



**National Science Foundation**  
4201 Wilson Boulevard  
Arlington, Virginia 22230

**VOLUME III of III**

**SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**Pre-DEIS PUBLIC COMMENTS  
and  
MEETING TRANSCRIPTS**

**Advanced Technology Solar Telescope  
Haleakalā, Maui, Hawai'i**

**May 2009**

**VOLUME III**

**Pre-DEIS PUBLIC COMMENTS AND MEETING TRANSCRIPTS**

Volume III contains Pre-DEIS Public Comments and the transcripts from formal Public Scoping meetings, Section 106 Consultation meetings, and the DEIS Public Comment meetings. Comments to the DEIS and SDEIS will be included in the Final EIS.

***Appendix A:*** Pre-DEIS Public Comments

***Appendix B:*** Transcripts – Scoping Meetings:

- (1) Cameron Center, July 12, 2005
- (2) Kula Community Center, July 13, 2005
- (3) Mayor Hannibal Tavares Community Center, July 14, 2005

***Appendix C:*** Transcripts – Section 106 Consultation Meetings:

- (1) Mayor Hannibal Tavares Community Center, March 28, 2006
- (2) Paukūkalo Community Center, May 1, 2006,
- (3) University of Hawai‘i Institute for Astronomy,  
Maikalani Facility, June 16, 2008
- (4) University of Hawai‘i Institute for Astronomy,  
Maikalani Facility, June 17, 2008
- (5) University of Hawai‘i Institute for Astronomy,  
Maikalani Facility, August 27, 2008, Afternoon session
- (6) University of Hawai‘i Institute for Astronomy,  
Maikalani Facility, August 27, 2008, Evening session

***Appendix D:*** Transcripts – DEIS Public Comment Meetings:

- (1) Cameron Center, September 27, 2006
- (2) Mayor Hannibal Tavares Community Center, September 28, 2006
- (3) Kula Community Center, September 29, 2006

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## **APPENDIX A**

### **Pre-DEIS PUBLIC COMMENTS**

- The comments in this Appendix were received prior to publication of the DEIS, which was published in September 2006. All comments were carefully evaluated during the preparation of the Draft EIS and, where feasible, they were incorporated into the analysis of the affected environment, analysis of potential impacts that could result from the Proposed Action, and mitigations to those potential impacts. Full consideration was given to the concerns, suggestions, information, and documentation provided by the commenting individuals, groups, and agencies.
- Comments are listed in order of date received and grouped by commenter name or organization.
- Comments and responses to the DEIS and SDEIS will be included in the Final EIS.

## List of Commenters

Last Name	First Name
Adler	Martin E.
Aeder	Erik
Akaka	Senator Daniel
Alday	Rene Christopher
Alexander	Gerry
Aller	Kimberly
Amindson	Danielle
Aquino	Princess Lehuanani
Armstrong	James D.
Atwell	Francine
Bailey	Gordean
Bal	Calyton H.
Balinbin	Rudy
Bantilan	Melissa
Barclay	Claire
Barona	Lolita
Bear	Lynne
Beatty	Jody
Behan	Kevin
Born	Terry
Brayton	Chris
Brayton	Thomas
Breitbach	Brad
Briner	Kenn
Brinkman	Steve
Bunny	Kirsten
Cabradilla	Jolene
Calhoun	John
Capriola	Gary
Carlos	Sumer
Carlucci	Michael
Cazimero	Kanoe
Chacko	Sumita Mary
Christensen	Robert
Christensen	Daphne
Cook	Jerry
Cost	Jill
Craig	Tad
Cunanan	Romylynn
Dailey	Roger
Dale	Nicholas
Davidge	Greg
Davis	Janet
DeRego	Neal L.
Dixon	Ann
Dizon	Toni
Donner	Tammy
Drood	Jeffrey

Last Name	First Name
Eichart	John
Eldridge	Carl
Ellison	Jeffrey
Evanson	Mary
Fair	Deybra
Fielding	Ann
Foley	Mike
Fukuda	Casey
Garcia, Jr., Ku`auhau Nui	Ali`i Sir William
Gebink	Cynthia
George	Janet
Gibson	Brooke
Gilliland	Julie
Glassen	Nicole
Gottlieb	Steve
Greenberg	Gary
Groden	Randy
Guinan	Stacey
Habesreiter (Dr.)	Margit
Hall	Dawn
Hall	Issac
Haraga	Rod
Hartman	David A.
Haslbede	Glenn
Haupt	Prentiss Carl
Hazen	Lorna
Helm	Mikahala
Helm	Rusty
Hodge	Curt
Hoffman	Mark
Hogan	Vince
Holton	Doreen
Hope	Douglas
Hough	Jason
Howard	Gardner
Hughes	Kevin
Hutchison	James
Iao	Maydeen
Ingalls	Thomas E.
Ito	Blanche N.
James	Gillian
Janke	R. L.
Jenkins	Brian
Jensen	Susan
Judson	Dan
Kaeo	Donlyn
Kahaleanu	Roselani
Kahooanohano, Ku`auhau	Ali`i George

## List of Commenters (cont.)

Last Name	First Name
Kajihiro	Kyle
Kalili	Dreana
Kanamau	Walter
Kane	Jen
Kaohu	Kathy
Karakawa	Shigeru
Karakawa	Carol
Kasprzycki	Lisa
Kaupalolo	Cheryl
Kaupalolo	Kristopher
Keala	David
Kiriatiy	Avi
Kleid	Cindi
Korpi	John
Krost	Todd
Krumwiede	Jack
Kuehler	Malia
Kumasaka	Linda
Kumasaka	Kenneth
Kushi	Keith
Lane	Edward
Lao	Harold
Lapp	Howard
LeBron	M. Kehaulani
Lee	Stanley
Lemmo	Sam
Lesteie	Ron
Lester	Susan
Lindsey	Ed and Puanani
Lindsey	Clifford
Liva	Angela
Longaker	Jason
Lowell	Rebecca
Lucas	Richard and Michael
Maberry	Michael
Maki	Richard
Makua	Janet
Mancini	Judy
Mann	Donna
Martin	Martha
Maux	Steve
Maxwell, Sr.	Kahu Charles
Mayer	Dick
McCarty	Vicki
McDuff	Kathleen
McGinnis	Vicki
McNulty	Patrick

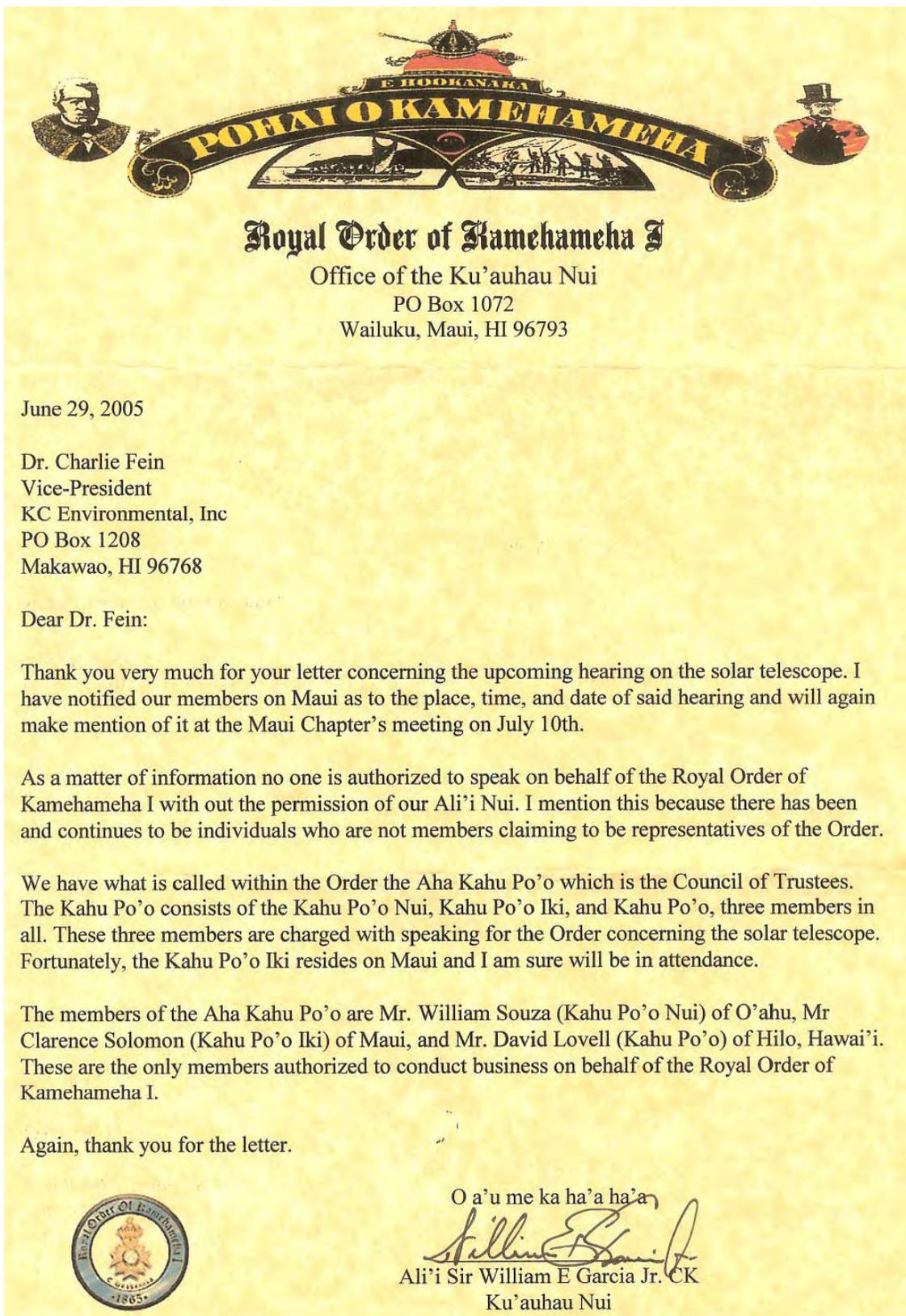
Last Name	First Name
Mealey	Richard
Medeiros	Art
Medeiros	Bill
Meeder	Susan
Mertens	Judy
Messersmith	E. John
Michaud	Gerry
Minnella	Patrick
Miyajima	Melissa
Moore	Gary
Moore	Kelly
Morales	Jose
Moran	Martha
Morizono	Justin P.
Morrison	Shauna
Mueller-Fitch	Heather
Mussou	Jake
Nahulu	Verna
Nakai	Kan
Nakakura	Jayson
Namu`o	Clyde
Narrowe	Patt
Neizman	Karen
O'Brien	Cristin
O'Connell	Daniel
O'Gara	Daniel
Oliver	John
Olson	Elaine
Orszula	Edmund
Orwig	Steve
Pell	Sherri
Pequegnat	B.
Pestana	Lisa
Petrie	Barb
Pico	Montez
Pofford	April
Porter	Lisa
Powell	Madeline
Powell	Peter
Prieto	Glenn
Quinton	Lynne
Rabold	Jeanne
Rasmusse	Kasper
Ratkowski	Diane
Ratkowski	Rob
Raymond	Kiope
Reeser	Don

## List of Commenters (cont.)

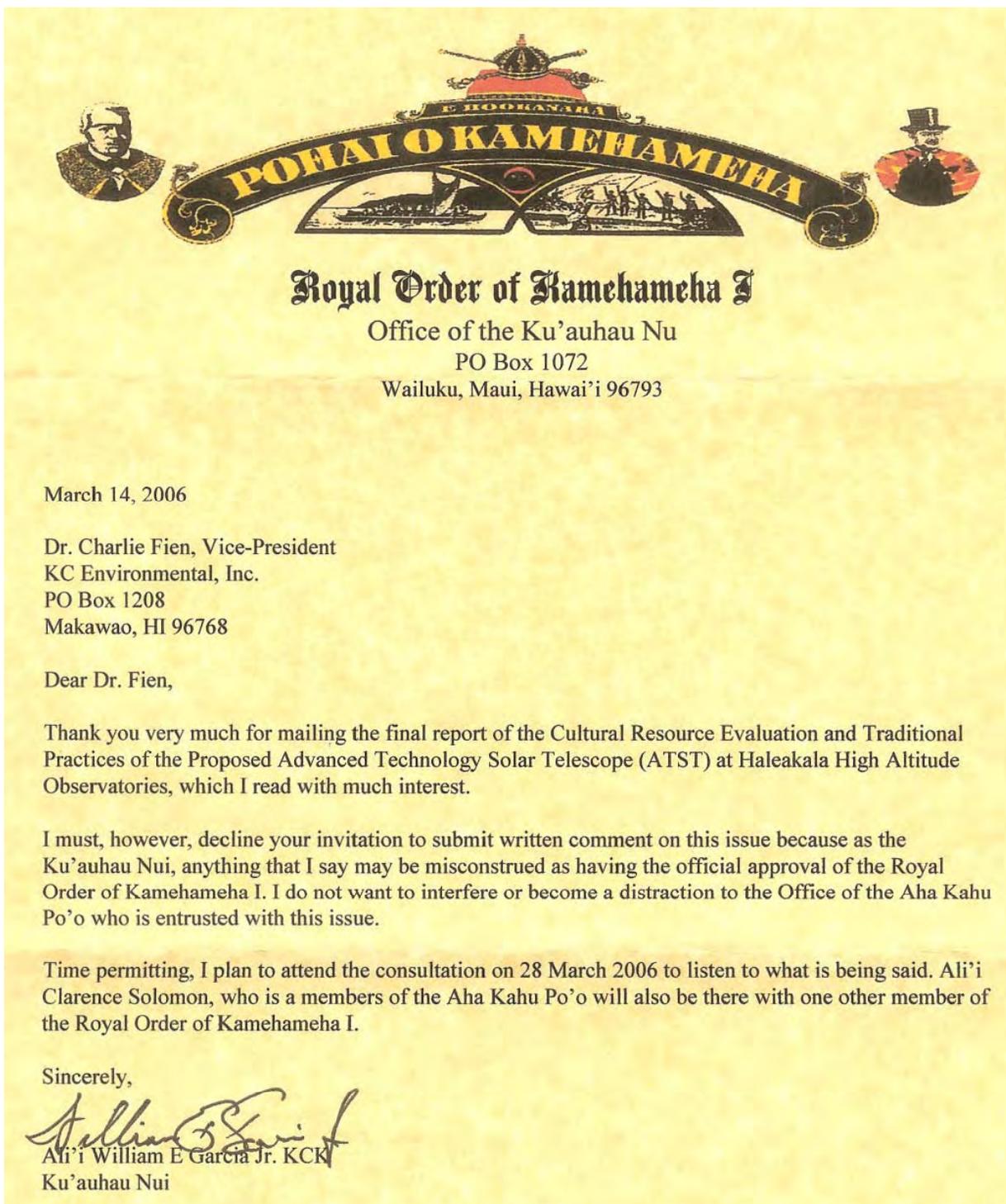
Last Name	First Name
Rizzo	Frank
Roback	William
Russell	Nikki
Ryder	Leohu
Sato	Charlotte
Sawyer	Charlene
Schwarz	Michael
Shearman	Nancy
Sherling	Alana
Sherling	Dave
Shibuya	Warren
Shiozuki	Ryoji
Shippee	George
Shito	Georgina
Skog	Jeanne
Smith	Bill
Smith	Gregory
Smith	Rona
Snipes	Heather
Souza Sjholom	Ellen
Staple	Susan
Steele	Marjorie
Stephens	Jennifer
Stephens	Sam
Stokesberry	Mele
Stott	Linda
Street	Spar
Strini	Rick
Summer	Silvia
Tassill	Kalani
Taylor	Chris
Tempchin	Jen
Thielen	Laura
Thompson	Karen D.
Tolman	Margit
Torres	Stephan
Truitt	Stan
Tyler	Majorie
Van Dorland	Carlos
Vilahos	Alexander
Viloria	Chris
Vladyka	Penrod
Wallholm	Tony
Warren	Cole
Watsuss	Chauncy
Whittemore	Linda
Wilson	Johanna
Wilson	Geraldine

Last Name	First Name
Wineland	Rene
Wooten	Jason
Yamada	Daryl
Yu	Liu
Zaleski	Robert
1 illegible name	

## Comment - Royal Order of Kamehameha I, June 29, 2005



## Comment - Royal Order of Kamehameha I, March 14, 2006



## Response - Royal Order of Kamehameha I, April 3, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

April 3, 2006

Ali'i William Garcia, Jr., KCK  
Royal Order of Kamehameha I  
Office of the Ku'auhau Nu

RE: Comments to Advanced Technology Solar Telescope (ATST) Cultural Report

Dear Ali'i Garcia,

Thank you for your letter regarding the Cultural Resource Evaluation and Traditional Practices Report for the ATST project. We understand that Haleakalā has significant cultural resources for the Native Hawaiian community. The comprehensive Environmental Impact Statement (EIS) is being prepared and will evaluate the potential impacts of the proposed project on the associated Hawaiian culture and spiritual resources, as well as other environmental conditions to Haleakalā.

We appreciate the participation of all members of the Royal Order of Kamehameha I. Your letter will become part of the EIS and the Administrative Record.

If you have not done so already, we invite you to visit the web site at: <http://atst.nso.edu/> and <http://atst.nso.edu/library/EIS.shtml>, which specifically addresses the Section 106 process of the National Historic Preservation Act (NHPA). Thank you for your participation.

Sincerely,



Dr. Charlie Fein  
Vice President

Comment - Royal Order of Kamehameha I, June 17, 2006



Royal Order of Kamehameha I

Heiau 'O Kahekili 4

Hale Panea, Kahului, Maui

June 17, 2006

Dr. Charlie Fein, Vice President  
KC Environmental, Inc.  
P.O. Box 1208  
Makawao, Maui, Hawai'i 96768

**Subject: Haleakala Cultural Resource Plan**

To Whom It May Concern,

This letter is to inform you that I have been designated to communicate with you and your organization on behalf of the Royal Order of Kamehameha I, Heiau 'O Kahekili IV so that we will have a formal request for information about Haleakala and inquire if we could have a copy of this information in writing.

The information that we as an organization are requesting is a copy of the Haleakala Cultural Resource Plan. We would like to have this plan so that we can be better informed as what has been recommended and what has been done to amend this plan (if any). We would like to know from you what obstacles your organization encountered, in regards to the Haleakala Cultural Resource Plan, since the Telescope project came about and what have been noted to follow the plan. We are requesting all of this information in writing to help us better review the matters before us.

Should you have any questions please feel free to contact me at the following phone number: Cell (808) 357-7759, also there is an e-mail address of [Kahekili@wisperhawaii.com](mailto:Kahekili@wisperhawaii.com) Thank you very much for your time and consideration in this matter.

Ali'i George Kaho'ohanohano  
Ku'auhau  
Royal Order of Kamehameha I  
Heiau 'O Kahekili IV

Certified Mail: 700402510 0005 3733 5393

*Address for the Ku'auhau for Heiau 'O Kahekili 4  
Ali'i George Kaho'ohanohano  
2723 Kamelani Loop, Pukalani, Maui, Hawaii 96768-8744*

## Response - Royal Order of Kamehameha I, June 27, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

June 27, 2006

Ali'i George Kaho'ohanohano  
Ku'auhau  
Royal Order of Kamehameha I  
Heiau 'O Kahekili IV

Dear George:

Thank you for your inquiry and interest in the proposed Advanced Technology Solar Telescope (ATST) project. While there is no overall Haleakalā Cultural Resource Plan, which would have to include all of the many properties on the mountain, I believe that you may be referring to either:

- a) the Cultural Resource Evaluation (*Kū I Ka Mauna, 2003*) prepared for the University of Hawai'i Institute for Astronomy Long Range Development Plan (LRDP, 2004); or,
- b) the Cultural Resource Evaluation and Traditional Practices Assessment for the Proposed Advanced Technology Solar Telescope (ATST), *E Mālama Mau Ka La'a: Preserve the Sacredness at Haleakalā High Altitude Observatories*; which was prepared in 2005 by Cultural Specialist's Charles Kauluwehi Maxwell and Adrian K. Kamali'i.

We have enclosed these documents and a CD. Both documents contain recommendations for preservation of the cultural resources and practice of spiritual protocols at Haleakalā High Altitude Observatory (HO), the 18.1-acre property managed by the University of Hawai'i Institute for Astronomy that occupies most of Pu'u Kolekole. The Institute for Astronomy has adopted the recommendations in these two documents and all those who work at HO must adhere to the cultural protocols described in them.

With respect to the proposed ATST project, the Draft Environmental Impact Statement (DEIS) will be released shortly. The Royal Order of Kamehameha I is included on the DEIS distribution list. This DEIS will discuss in detail potential impacts of the proposed ATST project on cultural and historic resources in the summit area. These potential impacts have already resulted in a declaration of "Adverse Effect" by the agency proposing the project (the National Science Foundation) and, as you know, public meetings to discuss Native Hawaiian interests arising from these potential impacts have already occurred on Maui.

The National Historic Preservation Act (NHPA) requires that agencies consider the impacts of proposed actions on historic and cultural resources. After assessing these potential impacts on the resources that had been identified through studies funded by UH and NSF, the NSF has published notification in Maui newspapers requesting resolution proposals to help mitigate any potential cultural or historic impacts that may result from the construction and operation of ATST at the 18.1-acre University of Hawai'i site on Haleakalā. Proposals have been received and more are anticipated as the process continues during the coming months. The ultimate objective is to develop a Memorandum of Agreement (MOA) between the NSF and cooperating groups and individuals in the Maui community to minimize and resolve any cultural impacts that may result from the proposed ATST project.

## Response - Royal Order of Kamehameha I, June 27, 2006 (cont.)

Additional information regarding the NHPA process for this project can be found on the Internet at: <http://atst.nso.edu/library/EIS.shtml>. The LRDP can also be found on the Internet at: <http://www.ifa.hawaii.edu/haleakala/LRDP/>.

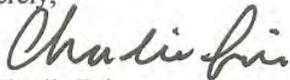
We hope your organization will choose to participate in the process. If there is any additional information you need or questions you have, please do not hesitate to write or call me. If you have any questions that you would like to address to the National Science Foundation regarding this matter, please do not hesitate to contact either of the following:

Dr. Craig Foltz, Program Officer  
Telephone: (703) 292-4909 Fax: (703) 292-9034  
E-mail: [cfoltz@nsf.gov](mailto:cfoltz@nsf.gov)

Bijan Gilanshah, Assistant General Counsel  
Telephone: (703) 292-5056 Fax: (703) 292-9041  
E-mail: [bgilansh@nsf.gov](mailto:bgilansh@nsf.gov)

National Science Foundation  
4201 Wilson Boulevard, Room 1045  
Arlington, VA 22230

Sincerely,



Dr. Charlie Fein  
Vice President

Enclosure

CC: Dr. Craig Foltz, Program Officer, National Science Foundation  
Bijan Gilanshah, Assistant General Counsel, National Science Foundation  
Melissa Kirkendall, Maui Archaeologist, State Historic Preservation Division  
Thelma Shimaoka, Maui Community Resource Coordinator, Office of Hawaiian Affairs

## Comment - Royal Order of Kamehameha I, July 17, 2006



### Royal Order of Kamehameha I

#### Heiau 'O Kahekili 4

Hale Nanea, Kahului, Maui

July 17, 2006

Dr. Charlie Fein, Vice President  
KC Environmental, Inc.  
P.O. Box 1208  
Makawao, Maui, Hawai'i 96768

**Subject: Haleakala Cultural Resource Plan**

Dear Dr. Fein,

This letter is being sent out to you to follow up on the response that was sent to this organization regarding the statement that there is no Haleakala Cultural Resource Management Plan at this time for Mount Haleakala. It is somewhat confusing when we read your letter stating that there are several different properties on the Mountain top and it would be difficult to have several different cultural plans for this area. There are several issues that we would like to review with you,

- A) Does the federal rules (under 106) mandate that Cultural Resource Management plans must be followed?
- B) Why would there be several different cultural Management plans for one Sacred Mountain? From your letter we find it very difficult to understand that there would be several different cultural plans for the Sacred Mount Haleakala. Where is this coming from? Is there a change in 106 that we have not been informed about?
- C) The plans that was submitted by you to this organization is not a cultural management plan for the Sacred Mountain, where is the plan that is mandated by the Federal Government?
- D) From what we have been informed about the lack of a Cultural Management Plan for Haleakala, does the Federal rules (under 106) mandate that a cultural plan be done and followed before any project can be started?
- E) The palapala (Paper work) that was supplied to this organization by your company is not a cultural management plan for Haleakala; these are consultation plans for proposed projects and do not qualify to be used in place of a Cultural Management Plan.
- F) With the lack of information from your company or from any other entity about a Cultural Management Resource Plan (that is in effect at this time) for Haleakala, this organization feels that your company are not following section 106 of the Federal Rules.
- G) If we are in error please show us where in the Federal rules, because of a lack of a cultural management plan, rule 106 can be disregarded. From the meetings that I have attended

**Comment - Royal Order of Kamehameha I, July 17, 2006 (cont.)**



**Royal Order of Kamehameha I**  
**Heiau 'O Kahekili 4**  
Hale Nanea, Kahului, Maui

your organization has been enforcing the fact that you must follow Section 106 and yet there is no compliance in the area of a Cultural Resource management plan.

We would like to have these questions addressed in order to secure, protect, perpetuate and preserve our Hawaiian Culture, natural and Cultural resources and traditional practices for Haleakala. We believe that it is needed to make sound, long term decisions in matters of such great importance.

Should you have any questions please feel free to contact me at the following phone number: Cell (808) 357-7759. Also there is an e-mail address of [Kahekili@wisperhawaii.com](mailto:Kahekili@wisperhawaii.com), we would like to have a response to this letter no later than ten (10) working days and if more time is needed please feel free to contact us. Thank you very much for your time and consideration in this matter.

Ali'i George Kaho'ohanohano  
Ku'auhau  
Royal Order of Kamehameha I  
Heiau 'O Kahekili IV

CC: Ali'i Nui, Kalaimoku, Ali'i Ai Moku – Heiau 'O Kahekili IV  
Kaka'olelo – Heiau 'O Kahekili IV  
Haleakala Nation Park, Superintendent  
Department of the Interior, Haleakala Kapuna Group

Certified Mail: 7004 2510 0005 3736 8339

*Address for the Ku'auhau for Heiau 'O Kahekili 4*  
*Ali'i George Kaho'ohanohano*  
*2723 Kamelani Loop, Pukalani, Maui, Hawaii 96768-8744*

2

## Response - Royal Order of Kamehameha I, July 24, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

July 24, 2006

Ali'i George Kaho'ohanohano, Ku'auhau  
Royal Order of Kamehameha I  
Heiau 'O Kahekili IV

Dear George:

Thank you for your additional request for information. Your questions suggest that perhaps there is some misunderstanding about the ATST project and about the University of Hawaii's Haleakalā High Altitude Observatory in general. Please allow me to further clarify.

The only property for which the University of Hawai'i has any responsibility is for the 18.1 acres of land that is managed by the University of Hawai'i Institute for Astronomy. At this time, that property does have a Protection of Historic and Cultural Resources plan that was referenced in our first letter, which may be found in the Long Range Development Plan (LRDP) <http://www.ifa.hawaii.edu/haleakala/LRDP/>. The plan may be found beginning on page 62 of the LRDP, Section 9.3.2-Protection of Historic and Cultural Resources. As far as we are aware, only the Institute for Astronomy out of all the agencies on Haleakalā operates under a Protection of Historic and Cultural Resources plan at this time.

It is accurate to state that the Section 106 process operates in parallel and somewhat independent from such existing cultural plans, although there may be considerable overlap in cultural resource protection measures. Under Section 106 for this proposed project, the parties are to consult on ways to avoid, minimize, or mitigate the adverse effects of ATST. If, following consultations, the State Historic Preservation Division and the agency can reach agreement as to how best to resolve the adverse effects, they will enter into a Memorandum of Agreement, which must be followed by the signatories. Native Hawaiian organizations such as the Royal Order of Kamehameha I would be invited to also sign as a concurring party to the Agreement.

Under Section 106, there would not be several plans or Memorandum of Agreements — only one. Therefore, if the "Cultural Resources Management Plan" to which you refer in your last letter is actually what Section 106 refers to as the "Memorandum of Agreement, you would be correct to say that no such Agreement exists as of this date.

The Section 106 process must be followed before the project is approved. However, that process may or may not result in a Memorandum of Agreement, although we are very hopeful we will come to such an Agreement. If the agency and State Historic Preservation Division cannot agree on how to resolve the adverse effects after consultations with each other and other concurring parties, Section 106 still allows a project to proceed following consultations, as long as certain other procedures are followed, such as affording the Advisory Council for Historic Preservation the opportunity to comment on the parties' consultative process. Again, we are hopeful that we can resolve the adverse effects of ATST by reaching an agreeable Memorandum of Agreement. In that regard, the National Science Foundation, which is the agency proposing the ATST project, invites the Royal Order of Kamehameha to submit proposals that would help resolve the adverse cultural effects of building ATST on Haleakalā. If NSF receives such a proposal from the Royal Order of Kamehameha, a one-on-one meeting with NSF would be welcome to further discuss such a proposal when the ATST Project Team comes to Maui for further consultations and public comment.

Sincerely,

Dr. Charlie Fein  
Vice President

CC: Bijan Gilanshah, Assistant General Counsel, NSF  
Dr. Craig Foltz, Program Officer, NSF  
Melissa Kirkendall, Maui Archaeologist, SHPD  
Marilyn Parris, Haleakalā National Park Superintendent  
Thelma Shimaoka, Community Resource Coordinator, OHA

## Comment - Stan Truitt, July 5, 2005

>Subject: Haleakala Hearings  
>  
>Aloha Jeremy,  
>  
>As a retired scientist from the AMOS / MOTIF observatory at  
>Haleakala's summit, and a lifelong astronomy enthusiast, I will be  
>attending at least two of the hearings regarding the newly proposed  
>solar telescope. It is usual for some environmental and cultural  
>organizations and individuals to resist any change of skyline or  
>appearance of our mountain. My intention is to mitigate some  
>objections and to defuse some of the anti-scientific attitude often  
>expressed at such hearings, as well as becoming better informed about  
>the scientific activities.  
>  
>If it is convenient, please send me related information currently  
>available on the project, or provide URLs to specific sites where I  
>may glean useful facts specific to the proposed telescope and data  
>gathering facilities. Armed with these facts, my language can be  
>more specific instead of diluted by sweeping generalities so common  
>to the persons resisting change at these hearings. When rising to  
>speak, my emphasis will not just be technical, but also peppered with  
>familial and community considerations.  
>  
>Lastly, even though I expect that your people are in touch with the  
>Institute for Astronomy and other Hawaii troops, it would be a  
>pleasure to suggest not so touristy eating places and sights to see.  
>  
>  
>Cordially,  
>  
>Stan Truitt

## Response - Stan Truitt, July 5, 2005

>  
>Dear Stan,  
>  
>Thank you for your interest in the Advanced Technology Solar Telescope  
>(ATST) project. We invite you to visit our web site at:  
><http://atst.nso.edu/> for more information.  
>  
>If you would like further information, please feel free to contact me.  
>  
>Best regards,  
>Jeremy Wagner

## Comment - Kyle Kajihiro, July 7, 2005

**Subject:** solar telescope

Dear Mr. Wagner

I am writing regarding the upcoming public meetings on the Solar Telescope on Maui.

Please send me all of the relevant information about the proposed project so that I can formulate questions and comments.

Also, I urge you to hold meetings on other islands besides Maui. This project affects all the islands in Hawai'i. You would deny public participation for large numbers of people by only holding hearing on Maui.

Thank you.

Kyle Kajihiro

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Dear Mr. Kajihiro:

Thank you for your interest in the Advanced Technology Solar Telescope (ATST) project. We invite you to visit our web site at: <http://atst.nso.edu/> for more information. Please feel free to contact me with comments or to ask questions about the project as information is added to the web site.

With respect to meetings on other islands, we have consulted with our cultural specialist, who clearly indicated there is a strong "home rule" aspect to this project for the Native Hawaiians and the local community on Maui. Through past experience with other state or federal Maui-based projects, the indication was that the community is concerned about once again having only a minority voice when it comes to their own land-use cultural and environmental priorities. Therefore, we have focused public participation on Maui.

Best regards,  
Jeremy Wagner

## Comment and Response - John Oliver, July 7, 2005

Date: Fri, 8 Jul 2005 10:33:15 -0700  
X-Mailer: Microsoft Office Outlook, Build 11.0.6353  
Thread-Index: AcWD4x8IjAz6RygJRXiAPW+5mDyvaA==

Charlie,

I received a voice mail message on my office telephone last night (Thursday, July 7, 2005 at 8:58 pm MST). The message ran as follows:

Hey Jerry Wagner.  
Just calling to let you know what the laws are here in the alleged state of Hawaii.  
You guys can not put a telescope up.  
UH does not have title over the land on Haleakala.  
They've never had title.  
And the state courts have already said they have no jurisdiction over title.  
The "Ava Nava Aah" [sp?] is a legitimate court.  
You're going to have to answer to them.  
You might as well answer to them now.  
Give me a call, my name is [John Oliver](#)  
Thanks.

---

Subject: contact by John Oliver  
Date: Fri, 8 Jul 2005 13:20:14 -0700  
X-Mailer: Microsoft Office Outlook, Build 11.0.6353  
Thread-Index: AcWD9gjIhg8a/oOITDCaqrBoyRK2mg==

Charlie,

I called Mr. John Oliver back at 12:30pm MST today, Friday, July 8, 2005. I stated that the issue of land title should be referred to the University of Hawaii and that therefore I had already forwarded his comments to the UofH. Mr. Oliver thanked me for this. Mr. Oliver stated that the UofH does not have title to the land on Haleakala. I suggested that Mr. Oliver consider submitting his thoughts in writing to the EIS process. I asked if he had the contact information. Mr. Oliver indicated that he had the contact information from the recent newspaper article. Mr. Olsen then asked if the NSO was part of NASA. I said that the NSO was not part of NASA and that we were working through the EIS process for the National Science Foundation. Mr. Oliver thanked me for calling and for the information. The conversation lasted approximately 33 minutes and was very cordial in nature.

Jeremy

# Comment - Rod Haraga, Director, Dept. of Transportation, July 7, 2005

LINDA LINGLE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

RODNEY K. HARAGA  
DIRECTOR

Deputy Directors  
BRUCE Y. MATSUI  
BARRY FUKUNAGA  
BRENNON T. MORIOKA  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.1815

July 7, 2005

Dr. Charlie Fein  
Vice President  
KC Environmental, Inc.  
P.O. Box 1208  
Makawao, Hawaii 96768

Dear Dr. Fein:

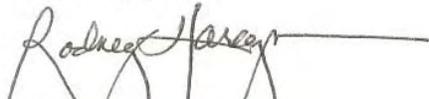
Subject: National Science Foundation (NSF),  
Advanced Technology Solar Telescope (ATST) Project at  
Haleakala High Altitude Observatory site  
Environmental Impact Statement Preparation Notice

Thank you for your transmittal requesting our review of the subject project.

In reply to your request for our review of the proposed telescope project, this is to advise you that the facility will not have an impact on our transportation facilities.

We appreciate the opportunity to provide our comments.

Very truly yours,

  
RODNEY K. HARAGA  
Director of Transportation

## Comment - Edmund Orszula, July 14, 2005

### ADVANCED TECHNOLOGY SOLAR TELESCOPE PROJECT COMMENTS FORM

The National Science Foundation (NSF) and the National Solar Observatory (NSO) welcomes and encourages written public comments on environmental impacts and concerns — including historical, archaeological, and traditional cultural issues — and proposed mitigation associated with the proposed Advanced Technology Solar Telescope (ATST) project.

Your comments will be reproduced in the Final Environmental Impact Statement (EIS) for the ATST project. If you prefer that your name not be published with your comments, please express that desire in the comments section below. The NSF and NSO will not publish your address in the Final EIS.

Your comments may be written on this form or additional pages and returned to the registration desk; or, you may send your comments to:

Mr. Jeremy Wagner, ATST Project Manager  
National Solar Observatory  
950 North Cherry Avenue, Tucson, Arizona 85726  
email: [jwagner@nso.edu](mailto:jwagner@nso.edu)  
telephone: (520) 318-8249 fax: (520) 318-8500

Written comments must be received at NSO  
on or before 4:30 p.m. Mountain Standard Time, August 14, 2005.

Name: EDMUND J. ORSZULA

Date: 7/14/05

Place an X in this box if you wish to receive copies of future environmental planning documents on the proposed ATST project (including the Record of Decision) that NSF and NSO distributes to the public.



What impact will visitors, racing events, downhill bicycling,  
etc on ATST. (ie. slower driving).

## Response - Edmund Orszula, July 25, 2005



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

July 25, 2005

Mr. Edmund James Orszula

Dear Mr. Orszula:

Thank you for attending the Advanced Technology Solar Telescope (ATST) public scoping meeting held at the Mayor Hannibal Tavares Community Center on Thursday, 14 July, 2005.

In response to your question, the traffic on the roads leading to the observatory will be studied as a part of the Environmental Impact Statement preparation. This study will include assessment of the current use of the roads by park visitors, bicycle riders, observatory personnel, and others, as well as the anticipated increase in traffic that would result from constructing and operating the ATST at Haleakala. Any mitigations to be implemented during ATST construction and/or operation in order to assure continued safe traffic volumes and minimum potential for dangerous situations will be included as part of the final EIS.

Again, thank you for your interest in the ATST project. We invite you to visit our web site at: <http://atst.nso.edu/> for more information. Please feel free to contact me with comments or to ask questions about the project as information is added to the web site.

Best regards,



Jeremy Wagner  
Project Manager



Operated by the Association of Universities for Research in Astronomy, Inc.  
under a cooperative agreement to the National Science Foundation

## Comment - Kanoë Cazimero, July 15, 2005

Mr. Wagner,

Attached and imbedded in this e-mail is my letter in opposition to your ASTA Project.

Kanoë Cazimero

July 15, 2005

Jeremy Wagner, ATST project manager

National Solar Observatory

950 N. Cherry Ave.

Tucson, AZ 85726

Via e-mail [jwagner@nso.edu](mailto:jwagner@nso.edu)

Re: Advanced Technology Solar Telescope  
ATST atop Haleakala, Island of Maui, Hawaii

Aloha Mr. Wagner,

I am writing because of great concern and in protest against the ATST Project.

Let me first say that I am a Native Hawaiian. I stand solidly upon my heritage while being fully educated by Western standards and live a balanced life with minimal forfeit of one for the other. History has demonstrated and confirmed that much wrongdoing has been committed against us. Yet I and many others stand as proof that although a race decimated we are increasing, although a people oppressed we are rising, although a culture disregarded we are growing in esteem, and although our values are subjugated we defiantly hold strong to our spirituality. Our sense of connectivity to the land is at the very fiber of our spirituality. We are a proficient people Sir. Our knowledge, skills, and resources are being stripped because although we share with Aloha, you of the Western culture are parasitic in nature and do not understand reciprocity nor do you have a symbiotic relationship to the land.

You and your constituents have taken it upon yourselves to do years of research and development on this very worthy project. However, you have spent little time or effort to research and develop any kind of cultural sensitivity to the host culture and people of these islands. You forget that this is our Motherland. You show how your comparisons to other locations demonstrate that Hawaii provides YOU with the most optimum opportunity to further YOUR research.

## Comment - Kanoë Cazimero, July 15, 2005 (cont.)

And just who are you? Your collaborators and partners are all very impressive ? Cal Institute of Technology, Cal State U, Colorado Research, Lockheed, and Michigan State. So why are they not stepping forward to have the ATST in their state? We the people of Hawaii concur with Mr. Lindsey. WE WOULD rather see the telescope in ??Colorado, Montana, New Mexico, California? or some other state.? [http://www.mauinews.com/print\\_version.asp](http://www.mauinews.com/print_version.asp). Your approach is to convince the people of Hawaii through a small part of our community that the project is good for us. But have you truly considered US, the collective people of Hawaii.

Mr. Jeff Kuhn, Associate Director of the University of Hawaii Institute for Astronomy spoke to only a small portion of our community. You geographically failed to recognize that our State is comprised of 120 islands where 7 of them are inhabited and make up the vast greater community. Any invasive construction of this magnitude upon a sacred site is a direct attack on our intelligence, our culture and our land.

Mr. Kuhn said that the ASTA would be used for research, yet he states that ?the reason the \$161 million telescope should be built is ?for our children.?? [http://www.mauinews.com/print\\_version.asp](http://www.mauinews.com/print_version.asp). For who?s children specifically are Mr. Kuhn and your constituents speaking? If you wish to speak about the needs of the children of Hawaii, then consider the needed dollars to help raise the standards of the local educational system, school conditions, transportation, teacher support, programs, supplies, materials, nutrition ? for starters.

I am appreciative of Mr. Edgar?s article in the Maui News for those like I who live on another island would not be aware of the project. However he uses a lot of ink to cover the persuasive points of UH Director Mr. Kuhn and seems to nonchalantly state that ?Although worries were expressed about the impact on Hawaiian dark-rumped petrels that nest nearby and about the fact that the site is on ceded - described by Lindsey as "stolen" - land, the most common objection was to the color of the 10-story building.? [http://www.mauinews.com/print\\_version.asp](http://www.mauinews.com/print_version.asp).

No Mr. Edgar, and no Mr. Wagner, it is not just a worry about impact, or about nesting petrels, let alone the color of the 10-story building. It is indeed a concern when people who are not able to eloquently express themselves are not asked to clarify what was simply stated. Your 10-story building, were it painted to blend into the landscape of Haleakala would still be unacceptable. It is a defacement of pristine and sacred ground that for our Hawaiian Culture holds historic value. Our history was being defined long before our shores were touched by Western explorers ? not at the point of Western contact.

Put your technological wonder somewhere else Mr. Wagner. And Mr. Kuhn, you and your fellow Directors at the University of Hawaii need to put your energies into providing opportunities that will support and advance our youth, for they are the future of Hawaii. Provide more scholarship, more appropriate housing, on-the-job internship for credit to ensure that our graduating students become the future workforce we need.

"We are hoping for an invitation from the Hawaiian community to come into Haleakala to open a new window onto the sun," Kuhn said. [http://www.mauinews.com/print\\_version.asp](http://www.mauinews.com/print_version.asp). And I say to you Mr. Kuhn and Mr. Wagner, were this true, then you would have invited the Hawaiian community, not the collaborators to come to the table from the onset of this project. The development on Haleakala is spreading like a cancer, much like the development on Mauna Kea. It needs to stop.



Kanoë Cazimero (Ms.)

## Response - Kanoë Cazimero, July 15, 2005

Dear Ms. Cazimero:

Thank you for your comments and interest in the Advanced Technology Solar Telescope (ATST) project. We invite you to visit our web site at: <http://atst.nso.edu/> for more information. Please feel free to contact me with comments or to ask questions about the project as information is added to the web site.

Best regards,

Jeremy Wagner

**Comment - Jeanne Skog, President, Maui Economic Development Board,  
July 25, 2005**

**ADVANCED TECHNOLOGY SOLAR TELESCOPE PROJECT  
COMMENTS FORM**

The National Science Foundation (NSF) and the National Solar Observatory (NSO) welcomes and encourages written public comments on environmental impacts and concerns — including historical, archaeological, and traditional cultural issues — and proposed mitigation associated with the proposed Advanced Technology Solar Telescope (ATST) project.

Your comments will be reproduced in the Final Environmental Impact Statement (EIS) for the ATST project. If you prefer that your name not be published with your comments, please express that desire in the comments section below. The NSF and NSO will not publish your address in the Final EIS.

Your comments may be written on this form or additional pages and returned to the registration desk; or, you may send your comments to:

Mr. Jeremy Wagner, ATST Project Manager  
National Solar Observatory  
950 North Cherry Avenue, Tucson, Arizona 85726  
email: [jwagner@nso.edu](mailto:jwagner@nso.edu)  
telephone: (520) 318-8249 fax: (520) 318-8500

Written comments must be received at NSO  
on or before 4:30 p.m. Mountain Standard Time, August 14, 2005.

Name: Jeanne Skog, President, MEDB  
Full Address: \_\_\_\_\_  
Street: 590 Lipoa Pkwy # 103  
City: Kihei State: HI Zip Code: 96753 Date: 7/25/05

Place an X in this box if you wish to receive copies of future environmental planning documents on the proposed ATST project (including the Record of Decision) that NSF and NSO distributes to the public.



We hope that the project's PI and partners will seek ways to actively involve the residents, especially youth, in Maui County ~~and the state~~ in the work force opportunities related to ATST. MEDB will assist in this exploration.

**Response - Jeanne Skog, President, Maui Economic Development Board  
August 9, 2005**



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

August 9, 2005

Ms. Jeanne Skog, President  
Maui Economic Development Board  
590 Lipoa Parkway, #103  
Kihei, HI 96753

Dear Ms. Skog,

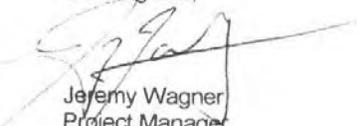
Thank you for your interest in the Advanced Technology Solar Telescope (ATST) project and for attending one of the Public Scoping Meetings. We appreciate the comment form you have submitted and are writing to respond to your comments.

Please be assured that the issue of public outreach and education is a high priority for our project as well as our Funding Agency (the National Science Foundation). We will strive to include the local residents of Maui County as much as possible and would encourage their involvement in workforce opportunities with the ATST Project.

If you have not done so already, we invite you to visit our web site at: <http://atst.nso.edu/>.

Again, thank you for your participation and feedback and if you would like further information, please feel free to contact me.

Best regards,



Jeremy Wagner  
Project Manager



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under a cooperative agreement to the National Science Foundation

## Comment - Senator Daniel Akaka, July 26, 2005

DANIEL K. AKAKA  
HAWAII

WASHINGTON OFFICE:  
141 HART SENATE OFFICE BUILDING  
WASHINGTON, DC 20510  
TELEPHONE: (202) 224-6361

HONOLULU OFFICE:  
3106 PRINCE JONAH KUHIO  
KALANIANA'OLE FEDERAL BUILDING  
P.O. Box 50144  
HONOLULU, HI 96850  
TELEPHONE: (808) 522-8970

United States Senate

WASHINGTON, DC 20510-1103

July 26, 2005

COMMITTEES:  
ARMED SERVICES  
ENERGY AND NATURAL RESOURCES  
HOMELAND SECURITY AND  
GOVERNMENTAL AFFAIRS  
INDIAN AFFAIRS  
VETERANS' AFFAIRS  
SELECT COMMITTEE ON ETHICS

Dr. Charlie Fein  
Vice President  
KC Environmental, Inc.  
P.O. Box 1208  
Makawao, HI 96768

Dear Dr. Fein:

Thank you for informing me of the National Science Foundation's preparation to conduct an Environmental Impact Statement (EIS) for the Advanced Technology Solar Telescope (ATST) project.

I appreciate receiving this information. It is my understanding that the ATST project will provide the United States with a premier observatory for exploring and understanding the physical processes on the sun that ultimately affect Earth.

Once again, mahalo for providing me with this update on the project.

Aloha pumehana,



DANIEL K. AKAKA  
U.S. Senator

# Comment - Dick Mayer August 5, 2005

## ADVANCED TECHNOLOGY SOLAR TELESCOPE PROJECT COMMENTS FORM

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Your comments may be written on this form or additional pages and returned to the registration desk; or, you may send your comments to:

Mr. Jeremy Wagner, ATST Project Manager  
National Solar Observatory  
950 North Cherry Avenue, Tucson, Arizona 85726  
email: [jwagner@nso.edu](mailto:jwagner@nso.edu)  
telephone: (520) 318-8249 fax: (520) 318-8500

Written comments must be received at NSO  
on or before 4:30 p.m. Mountain Standard Time, August 14, 2005.

Name: DICK MAYER

Date: 8/5/05

Place an X in this box if you wish to receive copies of future environmental planning documents on the proposed ATST project (including the Record of Decision) that NSF and NSO distributes to the public.

THE ATST SCOPING MEETING GAVE THE PUBLIC ~~AN~~ INADEQUATE AND DECEPTIVE IMPRESSION OF THE SCALE, AND CONSEQUENT VISUAL IMPACT, OF THE ATST.

- ALL PHOTOS + SKETCHES WERE AERIAL SHOTS TO MAKE THE TELESCOPE LOOK SMALLER.
- PHOTOS FROM THE SOUTH MADE IT APPEAR THAT THE TOP OF THE TELESCOPE WAS BELOW THE MOUNTAIN SUMMIT. (IT IS ACTUALLY ABOUT 100' HIGHER.)
- THE SPOKES PEOPLE AT THE SCOPING MEETING MISLEADINGLY STATED (OVER + OVER) THAT THE HEIGHT WAS 92', WHEN IT IS ACTUALLY 143'. THIS SEEMED AN INTENTIONAL LIE
- THE NEWSPAPER (MAUI NEWS) REPORTED "92'" AND NO EFFORT WAS MADE TO CONTACT THE NEWSPAPER TO CORRECT THE FIGURE. CONSEQUENTLY, THE PUBLIC WAS UNABLE TO GIVE FULL INPUT.

## Comment - Dick Mayer, October 7, 2005

**From:** Dick Mayer

**Sent:** Friday, October 7, 2005 01:05 AM

**To:** 'Dick Mayer', jwagner@nso.edu, charlie@kcenv.com, OEQC@mail.health.state.hi.us, 'Mike Maberry'

**Subject:** Haleakala ATST - FEA, DEIS & FEIS

**RE: Request to be a consulted party  
for the Haleakala ATST - FEA, DEIS & FEIS  
Both Federal and Hawaii State processes.**

Aloha,

This my formal request to be a consulted party in the ATST FEA, DEIS & FEIS permitting process. I am wish to be consulted for both the federal and Hawaii State portions.

**NOTE: This is a separate request from the one I sent you earlier from the Board of the Kula Community Association.**

Among my interests are the impact on the roads, the visual impact, the effect on auto and bike traffic through our community, and other physical and cultural issues that may arise or not be addressed during the preparation of the FEA, DEIS & EIS.

You should send correspondence to the following address:

Prof (Emeritus) Dick Mayer

Sincerely yours,  
Dick Mayer

## Comment - Mele Stokesberry, Friends of Haleakalā, August 10, 2005

AUG-10-05 11:23 PM ←MELESTOKESBERRY

P. 01

Mr. Jeremy Wagner, ATST Project Manager  
National Solar Observatory  
950 North Cherry Ave.  
Tucson, AZ 85726  
fax: (520) 318-8500

Dear Mr. Wagner,

The Board of the Friends of Haleakala National Park, at our August 9th meeting, formulated and passed the following statement to be entered as a comment for the EIS on the ATST. We intend this email to take the place of a postal-mailed ATST PROJECT COMMENTS FORM. I will also fax this statement to you to make sure that you receive it by your deadline of 4:30 pm MST August 14.

Mele Stokesberry,  
Recording Secretary, Friends of Haleakala National Park

Yes, we would like to receive copies of future environmental planning documents on the proposed ATST project (including the Record of Decision) that NSF and NSO distribute to the public.

### COMMENT OF FRIENDS OF HALEAKALA NATIONAL PARK

The Friends of Haleakala National Park strongly oppose locating the Advanced Technology Solar Telescope Project on Haleakala.

The entire mountain of Haleakala is a visual, cultural, biological and geological resource that must continue to be recognized as being of great significance and vital to our visitors, to our local residents and to our economy.

One of the missions of the Friends of Haleakala National Park is to preserve Haleakala's unique ecosystems, scenic character and associated Hawaiian culture and spiritual resources.

This project is so huge and intrusive it will adversely change Haleakala forever, causing irrevocable loss of natural resources.

## Comment - Mele Stokesberry, Friends of Haleakalā August 13, 2005

AUG-13-05 05:09 PM ←MELESTOKESBERRY

P. 01

Mr. Jeremy Wagner, ATST Project Manager  
National Solar Observatory  
950 North Cherry Ave.  
Tucson, AZ 85726  
fax: (520) 318-8500  
email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

Dear Mr. Wagner,

This is a correction to the ATST comment sheet sent to you by both email and fax on Aug. 10, pm, from the Friends of Haleakala National Park.

Please remove our paragraph beginning with the words "**COMMENT OF FRIENDS OF HALEAKALA NATIONAL PARK for the Final Environmental Impact Statement..**" above our official statement. There was confusion on my part as to what document these comments were intended for. The Friends of Haleakala National Park wish to retain the right to amend and/or add to our statement when the final EIS is published.

Our official statement, turned in as comments to you on Aug. 10, remains as sent:

"The Friends of Haleakala National Park strongly oppose locating the Advanced Technology Solar Telescope Project on Haleakala.

The entire mountain of Haleakala is a visual, cultural, biological and geological resource that must continue to be recognized as being of great significance and vital to our visitors, to our local residents and to our economy.

One of the missions of the Friends of Haleakala National Park is to preserve Haleakala's unique ecosystems, scenic character and associated Hawaiian culture and spiritual resources.

This project is so huge and intrusive it will adversely change Haleakala forever, causing irrevocable loss of natural resources."

Thank you.

Mele Stokesberry,  
Recording Secretary, Friends of Haleakala National Park

## Response - Mele Stokesberry, Friends of Haleakalā, August 17, 2005



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

August 17, 2005

Ms. Mele Stokesberry  
Friends of Haleakalā National Park  
P.O. Box 322  
Makawao, HI 96768

Dear Ms. Stokesberry,

Thank you for the submission of comments on behalf of Friends of Haleakalā National Park. We agree that Haleakalā has significant visual, cultural, biological, and geological resources for visitors, local residents, and the Maui economy. As we explained in our presentation to the Friends Board in July, the ATST project is proposed for the 18,166 acres of conservation land that was specifically set aside on the mountain for scientific purposes by Executive Order by the Governor of Hawai'i.

Therefore, a comprehensive Environmental Impact Statement is being prepared to evaluate potential impacts of the proposed project on the ecosystems, scenic character, associated Hawaiian culture and spiritual resources, and other environmental conditions on those 18,166 acres, as well as any potential impacts to the surrounding Haleakalā environment that may be of concern to your organization.

The EIS process involves identifying environmental concerns (such as those your organization has expressed), obtaining the relevant data on environmental conditions through necessary studies and surveys, receiving public and agency input, evaluating alternatives, and proposing measures for avoiding, minimizing, rectifying or reducing adverse impacts. At various times that will be widely announced, there will be opportunities for your organization to provide input, additional data, comments, recommendations, etc., in keeping with the intent of the EIS process to fully and publicly evaluate a proposed action. We welcome your participation and look forward to further interaction with Friends of Haleakalā National Park.

If you have not done so already, we invite you to visit our web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Best regards,

A handwritten signature in black ink, appearing to read "Jeremy Wagjer".

Jeremy Wagjer  
Project Manager



Operated by the Association of Universities for Research in Astronomy, Inc.  
under a cooperative agreement to the National Science Foundation

# Comment - Mary Evanson, August 10, 2005

## ADVANCED TECHNOLOGY SOLAR TELESCOPE PROJECT COMMENTS FORM

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Your comments may be written on this form or additional pages and returned to the registration desk; or, you may send your comments to:

Mr. Jeremy Wagner, ATST Project Manager  
National Solar Observatory  
950 North Cherry Avenue, Tucson, Arizona 85726  
email: [jwagner@nso.edu](mailto:jwagner@nso.edu)  
telephone: (520) 318-8249 fax: (520) 318-8500

Written comments must be received at NSO  
on or before 4:30 p.m. Mountain Standard Time, August 14, 2005.

Name:  
Full Address:  
Street:

Mary Evanson

City:

Date: 8/10/05

Place an X in this box if you wish to receive copies of future environmental planning documents on the proposed ATST project (including the Record of Decision) that NSF and NSO distributes to the public.



I feel very strongly that this proposed ATST is inappropriate for the summit of Haleakala.

Haleakala is vital to <sup>the</sup> visitor industry and many residents. The visual impacts of this project will be significant and can not be mitigated - its just too huge and does not belong on Haleakala. Find another location - & use the sun for energy - why plug into our <sup>PUBLIC</sup> dwindling power supply -

## Response - Mary Evanson, August 17, 2005



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

August 17, 2005

Ms. Mary Evanson

Dear Ms. Evanson,

Thank you for your comments regarding the Advanced Technology Solar Telescope (ATST) Project following the Public Scoping Meetings.

The EIS will fully assess and document potential visual impacts from the proposed project, in order to evaluate whether the project will in fact constitute a significant impact to the summit of Haleakalā. We look forward to having you examine our studies and documentation, and we encourage you to provide your comment during the EIS process.

If you have not done so already, we invite you to visit our web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Best regards,

A handwritten signature in black ink, appearing to read "Jeremy Wagner", is written over a horizontal line.

Jeremy Wagner  
Project Manager



Operated by the Association of Universities for Research in Astronomy, Inc.  
under a cooperative agreement to the National Science Foundation

## Comment– Mary Evanson, March 20, 2006

### CULTURAL RESOURCE EVALUATION AND TRADITIONAL PROCTICES OF THE PROPOSED ADVANCED TECHNOLOGY SOLAR TELESCOPE AT HALEAKALA HIGH ALTITUDE OBSERVATORIES

I have read this document and call attention to the following:

Page i: Footnote: There is no Kaupo District. See attached maps.

Page 1: Outline

Throughout this document the author uses names of quadrangles in place of ahupua'a and districts. Kolekole is entirely within the ahupua'a of Papa'anui, Makawao District.

C. The tangent areas of research are all quadrangles and not ahupua'a.

Page 3: Last paragraph: the author writes that according to "Place Names of Hawai'i" Kolēkōle is located in Makena ahupua'a. This and the next sentence are erroneus. Neither Pukui or USGS use "ahupua'a as land designations. There is no Makena ahupua'a.

Footnote 3: Again the author confuses Districts and Quadrangles. Haleakala peak is in the Kaupo quadrangle not Kaupo district. Haleakala peak is 8201' not 10,023 - Pu'u Ula'ula (Red Hill), the summit of Haleakala is 10,023'.

Page 4. Kilohana ahupua'a and in footnote, Kilohana District, neither is correct. Kilohana is a quadrangle.

Page 5: All Tangent Areas of Research are quads not ahupua'a as stated.

Page 19: Last paragraph. The variety of Sandalwood found near Park Headquarters and Hosmer Grove is Santalum haleakalae. The lanaiense named in this report is found in the Auwahi area of south Maui a long distance from Kolekole.

Page 20: Ka'ape'ape or Ape'ape is not found in the Kolekole area or in ahupua'a of Papa'anui. It only grows in very wet areas miles away from the dry alpine area of Kolekole or Papa'anui.

It is unfortunate that these errors were not caught and corrected before being printed as fact and being posted on the Internet. Be accurate and true to the Hawaiian culture. These errors are so obvious they do raise doubts about the accuracy of other documents relating to this project.

Respectfully submitted,

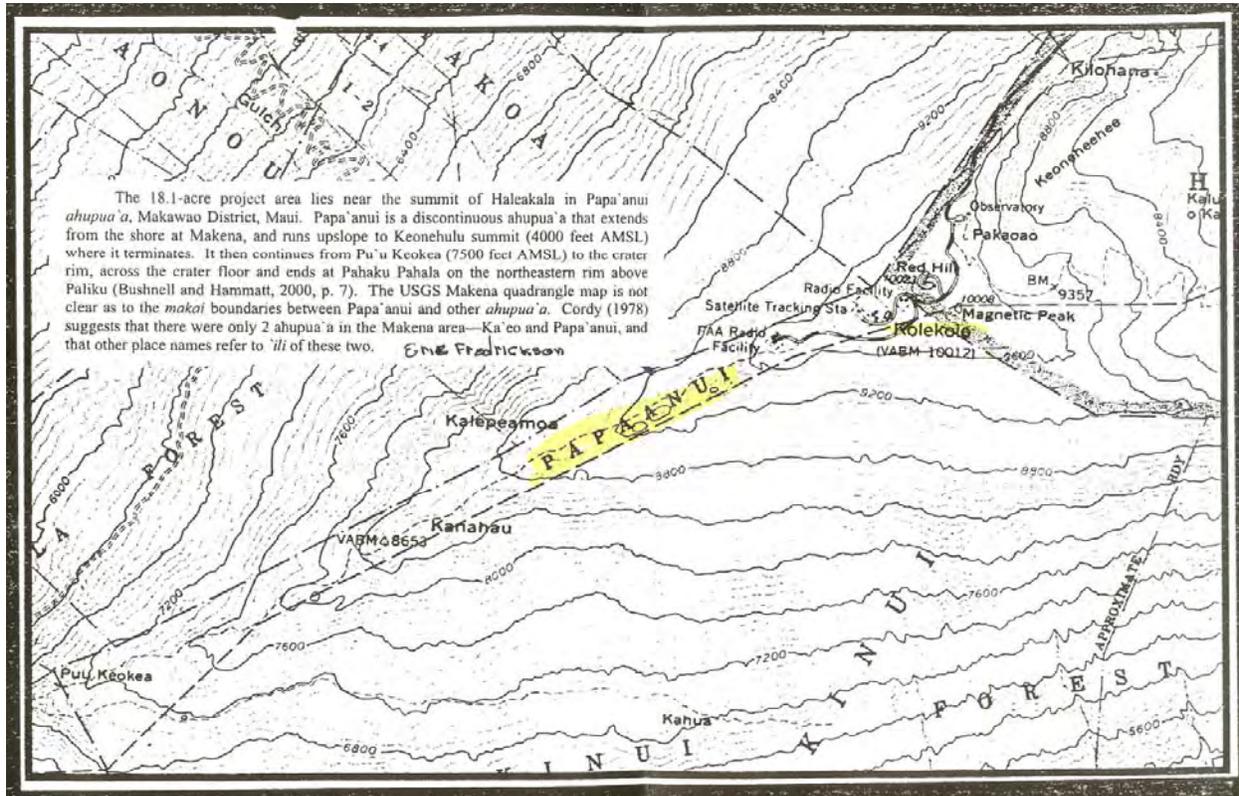
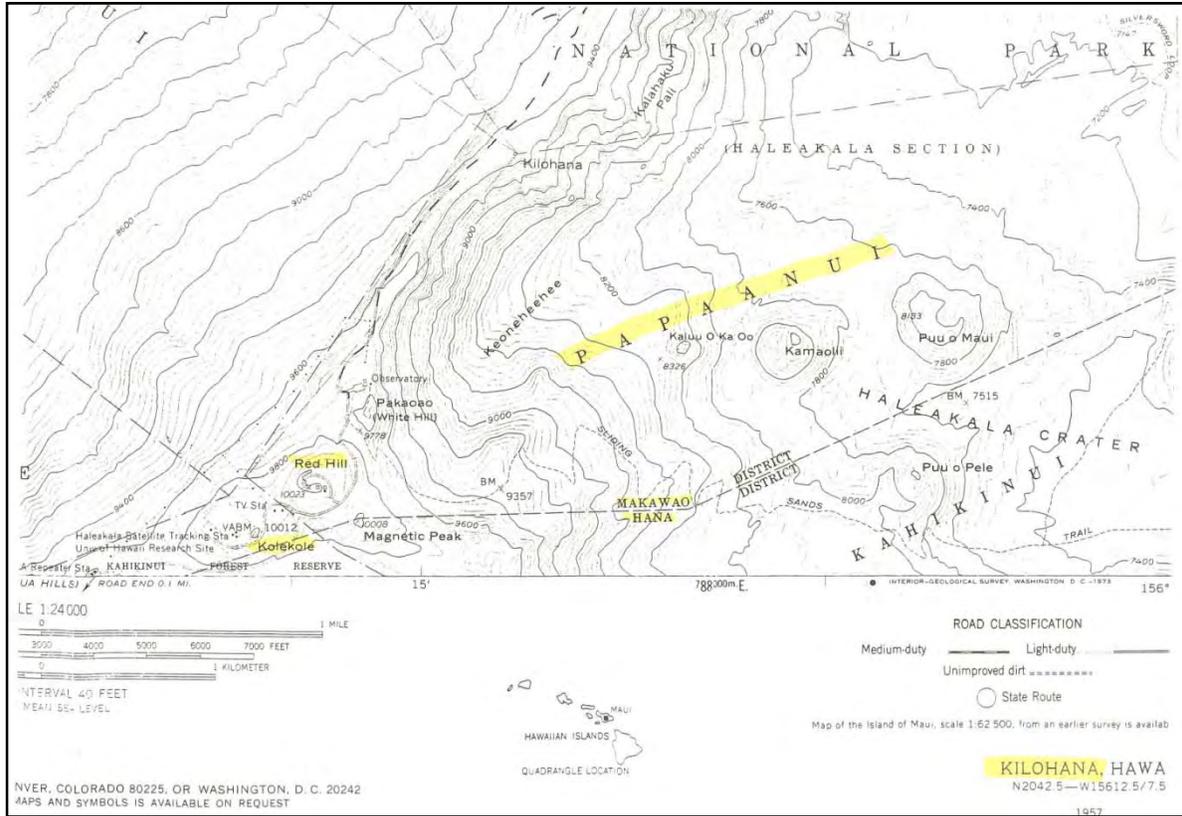
March 13, 2006



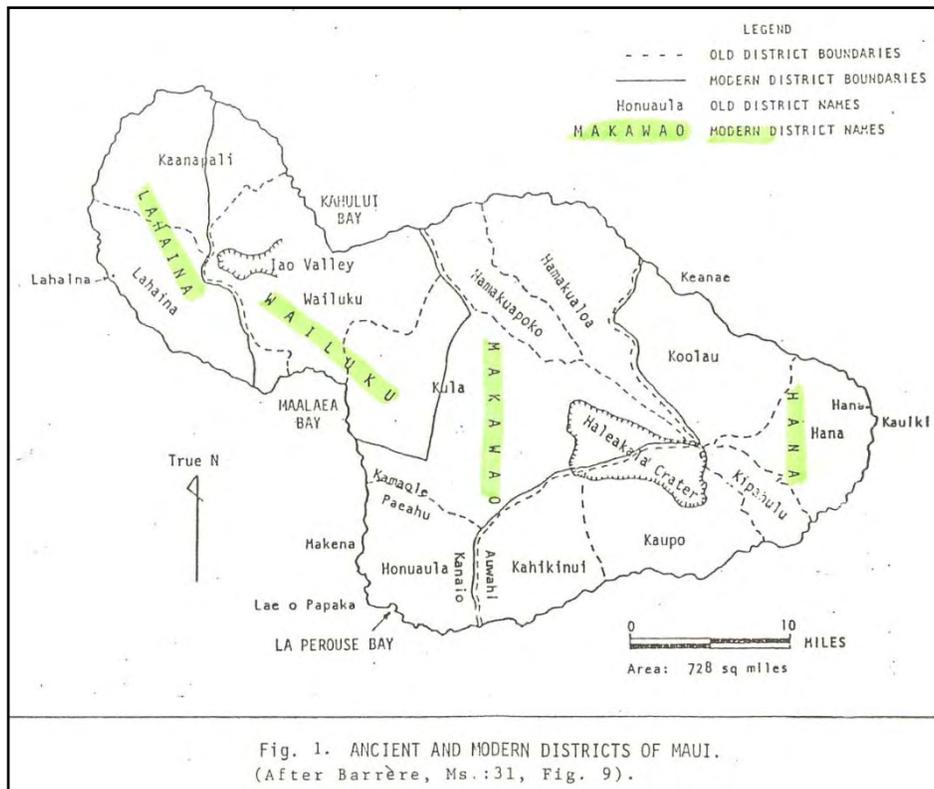
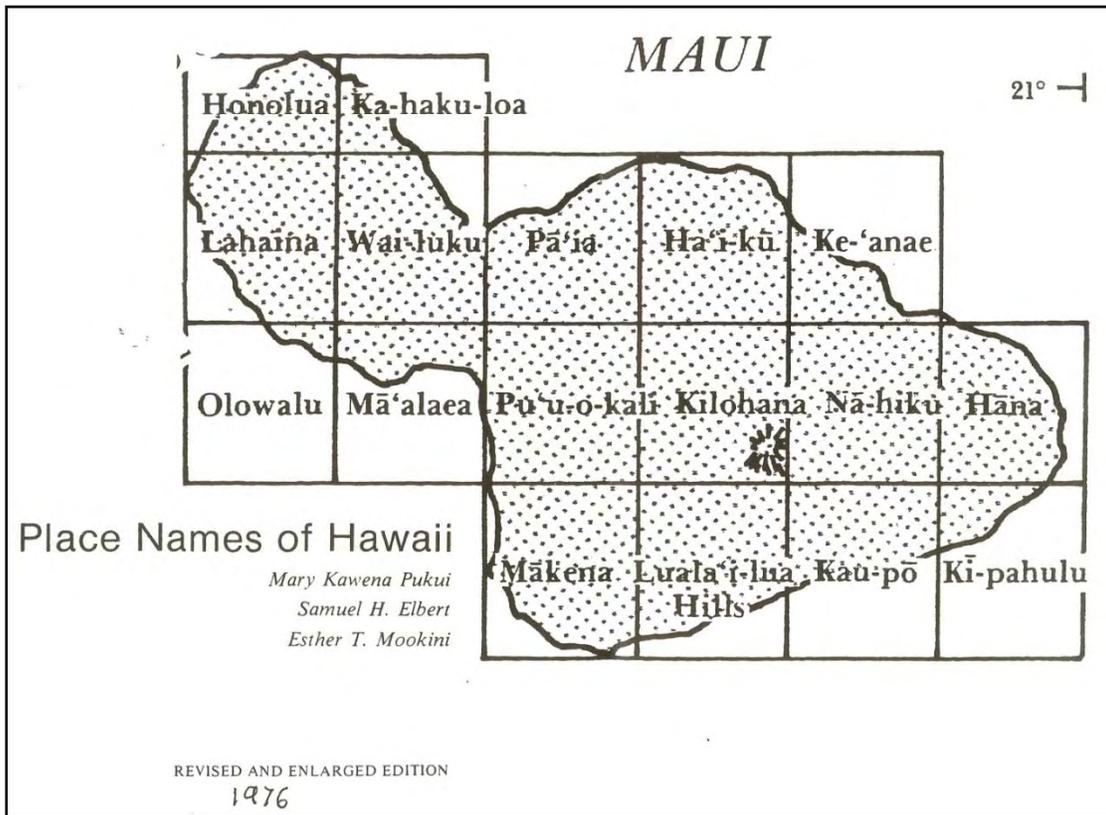
Mary M. Evanson

4 attachments

Comment– Mary Evanson, March 20, 2006 (cont.)



Comment – Mary Evanson, March 20, 2006 (cont.)



## Response – Mary Evanson, April 3, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

April 3, 2006

Ms. Mary Evanson

RE: Comments to Advanced Technology Solar Telescope (ATST) Cultural Report

Dear Mary,

Thank you for your comments to the Cultural Resource Evaluation and Traditional Practices Report for the ATST project. We understand that Haleakalā has significant cultural resources for visitors, local residents, and the Maui community. The comprehensive Environmental Impact Statement (EIS) is being prepared and will evaluate the potential impacts of the proposed project on the associated Hawaiian culture and spiritual resources, as well as other environmental conditions to Haleakalā.

We appreciate your comments and concerns and will ensure they are addressed as part of the EIS process. Your comments will become part of the EIS and the Administrative Record.

If you have not done so already, we invite you to visit the web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Sincerely,



Dr. Charlie Fein  
Vice President

## Comment - Marv Evanson, March 20, 2006

### 5.8.3 SCHOOLS

The closest school is located in the Kula community (Haleakalā Waldorf School) and is approximately 27 miles from the summit of Haleakalā.

#### *Potential Impacts and Mitigative Measures*

Due to its proposed location, impacts to schools from the proposed ATST project are not anticipated to be significant.

### 5.8.4 RECREATIONAL FACILITIES

The Haleakalā Visitor Center of Haleakalā National Park is located approximately 0.5 miles east of HO and is one of the main points of attraction for visitors of the mountain. Besides boasting a magnificent view of the crater, the Visitor Center also details the geology, archaeology, and ecology of the area as well as the wilderness protection programs in exhibits posted throughout the area. Overlooks with orientation panels and descriptive displays are located at Leleiwi, Kalahaku, and Pu`u Ula`ula (Red Hill) along the park road between park headquarters and the summit. The rare silversword plant that can be seen at Kalahaku draws many nature enthusiasts.

Many visitors are attracted to the summit and crater area, because of the excellent walking and hiking opportunities available. Hikes can range from short self-guiding walks to rigorous backpacking for several days. Camping is permitted at designated areas inside the crater floor. Camp and picnic sites are available in the Park, while public cabins are available for campers in the crater. In addition, concessionaires sponsor their own trips through the crater on a one-day or overnight basis. Hikers have also been known to traverse the trails found near the proposed site at Kalepeamo. The Skyline Trail begins at the 9,750-foot elevation at the lowest point of the paved access road near the Saddle Area and continues for about 6.5 miles, ending at the Polipoli Spring State Recreation Area. Trails through the area are open to the public for hiking and related recreational activities except during times of extreme fire danger.

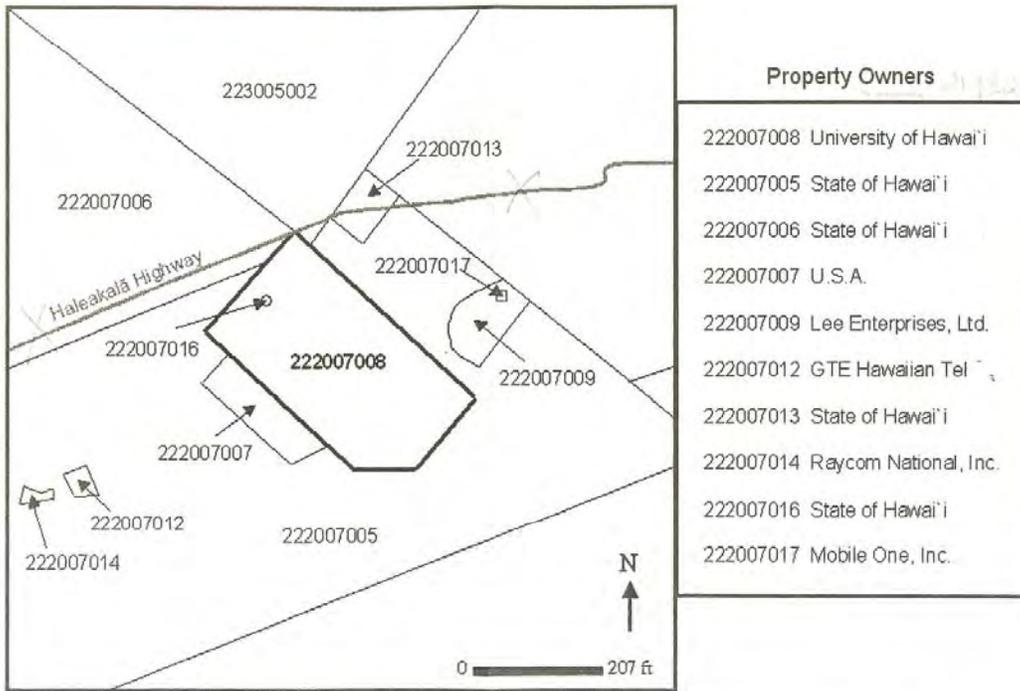
#### *Potential Impacts and Mitigative Measures*

The proposed ATST project is not expected to have any impact on recreational facilities at Haleakalā. While visitors to the Visitor Center would be able to see ATST among the other HO facilities from the parking area of the visitor center and from the Pu`u Ula`ula overlook, the proposed project will not interfere with the view of the crater or other vistas in the summit area. The facility would not be visible from the crater, due to terrain between the proposed facility and the crater wall. The few vehicles traveling to the proposed ATST each day will not add significantly to the hundreds of vehicles entering Haleakalā National Park daily. Construction activities that may involve slow vehicular traffic will be described in the EIS, along with mitigation measures for potential interference with visitor and emergency vehicle traffic.

what are you doing at Halepeamo?

3-20-06  
Recd From Mary Evanson

**Comment - Mary Evanson, March 20, 2006 (cont.)**



**Figure 2. Haleakalā Observatories (HO) Site Tax Map Key and Adjacent Properties**

*And you're building a new Haleakalā Highway - wow*

*gotta watch you*

## Response - Mary Evanson, March 21, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

March 21, 2006

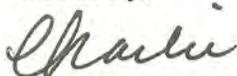
Ms. Mary Evanson

Dear Mary,

Thank you for your comments on the ATST EIS Preparation Notice. In response to your handwritten comment in the margins of page 40, the sentence you underscored should have read, "Hikers have also been known to traverse the trails found near the proposed site, to Kalapeamoa and points beyond on the Skyline Trail, which begins at the 9,750-foot elevation..." The ATST project is not planning to do anything with Kalepeamoa.

In response to your handwritten comment on Figure 2, Haleakalā Observatories (HO) Site Tax Map Key and Adjacent Properties (page 3), we have shown the TMK information as it is on the Maui County Web Site for that graphic. Haleakalā Highway is shown on their map as traversing the area. The ATST project is not planning to build any roads.

Sincerely,



Dr. Charlie Fein  
Vice President

## Comment - Mary Evanson, March 27, 2006

March 27, 2006

Re: ADVANCED TECHNOLOGY SOLAR TELESCOPE

The Friends of Haleakala National Park is a non-profit organization that was formed ten years ago, in 1996, to assist Haleakala National Park in various ways such as offering volunteer assistance, raising money for the Park's Endangered Species Program and to monitor actions that might impact the Park and its ecosystems.

In 1997 the University of Hawai'i/Institute for Astronomy published a draft Environmental Assessment for a Coordinated Broadcast Facility to be located about a mile down the southwest rift zone from the summit of Haleakala. The project was good but the location was bad. The public said no and the project did not materialize.

Last August the Friends of Haleakala National Park voted to strongly oppose locating the Advanced Technology Solar Telescope project on Haleakala. The project may be good but the location is bad.

The Friends of Haleakala National Park strongly oppose locating the Advanced Technology Solar Telescope Project on Haleakala

The entire mountain of Haleakala is a visual, cultural, biological and geological resource that must continue to be recognized as being of great significance and vital to our visitors, to our local residents and to our economy.

One of the missions of the Friends of Haleakala National Park is to preserve Haleakala's unique ecosystems, scenic character and associated Hawaiian culture and spiritual resources.

This project is so huge and intrusive it will adversely change Haleakala forever, causing irrevocable loss of natural, cultural and scenic resources.

This project may be worthwhile but the location is unacceptable. Haleakala may be the best spot in the whole wide world for this telescope but it can not be built on Haleakala. Go back to your maps and find another location. PLEASE!

Submitted by:



Mary M. Evanson, Vice-president

FRIENDS OF HALEAKALA NATIONAL PARK, INC.

## Comment - Issac Hall, August 10, 2005

### ADVANCED TECHNOLOGY SOLAR TELESCOPE PROJECT COMMENTS FORM

The National Science Foundation (NSF) and the National Solar Observatory (NSO) welcomes and encourages written public comments on environmental impacts and concerns — including historical, archaeological, and traditional cultural issues — and proposed mitigation associated with the proposed Advanced Technology Solar Telescope (ATST) project.

Your comments will be reproduced in the Final Environmental Impact Statement (EIS) for the ATST project. If you prefer that your name not be published with your comments, please express that desire in the comments section below. The NSF and NSO will not publish your address in the Final EIS.

Your comments may be written on this form or additional pages and returned to the registration desk; or, you may send your comments to:

Mr. Jeremy Wagner, ATST Project Manager  
National Solar Observatory  
950 North Cherry Avenue, Tucson, Arizona 85726  
email: [jwagner@nso.edu](mailto:jwagner@nso.edu)  
telephone: (520) 318-8249 fax: (520) 318-8500

Written comments must be received at NSO  
on or before 4:30 p.m. Mountain Standard Time, August 14, 2005.

Name: Isaac Hall

Full Address:

Street: \_\_\_\_\_

City: I

Date: 8/10/05

Place an X in this box if you wish to receive copies of future environmental planning documents on the proposed ATST project (including the Record of Decision) that NSF and NSO distributes to the public.

Please send to me all NEPA documents and a copy of your CDUA application.

The Advanced Technology Solar Telescope should be located somewhere else and not on top of Haleakala. This project is so hugh and intrusive that it will adversely change the summit of Haleakala.

## Response - Issac Hall, August 17, 2005



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

August 17, 2005

Mr. Isaac Hall

Dear Mr. Hall,

Thank you for your comments regarding the Advanced Technology Solar Telescope (ATST) Project following the Public Scoping Meetings.

As we indicated in our public meetings and in the forthcoming EIS Preparation Notice, we anticipate that the ATST will be visible at the summit from some locations on Maui under clear weather conditions. In the EIS, we fully intend to assess and document any potential for visible impact from the proposed project, in order to evaluate whether the project will be so "huge and intrusive" as to constitute a significant impact to the summit of Haleakalā. We look forward to having you examine our documentation as it becomes public.

If you have not done so already, we invite you to visit our web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Best regards,

A handwritten signature in black ink, appearing to read "Jeremy Wagner", is written over a horizontal line.

Jeremy Wagner  
Project Manager



Operated by the Association of Universities for Research in Astronomy, Inc.  
under a cooperative agreement to the National Science Foundation

## Comment - Bill Smith, August 14, 2005

August 14, 2005

Dr. Craig B. Foltz, Program Officer  
National Science Foundation  
Division of Astronomical Sciences  
4201 Wilson Blvd., Room 1045  
Washington, DC 22230

Re: Advanced Technology Solar Telescope (ATST) Project

Aloha:

I am writing about my interest in a notice of intent to prepare an Environmental Impact Statement (EIS) for the Advanced Technology Solar Telescope (ATST) at the Haleakala High Altitude Observatory (HO) Site on Haleakala, Maui, Hawai'i and request that you include my name and address among the interested parties receiving material about the project. Unfortunately, I was unable to attend any of the scoping meetings, and so copies of any previously published materials would also be appreciated.

My interests include these potential impacts that should be analyzed in the EIS: (1) visual impacts upon the natural image of Haleakala both in the summit area and all locations on the Island of Maui where the summit is visible; (2) continuation of existing abuse of a remarkably unique natural area for purposes that are incompatible with the spiritual and esthetic nature of the place; (3) disrespect for the importance of keeping such unique places in their natural condition, to benefit future generations (as a result of scientists being primarily motivated by near term professional and economic interests in the project); (4) deterioration of the spiritual and cultural environment of Maui as a result of excessive development of all types – including this project as a cumulative impact – displacing unique natural, spiritual and cultural resources; (5) risk of further alien species introduction with adverse impacts on the summit, Haleakala and Maui in general; (6) a malaise of bad karma (*i.e.*, adverse repercussions in the fate of those involved) from all of the above specified impacts – and resulting continued confusion in the appropriate balance that should be maintained between occupational technology and nature.

Thank you for considering these comments.

Aloha,

*Bill Smith*

## Response - Bill Smith, September 23, 2005



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

September 23, 2005

William D. Smith

Dear Mr. Smith,

Thank you for your comments regarding the Advanced Technology Solar Telescope (ATST) Project. We understand that Haleakalā has significant visual, cultural, biological, and geological resources for visitors, local residents, and the Maui economy. The comprehensive Environmental Impact Statement is being prepared and will evaluate the potential impacts of the proposed project on the ecosystems, scenic character, associated Hawaiian culture and spiritual resources, and other environmental conditions to Haleakalā.

The EIS process involves identifying environmental concerns, obtaining the relevant data on environmental conditions through necessary studies and surveys, receiving public and agency input, evaluating alternatives, and proposing measures for avoiding, minimizing, rectifying or reducing adverse impacts.

We appreciate your comments and concerns and will ensure they are addressed as a part of the EIS process.

If you have not done so already, we invite you to visit our web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Best regards,

A handwritten signature in black ink, appearing to read "J. Wagner", is written over the typed name.

Jeremy Wagner  
Project Manager



Operated by the Association of Universities for Research in Astronomy, Inc.  
under a cooperative agreement to the National Science Foundation

## Comment - Kula Community Association, September 19, 2005

**From:** Dick Mayer

**Date:** Mon, 19 Sep 2005 16:22:00 -1000

**To:** <jwagner@nso.edu>, <charlie@kcenv.com>, <OEQC@mail.health.state.hi.us>, Mike Maberry <maberry@hawaii.edu>

**Cc:** Karolyn Mossman, Elliott Krash, "Flammer, Gina"

**Subject:** Haleakala ATST - FEA, DEIS & FEIS

### **KULA COMMUNITY ASSOCIATION**

**P.O. Box 417 - Kula, HI 96790**

<http://kulamaui.com> <<http://kulamaui.com>>

*The vision of the Kula Community Association is to preserve open space,  
support agriculture,  
maintain a rural residential atmosphere, and to work together as a  
community.*

*The specific purpose of this association is to improve the quality of life for  
the residents of Kula,  
to promote civic welfare, and generally to benefit the community of Kula.*

**RE: Request to be a consulted party  
for the Haleakala ATST - FEA, DEIS & FEIS**

Aloha,

This is a formal request by the Board of the Kula Community Association to be a consulted party in the ATST FEA, DEIS & FEIS permitting process.

Since the ATST is within our community, we obviously have a genuine interest in the ATST's impact on the Kula community. Among our interests are the impact on the roads, the visual impact, the effect on auto and bike traffic through our community, and other physical and cultural issues that may arise or not be addressed during the preparation of the FEA, DEIS & EIS.

You should send correspondence to BOTH of the following addresses:

Kula Community Association  
P.O. Box 417  
Kula, Maui HI 96790  
and  
Dick Mayer, KCA Vice-President

Sincerely yours,  
Dick Mayer  
Vice-President, Kula Community Association

## Response - Kula Community Association, September 27, 2005



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

September 27, 2005

Mr. Dick Mayer, KCA Vice-President

Kula Community Association  
P.O. Box 417  
Kula, HI 96790

Dear Mr. Mayer and the Kula Community Association Members,

Thank you for your comments regarding the Advanced Technology Solar Telescope (ATST) Project. We understand that Haleakalā has significant visual, cultural, biological, and geological resources for visitors, local residents, and the Maui economy. We are in the process of preparing a comprehensive Environmental Impact Statement in order to evaluate the potential impacts of the proposed project on the ecosystems, scenic character, associated Hawaiian culture and spiritual resources, and other environmental conditions to Haleakalā.

The EIS process involves identifying environmental concerns, obtaining the relevant data on environmental conditions through necessary studies and surveys, receiving public and agency input, evaluating alternatives, and proposing measures for avoiding, minimizing, rectifying or reducing adverse impacts.

In accordance with your request to be consulted on the ATST Project, your comments will be addressed in the EIS. Specifically, the EIS will address potential impact to the roads, visual impact, any potential effects on auto and bike traffic in the Kula community, and other physical and cultural issues that have already been identified elsewhere in the community.

We appreciate your comments and concerns and we will ensure they are addressed as a part of the EIS process. If requested by the KCA membership, we are more than willing to give a presentation to KCA at a future date to more fully inform the members about the ATST Project and to further consult with KCA members.

If you have not done so already, we invite you to visit our web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Best regards,

A handwritten signature in black ink, appearing to read "Jeremy Wagner", is written over a white rectangular area.

Jeremy Wagner  
Project Manager



Operated by the Association of Universities for Research in Astronomy, Inc.  
under a cooperative agreement to the National Science Foundation

**Comment - Laura Thielen, Director,  
Dept. of Business, Economic Development & Tourism, September 16, 2005**



**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

**OFFICE OF PLANNING**

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846  
Fax: (808) 587-2824

LINDA LINGLE

GOVERNOR

THEODORE E. LIU

DIRECTOR

MARK K. ANDERSON

DEPUTY DIRECTOR

LAURA H. THIELEN

DIRECTOR

OFFICE OF PLANNING

Ref. No. P-11108

September 16, 2005

Dr. Charlie Fein  
Vice President  
KC Environmental, Inc.  
P.O. Box 1208  
Makawao, Hawaii 96768

Dear Dr. Fein:

Subject: The Advanced Technology Solar Telescope (ATST) Environmental  
Impact Statement Preparation Notice (EISPN), Haleakala Summit,  
County of Maui

Thank you for the opportunity to review the EISPN for the Environmental Impact  
Statement (EIS) which will accompany the Conservation District Use Application (CDUA) for  
the development of the ATST within the 18.166-acre University of Hawaii Institute for  
Astronomy site at the summit of Haleakala.

The proposed ATST project would be located within the 18.166-acre Haleakala High  
Altitude Observatories (HO) site on approximately 0.60 acres (25,800 square feet) of  
undeveloped land east of the existing Mees Solar Observatory Facility or at an alternative site  
within HO at Reber Circle.

The Draft EIS should discuss the master plan and planning process for the summit of  
Haleakala and summarize past, existing and future projects for the area. The environmental  
impacts and mitigation measures for the proposed ATST should be documented relative to the  
cumulative impacts of the existing development at the summit.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script, appearing to read "Laura Thielen".

Laura H. Thielen  
Director

c: Theodore E. Liu, DBEDT  
Peter T. Young, DLNR

**Response - Laura Thielen, Director,  
Dept. of Business, Economic Development & Tourism, September 22, 2005**

**UNIVERSITY OF HAWAII AT MĀNOA**

Institute for Astronomy

September 22, 2005

Ms. Laura H. Thielen  
Director  
Department of Business, Economy Development & Tourism  
235 Beretania Street, 6<sup>th</sup> Floor  
Honolulu, Hawaii 96804

**SUBJECT: The Advanced Technology Solar Telescope (ATST) Environmental Impact Statement Preparation Notice (EISPN), Haleakala Summit, County of Maui**

Dear Ms. Thielen,

The sites identified in the EISPN as being considered for the ATST are within the University of Hawaii (UH), Institute for Astronomy's (IfA) Haleakalā High Altitude Observatory Site (HO), which was set aside under Executive Order (EO) No. 1987 and placed under the control and management of the UH Board of Regents.

In your response to the above referenced EISPN, you state:

*"The Draft EIS should discuss the master plan and planning process for the summit of Haleakalā and summarize past, existing and future projects for the area."*

The Maui County Makawao-Pukalani-Kula Community Plan under:

**Environment**

***Objectives and Policies***

states:

4. *Encourage Federal, State and County cooperation in the preparation of a comprehensive Haleakalā summit master plan to promote orderly and sensitive development, which is compatible with the natural and native Hawaiian cultural environment of Haleakalā National Park.*

The "Haleakalā summit" actually includes HO, land EO-ed to the Federal Aviation Administration & Department of Energy, DLNR land leased to various broadcast entities including the County of Maui, Hawaiian Homelands, Haleakalā National Park as well as various private landowners.

**Response - Laura Thielen, Director,  
Dept. of Business, Economic Development & Tourism, September 22, 2005**

In January of 2005, the IfA published the Haleakalā High Altitude Observatory Site Long Range Development Plan (LRDP), which is available on the web at

<<http://www.ifa.hawaii.edu/Haleakalā/LRDP/>>. The LRDP is a master plan for our 18-acre HO area and will serve as our contribution to any comprehensive Haleakalā summit master plan that may someday be developed.

Sections 6-9 of the LRDP detail the historical, cultural, and educational & research use of HO as well as physical and management planning. The ATST is identified as a potential new facility at HO under Section 8.2.2 of the IfA's LRDP.

Should you have any questions, please do not hesitate to contact me.

Sincerely

Mike Maberry  
Assistant Director

[Maberry@hawaii.edu](mailto:Maberry@hawaii.edu)  
p-(808)8767600 X-107  
c-(808)870-3344  
f-(808)8767603

c. file  
Theodore E. Lie, DBEDT  
Peter T. Young, DLNR

2680 Woodlawn Drive, Honolulu, Hawai'i 96822  
An Equal Opportunity/Affirmative Action Institution

2

49

# Comment - Sam Lemmo, Dept. of Land and Natural Resources, September 23, 2005

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFFICE OF CONSERVATION AND COASTAL LANDS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN REGULATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
HUNTING AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

REF.:OCCL:TM

Correspondence: MA 06-47

Dr. Charlie Fein, Vice President  
KC Environmental, Inc.  
P.O. Box 1208  
Makawao, Hawaii 96768

SEP 23 2005

Dear Dr. Fein,

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN) for the Proposed Advance Technology Solar Telescope (ATST) Located at the Haleakala High Altitude Observatories, Papaanui, Island of Maui, TMK: (2) 2-2-7:008

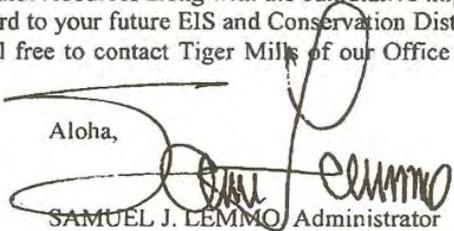
The Office of Conservation and Coastal Lands (OCCL) is in receipt of your correspondence requesting review of the EISPN for the Environmental Impact Statement for the development of the National Science Foundation's ATST proposal within the  $\approx$  18 acre University of Hawaii site.

According to your information, the proposed \$175,000,000 project is to be constructed on  $\approx$  25,800 square feet of undeveloped land located either east of the existing Mees facility or at Reber Circle. The project is to build the next generation ground-based solar telescope that would be an indispensable tool for exploring and understanding physical processes on the Sun that ultimately affect Earth.

The OCCL notes the Haleakala High Altitude Observatory site was established in 1961 by Governor's Executive Order 1987. Departmental records indicate that the proposed project area lies within the General subzone of the Conservation District. The OCCL notes that the proposed project is an identified land use within the General subzone under the Hawaii Administrative Rules (HAR) §13-5-22, R-3 ASTRONOMY FACILITIES. As noted by you, the proposed action will require the filing of a Conservation District Use Application (CDUA) and a Management Plan. The CDUA will require a Public Hearing and a Board permit. Please include a copy of the Long Range Development Plan (LRDP) with your CDUA submittal.

The Draft EIS should include discussion of the LRDP, past monitoring strategies and an evaluation of past mitigative measures for the natural and cultural resources along with the cumulative impacts of development at the subject area. The OCCL looks forward to your future EIS and Conservation District Use Application. Should you have any questions, please feel free to contact Tiger Mills of our Office of Conservation and Coastal Lands at 587-0382.

Aloha,

  
SAMUEL J. LEMMO, Administrator  
Office of Conservation and Coastal Lands

c: Chairperson  
MDLO  
County of Maui, Department of Planning

50

**Comment - Brian Jenkins, President, Friends of Polipoli, September 28, 2005**

FRIENDS OF POLIPOLI  
P.O. BOX 431  
WAILUKU, HAWAII 96793

September 28, 2005

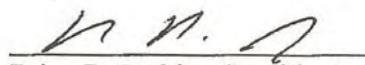
National Science Foundation  
Division of Astronomical Sciences  
c/o Mr. Jeremy Wagner  
National Solar Observatory  
P.O. Box 26732  
Tucson, AZ 85726-6732

Re: Request to Be a Consulted Party for Advanced Technology Solar Telescope at Haleakala

Dear Mr. Wagner:

Friends of Polipoli, a Hawaii nonprofit corporation, requests that it be a consulted party with regard to the above-referenced project. Thank you.

Sincerely,

  
Brian R. Jenkins, President

cc. UH, Institute for Astronomy  
KC Environmental, Inc.  
OEQC  
Directors, Friends of Polipoli

**Comment - Brian Jenkins, President, Friends of Polipoli,  
September 28, 2005 (cont.)**

FRIENDS OF POLIPOLI  
P.O. BOX 431  
WAILUKU, HAWAII 96793

LETTER OF TRANSMITTAL

TO: Office of Environmental Quality Control      University of Hawaii Institute for Astronomy  
235 South Beretania Street      Attention: Mr. Michael Maberry  
Suite 702      2680 Woodlawn Drive  
Honolulu, Hawaii 96813      Honolulu, Hawaii 96822

KC Environmental, Inc.  
Post Office Box 1208  
Makawao, Hawaii 96768

RE: Friends of Polipoli      FILE: 1857  
FROM: Brian R. Jenkins      DATE: September 28, 2005

COPIES	DATE	DESCRIPTION
Copy	09/28/05	CC. OF LETTER DATED SEPTEMBER 28, 2005 FROM BRIAN R. JENKINS TO NATIONAL SCIENCE FOUNDATION, DIVISION OF ASTRONOMICAL SCIENCES RE: REQUEST TO BE A CONSULTED PARTY FOR ADVANCED TECHNOLOGY SOLAR TELESCOPE AT HALEAKALA

The above is/are transmitted herewith:

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Per Our Conversation | <input type="checkbox"/> For Translation                       | <input type="checkbox"/> For Recordation   |
| <input type="checkbox"/> Per Your Request     | <input type="checkbox"/> For Review and Approval               | <input type="checkbox"/> For Filing        |
| <input type="checkbox"/> Approved             | <input type="checkbox"/> For Review and Payment                | <input type="checkbox"/> For Certification |
| <input type="checkbox"/> Approved as Noted    | <input checked="" type="checkbox"/> For Your Information/Files | <input type="checkbox"/> Other             |
| <input type="checkbox"/> Disapproved          | <input type="checkbox"/> For Signature and Return              | <input type="checkbox"/> See Remarks Below |
| <input type="checkbox"/> For Corrections      | <input type="checkbox"/> For Signature and Forwarding          |  |

Remarks:

Mahalo,

  
Candace H. Y. Stahl, Assisting Brian R. Jenkins  
Enclosure

## Response - Brian Jenkins, President, Friends of Polipoli, October 12, 2005



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

October 12, 2005

Mr. Brian R. Jenkins, President  
Friends of Polipoli  
P.O. Box 431  
Wailuku, HI 96793

Dear Mr. Jenkins,

Thank you for your letter regarding the Advanced Technology Solar Telescope (ATST) Project.

In accordance with your request to be consulted on the ATST Project, we will ensure any comments submitted by Friends of Polipoli are addressed in the EIS. If requested by the Friends of Polipoli membership, we are more than willing to give a presentation at a future date to more fully inform the members about the ATST Project and to further consult with the Friends of Polipoli membership.

If you have not done so already, we invite you to visit our web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Best regards,

A handwritten signature in black ink, appearing to read "Jeremy Wagner", is written over a horizontal line.

Jeremy Wagner  
Project Manager



Operated by the Association of Universities for Research in Astronomy, Inc.  
under a cooperative agreement to the National Science Foundation

## Comment – Brian Jenkins, Friends of Polipoli, April 27, 2006

FRIENDS OF POLIPOLI  
P.O. Box 431  
Wailuku, Hawai'i 96793

April 27, 2006

KC ENVIRONMENTAL INC.  
Att'n. Dr. Charlie Fein, Vice President  
P.O. Box 1208  
Makawao, Hawai'i 96768

Dr. Craig B. Foltz  
NSF ATST Program Director  
4201 Wilson Blvd., Room 1045  
Arlington, VA 22230

Re: Proposed Advanced Technology Solar Telescope on Haleakala Summit

Dear Doctors Fein and Foltz:

This letter is to advise you that the Friends of Polipoli, a Hawaii nonprofit corporation opposes the proposed "Advanced Technology Solar Telescope" on the following grounds:

1. The size of the proposed structure, at approximately 143 feet above ground level, is wholly inappropriate for the summit. It will be clearly visible from most of the Polipoli area especially from the Skyline Drive area. This towering structure will greatly detract from the experience of the last readily accessible wilderness area on Maui.
2. The color of the proposed structure will be a highly reflective bright white (to minimize cooling expenses). The blindingly reflective coating coupled with the gargantuan size of the building will create a glowing beacon that will detract from the wilderness experience enjoyed by hunters and hikers in the Polipoli area. When the public finally becomes aware that this glowing beacon will be taller than a twelve story building, I believe that any local support or disinterest will be quickly replaced with active opposition. The proposed 143 foot tall glowing tower has been described as being more fit for a memorial to the Chernobyl disaster of 1986 than a housing for a telescope on the summit of Haleakala.
3. The Final Report, dated January of 2006, on pages 49-54, contained deliberately deceptive and distorted pictures of how the proposed structure would appear from Pukalani and other sites on Maui. These "depictions" suggest that the tower would be barely visible from various points throughout the island. As the current small structures are clearly visible, how is it possibly that a twelve story glowing tower will be barely

**Comment – Brian Jenkins, Friends of Polipoli, April 27, 2006 (cont.)**

Dr. Charlie Fein  
Dr. Craig B. Foltz  
April 27, 2006  
Page Two

visible? The use of this dishonest presentation has made it clear that the rest of the analysis in the Environmental Assessment cannot be trusted by decision makers.

4. The further development of the “Science City” area is adversely impacting the public’s right of access to the top of the Skyline Drive trailhead from the national park. Already, there are posted signs declaring that people seeking access to the top of Skyline Drive from the National Park risk being prosecuted under federal law. There is currently a new gate being constructed that appears to be designed to allow the easy blockage of public access to this trailhead. The further development of “sensitive” projects like the proposed “Advanced Technology Solar Telescope” provides justification, for security purposes, to block this important access to the Polipoli trail system from the national park.

The Friends of Polipoli was incorporated on April 1, 2004 and its purpose is the preservation and restoration of natural areas including, particularly, Polipoli Spring State Recreation Area on the Island of Maui and educational activities with regard thereto. The proposed “Advanced Technology Solar Telescope” will clearly have an adverse impact on the Polipoli area. The Directors of The Friends of Polipoli have resolved to oppose this project. Thank you.

Sincerely,  
Friends of Polipoli



By: Brian R. Jenkins  
Its: President

**Comment – Brian Jenkins,  
Maui News Letters to the Editor,  
May 8, 2006**

## Letters

### **Solar telescope report used drawings disguised as photos**

As a resident of Kula and someone who has hiked and hunted in the Polipoli area since the 1960s, I am opposed to the proposed Advanced Technology Solar Telescope that the National Science Foundation wants to build on the Haleakala Summit.

Rising 143 feet above ground level with a coating of highly reflective bright white – to minimize cooling expenses – will create a glowing beacon that will detract from the wilderness experience enjoyed by hunters and hikers in the Polipoli area.

The January 2006 Final Report on the project released by KC Environmental contained deliberately deceptive and distorted “pictures” of how the proposed observatory would appear from Pukalani and other sites on Maui. These renditions, designed to resemble photographs, depict the gargantuan building as being barely visible from the central valley when even the very small currently existing observatories are clearly visible.

When the proponents of a project use deliberately deceptive material in their public reports, then the remainder of the presented information, declaring that the impact of the structure would be minimal, should also be viewed with skepticism.

Further development of “Science City” is adversely impacting the public’s right to access the top of the Skyline Drive trailhead. Already, there are posted signs declaring members of the public at risk of being prosecuted under federal law. A new gate has recently been constructed that appears to be designed to allow the easy blockage of public access to this trailhead.

**Brian R. Jenkins  
Kula**

**Response –  
Maui News, Letters to the Editor,  
May 14, 2006**

C2 – Sunday, May 14, 2006 – THE MAUI NEWS

### **Telescope report only a preliminary EIS statement**

I would like to clarify the inaccurate information in a May 8 letter. First, the “final report” referred to is actually the Environmental Impact Statement Preparation Notice, which describes the project, identifies the known issues, and notifies the public that a full federal and state environmental impact statement is forthcoming.

Second, there is no intent to deceive anyone about the appearance of the proposed Advanced Technology Solar Telescope. The visual materials used in the document were high-resolution digital photographs taken from various locations around Maui, with highly accurate computer renderings of the proposed project superimposed on the photographs.

The computer renderings were developed from architectural plans, actual on-site measurements and visual observations, topographic maps, and careful correlation between the proposed building dimensions and those of the existing facilities.

Third, under clear atmospheric conditions, the proposed ATST would be visible from various locations on Maui. However, its proposed primary siting is on ground that is lower and behind most of the other existing facilities. More of these renderings are in preparation for the EIS to show how the proposed project may appear at different times of the year.

Finally, The new gate/animal guard at the head of Skyline Drive leading to Skyline Trail only restricts vehicular traffic and is under the control of the state Department of Land and Natural Resources. It is neither on nor has anything to do with the property for which the University of Hawaii is the steward.

**Mike Maberry, Assistant Director  
UH Institute for Astronomy  
Kula**

## Response - Brian Jenkins, President, Friends of Polipoli, May 10, 2006

### UNIVERSITY OF HAWAII AT MĀNOA

Institute for Astronomy

May 10, 2006

Mr. Brian Jenkins  
P. O. Box 431  
Wailuku, HI 96793

Dear Mr. Jenkins,

I would like to clarify the inaccurate information in your Maui News Letter to the Editor (May 8) and your letter (April 27, 2006) to Dr. Charlie Fein of KC Environmental, Inc., and Dr. Craig Foltz of the National Science Foundation.

First, the "Final Report" you refer to is actually the Environmental Impact Statement Preparation Notice (EISPN), which describes the project, identifies the known issues, and notifies the public that a full Federal and State EIS is forthcoming.

Secondly, it is completely false to state that the project team used "deliberately deceptive material" in the EISPN to depict the proposed ATST as it would appear on Haleakalā. There is no intent to deceive anyone. The visual materials used in the document were not drawings. They were high-resolution digital photographs taken from various locations around Maui, with highly accurate computer renderings of the proposed project superimposed on the photographs. The computer renderings were developed from architectural plans, actual on-site measurements and visual observations, topographic maps, and careful correlation between the proposed building dimensions and those of the existing facilities.

Third, it is misleading to imply that since even the "very small currently existing observatories are clearly visible", a "gargantuan" ATST must be much more visible. Under clear atmospheric conditions, the proposed ATST would be visible from various locations on Maui; however at its proposed primary siting on ground that is lower and behind most of the other existing facilities, it would enjoy considerable shielding from the terrain and from those existing facilities. Given the relative positions of the existing facilities, the proposed ATST and the topography, the computer renderings in the EISPN accurately displayed both the current facilities and the proposed ATST at various locations around Maui. In truth, it would be barely visible in some locations and more visible in others—there's nothing deceptive about that. More of these renderings are in preparation for the EIS to show how the proposed project may appear at different times of the year.

Finally, contrary to the accusation that "Science City" is adversely affecting the public's right of access to Skyline Drive, it should be noted that the new gate/animal guard at the head of Skyline Drive leading to Skyline Trail only restricts vehicular traffic and is under the control of the Department of Land and Natural Resources. It is neither on, nor has anything to do with the property for which the University of Hawai'i is the steward.



Mike Maberry  
Assistant Director

Cc: Dr. Charlie Fein, KC Environmental, Inc.  
Dr. Craig Foltz, National Science Foundation

2680 Woodlawn Drive, Honolulu, Hawai'i 96822  
An Equal Opportunity/Affirmative Action Institution

# Comment - Dept. of Health, Environmental Planning Office, October 3, 2005

LINDA LINGLE  
GOVERNOR OF HAWAII



CHIYOME L. FUKINO, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
HONOLULU, HAWAII 96801-3378

In reply, please refer to:  
EPO-05-077

October 3, 2005

Dr. Charlie Fein, Vice-President  
KC Environmental Inc.  
P. O. Box 1208  
Makawao, Hawaii 96768

Dear Dr. Fein:

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN) for the Advanced Technology Solar Telescope (ATST) on Haleakala, Waiakoa, Papanui, Makawao, Maui, Hawaii. TMK: (2) 2-2-07:008

Thank you for allowing us to review and comment on the subject document. The document was routed to the various branches of the Environmental Health Administration. We have the following Wastewater Branch and Environmental Planning Office comments.

### Wastewater Branch

We have reviewed the subject document which proposes the Advanced Technology Solar Telescope (ATST) project which would be the largest and most capable solar telescope in the world with its unprecedented 4-meter aperture, integrated adaptive optics, low scattered light, infrared coverage and state-of-the-art post-focus instrumentation.

Plans for a treatment individual wastewater system (IWS) such as a septic tank and seepage pit serving the proposed facility were submitted to our office on November 10, 1997. The IWS was constructed and approved for use on April 29, 1999. Thus, we have no objections to the proposed project as domestic wastewater generation, treatment and disposal were previously addressed. However, we request that the project's consultant evaluate wastewater flows from the new facilities and insure that domestic wastewater generation can be handled by the current system. If wastewater flows are significantly increased with the new project, we would require that the wastewater system be modified or expanded.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater System." We do reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at telephone 586-4294.

## Comment - Dept. of Health, Environmental Planning Office, October 3, 2005 (cont.)

Dr. Fein  
October 3, 2005  
Page 2

### Environmental Planning Office

To facilitate TMDL development and implementation, and to assist with our assessment of the potential impact of proposed actions upon water quality, pollutant loading, and biological resources in receiving waters, we suggest that environmental review documents, permit applications, and related submittals include the following standard information and analyses. Please note that these comments are also listed on our website: [www.state.hi.us/hcalth/cnvironmental/cnv-planning/landusc/landusc.html](http://www.state.hi.us/hcalth/cnvironmental/cnv-planning/landusc/landusc.html). We suggest that you may review other Standard Comments on this website.

### **Waterbody type and class**

1. Identify the waterbody type and class, as defined in Hawaii Administrative Rules Chapter 11-54 (<http://www.state.hi.us/health/about/rules/11-54.pdf>), of all potentially affected water bodies. Potentially affected water bodies means those in which proposed project activity would take place and any others that could receive water discharged by the proposed project activity or water flowing down from the proposed site. These waterbodies can be presented as a chain of receiving waters whose top link is the project site upslope and whose bottom link is in Pacific Ocean "oceanic waters," with all receiving waters named according to conventions established by Chapter 11-54 and the *List of Impaired Waters in Hawaii Prepared under Clean Water Act § 303(d)*. For example, a recent project proposed for Nuhelewai Stream, Oahu (a tributary of Kapalama Canal) might potentially affect Nuhelewai Stream, Kapalama Canal, Honolulu Harbor and Shore Areas, and the Pacific Ocean.

### **Existing water quality management actions**

2. Identify any existing National Pollutant Discharge Elimination System (NPDES) permits and related connection permits (issued by permittees) that will govern the management of water that runs off or is discharged from the proposed project site or facility. Please include NPDES and other permit numbers; names of permittees, permitted facilities, and receiving waters (including waterbody type and class as in 1. above); diagrams showing drainage/discharge pathways and outfall locations; and note any permit conditions that may specifically apply to the proposed project.
3. Identify any planning documents, groups, and projects that include specific prescriptions for water quality management at the proposed project site and in the potentially affected waterbodies. Please note those prescriptions that may specifically apply to the proposed project.

**Comment - Dept. of Health, Environmental Planning Office,  
October 3, 2005 (cont.)**

Dr. Fein  
October 3, 2005  
Page 3

**Pending water quality management actions**

4. Identify all potentially affected water bodies that appear on the current *List of Impaired Waters in Hawaii Prepared under Clean Water Act §303(d)* including the listed waterbody, geographic scope of listing, and pollutant(s) (See Table 5 at <http://www.hawaii.gov/hhealth/environmental/env-planning/wqm/303dpcfinal.pdf>).
5. If the proposed project involves potentially affected water bodies that appear on the current *List of Impaired Waters in Hawaii Prepared under Clean Water Act §303(d)*, identify and quantify expected changes in the following site and watershed conditions and characteristics
  - surface permeability
  - hydrologic response of surface (timing, magnitude, and pathways)
  - receiving water hydrology
  - runoff and discharge constituents
  - pollutant concentrations and loads in receiving waters
  - aquatic habitat quality and the integrity of aquatic biota

Where TMDLs are already established they include pollutant load allocations for the surrounding lands and point source discharges. In these cases, we suggest that the submittal specify how the proposed project would contribute to achieving the applicable load reductions.

Where TMDLs are yet to be established and implemented, a first step in achieving TMDL objectives is to prevent any project-related increases in pollutant loads. This is generally accomplished through the proper application of suitable best management practices in all phases of the project and adherence to any applicable ordinances, standards, and permit conditions. In these cases we suggest that the submittal specify how the proposed project would contribute to reducing the polluted discharge and runoff entering the receiving waters, including plans for additional pollutant load reduction practices in future management of the surrounding lands and drainage/discharge systems.

**Proposed Action and Alternatives Considered**

We suggest that each submittal identify and analyze potential project impacts at a watershed scale by considering the potential contribution of the proposed project to cumulative, multi-project watershed effects on hydrology, water quality, and aquatic and riparian ecosystems.

We also suggest that each submittal broadly evaluate project alternatives by identifying more than one engineering solution for proposed projects. In particular, we suggest the consideration of "alternative," "soft," and "green" engineering solutions for channel modifications that would

**Comment - Dept. of Health, Environmental Planning Office,  
October 3, 2005 (cont.)**

Dr. Fein  
October 3, 2005  
Page 4

provide a more environmentally friendly and aesthetically pleasing channel environment and minimize the destruction of natural landscapes.

If there are any questions about these comments please contact Jiakai Liu with the Environmental Planning Office at 586-4346.

Sincerely,



HAROLD LAO, ACTING MANAGER  
Environmental Planning Office

c: DDEH  
EH-Maui  
WWB  
SDWB  
EPO

**Response - Dept. of Health, Environmental Planning Office, October 11, 2005**



**P.O. Box 1208  
Makawao HI 96768**

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

October 11, 2005

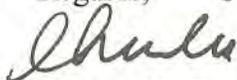
Mr. Harold Lao  
Acting Manager  
Department of Health  
Environmental Planning Office  
P. O. Box 3378  
Honolulu, HI 96801-3378

Dear Mr. Lao:

Thank you for your comments in response to the Environmental Impact Statement Preparation Notice (EISPN) for the Advanced Technology Solar Telescope (ATST) project. As a local Maui organization, we understand that Haleakalā has significant visual, cultural, biological, and geological resources for local residents, visitors, and the Maui economy. We fully intend to address each comment and concern you have listed in your letter in our comprehensive Environmental Impact Statement (EIS).

We appreciate your helpful comments and concerns, and we look forward to your future involvement in the environmental process for ATST. Again, thank you for your participation and feedback.

Regards,



Dr. Charlie Fein  
Vice President

## Comment - Dept. of Planning, County of Maui, October 5, 2005

ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

WAYNE A. BOTEILHO  
Deputy Director



### COUNTY OF MAUI DEPARTMENT OF PLANNING

October 5, 2005

Dr. Charlie Fein  
KC Environmental, Inc.  
P. O. Box 1208  
Makawao, Hawaii 96768

Dear Mr. Fein:

RE: Environmental Impact Statement Preparation Notice for the Advanced Technology Solar Telescope, Located at TMK 2-2-007:008, Summit of Haleakala, Island of Maui, Hawaii (LTR 2005/2444)

The Maui Planning Department (Department) is in receipt of the Environmental Impact Statement Preparation Notice dated August 2005, requesting comments on the above referenced project.

The Department provides the following comments:

1. The Makawao-Pukalani-Kula Community Plan includes a policy that states: "Encourage Federal, State and County cooperation in the preparation of a comprehensive Haleakala summit master plan to promote orderly and sensitive development which is compatible with the natural and native Hawaiian cultural environment of Haleakala National Park." Discuss how the proposal is consistent with this policy.
2. Provide an analysis of the proposal's impact on view planes of Haleakala from common viewing points on Maui, including Haleakala summit and population centers, using computer generated images.
3. Elaborate on the six potential candidate sites and the feasibility of their use as alternative sites.
4. Explain why other alternative sites do not meet the necessary criteria, including sites:
  - a. Within the Haleakala Observatory (HO) area.

250 SOUTH HIGH STREET, WAILUKU, MAUI, HAWAII 96793  
PLANNING DIVISION (808) 270-7735; ZONING DIVISION (808) 270-7253; FACSIMILE (808) 270-7634

**Comment - Dept. of Planning, County of Maui,  
October 5, 2005 (cont.)**

Dr. Charlie Fein  
October 5, 2005  
Page 2

- b. On land that is adjacent to the HO area that could be leased or exchanged.
  - c. On Mauna Kea, on the Big Island, Hawai'i.
  - d. Already containing telescopes on the mainland.
  - e. In space, i.e. the Hubble space telescope.
5. Discuss the use of technological solutions that could allow measures which would mitigate the visibility of the building, including:
  - a. Reducing the height of the building.
  - b. Using earth-tone colors for the building.
  - c. Sinking the building into the ground.
6. Discuss traffic volumes that will be generated from construction and from operation of the telescope, and measures that will mitigate the impacts.
7. Discuss on-site staff support facilities that will be generated by the proposal for use during operational and non-operational periods, including offices, laboratories, conference rooms, beds, kitchens, bathrooms, parking, etc.
8. Specify construction mitigation measures regarding air and water quality and soil conservation.
9. Discuss in terminology that the public can understand, how the information that will be generated from the operation of the telescope will be used, and the importance of its use.
10. Discuss the economic impact of the telescope including:
  - a. The total number of jobs that will be generated by the construction and operation of the telescope.
  - b. The resultant amount of money that will be infused into the local economy.
11. Discuss the non-economic advantages of having the largest solar telescope and the attractions and benefits it will bring to Maui and the State.
12. Although the site is outside of the Special Management Area, it is within the Coastal Zone Management Area (CZMA). Discuss compliance with the regulations of the CZMA.

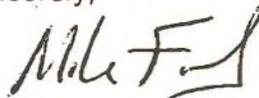
**Comment - Dept. of Planning, County of Maui,  
October 5, 2005 (cont.)**

Dr. Charlie Fein  
October 5, 2005  
Page 3

13. The Department recommends consultation with the Department of Land and Natural Resources regarding impacts to environmental resources and with the Department of Hawaiian Homelands, Office of Hawaiian Affairs, and Na Kapuna O Maui, regarding cultural and archaeological concerns.

Thank you for the opportunity to comment. Please include the Department on the distribution list for the Draft EIS. Should you require further clarification, please contact Mr. Jeff Hunt, AICP, Staff Planner, at 270-6271.

Sincerely,



MICHAEL W. FOLEY  
Planning Director

MWF:JH:lar

c: Clayton Yoshida, AICP, Planning Program Administrator  
Kivette Caigoy, Environmental Planner  
Jeff Hunt, AICP, Staff Planner  
OEQC  
DPWEM  
General File  
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**Response - Dept. of Planning, County of Maui, October 11, 2005**



**P.O. Box 1208  
Makawao HI 96768**

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

October 11, 2005

Mr. Michael W. Foley  
Planning Director  
County of Maui - Department of Planning  
250 South High Street  
Wailuku, HI 96793

Dear Mr. Foley:

Thank you for your comments in response to the Environmental Impact Statement Preparation Notice (EISPN) for the Advanced Technology Solar Telescope (ATST) project. As a local Maui organization, we understand that Haleakalā has significant visual, cultural, biological, and geological resources for local residents, visitors, and the Maui economy. We fully intend to address each comment and concern you have listed in your letter in our comprehensive Environmental Impact Statement (EIS).

We appreciate your helpful comments and concerns, and we look forward to your future involvement in the environmental process for ATST. Again, thank you for your participation and feedback.

Regards,



Dr. Charlie Fein  
Vice President

## Comment - Mikahala Helm, October 8, 2005

Oct. 8, 2005

To whom and all that  
it may concern -

I am a Hawaiian,  
born and raised on Maui.  
I am against the proposed  
telescope proposed for  
Haleakalā.

Please include me re  
EIS status.

Makahala,  
Mikahala Helm

## Response - Mikahala Helm, October 12, 2005



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

October 12, 2005

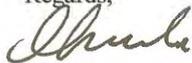
Mikahala Helm

Dear Mikahala:

Thank you for your comments in response to the Advanced Technology Solar Telescope (ATST) project. As a local Maui organization, we understand that Haleakalā has significant cultural, visual, biological, and geological resources for local residents, visitors, and the Maui economy. We fully intend to address these concerns in our comprehensive Environmental Impact Statement (EIS).

We will include you on our distribution list for the EIS. If you have not done so already, we invite you to visit the ATST web site at <http://atst.nso.edu/>. Thank you for your participation and feedback

Regards,



Dr. Charlie Fein  
Vice President

## Comment – Mikahala Helm, March 20, 2006

Mikahala Helm

March 20, 2006

Aloha kākou,

The following is my written comment on the Cultural Resource Evaluation and addresses my concerns as a Native Hawaiian. I was born and raised here on Maui. I am opposed to the proposed Advanced Technology Solar Telescope (ATST) Project. It negates the needs of the Hawaiian culture for the needs of everyone else. Once again, the needs of science are seen as more important than the needs of the Hawaiian people.

Haleakalā is important because it has continually been an important feature maintained in story and mele from pre-contact Hawai'i till today. Since Haleakalā was prominent in many of the stories and mele, it shows us that Haleakalā was important to our kupuna. This aloha, appreciation, awe and reverence for Haleakalā comes from all of my experiences in going to Haleakalā. Our cultural practitioners to this very day continue to use Haleakalā as a way to communicate with the greater beings in ceremonies and rituals.

I believe that we should not have any more telescopes on Haleakalā because they will continue to damage physically and spiritually the specialness of our majestic Haleakalā.

Sincerely,



Mikahala Helm

## Response – Mikahala Helm, April 3, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

April 3, 2006

Ms. Mikahala Helm

RE: Comments to Advanced Technology Solar Telescope (ATST) Cultural Report

Dear Mikahala,

Thank you for your comments to the Cultural Resource Evaluation and Traditional Practices Report for the ATST project. We understand that Haleakalā has significant cultural resources for the Native Hawaiian community. The comprehensive Environmental Impact Statement (EIS) is being prepared and will evaluate the potential impacts of the proposed project on the associated Hawaiian culture and spiritual resources, as well as other environmental conditions to Haleakalā.

We appreciate your comments and concerns and will ensure they are addressed as part of the EIS and Section 106 process. Your comments will become part of the EIS and the Administrative Record.

If you have not done so already, we invite you to visit the web site at: <http://atst.nso.edu/> and <http://atst.nso.edu/library/EIS.shtml>, which specifically addresses the Section 106 process of the National Historic Preservation Act (NHPA). Thank you for your participation.

Sincerely,



Dr. Charlie Fein  
Vice President

## Comment - Office of Hawaiian Affairs, October 17, 2005

PHONE (808) 594-1888

FAX (808) 594-1865



**STATE OF HAWAII**  
**OFFICE OF HAWAIIAN AFFAIRS**  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

HRD05/2048

October 17, 2005

Dr. Charlie Fein  
Vice-President  
KC Environmental, Inc.  
P.O. Box 1208  
Makawao, HI 96768

**RE: Environmental Impact Statement Preparation Notice (EISPN) for the proposed Advanced Technology Solar Telescope (ATST), Haleakalā, Maui; TMK: 2-2-007:008**

Dear Dr. Charlie Fein,

The Office of Hawaiian Affairs (OHA) is in receipt of your August 22, 2005, request for comments on the above project, which would include construction of at the 18.166-acre University of Hawai'i Institute of Astronomy, Haleakalā High Altitude Observatories site. OHA apologizes for the delayed response.

We request that you also consult, if you have not already, with our Maui Community Resource Coordinator (address below), the Maui Island Burial Council, Na Kapuna O Maui, the Central Maui Hawaiian Civic Club, and the Royal Order of Kamehameha (William Roback). Haleakalā is a sacred site that holds strong cultural, traditional and religious significance to the Hawaiian people, and the Hawaiian people should therefore be consulted and their feelings for the land should be respected. Until all of the above organizations have been fully consulted, and we have had a chance to review the cultural resource evaluation and traditional practices assessment that will be provided for the Long Range Development Plan (EISPN, p. 29, § 5.1.3), we cannot concur with the statement on page 29 of the EISPN that "The proposed ATST project is not expected to have an impact on cultural resources at Kolekole."

Please note that while the University of Hawai'i may be listed as the fee owner of the parcel in question (EISPN, p. 7, § 1.3), these are ceded lands, and should be afforded the respect that deserves. Ceded lands are public lands, held in trust, and OHA has a fiduciary duty to our beneficiaries – all Hawaiians, to assure that these lands are used and treated properly.

70

## Comment - Office of Hawaiian Affairs, October 17, 2005 (cont.)

Page 2  
Dr. Charlie Fein  
October 17, 2005

Ceded lands, and the State's responsibilities for and to them, are defined in the Hawai'i Admission Act (Act of March 18, 1959, Pub. L. 86-3, 73 Stat. 4), and further explained in the State Constitution and statutes. The State has a Constitutional responsibility to "conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources . . . . All public natural resources are held in trust by the State for the benefit of the people." (Hawai'i State Constitution, Art. XI, Section 1). The State also has a Constitutional responsibility to "protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes" possessed by Hawaiians. (Hawai'i State Constitution, Art. XII, Section 2).

The subject lands are Section 5(b) lands of the Hawaii Admission Act (Act of March 18, 1959, Pub. L. 86-3, 73 Stat. 4). As such, these are ceded lands, and, per §5(f) of the Admission Act, the public trust lands of §5(b), and the income derived therefrom, "shall be managed and disposed of for one or more" of the five listed purposes. The Act lists the five purposes as:

for the support of the public schools and other public educational institutions, for the betterment of the conditions of native Hawaiians, . . . for the development of farm and home ownership on as widespread a basis as possible, for the making of public improvements, and for the provision of lands for public use.

The Admission Act explains that §5(b) lands "shall be managed and disposed of for one or more of the foregoing purposes in such manner as the constitution and laws of said State may provide, and their use for any other object shall constitute a breach of trust . . . ." The Hawai'i State Constitution, Art. XII, Sec. 4, explains: "The lands granted to the State of Hawaii by Section 5(b) of the Admission Act and pursuant to Article XVI, Section 7, of the State Constitution, excluding therefrom lands defined as 'available' lands by Section 203 of the Hawaiian Homes Commission Act, 1920, as amended, shall be held by the State as a public trust for native Hawaiians and the general public."

Thus, these Public Trust lands may be used for educational purposes and for the betterment of Hawaiians. OHA therefore requests that should the proposed project go forward, part of the project include a guarantee of training and education for Hawaiians, perhaps through the Maui Community College/University of Hawai'i Institute of Astronomy, to allow them the opportunity to gain jobs at the Haleakalā High Altitude Observatories site.

We look forward to the opportunity to review, and comment upon, the forthcoming Draft Environmental Assessment, and the supplemental traditional practices assessment and cultural resource evaluation.

## Comment - Office of Hawaiian Affairs, October 17, 2005 (cont.)

Page 3  
Dr. Charlie Fein  
October 17, 2005

Thank you for the opportunity to comment at this time. If you have any further questions or concerns please contact Heidi Guth at (808) 594-1962 or e-mail her at [heidig@oha.org](mailto:heidig@oha.org).

Sincerely,



Clyde W. Nāmu'o  
Administrator

CC: National Science Foundation  
Division of Astronomical Sciences  
Jeremy Wagner, ATST Project Manager  
National Solar Observatory  
P.O. Box 26732  
Tucson, AZ 85726-6732

Governor Linda Lingle  
Office of the Governor, State of Hawai'i  
Executive Chambers, State Capitol Building  
Honolulu, HI 96813

Genevieve Salmonson, Director  
Office of Environmental Quality Control  
235 South Beretania Street, Suite 702  
Honolulu, HI 96813

Theima Shimaoka  
Community Resource Coordinator  
OHA – Maui Office  
140 Hoohana St., Suite 206  
Kahului, HI 96732

## Response - Office of Hawaiian Affairs, October 24, 2005



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

October 24, 2005

Mr. Clyde W. Nāmu‘o  
Administrator  
State of Hawai‘i Office of Hawaiian Affairs  
711 Kapi‘olani Blvd., Suite 500  
Honolulu, HI 96813

Dear Mr. Nāmu‘o:

Thank you for your comments in response to the proposed Advanced Technology Solar Telescope (ATST) project. As local Maui environmental consultants, we understand that Haleakalā is considered by Native Hawaiians to be a sacred site, with strong cultural, traditional, and religious significance. We fully intend to consult with and respect the feelings of all individuals within the native Hawaiian community and those groups that you have specifically suggested. We have already begun the process of completely addressing all cultural, traditional, and religious concerns in our comprehensive Environmental Impact Statement (EIS).

We will include you on our distribution list for the EIS. If you have not done so already, we invite you to visit the ATST web site at <http://atst.nso.edu/>. Thank you for your participation and feedback.

Sincerely,



Dr. Charlie Fein  
Vice-President

## Comment and Response - Richard Mealey, March 11, 2006

**From:** "Dr. Charlie Fein" <charlie@kcenv.com>  
**To:** "Richard Mealey"  
**Sent:** Saturday, March 11, 2006 3:21 PM  
**Subject:** Re: Solar Telescope

Richard:

Thank you for your encouraging comments. We will add them to the administrative record for the ATST project. Please consider attending the public information meeting at the Haiku Community Center on March 27th @ 6:00PM. There will be an opportunity to express your views.

>-----Original Message-----

>From: Richard Mealey  
>Sent: Saturday, March 11, 2006 03:08 PM  
>To: charlie@kcenv.com  
>Subject: Solar Telescope

>

>Dear Dr. Fein:

>

>I applaud the installation of the Solar Observatory Telescope on Haleakala.  
>Faced as we are with uncontrolled population growth, global warming, waning  
>oil reserves and a host of other ills, there is an accelerating need for  
>every bit of research which might lead to answers for these problems.  
>I do not subscribe at all to the religious imputation of sacredness to  
>inanimate matter like rocks or mountains. To me, these are illogical  
>superstitions unworthy of even the slightest notice and I would encourage  
>anyone prone to such beliefs to collect the objects of their veneration at  
>some central spot and worship them to their hearts' content while others  
>concentrate upon the serious work that will hopefully keep the earth  
>habitable for us all. Obviously there are positive features of most  
>religions such as treading lightly on the earth avoiding waste and extending  
>help to others. But to hobble the process of scientific inquiry for  
>superstition based reasons is by definition, unreasonable. No one should  
>drag an anchor behind the boat in which we all find ourselves.  
>It was my privilege years ago to tour the tri opto electrical telescope  
>installation after the Air Force faxed a request for a tour along with my  
>clearance information and that of a fellow ABM (B.M.E.W.S.) tech. to the  
>installation here. After the rigors of Alaskan winters at our radar site,  
>some of us were delighted to travel to Maui and spend a month or two thawing  
>out. I subsequently traded my sailboat for a condo (read: "tiny cement  
>cubicle") here and since retirement after a shivering 36 years, have lived  
>here for the past 5.

>

>As it is easily appended, I am adding the resignation I submitted upon  
>retiring as you may get a chuckle out of it as did my employer (we were all  
>very informal there). After nearly 40 years, I could not write a one-liner  
>like "take this job and....." so I wrote the following, had it published  
>in an anthology and presented the book to my boss. It read as follows:

>

## Comment and Response - Richard Mealey, March 11, 2006

>Goodbye Alaska  
>  
>Oh give me a home, where these moose never roam  
>Where icicles won't form on my nose  
>Where my knees won't freeze tight  
>During the long Arctic night  
>And I won't frostbite fingers and toes.  
>  
>Home home neath the snow  
>Where in Springtime it's fifty below,  
>And the trapdoor down there  
>In my long underwear  
>Fills with snow when the cold tailwinds blow.  
>  
>I've tarried too long where man doesn't belong.  
>I'll fly South with the migrating geese  
>To where girls just wear traces  
>Of cottons and laces  
>Not mukluks, huge parkas and fleece.  
>  
>I'm going to retire where a man can perspire  
>And cavort neath that sun from above  
>And I hope there's no doubt  
>If I ever thaw out  
>I'll be able again to make love.  
>  
>  
>© 1999 R. Mealey  
>  
>Again, please accept my encouragement and support for the installation.  
>  
>Richard Mealey  
>Kihei  
.....

## Comment – Kiope Raymond, March 20, 2006

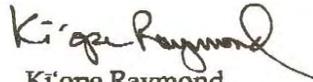
20 March 2006

Dr. Charlie Fein, Vice-President  
KC Environmental  
P.O. Box 1208  
Makawao, HI 96768  
Fax: (808) 573-7837

Aloha Charlie,

This is to respectfully request a thirty (30) day extension to submit my written comments and questions on the Cultural Resource Evaluation of the proposed undertaking of the Advanced Technology Solar Telescope.

Mahalo,

  
Kiope Raymond

cc: Charisse A. Carney-Nunes, NSF @ fax: (703) 292-9041

## Response – Kiope Raymond, March 20, 2006

**From:** "Kiope Raymond"  
**To:** <kcesharon@hawaii.rr.com>  
**Cc:** "Carney-Nunes, Charisse A." <ccarney@nsf.gov>; "Charlie Fein-kce" <charlie@kcehv.com>  
**Sent:** Tuesday, March 21, 2006 2:57 PM  
**Subject:** Re: Cultural Resource comments/questions submittal

Aloha Sharon,  
Mahalo!  
I will try to get my comments and questions to you or Charlie as soon as possible.  
Ki'ope

On 3/21/06 7:24 AM, "kcesharon@hawaii.rr.com" <kcesharon@hawaii.rr.com> wrote:

Hi Ki'ope,  
Thank you for your request to submit written comments and questions on the Cultural Resource Evaluation after the March 20, 2006 deadline. Public comment periods are determined by the guidelines outlined in the Federal regulations for the Section 106 process; however, we will respectfully honor your request to submit after the deadline. Please make every effort to submit your comments or questions to Dr. Fein or myself as soon as possible.

Take care.

Sharon Loando-Monro  
KC Environmental, Inc.  
Planning Projects Manager

76

## Comment – Kiope Raymond, June 28, 2006

-----Original Message-----

From: Kiope Raymond [email address]  
Sent: Wednesday, June 28, 2006 4:14 PM  
To: Gilanshah, Bijan  
Cc: Lui K Hokoana; Mikahala Helm; Kaleikoa  
Subject: ATST Haleakala

Aloha Bijan Gilanshah,

I just heard from Charisse Carney-Nunes that you will be the new assistant general counsel for the proposed advanced technology solar telescope. Here is what I sent Charisse this morning. Though I know you may need to get up to speed with this project, I hope you can answer the questions as soon as possible.

"Aloha Charisse,

I hope this finds you well. I left a voice-mail for you, but a response from you via e-mail would be great. I hope you can help me with some questions I have regarding the proposed ATST.

When will you be coming back to Maui?

Who will you be meeting with?

Am I correct that the Section 106 proposals from native Hawaiians are not the same as public comments in response to the Draft EIS?

When do the proposals have to be received?

How complete should the proposals be; and is there a template one follows?

Are the three areas for the proposals still Mitigation, Minimization, and Avoidance?

Can Hawaiians still respond to the Draft EIS even though they have submitted a proposal?

Has the start date for construction been pushed back to 2009, as Mr.

Keil indicates in the issue 86 NAO/NSO newsletter for June 2006?

<http://www.nso.edu/press/newsletter/86news.pdf>

If so, why does the EIS have to be completed - as I understand it now is

- by the end of this year, 2006?

Mahalo,

Ki'ope Raymond"

## Response – Kiope Raymond, June 28, 2006 (page 1)

----- Original Message -----

From: "Gilanshah, Bijan" <email address>

To: "Kiope Raymond" <email address >

Cc: "Lui K Hokoana" <email address >; "Mikahala Helm" <email address >;

"Kaleikoa" <email address >

Sent: Monday, July 10, 2006 11:09 AM

Subject: RE: ATST Haleakala

Dear Mr. Raymond:

Thank you very much for your patience and interest in ATST. Following please find responses to your questions.

Thanks,

Bijan Gilanshah

-----  
-----

When will you be coming back to Maui?

After publication of the Draft EIS (DEIS), a notice will be widely circulated inviting interested persons to a number of public meetings where comments to the DEIS will be received. You are on our distribution list and will certainly receive that notice and invitation. Currently, the expectation is to hold these public meetings at different venues on Maui sometime this summer, following issuance of the DEIS.

Who will you be meeting with?

We anticipate three general public meetings for all interested persons to attend and give comments on the DEIS. Those comments can also include section 106 proposals or other comments on cultural, historic and environmental issues. While on Maui, we also plan to have pre-scheduled meetings with interested persons and groups who submit National Historical Preservation Act Section 106 resolution proposals.

Am I correct that the Section 106 proposals from native Hawaiians are not the same as public comments in response to the Draft EIS?

The National Environmental Policy Act and Section 106 of the National Historic Preservation Act prescribe parallel consultative processes; however, they are designed to work together to achieve the goal of consultation and public participation. For instance, comments to the DEIS can include Section 106 resolution proposals from native Hawaiians (or the general public for that matter). Section 106 meetings are more narrow, however, since the focus in those meetings is how to avoid, minimize or mitigate adverse effects to historic or cultural properties.

Native Hawaiians may comment in response to the DEIS and also may provide Section 106 resolution proposals. The public may also submit Section 106 resolution proposals along with responses to the DEIS.

## **Response – Kiope Raymond, June 28, 2006 (page 2)**

When do the proposals have to be received?

We will widely publish a final deadline by which Section 106 proposals will have to be submitted. We do not yet know the deadline. Currently, as the consultative process remains ongoing, proposals can be submitted at any time.

How complete should the proposals be; and is there a template one follows?

As much feedback as possible as to ways in which the adverse effects can be avoided, minimized or mitigated is most helpful to the consultations. However, we would encourage any proposals, however complete or incomplete. There is no set template to follow. The proposal would be used as the basis for further discussion. As a concrete example, one resolution proposal that we have received was approximately two pages of free text that laid out the outline of a possible educational program.

Are the three areas for the proposals still Mitigation, Minimization, and Avoidance?

While all resolution proposals will be considered in the public meetings concerning the Draft EIS, the smaller Section 106 pre-scheduled meetings will only involve those resolution proposals from interested groups and individuals who seek to minimize or mitigate adverse affects by virtue of a Memorandum of Agreement as contemplated by the National Historic Preservation Act. Note that proposals seeking complete avoidance of the project (as already articulated by some at the first two consultative meetings) may still be submitted to KC Environmental, Inc. per the June 5, 2006 correspondence.

Can Hawaiians still respond to the Draft EIS even though they have submitted a proposal?

Absolutely, yes.

Has the start date for construction been pushed back to 2009, as Mr. Keil indicates in the issue 86 NOAO/NSO newsletter for June 2006?

The NSF has not yet approved construction funds for the ATST. There are several steps remaining in the process which culminates in decisions by the NSF Director and the US Congress to include the funds in a future budget. Given the remaining steps and the complex nature of the Federal budget process, the earliest start date for the proposed construction would be fiscal year 2009, which begins on October 1, 2008.

If so, why does the EIS have to be completed - as I understand it now is - by the end of this year, 2006?

The National Environmental Policy Act requires consideration of environmental impact issues at the earliest possible time "to insure that planning and decisions reflect environmental values."

## Comment – Donald Reeser, March 20, 2006

March 20, 2006

Dr. Charlie Fein, Vice President  
KC Environmental, Inc.  
P. O. Box 1208  
Makawao, HI 96768

Dear Dr. Fein:

Thank you for asking me to comment on *Cultural Resource Evaluation and Traditional Practices Report, January, the Proposed Advanced Technology Solar Telescope (ATST) at Haleakalā High Altitude Observatories, January 2006*. The following opinions are my own and not expressed on behalf of any organization.

I have reviewed subject document and am left feeling highly unsatisfied with the authors' attempt to explain and document the cultural significance of the proposed Advanced Technology Solar Telescope site at Kolekole, on Haleakalā. Although I don't claim to be competent to evaluate Hawaiian cultural values, it seems to me the report doesn't clearly answer two important questions:

--What is the cultural significance of the Kolekole area to Hawaiian Kanaka Maoli?

--Is the area's Hawaiian cultural significance diminished by the presence of astronomical observatories and why?

The authors state that Haleakalā is considered one of the most sacred sites on Maui to Kanaka Maoli, and endeavor to substantiate this through a disjointed collection of references, Hawaiian chants and interviews with selected informants. Little if any evidence is presented indicating the area's cultural significance is compatible with observatories. Yet in the conclusion, the authors seemingly ignore their own arguments and sanction more observatories providing that developers follow certain modest protocols before and during construction. Limits for location, size, purpose, etc. are not addressed.

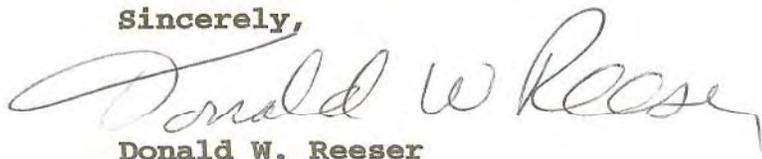
I would be very surprised if the conclusion presented represents the majority opinion of native Hawaiian Kanaka Maoli. I believe a diverse and independent group of

**Comment – Donald Reeser, March 20, 2006 (cont.)**

Hawaiian scholars and practitioners, not under contract with the observatory proponents, would conclude that new astronomical observatories atop Haleakalā are culturally not supportable, with or without the proposed protocols.

Also, I note that an Archaeological Report by Eric Frederickson of Xamanek Researchers is cited on page 22, but this report is not referred to in the bibliography. Where can a copy be obtained?

Sincerely,

A handwritten signature in cursive script that reads "Donald W. Reeser". The signature is written in black ink and is positioned above the printed name.

Donald W. Reeser

cc: Charlie Maxwell  
Mary Evanson, Friends of Haleakalā National Park  
Superintendent, Haleakalā National Park

## Response – Donald Reeser, April 3, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

April 3, 2006

Mr. Don Reeser

RE: Comments to Advanced Technology Solar Telescope (ATST) Cultural Report

Dear Don,

Thank you for your comments to the Cultural Resource Evaluation and Traditional Practices Report for the ATST project. We understand that Haleakalā has significant cultural resources for visitors, local residents, and the Maui community. The comprehensive Environmental Impact Statement (EIS) is being prepared and will evaluate the potential impacts of the proposed project on the associated Hawaiian culture and spiritual resources, as well as other environmental conditions to Haleakalā.

We appreciate your comments and concerns and will ensure they are addressed as part of the EIS process. Your comments will become part of the EIS and the Administrative Record.

If you have not done so already, we invite you to visit the web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Sincerely,



Dr. Charlie Fein  
Vice President

## Comment - Nancy Shearman, March 19-20, 2006

Comment letter

>From: Nancy  
>Subject: ATST  
>Date: Sun, 19 Mar 2006 21:00:17 -1000  
>To: [charlie@kcenv.com](mailto:charlie@kcenv.com)

>  
>Aloha, Dr. Charlie Fein,  
>  
>I am writing to express my opposition to the solar telescope being  
>planned for Haleakala's summit. The "house of the Sun" is holy.  
>Would you build a 16 foot telescope on the top of Notre Dame?  
>Haleakala warrants our reverence. We have a responsibility to  
>protect this beautiful, sacred aina. Some places on our precious  
>planet must be singled out, where the long arms of man and their  
>toys cannot go. A place of integrity, a place that cannot be bought.  
>Haleakala is one of these places. Please do not allow it to be dishonored.  
>  
> Your help is sincerely appreciated.  
>  
>Mahalo and aloha,  
>  
>Nancy Shearman

Follow-up comment from previous e-mail

>From: Nancy  
>Subject: Re:ATST  
>Date: Mon, 20 Mar 2006 07:38:14 -1000  
>To: [charlie@kcenv.com](mailto:charlie@kcenv.com)

>Aloha, Dr. Fein,  
>  
>I awoke in the night when I realized the typo in my correspondence  
>to you last evening. The proposed telescope would stand nearly 12  
>stories high, not 16 feet.  
>  
>Mahalo and aloha,  
>  
>Nancy Shearman

## Comment - Nancy Shearman, April 21, 2006

April 21, 2006

Charlie Fein  
KC Environmental  
PO Box 1208  
Makawao, HI 96768

Aloha, Mr. Fein,

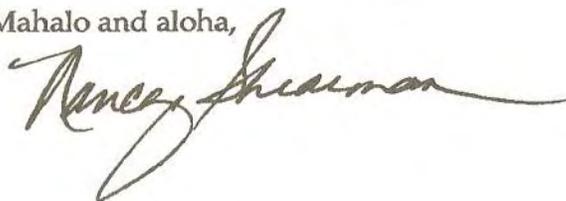
There are so many reasons not to build the 143 foot high telescope on top of Haleakala that I hardly know where to begin. Appropriately named the "house of the Sun," as stewards we are responsible for protecting everything in its shadow. I don't buy the arguments that the telescope will provide jobs for our people or encourage students to pursue careers in science. We set a much better example by respecting the land and providing for its people. How can we seriously consider studying the Sun while devastating this planet?

Haleakala is one of those special places too holy to desecrate. The visual impact alone will be obscene, but the thought of stakes driven 40 feet into the summit is vile beyond comprehension. Please, as Mary Evanson writes, find another place for this telescope. Symbolically, if built, it will be a testament to man's greed rather than honor.

I had the pleasure of hearing Barry Flanagan, Nathan Aweau, and Charles Ka'upu sing the patriotic oli "Kaulana Na Pua and "Mo'i O Lili'u" to the tune of Bob Marley's "Redemption Song" recently at the MACC. Heartfelt words revitalized. Show respect for the Native Hawaiians and their sacred places. Sing out for Haleakala's freedom so that it will continue to bless and keep us safe.

Your help to do the right thing is appreciated.

Mahalo and aloha,

A handwritten signature in black ink that reads "Nancy Shearman". The signature is written in a cursive, flowing style with a long, sweeping underline.

## Comment – Warren Shibuya, March 27, 2006

Testimony on Advance Technology Solar Telescope proposed to be housed on UH Institute of Astronomy, Haleakala High Altitude Observatories, Haleakala, Maui.

Good evening members of this panel and audience. I am Warren Shibuya. I am a returning Maui resident after retiring from the Space & Missile Systems Center in El Segundo, California. Mahalo for allowing me to present my testimony.

I support basic and applied research and proposed housing of Advanced Technology Solar Telescope (ATST) systems, a project within the 18,166-acre University of Hawaii Institute for Astronomy (IfA), Haleakala High Altitude Observatories (HO) site at the summit of Mt. Haleakala, Maui, Hawaii.

I ask you and all project members to behave respectfully and malama mau ka lā a, preserve the sacredness of Haleakala, specifically the summit area. Proper cultural respect should be demonstrated by ATST project and other projects housed at Haleakala High Altitude Observatories site, especially while sharing very sacred summit grounds.

As you well know, Haleakala is home to all 40,000 Hawaiian gods and goddesses. Haleakala is spiritual power and home of inspired Hawaiian beliefs, besides being physically inspiring. Haleakala's summit, or Kolekole, is near wao akua, a level of earth stratosphere where gods and goddesses are believed to reside and culturally guide everyday living. Ala Hea Ka La, "the path to calling the sun," presents basic rhythms of night and day and establishes the sun being source of life for Kanaka Maoli, Hawaiians, and citizens of Maui and Hawaii.

In ancient days, Kolekole was site where Kahuna Pó o, High Priests, consulted with gods and goddesses to answer difficult questions and delve tough issues. Astronomy, aerospace and solar study efforts at Kolekole should be respectful of wao akua, sacred area above the summit and lava, the essence of Goddess Pele, despite her current home at Kilauea caldera. Special care should be exercised in digging, saving lava and restoring earlier pū u, hills and wahi pana, and minimizing invading airspace, all Sacred places.

To demonstrate proper respect, let us all do it right, as kapó e kahiko, or ancient people respected and admired Kolekole. Recommend Institute for Astronomy immediately remove intrusive, unused or excess facilities; poles, antenna, lines, signs and roads; immediately begin respectfully restoring Kolekole to it's ancient topology and it's historic

\\WARREN\\ATST-HI/3/27/2006// Page 1 of 2.

## **Comment – Warren Shibuya, March 27, 2006 (cont.)**

Testimony on Advance Technology Solar Telescope proposed to be housed on UH Institute of Astronomy, Haleakala High Altitude Observatories, Haleakala, Maui.

and highly sacred configuration. Further, rename summit roadways to more appropriate kapó e kahiko names, thus demonstrating sacred wahi pana, respect of Kolekole.

Today, ATST nobly seeks to observe and carefully study turbulent forces of our Sun, which affects life on Earth from a sacred site. As mentioned, Kolekole wahi pana was used by Kahuna Pó o, High Priests, who consulted with gods and goddesses to answer difficult questions, delve and resolve tough issues. Today, in addition to consulting gods and goddesses and accommodating visitors, the scientific community is permitted to seek answers to heavenly questions through use of high technology telescopes and systems, computerized instruments, all housed in large structures. As Kahuna Pó o shared gained insights with Maui residents, I ask ATST technology and other Haleakala IfA investigations and gained knowledge be regularly shared with host Maui and Hawaii State's people, to include keiki, kapuna, Kamaaina and malama aina groups.

Shared knowledge and expressions of appreciation be given to Mauians, such as support for Hawaiian education, culture, arts, sovereign rights and law, language programs and scholarships to pursue learning at higher institutes, centers and universities. Of course, Mauians should be employed with all projects on Haleakala.

I remind you and other agencies operating in sacred wahi pana of Demi God Maui and other gods and goddesses, that your viewing or looking through Wao Akua, where gods reside, is invasive and not polite etiquette or behavior of a guest. Peeping through a neighbor's home is privacy-invasive and by our laws could be a misdemeanor crime.

Western culture dictates, "It is most proper for a guest visiting a home, to express appreciation to the host with fists filled with gifts." In no case should guests visit with closed fists, especially when visiting the sacred "House of the Sun." I am embarrassed to remind you of proper etiquette. I truly trust you know and will do the right things to demonstrate your most honored respect of the host's customs and beliefs. Maui kanaka maoli and kamaaina should not need to tell terms to you more succinctly and emphatically.

I am no expert on Hawaii's culture, but simple analogies mentioned should be more than adequate for respectful understanding and behavior of Hawaiian and visiting non-Hawaiian members. Hawaiian culture is founded on love and respect for each other,

\\WARREN\ATST-HI/3/27/2006// Page 2 of 2.

## **Comment – Warren Shibuya, March 27, 2006 (cont.)**

Testimony on Advance Technology Solar Telescope proposed to be housed on UH Institute of Astronomy, Haleakala High Altitude Observatories, Haleakala, Maui.

family ohana, the aina which provides life sustenance, the importance of the sun and the deep felt reverence for wao akua.

Mahalo for allowing me to express my support for scientific pursuits for knowledge, expressing my thoughts and trust you and other visiting agencies will demonstrate your appreciation to Maui's citizens.

## Response – Warren Shibuya, April 3, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

April 3, 2006

Mr. Warren Shibuya

RE: Comments to Advanced Technology Solar Telescope (ATST)

Dear Warren,

Thank you for your comments to the Advanced Technology Solar Telescope (ATST) project. We understand that Haleakalā has significant resources for visitors, local residents, and the Native Hawaiian community. The comprehensive Environmental Impact Statement (EIS) is being prepared and will evaluate the potential impacts of the proposed project on the associated Hawaiian culture and spiritual resources, as well as other environmental conditions to Haleakalā.

We appreciate your comments and concerns and will ensure they are addressed as part of the EIS and Section 106 process. Your comments will become part of the EIS and the Administrative Record.

If you have not done so already, we invite you to visit the web site at: <http://atst.nso.edu/> and <http://atst.nso.edu/library/EIS.shtml>, which specifically addresses the Section 106 process of the National Historic Preservation Act (NHPA). Thank you for your participation.

Sincerely,



Dr. Charlie Fein  
Vice President

# Hālau ‘Imi ‘Ike Hōkū

---

*Center for Traditional Hawaiian Navigation and Astronomy*

Proposal for creation:

Hālau ‘Imi ‘Ike Hōkū: Center for Traditional Hawaiian Navigation and Astronomy will be a collaboration of community and cultural resources to provide a venue to, *e ‘imi ‘ike no nā hōkū* or to search or gather knowledge about the bright stars above. The Center’s purposes will be to:

1. To create, produce, collaborate and administer curriculum for students from Kindergarten through Secondary and post secondary collaborations, which focus on traditional and modern astronomy and traditional Hawaiian navigation. This product would be for public and private school uses.
2. Promote edification of traditional Hawaiian techniques in astronomy and navigation and to integrate these concepts with scientific knowledge and produce traditional interpretations of the universe and the understanding of the native Hawaiian relationship to the surrounding areas and World.
3. Prepare students of all ages with traditional knowledge and modern scientific techniques that would cause future interest in astronomy and establish native Hawaiian expertise in the subject.
4. Create and manage a scholarship fund for individuals seeking a post high education on the island of Maui.
5. Create a planetarium with celestial bodies of the solar system that duplicate “traditional methods” used by Hawaiians to travel thousands of miles throughout the Pacific in double hulled canoes, using the knowledge of their natural elements and the traditional and native instincts as their guide.
6. Finally, this center for Traditional Hawaiian Navigation and Astronomy should be built at the time funding is approved for ATST by Congress. Ideas like this tend to get “lost” in the shuffle of progress. The completion date could be worked on by the parties involved at that time.

In presenting this idea to Master Navigator Nainoa Thompson of the Polynesian voyaging canoe Hōkūle‘a, who sailed thousands of miles throughout the Pacific using traditional navigational methods, he felt that this method is the missing component in teaching the youth of Hawai‘i about the brilliance and resilience of their ancestors and the enormous feats they accomplished thousands of years ago. He has committed his support and that of the Polynesian Voyaging Society to make this happen.

## **Resolution Proposal – Kahu Charles Maxwell, March 28, 2006 (cont.)**

The potential outreach of this Center could be enormous, but the more compelling reason is because it is right. A center of this magnitude possibly will produce world class Hawai'i/Maui-based scientists in this subject matter. Because of the training in these two worlds (Polynesian discovery and modern science), these future scientists and astronomers could bridge the past to the present and beyond. E 'imi 'ike hōkū!

Submitted by:

***KAHU CHARLES KAULUWEHI MAXWELL SR.***

Comment – Kathy Kaohu, March 28, 2006

March 28, 2006

Re: Section 106 Consultation for proposed ATST

My name is Kathy Kaohu. I'm a native Hawaiian and a resident of Maui. I write today to express my strong disappointment and opposition to using Maui's sacred Haleakala to site the Advanced Technology Solar Telescope (ATST).

Hawaii continues to be bombarded with western influence and every day we as Hawaiians loose more and more of our precious cultural heritage, that include our special places.

Enough is enough already! NO MORE TELESCOPES ATDP  
HALEAKALA!

That mountain represents many aspects of our culture – spiritual and religious. It's rich in our stories of many many hundreds of years.

Take your solar studies to one of the other 70 or so alternative sites, that don't carry the same significance that Haleakala holds. Please.

We as native Hawaiians already hold dear our cultural celestial studies, we should be embracing that from the outside, rather than having a group of scientists impose this big money research project on our island, our culture and our people.

Again — 70 other optional sites to look at —

Don't be a continued part of the desecration of our historical cultural sites. Haleakala is wao akua — where our Gods dwell — This proposal is an insult!

**Comment – Kathy Kaohu, March 28, 2006 (cont.)**

There is no benefit that will justify this desecration – plain and simple. This is Hawai'i's beloved 'aina, it's beloved mountain, please take the project elsewhere — That's my mitigation proposal: go to site selection 2, 5, 7, or 170 but not Haleakala! That's the win-win solution.

Mahalo for allowing me to submit my mana'o. Please keep me notified of any subsequent meetings regarding this matter.

Kathy Kaohu

## Response – Kathy Kaohu, April 3, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

April 3, 2006

Ms. Kathy Kaohu

RE: Comments to Advanced Technology Solar Telescope (ATST)

Dear Kathy,

Thank you for your comments to the Cultural Resource Evaluation and Traditional Practices Report for the ATST project. We understand that Haleakalā has significant cultural resources for the Native Hawaiian community. The comprehensive Environmental Impact Statement (EIS) is being prepared and will evaluate the potential impacts of the proposed project on the associated Hawaiian culture and spiritual resources, as well as other environmental conditions to Haleakalā.

We appreciate your comments and concerns and will ensure they are addressed as part of the EIS and Section 106 process. Your comments will become part of the EIS and the Administrative Record.

If you have not done so already, we invite you to visit the web site at: <http://atst.nso.edu/> and <http://atst.nso.edu/library/EIS.shtml>, which specifically addresses the Section 106 process of the National Historic Preservation Act (NHPA). Thank you for your participation.

Sincerely,



Dr. Charlie Fein  
Vice President

**Comment – Chauncey Watsuss, Maui News, April 5, 2006**

THE MAUI NEWS – Wednesday, April 5, 2006 – A11

**Color of proposed telescope housing a major objection**

Why does the proposed new telescope for Haleakala have to be bright white? Why not make it shades of brown, black, and red, to blend in with the natural rock, camouflage style, so it is a lot less of an eyesore when viewed from afar?

**Chauncey Watsuss**  
**Haiku**

**Response – Chauncey Watsuss, Maui News, April 11, 2006**

**Heat determined color of the proposed housing of telescope**

The reddish-brown cinder and lava on Haleakala absorbs significant heat from the sun. The proposed Advanced Technology Solar Telescope would be painted in a low-reflective white color (not “gleaming white,” Letters, April 5) to ensure that the telescope will be able to perform the very clear imaging for which it was designed.

Thermal modeling was conducted to test the effects of using different colors for ATST and unfortunately, painting the enclosure to match the natural volcanic rock would result in the telescope enclosure (dome) absorbing about four times as much heat from sunlight on its surface. That layer of turbulent heated air would rise up into the path of the telescope and ruin the imaging.

**Jeremy Wagner, Project Manager**  
**Advanced Technology Solar Telescope**  
**Tucson, Ariz.**

## Comment – Michael Carlucci, April 6, 2006

April 6, 2006

Fein at KC Environmental Inc.  
P.O. Box 1208  
Makawao, HI 96768

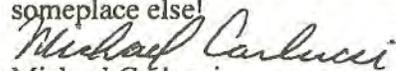
To Whom It May Concern:

The purpose of this letter is to protest in the strongest terms the proposed new observatory at the summit of Haleakala.

The construction of this observatory would serve to add insult to injury at the summit of this sacred Hawaiian site. Even if it were to be less obtrusive it would be an affront to continue the desecration that already exists at the summit. To construct a fourteen story building is obscene! Even for a visitor it would despoil the beauty of this summit. Imagine, looking up at the summit from sea level and instead of seeing the unspoiled summit of a dormant volcano we would be treated to the highest building on Maui sticking up from the top. Maybe you could put a big, blinking, neon sign on top to dress it up at night.

If the summit of Haleakala is your first choice for the observatory I urge you to try for the second, or third choice.

Go away! Leave the Hawaiian culture and people alone. Build your observatory someplace else!

  
Michael Carlucci

c. Foltz at National Science Foundation  
4201 Wilson Blvd. Room 1045  
Arlington, VA 22230

## Comment – Vicki McCarty, April 7, 2006

Date: Fri, 07 Apr 2006 21:02:45 -0400

From: Vicki McCarty (via email )

Subject: Testimony and Comments on proposed telescope at Haleakala -  
please forward to the appropriate parties

To: charlie@kcnv.com

Aloha, I am a member of the Mayor's West Maui Advisory Committee but I am writing this as an individual. Please forward these comments to the appropriate parties.

I am opposed to this proposal for another telescope at Haleakala. This is a sacred place and another telescope will only add to the desecration.

Mr. Folts stated that "...positive impacts of the knowledge gained from the telescope would grow in the future..." This completely ignores the Native Hawaiian's who have honored their culture in this sacred place and it destroys any opportunity for future generations of Hawaiian's to learn by engaging in their own cultural practices as their ancestors have .

In addition, Mr Foltz said "...think of the possibilities of what mysteries the telescope might eventually unlock..." This implies that the mysteries of science are somehow more valuable than the spiritual and cultural aspects of this place whose sacredness is of great importance to all Native Hawaiians-past, present, and future and whose "mysteries" will be destroyed forever.

There are 70 other possible sites for this telescope...there is only one sacred Haleakala... there can be no compromise...this site is sacred to the Native people of Hawaii - it must be preserved.

Do not dismiss what you cannot see or feel...Do not destroy what you do not understand...Do not put your "mysteries of science" above the sacredness and the natural spiritual mysteries of this revered place. You do not have the right to destroy this hallowed ground.

Yours truly,  
Vicki McCarty  
Lahaina Maui

## Response – Vicki McCarty, April 28, 2006

----- Original Message -----

**From:** Foltz, Craig B.

**To:** Vmcarty@ (via email)

**Sent:** Friday, April 28, 2006 2:04 AM

**Subject:** Re: Testimony and Comments on proposed telescope at Haleakala - please forward to the appropriate parties

Ms. Vicki McCartyLahaina, Maui

Dear Ms. McCarty:

Thank you for your opinions regarding the construction of the Advanced Technology Solar Telescope on Maui. I want to address several of your points.

With respect to the selection of Haleakala as the site for the telescope, I note that, indeed, over 70 *possible* sites were identified worldwide. From this extensive list, six sites were identified as candidates for further study. The atmospheric conditions at the sites on this list were then studied intensively for many months and Haleakala was found to be the only site that would support the scientific goals of the project. While I understand that this may not mitigate your concerns, I want to stress that the site selection was not arbitrary.

You ask that we "do not dismiss what we cannot see or feel." I assure you that most of modern science and astrophysics in particular deals with phenomena that we cannot observe with our unaided senses. We build instruments to help us understand some of the things that we cannot see or feel. This in no way implies that we dismiss the spiritual; we accept that there are things that we cannot study. There is never the intention that scientific endeavors should supplant spiritual mysteries. It is my opinion that many, if not most, scientists, including those of Native Hawaiian heritage, have deeply-held spiritual feelings and do not feel that they are mutually exclusive from the pursuit of scientific knowledge.

The process that we are undertaking on Maui at this time is being done with every effort to allow the spiritual and the scientific to co-exist on Haleakala.

With respect and best wishes,  
Craig Foltz

-----  
Craig B. Foltz, Ph.D.  
Program Manager NOAO/NSO  
Division of Astronomical Sciences  
National Science Foundation, Room 1045  
4201 Wilson Blvd, Arlington, VA, 22230  
Office: 703-292-4909 Fax: 703-292-9034  
Email: cfoltz@nsf.gov

## Comment – Vicki McCarty, April 28, 2006

**From:** vmcarty – via email

**Sent:** Friday, April 28, 2006 10:06 PM

**To:** Foltz, Craig B.

**Cc:** Vmcarty (via email)

**Subject:** Re: Testimony and Comments on proposed telescope at Haleakala - please forward to the appropriate parties

Dear Mr. Foltz, Thank you for taking the time to email me. I truly appreciate that you have read my testimony and have given me your thoughts on it. Please forward this to any other appropriate parties.

I am hopeful that by listening to all of the thoughts and opinions of those who are concerned about this issue that it will result in your choosing an alternate site.

Before my testimony, I was, in fact, aware that there were other sites that were under consideration and that the site selection was not arbitrary. You have indicated in your email to me that "Haleakala was found to be the only site that would support the scientific goals of the project." I would like to respectfully ask you to consider that Native Hawaiians also believe that this is the only site that would support specific cultural practices that have been observed by their ancestors...for centuries. These practices have already been interfered with by the presence of the equipment that is there. There should be no further desecration so Native Hawaiians and their future generations can continue their cultural practices.

"We build instruments to help us understand some of the things that we cannot see or feel." ... Sacred sites are preserved and respected by honoring what they are and caring for them - not by cluttering them with foreign objects or by expecting that the spiritual and the scientific must co-exist.

The sacredness of this place should not have to "co-exist". It should instead be respected and honored. It should not be sacrificed.

Please choose another site.

Yours very truly,  
Vicki McCarty  
Lahaina Maui HI

## Comment – Dan Judson, April 13, 2006

April 13, 2006

KC Environmental, Inc.  
PO Box 1208  
Makawao, HI 96768

Dear Reader;

The following are suggestions to mitigate the impact on the summit of Haleakala National Park by the proposed solar telescope.

- Place the telescope below the ridge line out of view of central and south Maui.
- Colorize the outside a neutral brown-tan color so that it will blend in more with the adjoining natural landscape.
- Bury the majority of the telescope below ground.
- Leave only the necessary observation part exposed above the surface.
- The foundation is 40 feet below the grade line, so just dig deeper.
- Place all non-observatory parts of the structure below the grade level.

I believe that this telescope will be a good addition to our scientific research community on Maui, and it will further an important study of the sun. The legend of Maui said that the sun slowed its passage across the sky. By studying the sun, we honor the Hawaiian legend of Maui, and are perpetuating it in a scientific way.

Thank you for considering these suggestions.

Aloha,



Dan Judson

## Response – Dan Judson, April 19, 2006



950 N. Cherry Avenue  
Tucson, Arizona 85719  
Telephone 520/318-8249  
Fax 520/318-8500  
Email: [jwagner@nso.edu](mailto:jwagner@nso.edu)

April 19, 2006

Dan Judson

Dear Mr. Judson,

Thank you for your interest in the Advanced Technology Solar Telescope. The issues addressed in your letter - placement, height, and color of the observatory structures, were thoughtful and deserve a direct response. The facility design has dictated where we would place the telescope, how high it would be, and what color it would have to be painted. Much investigation of these issues was done and I would like to briefly share with you some information about the range of solutions. Taking them one-by-one:

- Placing the telescope at a lower elevation, below the ridge line, would adversely impact the telescope's delivered image quality. The steady laminar flow of wind over the summit is one of the unique beneficial conditions that make Haleakalā the best site for ATST.
- The color of the telescope enclosure (dome), the tallest and most visible part of the observatory, has been explored in depth. Being aware of a preference within the community to make the dome blend in with the mountain, we investigated the possibility of painting it to match the brown color of the native volcanic rock. This was shown in thermal modeling to result in roughly four times as much absorbed heat as a white enclosure under the same conditions. That heat would rise into the telescope path and degrade the image quality significantly.
- Your last four points all address the possibility of placing significant portions of the observatory below ground. The height of 28m (~92 ft.) to the center of the telescope (primary mirror) was established to place it above the thermal turbulence near the ground during the daytime. The telescope enclosure height (~143 ft.) is in turn set by providing minimum clearance and working space around the telescope. The height of the main instrument platform and the adjacent control room, about 60 ft. below the telescope (32 ft. above ground) is set by the focal lengths of the optics required to achieve the necessary imaging at the instruments. None of these elements could be located closer to the ground (or underground) without destroying the scientific capabilities of the telescope. The other parts of the observatory, primarily service and utility spaces, as currently designed, are already low enough to not be visible from valley or upcountry communities. Also, if we required additional excavation, it would be undesirable both culturally and biologically, as it would entail the displacement of more native soil and would increase the potential disruption to nearby petrel burrows.

Thank you again for your interest and for the supportive comments in your letter. We certainly hope, as you say, to honor and perpetuate in a scientific way what has been an enduring Hawaiian tradition of venerating the Sun.

If you have not done so already, we invite you to visit our web site at: <http://atst.nso.edu/>. Thank you for your participation and feedback.

Best regards,

A handwritten signature in black ink, appearing to read "Jeremy Wagner".

Jeremy Wagner  
Project Manager



Operated by the Association of Universities for Research in Astronomy, Inc.  
under a cooperative agreement to the National Science Foundation

19 'Apelila 2006

Please do not disrespect  
Haleakala with another  
telescope. Once again  
you are disrespecting  
Hawaiian Culture &  
Rights. You plan for  
even thinking of that.

Mālia Kuehler

## **Comment – Art Medeiros, Maui News, April 22, 2006**

### **Seeker of knowledge suggests moving solar telescope**

Maui News, April 22, 2006

I cannot help but respond to Mal Johnson's April 16 letter concerning the value of knowledge and in favor of the Haleakala proposed astronomy facility.

I am one who has spent all of my adult life in the beautiful quest for that which is yet unknown and agree that this pursuit borders on the sacred. I am also painfully aware of the trend of conversion of the once rounded and most assuredly sacred pu'u of uppermost Haleakala into a jumble of white blocky buildings.

The rocky summit of Haleakala, one of the highest mountains in Oceania, may seem like a lifeless land of stone, but is actually alive with unique Hawaiian plants and animals.

The proposed Advanced Technology Solar Telescope would easily be the largest of its type. I am told the facility would be over 140 feet tall, taller than the county building in Wailuku. The mark this monolith would make on Maui would be significant and irrevocable.

Though Haleakala was the preferred site for this facility, other sites were identified as acceptable. I suggest that these options be pursued.

The quest for knowledge is beautiful but its demands must be weighed against the other sacred and beautiful things of the limited area of Maui, aspects of our Hawaiian culture, the lives of unique native plants and animals and the grace of the clean lines of Haleakala's ethereal high Pacific mountain viewscales.

Art Medeiros

Makawao

## Response – Art Medeiros, Maui News, April 28, 2006

### **Haleakala is the only place for advanced solar study**

We agree with Art Medeiros (Letters, April 22) that the rocky summit of Haleakala is alive with unique Hawaiian plants and animals. However, the 18-acre “Science City” site represents only about 1 percent of similar habitat on or near the summit of Haleakala.

To seriously undertake a quest for knowledge, we must often find the very best place to undertake research in order to maximize the potential for success.

For the Advanced Technology Solar Telescope, a group of scientists was given the task of finding the very best site in the world for studying the sun and its corona. The group also developed instrumentation that would be used to measure daytime solar seeing, sky brightness, clear time fraction, dust levels, and water vapor content at the most promising sites.

An evaluation of more than 72 sites around the world yielded six potential locations. After the first phase of testing, the list of six sites was reduced to three. After two years of the most extensive daytime site testing ever conducted, the site group produced its final report in October 2004.

Two of the sites tested in the final phase did not provide the excellent seeing conditions and/or had a much brighter sky in the daytime when compared to Haleakala.

Only Haleakala fully meets all three of the most critical criteria to meet the science objectives of the proposed ATST. Haleakala is truly the best site in the world from which to undertake a quest for knowledge of the sun.

**Jeremy Wagner**  
ATST project manager  
National Solar Observatory  
Tucson, Ariz.

4/22/06

Dr Craig S Foltz

Aloha. It is an absolutely unspeakable sin to consider a 14 story, whatever color, "astronomical" observatory on top of our sacred and precious centerpiece of Maui.

Have you ever walked the incredibly difficult West Rift trail whereby Ulu (breadfruit) was brought from Hana to what is now Kihei past the undisturbed burial cairns of those died during their journey?

This would be a crime to our ancestors, descendants yet to come a desecration to our Island and it's archeological, historic, and religious sites – not to mention the a'aina – the land.

Gillian M James

Sincerely,

Gillian M James

P.S. I will fight this until my dying breath.

Gillian Mallory James

4/23/06

KC Environmental

It is absolutely unspeakable to consider a 14 story, white or any other color, "astronomical" observatory, building on top of our precious and sacred Haleakala, the centerpiece of our Maui.

Has any of you ever walked that sacred West Rift trail, over which Ulu were brought from Hana to what is now Kihei, and passed by those intact burial cairns where the ancestors were interred if they died on route?

This would be a crime against the people of Maui, and the state of Hawaii, and our ancestors and descendants.

Sincerely,  
Gillian Mallory James

## Comment – Kathleen McDuff, Richard Lucas, Michael Lucas, April 20, 2006

April 20, 2006

KC Environmental  
P.O. Box 1208  
Makawao HI 96768

Dr. Craig S. Foltz  
1201 Wilson Blvd. No. 1045  
Arlington VA 22230

Re: Haleakala Solar Telescope

Dear Sir or Madam:

We are residents of Maui, and we respectfully request that you choose another location for the new telescope facility you are planning for Haleakala. Although this is a worthy project, it would be much more appropriate in one of the other 70 locations you have considered. Most of those locations welcome the telescope, and that way you could have the facility, as well as the good will of the community.

As we are sure you are aware, Haleakala is a sacred site for Native Hawaiian people, and, as such, should not be desecrated. You stated that “the acquired science would probably result in ‘very little’ measurable impact on Maui folks or even on ‘civilization at large,’ but that the positive impacts of the knowledge gained from the telescope would grow in the future.” What you did not address, is that this facility will have a very real negative impact on Maui immediately. You cannot show Haleakala “proper cultural respect” (which you claim you are addressing) by building a 140 foot white tower on her summit. This is not possible, because the two terms (**proper cultural respect** and building the tower on her summit) cannot co-exist. It is actually that simple.

“Proper cultural respect” for Haleakala would prohibit placing any structure on the peak of a mountain considered hallowed ground by Native Hawaiians. The structures that are already there have desecrated the ‘aina already – placing this monstrous white facility which will forever alter the splendor of this most sacred site is not necessary. It’s not like there is no where else it can be built. Maui and the rest of Hawaii have been pillaged and prostituted for economic gain – please do continue this unnecessary practice for the sake of this project. **Please** allow Maui, and the Hawaiians who live on her, to keep one the few remaining sacred sites left. The lives of Mauians will not be improved by this facility, and science could benefit just as well at another site. In fact it is my understanding that there are other sites that would actually be more effective scientifically.

Respectfully,

Kathleen S. McDuff  
Richard M. Lucas  
Michael A. Lucas

## Comment – Judy Mancini, April 23, 2006

April 23, 2006

KC Environmental  
P.O. Box 1208  
Makawao HI. 96768

RE: Solar Telescope

To Whom it May Concern:

And this does concern each and every one of us who live on this gorgeous Island! One cannot look at this mountain, Haleakala, where heaven meets earth in an unobstructed sky and not wonder about the majesty of the universe. For thousands of years, Hawaiians have taken care of this sacred place and we malihini are privileged to have the opportunity to experience an unspoiled wilderness area where only the sounds of nature can be heard beneath the blackness and solitude of the night sky. We have the same obligation to preserve this special place for generations to come.

I am writing this letter for my grandchildren because I want them to experience that same sense of awe. The telescope can probably provide much information about outer space to the military planning to build it, but I for one am opposed to this site. Science is only one way to know things. It cannot measure soul or peace or respect. All of these things can be found right here on earth, on this mountain. Please reconsider this location.

Respectfully,



Judy Mancini

## Comment – Martha Martin, April 24, 2006

Date: Mon, 24 Apr 2006 17:18:52 -0900  
To: [charlie@kcnv.com](mailto:charlie@kcnv.com)  
From: "Martha E. Martin" (via email)  
Subject: No to ATST on Haleakala

KC Environmental Inc.  
P.O.Box 1208, Makawao, HI 96768

I oppose building a massive Advanced Technology Solar Telescope on Haleakala. The mountain is part of a small island, formed only after thousands of years. It cannot be replaced in Hawaii within the next thousands of years. The loss of it cannot be put into dollars , or traded for current purposes.

Hawaiian people don't need a high-tech telescope. They do need to protect their fragile lands and preserve their limited natural wonders. The known, and unknown plants and animals living on the summit will be seriously threatened by the ATST.

The ATST will intrude visibly and audibly on this wildness treasure. Noise from construction, traffic, the use of air conditioners, generators, and the disruptions caused by building maintenance are things which should be excluded from wilderness environs.

The operation of the ATST will probably produce poisonous wastes. The public has not been informed about the details of materials and of their waste disposal.

For instance, will ATST use transformers, coolants, insulators and hydoraulic fluids which use PCB's? PCBS are toxic compounds which can evaporate, drift off, and poison the earth. The large amount of electricity needed for the ATST ought to have been produced by its own solar design, not planned to draw from Maui power.

Many of the operations of the ATST many contribute to global warming. Global warming seems to be threatening to change the weather on earth and bring higher ocean levels, more hurricanes and tornadoes, and both droughts and floods.All of these effects are infinitely more life-threatening to Mauians than the study of solar flares.

Maui does need to encourage scientific advances in learning about our environment, and find ways to make life on earth better. But building the ATST is not good for Maui, and it is certainly not the only way to inspire minds.

In conclusion , I ask that the ATST not be located on Haleakala, because it is not an overall benefit to Maui. Perhaps in 50 years science will find a way to study the sun without needing such a huge telescope at all.

Martha E. Martin

108

**Comment – Ann Fielding, April 27, 2006**

**Ann Fielding**

April 24, 2006

To Whom It May Concern:

**No, not on Haleakala!!**

Aloha,

A handwritten signature in cursive script that reads "Ann Fielding".

**Ann Fielding**

## **Comment – Association of Hawaiian Civic Clubs, May 1, 2006**

Date: Mon, 1 May 2006 21:40:19 -0700 (PDT)

From: Dreana Kalili <VIA EMAIL>

Subject: AHCC Comments in Opposition to ATST Project

To: charlie@kcenv.com, cfoltz@nsf.gov

Cc: Antoinette Lee <email>, lhokoana (email)

Dear Mr. Fein and Mr. Foltz,

Please accept the following comments from Antoinette L. Lee on behalf of the Association of Hawaiian Civic Clubs.

If you have any questions, please reply to this e-mail address, or you may contact Ms. Lee directly at 808-xxx-xxxx.

Sincerely,

Dreana Kalili, Chair  
Government Relations Committee  
Association of Hawaiian Civic Clubs

## Comment – Association of Hawaiian Civic Clubs, May 1, 2006 (cont.)



### ASSOCIATION OF HAWAIIAN CIVIC CLUBS

P.O. Box 1135 Honolulu, Hawaii 96807

TESTIMONY OF ANTOINETTE L. LEE, PRESIDENT  
ASSOCIATION OF HAWAIIAN CIVIC CLUBS TO THE  
NATIONAL HISTORIC PRESERVATION ACT 106  
CONSULTATION MEETING AT PAUKŪKALO COMMUNITY CENTER

May 1, 2006

Aloha:

The Association of Hawaiian Civic Clubs firmly opposes the development of an Advanced Technology Solar Telescope project on Haleakalā.

The Association of Hawaiian Civic Clubs is a confederation of fifty-one Hawaiian Civic Clubs located throughout Hawai'i and across the United States. We are the oldest community-based grassroots Hawaiian organization in the state and we work to support initiatives that benefit the native Hawaiian community. One important issue we support is the preservation of sacred and culturally significant sites. On Saturday, April 29, 2006, our board voted unanimously to support our Maui District Council and its member clubs to oppose this project.

Haleakalā, visible from almost every part of Maui, is a sacred cultural site and the beauty of its unblemished slopes has been recorded for centuries in Hawaiian legends, chants and songs. Native Hawaiians revere this site as a place of great mana (spiritual power). The construction of a telescope the size of a 14-story building will destroy this pristine landscape of our sacred site. This project is not only unwelcome, but will set a very dangerous precedent.

On the Big Island, where similar observatory and telescope structures line the mountain range, it is impossible to appreciate natural beauty when unnatural structures obscure the view. These slopes, too, were once described in chant and song as beautiful, awe-inspiring, and brilliant, but future generations will never be able to fully appreciate this beauty. We must ensure that Haleakalā and the people of Maui do not share this fate.

Also, please consider the potential negative impacts to the Maui and state economies. In a survey conducted by the Hawai'i Tourism Authority, 58% of Maui residents sighted "loss of Nature and open space" as a big problem. The Haleakalā National Park, one of the most popular tourist destinations on Maui, has adopted policies to control the overcrowding of visitors at the summit during the sunrise. There may be no crowds to control if this telescope facility is erected.

"Haleakalā the beautiful Mountain it stands all alone so Peacefully". Please preserve Haleakalā.

**Comment – David Keala – June 4, 2006**

4 June 2006

KC Environmental, Inc.  
P.O. Box 1208  
Makawao, HI 96768

TO WHOM IT MAY CONCERN

Aloha:

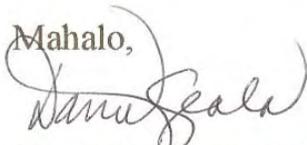
I would like to thank you in behalf of the Native Hawaiian Educational Council for this opportunity to participate in the National Historic Preservation Act, Section 106, 36 CFR, PART 800, Protection of Historic and Cultural Properties.

Yes, we do have some concerns that we would like comments on.

1. The color of the structure. Would it blend in with the area without being unduly noticeable?
2. Will the height of the structure make a significant impact to the visibility from surrounding areas, especially from low lying areas?
3. Will the design of the building offer any cultural significance?
4. Will a college program be offered, through Maui Community College or another university, to students of Maui?
5. Will it be open for tours and how often?

Your response will be greatly appreciated.

Mahalo,



David Keala, President

## Response – David Keala – June 7, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

June 7, 2006

Mr. David Keala, President  
Native Hawaiian Educational Council  
240 Elilani Street  
Pukalani, HI 96768-8332

Dear Mr. Keala,

On behalf of the National Science Foundation, I would like to thank you for your participation in the National Historic Preservation Act, Section 106 process for the proposed Advanced Technology Solar Telescope (ATST). We have forwarded your letter to the National Science Foundation ATST Program Officer, so that he can respond to your items of concern. You will be hearing from NSF in the very near future.

If you have not done so already, we encourage you to visit the ATST web site for more information about this project and the information we have provided regarding the Section 106 process to date:

ATST Web site: <http://atst.nso.edu/>  
Protection of Historic Properties: <http://atst.nso.edu/library/EIS.shtml>

Again, thank you for your participation and please do not hesitate to call me if you should have further questions.

Sincerely,



Dr. Charlie Fein  
Vice President

## Response – David Keala – June 7, 2006



National Science Foundation  
4201 Wilson Boulevard  
Arlington, Virginia 22230

June 7, 2006

Mr. David Keala, President  
Native Hawaiian Educational Council  
240 Elilani Street  
Pukalani, HI 96768-8332

Dear Mr. Keala:

On behalf of the National Science Foundation, I would like to thank you for your letter regarding the proposed Advanced Technology Solar Telescope (ATST). I am the NSF Program Officer for the project. Since the project, if it is funded, will be a Federal undertaking, the NSF is the lead Federal agency and, therefore, has the responsibility for compliance with the applicable environmental and cultural preservation statutes.

I understand that our environmental consultant, Dr. Charlie Fein of KC Environmental, has been in touch with you in regard to the NHPA Section 106 consultation. The purpose of this letter is to respond to the specific concerns enumerated in your letter of June 4, 2006. Many of the details of the project will be thoroughly described in the Draft Environmental Impact Statement (DEIS) that is nearly complete. However, in anticipation of the release of that document, my understanding of the issues you raised follows:

- A. *Color of the Structure* – The color of the solar telescope enclosure and support building would be white. Unfortunately, if they were to be painted to blend in with the mountain, they would absorb about four times more heat from sunlight during the day. The heated air rising from the building surfaces would pass through the observing path of the telescope and unacceptably blur the images.
- B. *Visibility of the Building* – As described in the DEIS, the height of the ATST building would be as much as 143 feet. This height is required to place the telescope above the turbulence in the atmosphere directly above the ground level at the site. Since it would be quite high, the visibility of the structure has been a major concern expressed in our public meetings to date. As part of the environmental impact analysis process, detailed model simulations and renderings of the view planes have been prepared for many locations in low lying areas, including upcountry, Kahului, Wailuku, Kihei, and other locations. While these show that the building would be clearly visible from the visitors overlook in the National Park, the visibility from low-lying areas of Maui would be variable, depending upon which of the two potential sites at Haleakala High Altitude Observatory (HO) is considered and the exact location of the viewer. In many cases, the ATST will be hardly visible or not visible at all; its view being blocked by other buildings at HO or the terrain of the summit area. A detailed discussion and the view plane renderings will be included in the DEIS.
- C. *Cultural Significance of the Building's Design* – At the present time, the design of the building, as described in the DEIS, is purely utilitarian. The basic structure must enclose and

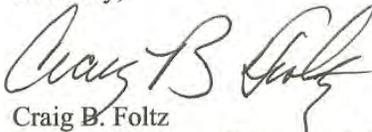
## Response – David Keala – June , 2006 (cont.)

protect the delicate equipment that it houses and there are some constraints on the design, for example, the color and the details of the rotating dome, that are imposed by solar heating, the need to control dust, etc. However, there is still opportunity for discussion of the incorporation of design features that would have cultural significance. This could be a subject for future discussion.

- D. *Education/Workforce Development Programs* – The National Science Foundation Act of 1950 (Public Law 81-507) established the NSF and authorized and directed it to initiate and support (among other things) “science and engineering education programs at all levels and in all the various fields of science and engineering.” Therefore, there is a clear mandate to all NSF-supported facilities to develop and run programs to promote science, technology, engineering, and mathematics education at all levels from K-12 through college and universities as well as through informal science education for the broader public. Programs that are supported at the National Solar Observatory and the National Optical Astronomy Observatory (to name just two of our major facilities) include direct educational outreach, educator support programs such as teacher training and curriculum development. For more information on ongoing programs, see <http://eo.nso.edu> and the education and public outreach links at <http://www.noao.edu>. The ATST team understands that it bears the responsibility to develop education, outreach and workforce development programs specific to the needs of the Maui community. The team has already met with MCC President, Clyde Sakamoto, Maui Economic Development Board, and officials from Kamehameha Schools to discuss potential partnerships. In addition, the team has already received a proposal from Mr. Charles K. Maxwell describing his vision for a long term, comprehensive educational program that integrates modern astronomy with traditional Hawaiian astronomy. The spectrum of possibilities is very broad and we hope that we can work with NHEC in crystallizing the education and outreach efforts.
- E. *Tours* – More than a million visitors visit the Haleakala National Park each year, which is adjacent to the Haleakala High Altitude Observatory, where the proposed two potential sites for the ATST are located. Due in part to the limited space for parking and for vehicular turn-around within the Observatory as well as the limited number of employees working at the summit, the facilities are not open to the general public. However, all astronomical facilities within the observatory will accommodate tours by educational and civic groups by appointment. It has been my experience that NSF-supported facilities take the mandate of communicating science to a broad audience very seriously and all requests for tours are honored within the constraints imposed by unusual activity in the building (construction, delicate operational procedures, etc.).

I look forward to consulting further with you on your concerns. Thank you for your participation and please do not hesitate to call me if you have any further questions. My phone number is (703) 292-4909 and my email is [cfoltz@nsf.gov](mailto:cfoltz@nsf.gov).

Sincerely,



Craig B. Foltz  
Program Manager, Division of Astronomical Sciences

Comment – Verna Nahulu - June 25, 2006

June 25, 2006/Kedra

Dear Mike,

Thank you so much for the TOUR, which was way beyond my expectations! In a very important way, the TOUR awakened a part of me that laid dormant in dreams, hopes and wishes.

I think someone has to write textbooks for the home-schooled students, and their teacher/parents. Today, there are more alternative education schools, like Charter Schools, Montessori Schools, and "Home-Schools". These schools are more accepting of what's true and real, so there's a market for <sup>these</sup> textbooks, for ages  $1\frac{1}{2}$  to 12, actually. And not just textbooks, but BOOKS... picture books, etc. It's the only way to counteract the "dumbing-down" of America. I want to start.

Today,  
I bought the CIG (Complete Idiots' Guide) to Physics, offering: ① An idiot-proof introduction to high school and first-year college-level physics, ② Down-to-earth explanations of complex concepts, ③ Simple solutions to algebra-based problems. It's thrilling! I can see myself taking a child from blocks and cups of water, to learning the systems of measurement used to measure physical quantities; to learning the units of measurement in each of the CGS, MKS, and FPS systems; to learning the fundamental quantities of physics (being mass, space, and time). I can do this with candies,

Comment – Verna Nahulu - June 25, 2006 (cont.)

3

gum, miniature candies, etc., along with scales, etc. and taking them from 1-10, to original numbers written in Scientific Notation ( $250,000 \text{ mi.} = 2.5 \times 10^5 \text{ mi.}$ ). They'll have fun with all those zeros, and the shorthand method as well. Measurements and writing of letters and numbers... are first grade curriculum anyway; we'll just step it up in first grade Physics; and have number rods etc. to express quantities, for example. Anyway, three-year-olds would get this, so I wouldn't want to limit anything, <sup>or any age,</sup> in learning. Accelerated learning can be the most naturally understood if there is excitement, freedom & dignity present.

Can you repeat two things you mentioned, on the tour? <sup>(learning on Telescopes)</sup> The benefits for racial groups, The "distance-learning" university study/correspondence <sup>school(?)</sup> (?).

Governor Lingle and I used to write. When I wrote to her about the biology of transcendence and how it relates to teaching children on a higher level of understanding, she asked me to start a charter school. Unfortunately, she answered six months after I wrote, and I was already involved in another project. But, I think I'd like to teach the very young again... accelerated comprehension is a reality. The human brain is not completely developed until 3 years after birth, and then grows <sup>zero to three</sup> is precious time.

Thank you for my whole awakening about the importance of physics for the very young, AND the possible introduction of solar <sup>(sub)</sup> technology for all grades. Parents HAVE to be in on it somehow, they can't be left in the dark.

Comment – Verna Nahulu - June 25, 2006 (cont.)

(3)

I wonder if I can experience the telescope when the operator is there? Can we have another tour and cover the parts we missed? <sup>When?</sup> When everything comes together in an easy and comfortable way for you... even if it's a few months down the road (or the mountain).

actually, I'm just aching to do a first grade introduction to a study of the sun! I had to wait until I was 70 to learn that the sun had gravity, and rotated from left to right? Preposterous! where can I get information on the study of the sun in detail? I want to set Hawaiians on fire with new knowledge of the sun, and consequently, why we need the Solar Telescope!

New careers will come from the Solar Telescope's location here. I, personally, am grateful that a small group of people made something incredible happen, when <sup>most</sup> people were too far in the past to think of something real that was beyond their imagination!

and plans made w/you, after a little more research, and with some real visuals and knock-out information, I'll be ready to meet with Hawaiian groups on Maui, with Power Point presentations, hands-on models, print-outs, etc. If there are no models of the sun, I could make one from the poster you have (3x the size)!

[Hum, a good starting point!]  
Aloha, Verna my first project, a 3-D model of the sun (with accurate or probable accuracy). The "sun" should be able to spin slowly from left to right

## Response – Verna Nahulu - July 7, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

July 7, 2006

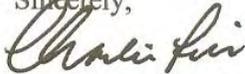
Ms. Verna Nahulu

Dear Verna,

Mike Maberry has given us your letter dated June 25, 2006 for inclusion into the Environmental Impact Statement for the Advanced Technology Solar Telescope (ATST). We have also forwarded your letter to the National Science Foundation.

Enclosed please find a few copies of booklets, tri-folds, and Fact Sheets regarding the proposed ATST project. Thank you for your continued interest in this project.

Sincerely,



Dr. Charlie Fein  
Vice President

Enclosures

CC: Craig Foltz, National Science Foundation  
Bijan Gilanshah, National Science Foundation  
Thelma Shimaoka, Office of Hawaiian Affairs  
Melissa Kirkendall, Maui Office, State Historic Preservation Division

Comment – Verna Nahulu - July 11, 2006

Copy: To Mike Maberry

July 11, 2006  
Keokea, Maui

Dear Dr. Fein,

Thank you so much for a very appreciated letter, and "extremely-timely" printed information that I received just yesterday. Today, the Kula Board met at 5:30 PM, and I had 11 Fact Sheets, 11 ATST Pamphlets and 3 beautifully covered booklets. Ten KCA members were present, and everyone went home w/ your fact sheets and pamphlets. I was delighted that you were on the agenda for discussion. I gave an impromptu presentation for ATST, reading aloud the section subtitled, "education and public outreach"; I spoke about the tour that Mike Maberry hosted, and what I experienced to be a "boon for education" in Maui; I asked, "did you know that the sun rotates in 27 day completions, and the sun has a powerful gravitational pull?" (No one knew). All of your information was in front of the members just before my presentation. I revealed to them that the tour inspired me to create books and educational materials, and audio books to teach Physics to the Very Young (1-6 years). I will follow that with Physics text books for grades one to six, based on the introductory foundation of information learned from one to six years old. I'm planning to create a model of the sun with internal mechanisms to replicate a 27 day rotation.

The Kula Board members present at the meeting tonight were: President Carolyn Mossman, Kalama School teacher,

Comment – Verna Nahulu - July 11, 2006 (cont.)

Gina Hammer, Secretary and Homemaker; John Wilson, Treasurer and retired businessman; Buzz Stuka, CEO and President of Haleakala Ranch; Mitch Silver, Businessman, Photographer, ex - Peace Corps (India); Elliott Krasch, retired teacher; Paul Koehler, Monsanto Exec.; Alan Kaufman, Veterinarian (Kula), and myself, Verna, former Secretary (4 yrs), retired elementary school teacher, writer, artist, and Native Hawaiian Kahuna. Quite an array of Kula people, who now hold the information you sent me. I suggested they go on "the tour" before writing any resolutions or finalizing decisions about the ATST. The Kula Board decided to invite Mike Maberry and two or three ATST associates, after the EIS is out, to speak to the members and make a presentation.

I am committed to the ATST project, and would like to work with and assist your team in any capacity necessary to accomplish your goal.

My goal is to substantially counter-act the "dumbing-down of America" in schools, TV, video games, etc. by presenting the real world to the very young, starting with our number system and moving into algebra, geometry and physics by six years old. (I hope to have my Vector and Scalar "talking-surfboard dolls" ready before Christmas).

Please send more info, I'm out. Goodnight and Good luck,  
Aloha,

Verna K. Nahulu

cc Mike Maberry [Potential KCA member Jim Aaronson (Kula)]

## Response – Verna Nahulu - July 24, 2006



P.O. Box 1208  
Makawao HI 96768

(808) 573-1903  
fax: (808) 573-7837  
charlie@kcenv.com

July 24, 2006

Verna K. Nahulu

Dear Verna:

Thank you so much for your letter of July 11<sup>th</sup>. I will pass on your comments to the National Science Foundation (NSF), which is the agency responsible for the proposed ATST project

I understand your commitment to the ATST project and as a former UH faculty member, I appreciate your goal to counter-act the “dumbing down of America”. However, please keep in mind that KC Environmental, Inc. is the environmental consultant for this project and as such we have no authority concerning the decision whether to proceed with this project or whether it will or will not be funded for construction. We have transmitted your comments and action requests to NSF, and as we are authorized to act on their behalf, enclosed are a few more materials to distribute in the community.

You have my warmest Aloha,



Dr. Charlie Fein  
Vice President

Enclosures

CC: Dr. Craig Foltz, Program Officer, NSF  
Bijan Gillanshah, Assistant General Counsel, NSF  
Thelma Shimaoka, Office of Hawaiian Affairs  
Melissa Kirkendall, Maui Office, State Historic Preservation Division

## Comment – Mark Hoffman – July 21, 2006

**From:** "Dr. Charlie Fein" <charlie@kcenv.com>  
**To:** "Mark G Hoffman" <----->  
**Cc:** <kcesharon@hawaii.rr.com>  
**Sent:** Friday, July 21, 2006 1:15 PM  
**Subject:** Re: ATST section 106

Mark:

Thank you for your inquiry. Those individuals and groups submitting proposals for Section 106 will be invited to meet with NSF representatives during the same week that meetings are held for public comment on the Draft EIS. As of this date, we anticipate that the EIS public comment meetings will be held during the last week of September. That said, the NSF would like to have all Section 106 related proposals in hand as soon as possible, in order to initiate contact with the proposers before meeting with them on Maui. These proposals may indeed be submitted to us at KC Environmental at any time.

>-----Original Message-----

>From: Mark G Hoffman [mailto:-----] ]  
>Sent: Friday, July 21, 2006 07:44 AM  
>To: charlie@kcenv.com  
>Cc: hunter<----->  
>Subject: ATST section 106

>

>Dear Dr. Fein,

>I am the program coordinator for the electronics and computer engineering technology AS degree program at Maui Community College. You and I have spoken briefly at an ATST community meeting and at the Panstarrs dedication.

>I am working with a team of educators that would like to submit a Section 106 proposal for the proposed Advanced Technology Solar Telescope (ATST). Our understanding is that this proposal should be submitted to K.C. Environmental.

>We would like to know what the deadline for submission is. Thank you for your consideration.

>

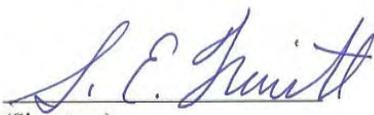
>Sincerely,

>Mark Hoffman

>

## “I SUPPORT...” Petition Forms

An “I Support...” form, as shown below, was also signed and submitted by the individuals listed on the following pages.

Date: <u>24 May</u> , 2006	
Dr. Craig B. Foltz National Science Foundation 4201 Wilson Boulevard, Room 1045 Arlington, VA 22230	
RE: Advanced Technology Solar Telescope on Haleakala, Maui	
Dear Dr. Foltz:	
I <u>SUPPORT</u> the proposed construction of the ATST on Haleakala. I believe the proposed project will result in major advances in solar research toward understanding space weather and how it affects life on Earth. It will be beneficial for educational outreach and will be a source of continued employment in the hi-tech field already on Maui. In summary, ATST is a worthy project for Maui.	
Sincerely,	Print Name: <u>STANLEY E. TRUITT</u>
 (Signature)	

## “I SUPPORT...” Petition Forms

An “I Support...” form, was also signed and submitted by the individuals listed.

Last Name	First Name	Last Name	First Name	Last Name
Adler	Martin E.	Ellison	Jeffrey	Kumasaka
Aeder	Erik	Fair	Deybra	Kumasaka
Alday	Rene Christopher	Fukuda	Casey	Lane
Alexander	Gerry	Gebink	Cynthia	Lapp
Aller	Kimberly	George	Janet	LeBron
Amindson	Danielle	Gibson	Brooke	Lee
Armstrong	James D.	Gilliland	Julie	Lesteie
Atwell	Francine	Glassen	Nicole	Lester
Bal	Calyton H.	Gottlieb	Steve	Lindsey
Balinbin	Rudy	Greenberg	Gary	Liva
Bantilan	Melissa	Groden	Randy	Longaker
Barona	Lolita	Guinan	Stacey	Lowell
Bear	Lynne	Habesreiter (Dr.)	Margit	Maberry
Beatty	Jody	Hall	Dawn	Maki
Behan	Kevin	Hartman	David A.	Makua
Born	Terry	Haslbede	Glenn	Mann
Briner	Kenn	Haupt	Prentiss Carl	Maux
Brinkman	Steve	Hodge	Curt	McGinnis
Bunny	Kirsten	Hogan	Vince	McNulty
Cabradilla	Jolene	Holton	Doreen	Meeder
Calhoun	John	Hope	Douglas	Mertens
Capriola	Gary	Hough	Jason	Messersmith
Carlos	Sumer	Howard	Gardner	Michaud
Chacko	Sumita Mary	Hughes	Kevin	Minnella
Christensen	Robert	Hutchison	James	Miyajima
Christensen	Daphne	Ingalls	Thomas E.	Moore
Cook	Jerry	Ito	Blanche N.	Moore
Cost	Jill	Janke	R. L.	Morul
Craig	Tad	Jensen	Susan	Moran
Cunanan	Romylynn	Kaeo	Donlyn	Morizono
Dailey	Roger	Karakawa	Shigeru	Morrison
Dale	Nicholas	Karakawa	Carol	Mueller-Fitch
Davidge	Greg	Kaupalolo	Kristopher	Mussou
Davis	Janet	Kiriaty	Avi	Nahulu
DeRego	Neal L.	Kishi	Keith	Nakai
Dixon	Ann	Kleid	Cindi	Nakakura
Donner	Tammy	Korpi	John	Narrowe
Drood	Jeffrey	Krost	Todd	Neizman
Eichart	John	Krumwiede	Jack	O'Brien

## “I SUPPORT...” Petition Forms

An “I Support...” form, was also signed and submitted by the individuals listed.

First Name	Last Name	First Name	Last Name	First Name
Linda	O'Connell	Daniel	Truitt	Stan
Kenneth	O'Gara	Daniel	Tyler	Majorie
Edward	Olson	Elaine	Van Dorland	Carlos
Howard	Orwig	Steve	Viloria	Chris
M. Kehaulani	Pell	Sherri	Vladyka	Penrod
Stanley	Pequegnat	B.	Wallholm	Tony
Ron	Pestana	Lisa	Warren	Cole
Susan	Petrie	Barb	Whittemore	Linda
Clifford	Pico	Montez	Wilson	Johanna
Angela	Porter	Lisa	Wilson	Geraldine
Jason	Powell	Madeline	Wineland	Rene
Rebecca	Powell	Peter	Wooten	Jason
Michael	Prieto	Glenn	Yamada	Daryl
Richard	Quinton	Lynne	Yu	Liu
Janet	Rasmusse	Kasper	Zaleski	Robert
Donna	Ratkowski	Diane	1 illegible name	
Steve	Ratkowski	Rob		
Vicki	Rizzo	Frank		
Patrick	Russell	Nikki		
Susan	Sato	Charlotte		
Judy	Sawyer	Charlene		
E. John	Schwarz	Michael		
Gerry	Sherling	Alana		
Patrick	Sherling	Dave		
Melissa	Shiozuki	Ryoji		
Gary	Shippee	George		
Kelly	Smith	Gregory		
Jose	Smith	Rona		
Martha	Staple	Susan		
Justin P.	Steele	Marjorie		
Shauna	Stephens	Jennifer		
Heather	Stephens	Sam		
Jake	Stott	Linda		
Verna	Street	Spar		
Kan	Strini	Rick		
Jayson	Summer	Silvia		
Patt	Tempchin	Jen		
Karen	Thompson	Karen D.		
Cristin	Torres	Stephan		

## “I OPPOSE...” Petition Forms

An “I Oppose...” form, as shown below, was also signed and submitted by the individuals listed.

Date: <u>May 12</u> , 2006	
Dr. Craig B. Foltz 4201 Wilson Blvd., Rm. 1045 Arlington, VA 22230	
Re: Advanced Technology Solar Telescope on Haleakala; Maui	
Dear Dr. Foltz:	
<p>I oppose the proposed ATST on Haleakala. I believe the proposed project will have significant adverse effects on the environment and the cultural and spiritual essence of Haleakala. I request a copy of the draft EIS so that I may review it and see if I wish to submit further comments.</p>	
Sincerely,	Name: <u>Vicki McCarty</u> <sup>R</sup>
<u>Vicki McCarty</u> (Signature)	Address: _

Last Name	First Name	Last Name	First Name
Aquino	Princess Lehuanani	Lindsey	Ed and Puanani
Bailey	Gordean	Martin	Martha
Barclay	Claire	McCarty	Vicki
Brayton	Chris	Medeiros	Bill
Brayton	Thomas	Pofford	April
Breitbach	Brad	Rabold	Jeanne
Dizon	Toni	Roback	William
Eldridge	Carl	Ryder	Leohu
Hazen	Lorna	Shearman	Nancy
Helm	Mikahala	Shito	Georgina
Helm	Rusty	Snipes	Heather
lao	Maydeen	Souza Sjholom	Ellen
Kahaleanu	Roselani	Tassill	Kalani
Kanamau	Walter	Taylor	Chris
Kane	Jen	Tolman	Margit
Kasprzycki	Lisa	Vilahos	Alexander
Kaupalolo	Cheryl		

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## **APPENDIX B**

### **TRANSCRIPTS – PUBLIC SCOPING MEETINGS**

- (1) Cameron Center, Kahului, HI, July 12, 2005**
- (2) Kula Community Center, Kula, HI, July 13, 2005**
- (3) Pukalani Community Center, Pukalani, HI, July 14, 2005**

# Appendix B(1): Transcripts, Public Scoping Meeting, Cameron Center, July 12, 2005

1

1           ADVANCED TECHNOLOGY SOLAR TELESCOPE (ATST)  
2           PUBLIC SCOPE MEETINGS  
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11  
12           PROCEEDINGS  
13  
14 Held at the Cameron Center conference room, 95 Mahalani  
15 Street, Wailuku, Maui, Hawaii, commencing at 7:00 p.m. on  
16 Tuesday, July 12, 2005.  
17  
18  
19  
20  
21  
22 REPORTED BY: GLORIA T. BEDIAMOL, CSR/RMR #262  
23  
24  
25

2

1           ATTENDANCE  
2  
3 MEETING FACILITATORS:  
4           Claudia Wahl and David Brass from Mediation  
5           Services of Maui  
6 HAWAIIAN LANGUAGE TRANSLATOR:  
7           Kiope Raymond  
8  
9 PANEL MEMBERS PRESENT:  
10          Jeff Kuhn - Associate Director of the University  
11          of Hawaii, Institute for Astronomy (Oahu)  
12          Craig Foltz - Program Officer with the National  
13          Science Foundation, Washington D.C.  
14          Dr. Charlie Fein - KC Environmental (Maui)  
15          Jeremy Wagner - ATST Project Manager with National  
16          Solar Observatory, Tucson, Arizona  
17          Jeff Barr - ATST Project Architect  
18          Mike Maberry - Assistant Director, University of  
19          Hawaii, Institute for Astronomy (Maui)  
20  
21  
22  
23  
24  
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3

1           TRANSCRIPT OF PROCEEDINGS  
2           \* \* \*  
3           MS. WAHL: Aloha. Good evening and welcome. My  
4 name is Claudia Wahl. I, along with David Brass, will be  
5 the host moderators this evening. We're representatives of  
6 Mediations Services of Maui, and we're here as neutrals.  
7 Meaning, that we have no vested interest in the outcome of  
8 tonight's meeting or in the proposed project. Our role is  
9 to make sure that everyone has an opportunity to contribute  
10 to the meeting by providing information to the public and to  
11 invite public comment about the proposed project.  
12          Before we get started this evening, I would like  
13 to introduce Leslie Kuloloio. He will offer the pule this  
14 evening.  
15          MR. KULOLOIO: (Hawaiian language was spoken)  
16 Leslie Kuloloio. I just kind of feel hewa. I don't why I  
17 would give pule for this project when my spirit is not  
18 (Hawaiian language was spoken) with this meeting, especially  
19 (Hawaiian language was spoken) Haleakala. (Hawaiian  
20 language was spoken). So let somebody else pule, because my  
21 spirit is not in harmony. Thank you.  
22          MR. MAXWELL: I was supposed to pule originally  
23 because I did the first archeological and cultural study of  
24 Haleakala. And my role is to protect it culturally and  
25 spiritually. (Hawaiian prayer) Heavenly father, as we sit

4

1 in this room, we ask and pray that you look down upon us so  
2 we can exchange and get all our answers answered in a good  
3 way; that we can relate to the people that is here, so that  
4 they might continuously protect and know that Haleakala is a  
5 sacred place. We ask in your name (Hawaiian language  
6 spoken).  
7          MS. WAHL: Mahalo, Charles K. Maxwell. Tonight is  
8 the first of three public scoping meetings sponsored by the  
9 National Science Foundation. The meetings are part of the  
10 environmental planning process for the Advanced Technology  
11 Solar Telescope, or ATST, proposed for the Haleakala high  
12 altitude observatory site. This meeting will be recorded so  
13 that your contributions will become a part of the  
14 administrative record and will be used as a part of the  
15 scoping process for the environmental impact statement.  
16          If you would prefer not to get up and speak this  
17 evening but would like to submit written questions or  
18 comments, there are comment sheets available outside at the  
19 sign-in table with information where you can send them. The  
20 deadline for submission is August 14th.  
21          If you would like David or I to read your  
22 comments, please give one of us your sheet. If you would  
23 prefer not to have your sheet read, please place them in the  
24 box provided on the sign-in table. Also at the sign-in  
25 table, you'll find brochures and information describing the

5

1 proposed project.  
 2 Just a bit of housekeeping, the bathrooms are  
 3 located outside to your left around the corner, and they are  
 4 open.  
 5 This evening's agenda will consist of brief  
 6 presentations by the panel, and then there will be a period  
 7 for questions and comments from the public. Post-it notes  
 8 and pens have been provided for you to jot down your  
 9 questions or comments while the panel is speaking.  
 10 I'll now introduce the panel. If you'll please  
 11 raise your hands when I call your name. Mr. Jeff Kuhn,  
 12 Associate Director of the University of Hawaii, Institute of  
 13 Astronomy, who will present the science behind the need for  
 14 this project; Mr. Craig Foltz, Program Officer with the  
 15 National Science Foundation, Washington D.C., who will  
 16 discuss the role of the National Science Foundation  
 17 proponent in sponsoring the ATST; Dr. Charlie Fein, KC  
 18 Environmental, who will explain the environmental planning  
 19 process; Mr. Jeremy Wagner, ATST Project Manager with the  
 20 National Solar Observatory, Tucson, Arizona, who will offer  
 21 an overview of the project schedule; and finally Mr. Jeff  
 22 Barr, ATST Project Architect, who will talk about the  
 23 facility design and features of the ATST.  
 24 I would also like to introduce our court reporter  
 25 this evening, Gloria Bediamol, and also Mr. Kiope Raymond

6

1 who is our Hawaiian interpreter for this evening.  
 2 Before we begin, I would like to set out some  
 3 meeting guidelines that I'm going to ask you to follow, so  
 4 that everyone who has made an effort to be here this evening  
 5 will have an opportunity to contribute within the time  
 6 allotted for the meeting. As you can see, we've had a  
 7 couple of change-ups.  
 8 What we're going to ask you to do is hold your  
 9 questions or comments until after all the speakers have  
 10 finished their presentations. If you choose to voice your  
 11 questions or comments, please raise your hands, and David  
 12 and I will hand you a microphone. And when you get the  
 13 microphone, please state your name for the record. Please  
 14 keep your questions or comments brief and concise, so that  
 15 everyone who chooses to speak has a chance to do so this  
 16 evening.  
 17 The comments sheets will be read after everyone  
 18 has had a chance to speak. Out of courtesy and respect to  
 19 all, we ask that you not interrupt or make comments when  
 20 others are speaking. There's a reason for this. If more  
 21 than one person speaks at a time, the record of the  
 22 proceedings may not be accurate. The court reporter is only  
 23 able to record one person at a time.  
 24 If by chance you are unable to get your questions  
 25 or comments made this evening, there are two more meetings

7

1 scheduled: one tomorrow evening July 13th from 6:30 to 9  
 2 p.m. at the Kula Community Center and another on July 14th  
 3 at the Tavares Community Center in Pukalani also from 6:30  
 4 to 9:00. Again, you may also submit your comments in  
 5 writing.  
 6 Thank you all for coming. We will begin the  
 7 meeting with our presenters.  
 8 MR. KUHN: Can you hear me if I speak -- can you  
 9 hear me? That's much better. Thanks.  
 10 My name is Jeff Kuhn and I'm a scientist. I'm not  
 11 exactly a nonpartisan to this project. I started worrying  
 12 about telescopes like this 12 years ago when ideas were  
 13 circulated back at the National Solar Observatory. I'm one  
 14 of the people who would use this telescope, if it were  
 15 built. And my job, I think, is to give you a sense of why  
 16 the scientists are very excited about what it could do if it  
 17 was built.  
 18 The telescope itself, as you probably know, is  
 19 designed to study the sun. And the fact is that the sun is  
 20 more than just a gas ball up in space.  
 21 About a year and a half ago, as we were studying  
 22 the sun, this is what we saw. This is a picture of the sun  
 23 seen in white light. This picture was taken from space, but  
 24 it could also be taken from a telescope on the ground like  
 25 the ATST.

8

1 What it shows is a period of time -- this was  
 2 right around Halloween, a year and a half ago. It shows the  
 3 sun in its rotation and the development of something right  
 4 here, which the sun has never done before, at least in the  
 5 time that we have seen, is the development of a sun spot  
 6 group.  
 7 That sun spot group is a dark spot that appeared  
 8 on the sun, and the rapid development of that spot was  
 9 faster than anything we'd seen. You'll see it as it comes  
 10 around. It's going to develop right there in the middle,  
 11 and then it rotated to the edge of the sun. There it is  
 12 right there.  
 13 The size of the earth on this scale is about the  
 14 size of the end of my finger. So this was a region on the  
 15 sun that was three or four times the size of the earth, and  
 16 then it rotated to the edge of the sun.  
 17 What happened after it got to the edge of the sun  
 18 is probably very good for us because there was an eruption  
 19 of energy, which is larger than has ever been recorded in  
 20 the time that we have been studying the energy that comes  
 21 from the sun. This is that region as seen again from space.  
 22 This is a picture that we could not see by eye. It's a  
 23 picture taken in x-rays, and it shows a burst of energy  
 24 going off to the side. Not directly towards us but going  
 25 off to the side. That burst of energy again, to set the

9

1 scale -- the size of the earth is about this big on that  
 2 image.  
 3 As we look out into space, what we see from that  
 4 burst of energy, if we could block the sun, and this is the  
 5 magic of what the ATST will do, it will block the sun and  
 6 allow us to see the region further out into space. And I  
 7 don't know why my screen just did what it did.

8 The picture I want to show you is this picture of  
 9 energy being ejected out into space. We call that a coronal  
 10 mass ejection. It's billions of tons of mass and energy  
 11 that travels out to space. If it's directed towards us,  
 12 that energy comes to the earth, and it lights up the polar  
 13 display of the aurora that we seldom see in Hawaii; but it  
 14 affects the earth in very profound ways.

15 This is a picture that we can't now see except by  
 16 computer. And what it shows is the earth and the  
 17 interaction of that energy as it streams by the earth. It's  
 18 almost as if you see the wind that comes from the sun. That  
 19 energy channels into the earth, and here's a picture of what  
 20 that energy looks like. It's like the fluorescent lights in  
 21 this room. The atmosphere lights up.

22 During that storm, a year and a half ago, we lost  
 23 a couple of satellites, Japanese satellites were lost,  
 24 communications satellites. There was a power grid in Sweden  
 25 that was brought down because of that interaction, that

10

1 energy. Planes in the northern polar regions were rerouted  
 2 because of interruptions of radio communications. And  
 3 because of the threat of radiation and energy at that high  
 4 altitude, we're protected by the earth's atmosphere on  
 5 average.

6 The picture that we have of the sun is that it  
 7 produces energy. We're protected by this shield around the  
 8 earth. We call it the magnetic field. It's the same shield  
 9 that makes your compass work. That shield is variable. And  
 10 the variability of that shield sometimes lets that energy  
 11 into the earth and into the surface of the earth. And  
 12 that's one of the problems that we're trying to understand,  
 13 is the connection between the sun's energy and the sun's  
 14 magnetic field and the earth and the protections that the  
 15 earth gives us to that energy.

16 There's a larger effect over longer periods of  
 17 time from the sun which are more profound, we think, than  
 18 the short-term effects, which admittedly are mostly to  
 19 technology. Those storms that I showed you affects cell  
 20 phone communication, radio communication. For us lying on  
 21 the beach over here on Maui, the direct effect is not  
 22 significant except through our technology.

23 On a longer time scale, what we know happens when  
 24 the sun shows the cycle of these dark spots is that every 11  
 25 years there's a peak in the number of those dark spots. So

11

1 the record in western literature goes back to the 1600s with  
 2 Galileo. The record in the Chinese literature goes back  
 3 2000 years, before there were even telescopes.

4 The numbers that I show here are from the western  
 5 record. And what they show is there are periods of time  
 6 when the sun spots went away. And then there were periods  
 7 of time when there were lots of sun spots.

8 We think, if we extended this record back 2000  
 9 years, there was a period of time, around the 1300s or  
 10 1400s, when there were lots of sun spots. We know that from  
 11 the Chinese record, not from the western records.

12 What we're beginning to understand, and we only  
 13 know this recently, is that the sun gets brighter -- this  
 14 is another graph -- but these peaks in this graph show the  
 15 brightness of the sun. The sun is hotter when there are  
 16 more of these dark spots every 11 years. We don't  
 17 understand why. If you put dark spots on the sun, you'd  
 18 think the sun would be cooler; we have less energy. It's  
 19 not the case. The sun has more energy. The sun is  
 20 brighter.

21 As far as we can tell, this change in the  
 22 brightness of the sun affects the climate of the earth. And  
 23 there are very pervasive hints that the effect of the sun,  
 24 not just this 11-year cycle of effect but the larger cycle  
 25 where the sun spots went away, or where there were lots of

12

1 sun spots like there were going from the late 1800s to the  
 2 present.

3 We know there's an economic influence. If you go  
 4 back and look at the cost of wheat adjusted for inflation,  
 5 go back all the way to 1200 to 1900, there's an economic  
 6 impact of what the sun was doing, which was measurable in  
 7 the cost of wheat. When there weren't any sun spots here  
 8 and in this period, the cost of wheat was higher. We think  
 9 it was an effect on the climate. The same kind of effect  
 10 that we can see from satellites that says that when there  
 11 are lots of sun spots, the sun is bright. But there's  
 12 probably more than just that simple economic effect.

13 If you go back in time, the sun affects that  
 14 magnetic bottle that shields us from energy from those  
 15 coronal mass objections, and it's almost certainly true that  
 16 the temperature of the surface of the earth has fluctuated  
 17 by much more than what we call global warming over the last  
 18 fifty to a hundred years. We know that from the record of  
 19 carbon 14 in the atmosphere, and we know that's connected to  
 20 what the sun is doing.

21 It's a complicated connection, and it's not  
 22 important right here, except to notice that there was a  
 23 period of time, back around 1300 AD, when the temperature of  
 24 the surface of the earth was almost certainly warmer than it  
 25 is now. That's a time when there were lots of sun spots on

13

1 the sun. More sun spots, a brighter sun. There was a  
 2 period of time around 1600, 1700 AD, when there were few sun  
 3 spots on the sun. That's a time when the surface of the  
 4 earth was cooler.

5 Why is that important? It's important because  
 6 those changes are larger than any of the changes that we  
 7 measure now, when scientists tell you there's global  
 8 warming. The changes in the sun that I'm talking about,  
 9 this warm period of time, corresponds to the time when  
 10 native people in North America were in decline in the 1300s.  
 11 They were vanishing, the Hohokam, the Anasazi, the Mogollon,  
 12 and the four corners of the region vanished at the time the  
 13 temperature of the earth was rising.

14 Similarly, during this time when the temperature  
 15 was cooling, the cultures from Sweden and Norway, the  
 16 Vikings, the Vikings had settled -- I remember from my  
 17 elementary school classes -- they had settled on the eastern  
 18 coast of Greenland at a time when it was very warm, this  
 19 time. And as the surface of the earth got cooler,  
 20 agriculture was suppressed; they could not live.

21 The decline of these cultures in Greenland almost  
 22 certainly coincides with the cooling period. That was the  
 23 change due to the sun. Those changes in the sun -- there's  
 24 no reason to believe that this should not happen again. We  
 25 can't predict whether the next solar cycle in 11 years will

14

1 be a tenth, two-tenths, one percent brighter or cooler than  
 2 the current solar cycle is. That's the primary aim of the  
 3 ATST: to understand the science and the connection between  
 4 what the sun does and what the earth is doing.

5 So in our lifetime, the probability of a major  
 6 solar storm or a brightness change affecting commerce with  
 7 billions of dollars of impact is a virtual certainty,  
 8 because it's already happened. We've lost satellites that  
 9 are worth a billion dollars.

10 Over the next thousand years, the probability of a  
 11 climate change, larger than the climate change that we're  
 12 seeing now, due to greenhouse gases, is almost a certainty.  
 13 It's at least 50 percent, if you look back at the current  
 14 record that goes back a thousand years.

15 We would be silly not to spend some money to try  
 16 to understand what is coming and trying to understand what  
 17 is coming and how the sun is changing is what this telescope  
 18 is all about.

19 Why Haleakala? We started over two years ago  
 20 looking at 70 different places in the world to put a  
 21 telescope like this. We started with a spread sheet that had  
 22 all kinds of data like the weather, like the number of  
 23 airplanes that passed over head, the likely climate at the  
 24 site and how many clear days we should get. That was  
 25 narrowed, based on that data, to six possible sites all over

15

1 the world: La Palma, a lake up in Montana, the coast of  
 2 California region. We put towers at each of these sites,  
 3 and we measured the weather, we measured the clarity of the  
 4 atmosphere, how much the twinkling of the atmosphere would  
 5 distort the ability to see fine detail and the brightness of  
 6 the atmosphere. How well we can see the outer layers of the  
 7 sun, the corona, that part of the sun that connects to the  
 8 earth.

9 The sites that we ended up with the study, the  
 10 ones that came out of the 70 were Big Bear, Haleakala, La  
 11 Palma, Panguitch Lake which is in Montana, Sac Peak which is  
 12 in New Mexico, and San Pedro which is a site in Mexico. At  
 13 each one of these sites, we collected data for at least a  
 14 year; in some cases almost two years.

15 What we got out of that was the ability to -- what  
 16 we were after was the ability -- our prime goal was to be  
 17 able to see this is a sun spot like you'd never seen before  
 18 and like scientists have never seen before, because we never  
 19 had sufficient detail. That's a dark region blown up like  
 20 you would see it from a microscope. And this movie is now  
 21 several hours long. But what we learned from this is that a  
 22 sun spot evolves in time. Material flows in and material  
 23 flows out. Somehow the evolution, the birth and death of  
 24 the sun spot, is connected to that whole cycle of how the  
 25 sun changes over 11 years and in longer time frames.

16

1 The ATST is designed -- its essential feature is  
 2 to get above the earth's atmosphere that prevents us from  
 3 seeing this kind of detail. This is what it's after: to  
 4 see the fine detail that you see in that picture.

5 In order to see that fine detail, on these towers  
 6 we measured how much the atmosphere degraded or blurred the  
 7 image.

8 I apologize, it's another graph, but it shows an  
 9 important feature, and it will be a question that comes  
 10 later. Why is the ATST designed to be above the ground?  
 11 This is a graph that shows all of those sites, and it shows  
 12 as a function of how high you are above the ground, how  
 13 little the blurring is. The bigger the line up, the smaller  
 14 the blurring.

15 And guess which of these lines corresponds to  
 16 Haleakala? It's the red line. The red line surpasses all  
 17 of the other sites, as we get above the ground and if we  
 18 reach this level of 10 meters in particular. The closest  
 19 site that reaches that is this black line, which is from a  
 20 site in California in the middle of a lake. But it doesn't  
 21 compete at all if we get above here. That was one of the  
 22 criteria for why Haleakala and why above the ground.

23 It's a terrible table, you can't read it; but in  
 24 this table were some of the other data that we used that  
 25 shows that Haleakala is the best place to be able to observe

17

1 the sun. And the numbers here that are important are how  
 2 bright the sky is. You know, if you have been to Haleakala,  
 3 that it's one of the few places where you can hold your  
 4 thumb up to the sun and the sky is dark all the way to the  
 5 edge of your thumb. It's absolutely -- it's almost like  
 6 being on the moon because there's no dust in the air. The  
 7 sky brightness is darker, we think, than even Maunakea  
 8 because Maunakea has more dust and ash.  
 9 The sky brightness at Haleakala was 5.8 compared  
 10 to 96 to 500 for the other two leading sites and 31 to 114.  
 11 That smaller number here is good. The smaller number means  
 12 very low sky brightness. That means we can see that part of  
 13 the sun that connects with the earth, the corona. These  
 14 numbers right here, this is the number of hours when we can  
 15 use that dark sky condition, a thousand hours compared to  
 16 between 2 and 196 or 384 to 861. Again, Haleakala far  
 17 surpasses any of the other places where you could look at  
 18 the sun.  
 19 Finally, the amount of dust in the area. The  
 20 amount of dust in the area is ten to a hundred times better.  
 21 Less dust in the air than Haleakala, which is why the other  
 22 numbers are so good.  
 23 So Haleakala, is as far we can tell, is by far the  
 24 best place in the world to be able to observe the sun. And  
 25 what we're after is the ability to understand this solar

18

1 connection of these magnetic fields and their connection to  
 2 the earth. That's the science we're after. It's not just  
 3 for us, but it's for the long-term picture of how the sun is  
 4 connected to the earth and how it's affecting climate.  
 5 Frankly, what we're here for today, we hope, is  
 6 for an invitation from the Hawaiian community to bring this  
 7 new window onto the sun, onto the summit of Haleakala. And  
 8 this picture that I've given you is what the scientists are  
 9 trying to achieve with that telescope. That's all I have.  
 10 MR. FOLTZ: I don't have any slides, and I will be  
 11 brief.  
 12 My name is Craig Foltz, and I'm an astronomer.  
 13 I'm not a solar astronomer. I work on objects that are only  
 14 observed at night; but in my current job, I am a program  
 15 manager for the National Science Foundation. I live and  
 16 work in Arlington, Virginia, which is across the river from  
 17 Washington D.C.  
 18 What I'd like to do tonight is briefly talk about  
 19 what the NSF is, what it does, and how it relates to this  
 20 project. Because one hears the Natural Science Foundation  
 21 and you think federal agency. I want to explain what sort  
 22 of a federal agency we are.  
 23 The National Science Foundation was created  
 24 roughly 55 years ago, and its purpose is to support basic  
 25 science research, engineering, and science and engineering

19

1 education for the entire nation. And we do this by an  
 2 interesting process, which is somewhat different than the  
 3 way other agencies work. I should say that the NSF supports  
 4 all types of sciences. We support biological sciences,  
 5 earth sciences, oceanography, atmospheric science, physics,  
 6 math, chemistry, materials research, all sorts of things,  
 7 and astronomy.  
 8 So astronomy within the NSF is a relatively small  
 9 piece of the agency. In fact, the agency has about an  
 10 annual budget of about 5.2 billion dollars, most of which we  
 11 give away. That's our job. And of that 5.2 billion  
 12 dollars, astronomy has about two hundred million. As you  
 13 can see, we are a relatively small part of the agency.  
 14 How does the NSF work? NSF is interesting in the  
 15 sense that the way the NSF works is by a process that is two  
 16 part: unsolicited proposals and peer reviews.  
 17 What does that mean? It means that we don't tell  
 18 the scientists what to do. We don't tell them what is  
 19 important. We don't tell them how they should do their job.  
 20 We don't go to the scientific community and say we want  
 21 proposals for, for example, a satellite that will go in  
 22 space and measure x-rays.  
 23 What we do is allow the scientific community  
 24 across the country, and in fact internationally in some  
 25 cases, to come together and decide what are the important

20

1 problems to attack, how do you attack them, and what  
 2 resources do you need to do that.  
 3 So in that sense it is an unsolicited proposal.  
 4 We don't ask them for a proposal. A proposal comes to us,  
 5 and then we don't evaluate that proposal ourselves. We go  
 6 out again to the scientific community and assemble panels of  
 7 experts, and they may be experts in science, they may be  
 8 experts in management any many things, and those proposals  
 9 are reviewed.  
 10 So if a proposal, after great scrutiny -- a  
 11 proposal like this gets enormous scrutiny. We look at it  
 12 over and over again because this is a sizeable project. If  
 13 it is well reviewed, if the funds are available, then  
 14 perhaps we will be able to provide funding to support the  
 15 research. And I should say that we never have enough money.  
 16 On average across the agency, only about one quarter of the  
 17 proposals that come to us are funded. So that's the way it  
 18 works.  
 19 How did it work in this case? And I wanted to  
 20 give you that preface because I wanted to point out that  
 21 this project, although the NSF is the so-called lead agency,  
 22 this is not the NSF's project. This is the solar physics,  
 23 atmospheric physics solar astronomy community's project that  
 24 they have asked the NSF for money to support. And we have  
 25 supported it for about the last five years at a level of

21

1 about 12 million dollars in order that these designs that  
 2 you see here, and you'll hear more about it, can be carried  
 3 out.  
 4 We have now received -- we've received, actually  
 5 over a year ago, a proposal to us to fund the construction  
 6 of this telescope. That proposal is still being reviewed.  
 7 It has been looked at by panel after panel. We've  
 8 scrutinized the cost, we've scrutinized the project  
 9 management, we've looked very hard at the science case. We  
 10 have looked at other options. Are there ways that we can  
 11 make this telescope less expensive?  
 12 So I'm not going to talk much about that because,  
 13 in fact, until the reviews are done, that is somewhat  
 14 confidential. But we're here today, and that should imply  
 15 to you perhaps that we are continuing the process of coming  
 16 to a decision as to whether this project should be funded.  
 17 I want to reiterate this project is not yet funded.  
 18 So what does the NSF need? What security, what  
 19 comfort level does the NSF need to have in order to fund a  
 20 project like this? Well, this project is more expensive.  
 21 The cost of this project is comparable to the division of  
 22 astronomical sciences, astronomy annual budget.  
 23 So, basically, the funding for a project like  
 24 this, which is not the biggest project that the NSF has ever  
 25 done, but it's certainly not the smallest one, it comes from

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1 a different pot of money. And in order to get that pot of  
 2 money, in order to get that money, we need to have congress  
 3 say, Yes, this is a good project.  
 4 In order for congress to consider it, it has to be  
 5 ready for construction. And in order to be ready for  
 6 construction, we need to understand how it will be built and  
 7 where it will be built. Because where it will be built will  
 8 determine how it is built. If you are building on granite,  
 9 then you build a foundation that's different than if you  
 10 were building on cinders or if you were building on lava.  
 11 So this EIS, this environmental impact study and  
 12 cultural study, is necessary for us to come to the point  
 13 where we can make the decision as to whether this proposal  
 14 will be funded.  
 15 So I want to reiterate that this is a project that  
 16 grew out of the grass roots, the scientific grass roots.  
 17 There are many institutions that are represented here, 22 or  
 18 so, they range all over the country. Astronomy is one of  
 19 the major players, the National Solar Observatory is the  
 20 lead player in this. That is the way these projects grow.  
 21 They do not grow from the NSF saying we want a proposal for  
 22 somebody to build a big telescope. I just wanted you to  
 23 understand that distinction.  
 24 I also wanted to make it clear to you, from the  
 25 NSF's perspective, that we value your input; and we want

23

1 this process to move forward with great respect. And so  
 2 with that, I'm going to turn it over to my next presenter  
 3 who will talk about the process.  
 4 MR. FEIN: Thank you, Craig.  
 5 Aloha, my name is Charlie Fein. I'm the  
 6 environmental consultant for this project. I am locally  
 7 based here on Maui, and I am doing what needs to be done to  
 8 comply with federal and state regulations concerning a  
 9 project of this size.  
 10 But as a resident of Maui, as somebody who lives  
 11 here and has lived here for many years, I'm also concerned  
 12 about preserving, protecting, and paying attention to the  
 13 necessary protocols for building anything on this island.  
 14 The process itself, the EIS process, is laid out in this  
 15 slide. It will be a joint federal and state environmental  
 16 impact statement. The impact statement itself comes later  
 17 in the process. We will not be preparing the draft  
 18 environmental impact statement for some time yet.  
 19 If you look at this slide, you see that the first  
 20 part of the process involves public comment. The scoping  
 21 process for this project is the phase that we're in now.  
 22 We're soliciting your comments, your input, what it is that  
 23 you would like to see as part of the environmental impact  
 24 assessment process.  
 25 Once we complete these informational meetings and

24

1 prepare our final scoping document, we'll begin to do the  
 2 impact assessment surveys and consultations.  
 3 Some of you are familiar with the long-range  
 4 development plan that the University of Hawaii, Institute  
 5 for Astronomy prepared last year. It was prepared in draft  
 6 and put on the internet. It was also widely publicized in  
 7 the media. We received many comments. The final versions  
 8 of the long-range development plan was published in January  
 9 of this year.  
 10 The long-range development plan includes the  
 11 potential for the Advanced Technology Solar Telescope. The  
 12 potential for building that facility on the primary  
 13 alternative sites that were selected, the discussion of  
 14 those sites was rather complete in the long-range  
 15 development plan.  
 16 We will do the surveys and consultations all over  
 17 again for those sites. We will look at the archeological  
 18 resources, we will look at the biological arthropod  
 19 resources, we will look at the following floral resources  
 20 very carefully and particularly paying attention to  
 21 endangered species such as the petrel, the Hawaiian bat,  
 22 which occasionally flies through the site and so on.  
 23 Once we receive those reports, we'll prepare the  
 24 draft environmental impact statement. Again, the public  
 25 will have an opportunity to comment on that draft

25

1 environmental impact statement, and we will hold public  
 2 hearings in various venues to solicit comments about that  
 3 document.  
 4       Once we receive the comments and corrections,  
 5 whatever needs to be done, we will then prepare the final  
 6 document and issue that document with a record of decision  
 7 as to whether this is an appropriate site to build on or  
 8 not; that is the Haleakala High Altitude Observatory site.  
 9       Simultaneously, we'll be preparing a conservation  
 10 district use application. The Haleakala High Altitude  
 11 Observatory, the 18 acres of the University of Hawaii, is in  
 12 a conservation district. Therefore, conservation district  
 13 use application must be prepared and a permit issued by the  
 14 Department of Land and Natural Resources in order to  
 15 legitimately use that site, conservation land for this  
 16 purpose.  
 17       So we'll be preparing that as well. That will  
 18 also involve public hearings. And those public hearings  
 19 will take place sometime during the 180-day process that the  
 20 conservation district use application is in progress. So  
 21 there will be a number of opportunities for the public to  
 22 comment on this project and to provide input. We strongly  
 23 encourage you to do so. We encourage you to provide your  
 24 comments. We would like to know what it is that you want to  
 25 see protected, what you want to see preserved, and how you

26

1 would like to see this project unfold.  
 2       We certainly can't make promises about individual  
 3 requests for some modifications to the building or something  
 4 like that. But there are principles and significant  
 5 criteria that we'll adhere to. And if there is some  
 6 significant impact that we're overlooking or have not  
 7 considered, we will do so.  
 8       With that, I would like to turn this over to the  
 9 next speaker, Jeremy Wagner, who will talk about the overall  
 10 schedule of the project.  
 11       MR. WAGNER: My name is Jeremy Wagner. I'm a  
 12 project manager for the ATST project based in Tucson,  
 13 Arizona. I'm with the with the National Solar Observatory.  
 14       What I would like to do is give you a quick  
 15 overview of the project schedule, answer a couple of  
 16 questions that you might have. Like, where are we in the  
 17 project design effort? When might construction start? When  
 18 could the operations begin?  
 19       This is a high level overview of the project  
 20 schedule. We are currently in the design effort, in the  
 21 preliminary design phase. We're starting the environmental  
 22 impact statement process, so we're right about here.  
 23       As Craig Foltz mentioned, funding for this  
 24 construction effort -- the earliest it could start would be  
 25 sometime in 2007. As we work through the review, the NSF

27

1 works through the review process, that would be about the  
 2 earliest.  
 3       When I wrote this slide, I assumed that would be  
 4 in early 2007, but it may be late 2007. That's where we are  
 5 now. So you can slide construction over a little bit, move  
 6 this part out.  
 7       So what we want to do is work through the EIS  
 8 process, work through our design effort, work through the  
 9 review with the NSF, understand whether construction is  
 10 going to be funded, and then that's more or less when it  
 11 would occur.  
 12       So the major work up on Haleakala, if it were to  
 13 occur, the major construction you would think of as major  
 14 construction work, would occur right in here, essentially,  
 15 these first two years.  
 16       After that period, we're inside the building and  
 17 the exterior, the large construction, is completed. We work  
 18 then to assemble the optics, test systems, bring on the  
 19 instrumentation, first light then occurs out here, the first  
 20 time we get sunlight into the telescope. And after we have  
 21 worked through proving that the telescope can deliver the  
 22 kind of performance that we're after, that we're trying to  
 23 reach, then we would begin the initial operations.  
 24       I'll introduce Jeff Barr who is the project  
 25 architect. Jeff will walk you through what the facility

28

1 looks like and a little bit about why it looks that way.  
 2       MR. BARR: Hello. As Jeremy said, I'm the project  
 3 architect. I work on a design team based in Tucson, Arizona  
 4 that he leads. We are two years, or something like that,  
 5 down the road in the development of this observatory. And  
 6 my part of it, as an architect, is sort of the outside part  
 7 that you see. That is sort of why I am here representing  
 8 the design team.  
 9       Essentially, what I'm going to look at is where  
 10 Jeff Kuhn talked about why Haleakala is important, but I'll  
 11 be talking about where specifically on Haleakala we're  
 12 proposing to put it, how big it will be, what it will look  
 13 like, why does it look like that.  
 14       The pictures on the left-hand side there are the  
 15 two sites that are identified the way they look right now.  
 16 The top one is the primary proposed site, and this is the  
 17 ATST, the test tower that's there right now, and has been  
 18 for some number of years taking data, that Jeff Kuhn  
 19 referred to.  
 20       The other site is in -- this one he referred to  
 21 generally as the Mees site. Next to the existing Mees  
 22 facility some of you are familiar with. The other site, the  
 23 alternate site, is referred to as the Reber Circle site.  
 24 This circle here is the remnant of an earlier radio  
 25 astronomy experiment that was done there. We refer to this

29

1 as the Reber Circle site. These two sites were identified  
 2 in the Haleakala High Altitude Observatory long-range  
 3 development plan. There's a leak there. You can look at  
 4 that. I think it's a useful document. It's been useful to  
 5 us. It's a great starting point for understanding what some  
 6 of the issues are here. These issues -- this is a short  
 7 list that represents some of the things that we think we  
 8 need to understand and the things that went into identifying  
 9 within that plan that these were two likely and feasible  
 10 sites for a project as big as ATST.

11 Both of these sites are big enough without a lot  
 12 more leveling or major earthwork for a building the size of  
 13 one that you see here. I know you've seen these pictures,  
 14 and I know you've seen some in the papers. So we're going  
 15 to talk about why it does look that way. It's a large  
 16 facility, and it takes a large site. There are only two  
 17 locations on Haleakala where it can really go. Both of  
 18 those sites have been tested, and they have good observing  
 19 conditions.

20 Looking down from the top of these sites, this is  
 21 a topographical map, just to get you oriented. This is how  
 22 big things are. That's one hundred feet, two hundred feet,  
 23 so it gives you an idea. This is the overall boundary of  
 24 the observatory. There's a topographical map where the  
 25 lines get closer together, it gets very steep, and so the

30

1 part in the middle here, where there's more space between  
 2 these wiggly lines in the middle, that's where the flat  
 3 places are. These are the sites. This is the primary site.  
 4 This is Mees here that you saw in the picture. And,  
 5 essentially, we're planning to locate or proposing to locate  
 6 ATST next to the existing Mees facility.

7 The alternate site is up here, and this is where  
 8 that Reber Circle area is that I referred to. Again, to get  
 9 you oriented, the road in from the park is here. So the Air  
 10 Force facility is up here, the Faulkes telescope down here,  
 11 and then we've also identified preliminarily some of the  
 12 restrictions that we know that these sites would have. The  
 13 archeological in blue here, the Petrel burrows.

14 The building requirements, as an architect for an  
 15 observatory, I have a short leash as far as design is  
 16 concerned. You work around -- in the second line here, what  
 17 it takes to support, protect, operate and maintain the  
 18 telescope. You design buildings around that, and you make  
 19 sure that those buildings do as little harm to the observing  
 20 conditions and to the environment as possible.

21 The kind of buildings that we have designed, and  
 22 what you are seeing in these pictures, are two different  
 23 kinds. There's the enclosure which directly goes around the  
 24 telescope and protects it and provides maintenance area for  
 25 it, and there's the support building, which is this other

31

1 structure out here and other remote buildings that also  
 2 serve to provide space for equipment and other kinds of  
 3 needs that have to do with maintaining the telescope.  
 4 It's important to note that all of this really, I  
 5 won't go through the list here because we'll talk about it  
 6 anyway, but all of these buildings, the idea is to keep them  
 7 no bigger than necessary and minimize any impact on the  
 8 environment and any impact on the observing conditions for  
 9 the telescope.

10 With that, we're going to get into what it looks  
 11 like, how big it is, and why it is as big as it is and the  
 12 dimensions that it has.

13 Again, to get you oriented, this would be the  
 14 enclosure, which I'm sure you are getting familiar with at  
 15 this point, the support building which looks like that  
 16 rendering over there, and this is the Mees building and a  
 17 remote facility building for ATST.

18 The first thing, in terms of dimensions on the  
 19 telescope, is the height. And that's something that Jeff  
 20 Kuhn referred to, this 92-foot height was determined, and  
 21 you saw it in his graph, that would be something like  
 22 halfway across, and it gets the line high enough that the  
 23 seeing is as good as they need to have. Honestly, it's what  
 24 we can afford.

25 There's a limitation. As you go higher, obviously

32

1 there's extra costs involved. So in a sense it was a  
 2 compromise, but it was -- the height we found was acceptable  
 3 in terms of meeting the scientific goals of the project. So  
 4 that's where you start.

5 This structure in here, I should probably also  
 6 mention, this is the telescope itself, this framework  
 7 structure. This is the primary mirror, and it swings inside  
 8 of this dome, requires space for maintenance and space for a  
 9 crane to remove parts and others -- the kinds of things that  
 10 you need to be able to do around it. So that dictates the  
 11 overall circumference or overall size of the circular  
 12 feature at the top of the dome.

13 Beyond that, the pier down here also has to be big  
 14 enough to be stable and provide a very vibration-free mount  
 15 for the telescope. And it also has to be big enough for  
 16 this rotating platform on the inside, which is where most of  
 17 the instrumentation that will do the science will be  
 18 located.

19 So that pretty well dictates to me, as an  
 20 architect, how big this building has to be. As you can see,  
 21 it's not much bigger than the telescope and the pier and the  
 22 equipment inside. The support building is dictated by a  
 23 telescope and the associated features of it. There's an  
 24 observing level here that's lined up with and is directly  
 25 adjacent to this instrument laboratory, there's an

33

1 instrument prep area here, there's a space down inside of  
 2 this area that's big enough for a coding facility to recoat  
 3 the mirror on a periodic basis.  
 4 And then the higher features here, there's a lift  
 5 in the center that allows you to get the mirror and other  
 6 big instruments off and down where you need them to go. And  
 7 so that is essentially what I've gone through here. Those  
 8 are the things that are dictated, these dimensions which are  
 9 outlined here, and the overall size of the building.  
 10 Let me go back for a second. If you cut through  
 11 at this level, all the way through these three buildings  
 12 here, that gives you a base level floor plan or building  
 13 plan of what we propose on this site.  
 14 Again, this is shown at the Mees site. This is  
 15 the existing Mees building which we proposed to leave for  
 16 several reasons, one of which it's an IFA building. It's  
 17 not an NSF facility. They have useful space there that they  
 18 are using to support other projects on Haleakala. And so in  
 19 taking that space, if we were to take that space, we'd have  
 20 to make a larger footprint and a larger building here -- new  
 21 building to compensate for what we'll be taking away.  
 22 Also, we see it as a way to reduce some of our own  
 23 needs and bring down the dimension of this building by  
 24 taking advantage of the things like the shop that's  
 25 incorporated. It's in there, an existing shop that we can

34

1 use and expand and continue. So it's a good functional  
 2 building that we can get good utility out of and help  
 3 minimize how much we have to build new.  
 4 This other building here, that's a remote utility  
 5 had area that will have big pieces of equipment in it that  
 6 needs to be separated for reasons of vibration and heat from  
 7 the telescope itself. The size of this building is, again,  
 8 you can see this is the mirror coating area that I talked  
 9 about, these big spaces are just big enough really to  
 10 accommodate all of those activities, and then there's a  
 11 smaller equipment area here.  
 12 Again, the main observatory roof coming in here,  
 13 the north -- you get a picture of how much -- this area in  
 14 between where the truck is coming in with the mirror, this  
 15 would be about a 40 to 50-foot long flatbed truck, and this  
 16 area in here would be a paved service yard that would serve  
 17 -- it's really already paved here, so we would have to  
 18 extend the area that much farther, and you can see why, in  
 19 order to bring a big truck into the new building.  
 20 To talk a little bit about what it looks like and  
 21 why it looks that way. The first thing is that it's going  
 22 to have to be white. For reasons of heat. The building has  
 23 to contribute no more to the thermal disturbance and the  
 24 heat in the area around the building than necessary. And  
 25 the only way to do that is to make the building white. We

35

1 looked at other alternatives, sky blue or other kinds of  
 2 colors, and it's a dramatic difference in the amount of heat  
 3 that comes off of the building surface. So that's the first  
 4 thing to understand that everything that's close to the  
 5 telescope will be white.  
 6 And then the areas that you see up in here that  
 7 looks odd with the line work, that's a kind of metal panel  
 8 that is liquid cooled. So even though the surfaces are  
 9 white, they still heat up some, and you still have to  
 10 extract that heat away. That's why it has an irregular look  
 11 to the top part here.  
 12 The rest of the building here will be a fairly  
 13 normal kind of commercial building that you would be  
 14 familiar with, metal panels and steel structure and pretty  
 15 normal kinds of things. There's also, and I did not point  
 16 it out on some of the other plans, but there's also what  
 17 we're calling an apron around -- especially on the east side  
 18 of the telescope, east and south side, to prevent the area  
 19 around the telescope because the volcanic cinders also has a  
 20 tendency, because of the dark color, to heat up. So that  
 21 protects that -- that's a heat shield in a sense that keeps  
 22 that area from contributing to bad observing conditions.  
 23 This, again, is the remote utility building which  
 24 is far enough away that we can get back to the idea of  
 25 making the building blend in with the mountain a little

36

1 more. It also has equipment we know that will have to be  
 2 sound insulated to keep the sense of the Haleakala  
 3 environment disturbed as little as possible.  
 4 That's essentially it. I'm not going to go  
 5 through this. This is a summary of everything I just said.  
 6 But I will go on to -- these are pictures that you have seen  
 7 now and are on either side here. This one, in case you  
 8 haven't had a chance to look at the posters a little closer,  
 9 this is at the Mees site and looking out to the south. So  
 10 from the road or from a little farther back from the road,  
 11 that's what you would see. The Mees facility is off on the  
 12 ride there.  
 13 This is at the alternate site at the Reber Circle  
 14 site. This is looking at it from the south side looking  
 15 north back at it. And those in the foreground are other  
 16 telescopes that are currently there.  
 17 So that's the -- this one, again, there's a poster  
 18 of this one up here, but this is the one you've probably  
 19 seen in the other literature. That's what we have, and I  
 20 think at this point, since I'm the last speaker, that we can  
 21 open it up for comments. And that's what we're here for, is  
 22 to get as much information from you about what the issues  
 23 are here that we can.  
 24 MS. WAHL: Thank you. We'll open the floor now to  
 25 questions and comments. I just want to remind you to please

37

1 state your name for the record and also keep your comments  
 2 and questions brief. We have just a little over an hour for  
 3 those comments and questions.  
 4 MR. KULOLOIO: I have a question on the follow-up  
 5 question. Number one, will this finished building be  
 6 visible from here, if we look up from the central Maui area?  
 7 If you do right now, we can look to see building up there  
 8 right now?  
 9 MR. BARR: Yes. I understand the question. The  
 10 answer is, there will be some visibility from the  
 11 communities around Maui. And we are in the process of  
 12 identifying that. That's part of what the EIS will  
 13 identify. There will be some visibility of that building  
 14 from some of the communities. How much of that is yet to be  
 15 determined.  
 16 MR. KULOLOIO: I think it was 143 feet from the  
 17 top of the building. So from wherever you site it, there  
 18 will be some visibility?  
 19 MR. BARR: That's right.  
 20 MR. KULOLOIO: The second question is or comment  
 21 is, I notice on your presentation the building will be  
 22 painted white.  
 23 MR. BARR: Yes.  
 24 MR. KULOLOIO: Right now we're looking up at the  
 25 building, they are all painted white. I always ask myself

38

1 how come they did not make the building brown or blend it  
 2 in? I say that because I retired from Maui Electric Company  
 3 Maalaea power plant, and when we had the plant, we had to  
 4 paint it green. The people in the Maalaea Community  
 5 Association wanted it that way. Why can't you do the same?  
 6 I know that you want to minimize the heat. Have you  
 7 conducted studies to say, Well, we have to paint it white?  
 8 MR. BARR: Yes. We actually have done modeling in  
 9 the most careful ways that we can do with the different  
 10 potential colors and finishes that the buildings could have.  
 11 And that was the very reason why. We knew this was an  
 12 issue.  
 13 We looked to see if we paint this building brown,  
 14 how much difference would it be. It's more than four times  
 15 as much heat generated by the surfaces of the building, and  
 16 that's just something that we can't contribute that much  
 17 turbulence, that much bad observing condition, and still  
 18 maintain -- get the scientific results we're looking for.  
 19 MR. KULOLOIO: I notice you had coolants running  
 20 within certain areas of the building, but I just would like  
 21 to ask or have included in the comments is if you would  
 22 consider redoing some testing to see if you can had make it  
 23 blend in more with the background of the mountain itself.  
 24 MR. BARR: Okay. I understood all along.  
 25 MR. KULOLOIO: Don't take it from the angle that

39

1 we're going to make sure --  
 2 MR. BARR: -- some further study. We're not done  
 3 studying the cooling of the --  
 4 MR. KULOLOIO: If we can put men on the moon and  
 5 brought them back, it's going to cost, nothing is free. So  
 6 being that the cost has not yet been determined, why not go  
 7 for it. If you can have an alternate, okay, fall-back plan  
 8 B, paint it white, cost less. That's when I'm trying to  
 9 figure. If you can take the extra step to consider that.  
 10 MR. BARR: Okay. Thank you.  
 11 MR. KULOLOIO: If you use the Reber Circle site,  
 12 what happens to the Reber Circle? Does that get preserved?  
 13 MR. KUHN: I missed what you said at the end.  
 14 MR. KULOLOIO: If you used the Reber Circle site,  
 15 what happens to the Reber Circle? Does that get preserved?  
 16 MR. KUHN: That's an interesting question. The  
 17 telescope footprint is probably too large, so that that  
 18 little concrete ring, which might have some historical  
 19 significance, is probably still there but it's underneath  
 20 another building would be my guess. I don't think that you  
 21 could go ahead and preserve that -- it may have only minor  
 22 historical difference. I would point out parts of it have  
 23 been obliterated already by some of the other -- one of the  
 24 observatories that's up there. So I think the answer is, it  
 25 would probably be gone if that site were to become the

40

1 primary site.  
 2 MR. KULOLOIO: If you put this telescope on the  
 3 Mees location where it shows us right there, will it still  
 4 be seen from down here?  
 5 MR. BARR: Will it still be visible from where?  
 6 MR. KULOLOIO: From down our way.  
 7 MR. BARR: From some areas on the coastal areas  
 8 and in the communities around Maui, some areas it will be  
 9 visible.  
 10 MR. KULOLOIO: If it's on the Mees site?  
 11 MR. BARR: If it's on the Mees site, it's less  
 12 visible than if it's on the Reber Circle site. But it still  
 13 will be visible from some other areas. How much of that,  
 14 how much of the top of that building -- there is some study  
 15 that has been done in the long-range plan.  
 16 MR. FEIN: The long-range development plan  
 17 included a discussion of what might be visible from the Mees  
 18 site and the Reber Circle site. And it was pretty clear  
 19 that up to about 90 feet or so at the Mees site, anything  
 20 built up to 90 feet would not be visible from anywhere  
 21 outside of the national park.  
 22 However, this facility will be taller than 90  
 23 feet. And so the top portion of it, some portion of the  
 24 enclosure, the upper enclosure, will likely be visible.  
 25 Pukalani would be the most likely spot for visibility at the

41

1 Mees site. It would not be visible from Kihei, for example,  
 2 but it would be potentially visible from Pukalani and  
 3 perhaps Kahului. A piece of it. A piece of the white upper  
 4 structure. If it were built at Reber Circle, more of it  
 5 would be visible from those communities, perhaps another 20  
 6 or 30 feet of the upper part of the structure.

7 Here at the Mees site, where we did our studies  
 8 for the long-range development plan, there's a great deal of  
 9 terrain blocking here from the valley, and the other  
 10 facilities also block the view. So that if it were built  
 11 back here at Mees, it would not be visible from certain  
 12 locations in the valley at all.

13 MR. KULOLOIO: I just have two questions, and I'm  
 14 done. How deep does it go? Can that go deeper so it would  
 15 not be seen from downtown? And isn't it true that whatever  
 16 -- would that site would probably be the last site that  
 17 ever would be built in Haleakala? Excuse me, that's the  
 18 only available site, that two sites right?

19 MR. BARR: Those are the two sites that were  
 20 identified in the long-range plan that's large enough for  
 21 the ATST to be built on. And in our own kind of study  
 22 following that, they do appear to be the only two viable  
 23 areas there within the observatory boundaries that would  
 24 allow for, as you saw on the topographical map, it falls off  
 25 very fast in most other directions. There's a lot of slope.

42

1 MR. KULOLOIO: My question is, if you could answer  
 2 it, can that -- I mean, are you going down underground,  
 3 which I think you are? Can you go deeper so it would not  
 4 have a visual impact from down in the valley?

5 MR. BARR: Well, the idea of the height is how  
 6 high above the ground. There will be some foundations under  
 7 the ground, but the telescope itself, the critical  
 8 dimensions is how high it is above the ground. So pushing  
 9 it down into the ground doesn't give you any height really  
 10 that matters to the observing conditions. In other words,  
 11 pushing the enclosure down into the ground would serve no  
 12 benefit to the telescope itself, other than making it less  
 13 visible.

14 MR. KULOLOIO: I have a number of questions, but  
 15 I'll probably ask more in the next nights when you go  
 16 upcountry. I think one of the questions is about paint and  
 17 color was one of the most interesting and cultural -- I  
 18 would say cultural concern about color. And that white  
 19 color is an interesting color that has never been asked  
 20 before. But I think one other question to add to the limits  
 21 and the technology of modern science, especially in the  
 22 military, I wanted to ask the question, these facilities  
 23 they are placed on the -- are they owned by the Department  
 24 of Defense?

25 MR. FOLTZ: No.

43

1 MR. KULOLOIO: Who is the partnership of the  
 2 acreage where these facilities are on in combination of UH,  
 3 Air Force? Is it State, private, or is it the Department of  
 4 Interior, instead of joint use or the military just hides  
 5 itself --

6 MR. MABERRY: Mike Maberry, assistant director for  
 7 the Institute for Astronomy. There was a better shot  
 8 earlier. About 18 acres within Kolekolepuu (phonetic), that  
 9 is the Haleakala High Altitude Observatory site, there is 18  
 10 acres that is in under the stewardship of the University of  
 11 Hawaii.

12 MR. KULOLOIO: Wait. Wait. Stewardship?  
 13 Stewardship is one thing.

14 MR. MABERRY: Yes, sir.

15 MR. KULOLOIO: Who gives the exemption under the  
 16 federal guidelines?

17 MR. MABERRY: It is seeded land, and the  
 18 University of Hawaii has the stewardship of the land under  
 19 executive order.

20 MR. KULOLOIO: Okay. Let me ask the question. If  
 21 this is the stewardship of a state entity, which is the  
 22 University of Hawaii, and could you point where the UH is on  
 23 that facility, the UH facility?

24 MR. MABERRY: Yes, sir. There's a UH facility  
 25 right here, solar observatory, the Mees solar observatory,

44

1 we have a couple of small observatories down here, this is  
 2 the Faulkes observatory which you may remember was the last  
 3 observatory.

4 MR. KULOLOIO: It's still under UH?

5 MR. MABERRY: We're a partnership.

6 MR. KULOLOIO: Yeah, I'm getting the picture.

7 MR. MABERRY: There's four and a half acres here  
 8 that is with the Army Corps. of Engineers that is leased to  
 9 the Army Corps. of Engineers.

10 MR. KULOLOIO: The Army Corps. of Engineers leases  
 11 it, but actually the Air Force facility uses it?

12 MR. MABERRY: Yes, sir.

13 MR. KULOLOIO: In other words, the Air Force is  
 14 the stewardship under the Army Corps. of Engineers?

15 MR. MABERRY: They are still responsible to the  
 16 University of Hawaii.

17 MR. KULOLOIO: So the Air Force is in connection  
 18 with the University of Hawaii?

19 MR. MABERRY: The University of Hawaii acts as a  
 20 landlord capacity to insure the stewardship of the land.

21 MR. KULOLOIO: So this facility, don't mind me I  
 22 want to ask the bottomline questions so that the grass roots  
 23 can see where is where. So these acreage is the long-range,  
 24 short-range appropriated acres set aside for any future  
 25 development that has to be inside these perimeters in the

45

1 next hundred years it won't, whoever has the federal  
 2 exemption would ask for more acreage to increase more white  
 3 stuff up there.  
 4 MR. MABERRY: I think I understand your question,  
 5 but there is something I should point out. The University  
 6 of Hawaii is not the only entity within Kolekolepuu. There  
 7 is another little piece right here that I want you to know  
 8 that is originally under the Department of Energy and is now  
 9 under the control of the FAA.  
 10 MR. KULOLOIO: Okay. Okay.  
 11 MR. MABERRY: That's not us.  
 12 MR. KULOLOIO: No. Yeah, but it looks like they  
 13 are all in the same funding district. So we have the  
 14 Department of Energy, the Air Force is the Department of  
 15 Defense, the University is the institution educational, and  
 16 now we have this A --  
 17 MR. MABERRY: ATST.  
 18 MR. KULOLOIO: ATST. Which you say the funding  
 19 will happen or not.  
 20 MR. MABERRY: NSF.  
 21 MR. KULOLOIO: Guarantee it's been approved by the  
 22 top echelons. I just wanted to ask, how come nothing was  
 23 planned or discussed about height limits? I mean, you know,  
 24 we get county rules on Maui, and we have rules that say in  
 25 certain districts there is height limits. Waikiki is

46

1 Waikiki. But how come height limits wasn't mentioned in  
 2 your long-range plan with the University of Hawaii? It's  
 3 not the shoving or hiding the buildings or bringing them  
 4 down. I'm against that. Height is height. Yeah. So why  
 5 wasn't any height limits mentioned in your plan, Charlie,  
 6 when you did the environmental studies long-range or  
 7 short-range? Could you answer that?  
 8 MR. MABERRY: Uncle Leslie --  
 9 MR. KULOLOIO: I'm talking to Charlie, he's the  
 10 EPA.  
 11 MR. FEIN: Yes, the long-range development plan  
 12 did not discuss height limits for facilities for two  
 13 reasons: First of all, it was not -- it's not been an  
 14 issue at the site; but more importantly, there's a  
 15 self-limiting factor there. You cannot build telescope  
 16 facilities that are 30 stories high. That's cost  
 17 ineffective to do that. So unlike facilities elsewhere on  
 18 this island, which are that high, you simply cannot do that  
 19 with this technology on the mountain. So we did not address  
 20 it.  
 21 MR. KULOLOIO: But you understand the critical  
 22 question?  
 23 MR. FEIN: Yes, I understand.  
 24 MR. KULOLOIO: It's a cultural question too.  
 25 Paint and height is a cultural resource question. That's

47

1 what I'm asking.  
 2 MR. FEIN: I understand your question.  
 3 MR. KULOLOIO: It could be an impact already as  
 4 you're planning your design.  
 5 MR. FEIN: Yes.  
 6 MR. KULOLOIO: It's just like blinding the eyes of  
 7 our Maui nature. It's just like taking away the visibility  
 8 and the site of birds that get confused during the day or  
 9 the night. The night birds and day birds that fly in from  
 10 the ocean. These kinds of stuff is a hopeless part of your  
 11 EIS.  
 12 And I mention that there's a boo-boo already from  
 13 day one, that you folks did not put height. Because you  
 14 could have come in with five hundred feet eye observation,  
 15 and that's why I asked my question. Why you folks did not  
 16 cover that? Was there any reason? I think your reason is  
 17 not sufficient or adequate enough, and it's not about cost.  
 18 If you say this is the best white dome telescope  
 19 that's going to be picked on Maui, and to be the best in the  
 20 world, then cost is not the problem because this is already  
 21 saying going to be the best site in the world.  
 22 So, anyway, I -- another question is -- I got  
 23 plenty, but I just wanted to ask -- I was asking in this  
 24 joint venture, this partnership, the University of Hawaii  
 25 has been studying the sun with that -- you know that laser,

48

1 that go koo, koo, koo (sic) like that, the laser that shoots  
 2 up into the sky and how it affected the air path of the  
 3 airplanes passing over Maui and there was an impact. Is  
 4 this proposed -- is this proposed project or site, is it  
 5 eventually going to be used by the Department of Energy or  
 6 defense in partnership, yes or no?  
 7 MR. FOLTZ: Sir, to the best of my knowledge, the  
 8 answer to your question is no.  
 9 MR. KULOLOIO: Turn on your mic.  
 10 MR. FOLTZ: The answer to your question is no.  
 11 This is a National Science Foundation facility. We are a  
 12 distinct organization from DOE or from DOD. It's not to say  
 13 that on occasion we do not collaborate with them if our  
 14 interests are common. But I can assure you that in this  
 15 case there are no plans to use this as a laser projector.  
 16 This is purely a benign activity.  
 17 MR. KULOLOIO: One of the question I ask then,  
 18 sir, I don't know if it's my last one, but you have a  
 19 projection of 2014 when this project will be somewhat almost  
 20 completed. When 2014 comes around, would there be an  
 21 opportunity for public input again to see any changes or --  
 22 the question I'm asking is here we have a shell, and your  
 23 brochure is so clear. It talks about dimension shells, but  
 24 it doesn't specify the kind of equipment.  
 25 MR. FOLTZ: That's inside --

49

1 MR. KULOLOIO: Yeah. The equipment is the one I  
2 am interested in. The topnotch equipment for national  
3 defense or what you call that kind stuff -- what is the  
4 Iraqi war talking about, you know, when Bush went over where  
5 they could not find --

6 MR. FOLTZ: The tapes.

7 MR. KULOLOIO: There you go. I don't have enough  
8 information yet of what is going inside the buildings. You  
9 folks got dimensions but not the kind of technology that is  
10 going to be open to native Hawaiians to ask questions.

11 MR. FOLTZ: I appreciate that. That's a very good  
12 question.

13 MR. KULOLOIO: That's another cultural resource.

14 MR. FOLTZ: I appreciate your concern. What I can  
15 say is that certainly there is a lot of information that is  
16 available, publicly available, as to what the inside of the  
17 structure looks like, what the telescope looks like. I can  
18 also say, as an NSF officer, I'm not at the highest level of  
19 NSF management, but it is my understanding, and I'm trying  
20 to do this in my head as I talk to you, but certainly of the  
21 astronomical facilities that we run, and that includes  
22 telescopes in Chile, telescopes in Arizona, if you as a  
23 private citizen came in and said, I'm concerned about what's  
24 going on inside that facility, it would be open to you. It  
25 could be toured. You could go in, you could ask questions,

50

1 and -- this is paid for with taxpayer money. We understand  
2 that's --

3 MR. KULOLOIO: I'm clear about international law.  
4 People of Chile and United States is run by different laws.  
5 Okay. So I'm not worried about Chile. I'm worried about  
6 native laws in Hawaii. What I wanted to ask finally is  
7 this: The paint, height, and those birds for now, the  
8 birds.

9 I have a hard time trying to put something right  
10 next to where those birds are nesting. If it was my choice,  
11 already that's another cultural resource that I would really  
12 fight hard to have the natural nesting of our birds of  
13 Haleakala have priority before anything else. Because the  
14 bird is a symbolic figure culturally. That represents old  
15 Hawaii. And I feel so bad about having them disturbed. You  
16 see over there? I don't care what expertise you bring down,  
17 that's a concern.

18 MR. BARR: We understand that it is a concern.

19 MR. KULOLOIO: That's all I got.

20 MR. BARR: We have talked a little bit about the  
21 height certainly and the color. I'm not sure we have a lot  
22 more to say about that.

23 MR. KULOLOIO: Let me tell you. There's  
24 indication that the military do have paints that can deflect  
25 heat. So paint it brown. Geeze, paint it brown.

51

1 MR. BARR: I just want to make one comment because  
2 you brought up the subject of the petrel burrows and the  
3 protection of those is certainly going to be part of the  
4 construction practices and how that affects them during  
5 their nesting season and what work we're allowed to do. All  
6 of that is addressed.

7 MR. KULOLOIO: Finally -- I forgot my last  
8 question -- because already mentioned this is seeded lands,  
9 it kind of strikes me how come as native Hawaiians we have  
10 to struggle every day seeking representation from the state  
11 and federal government, and we have billions and billions of  
12 bucks from that mountain. Just a small acre. And talk  
13 about economics. This is where we should get our money  
14 from.

15 So the seeded lands issue is another culturally --  
16 wow, I did not know that. Perhaps there should be some kind  
17 of facility with the governor, Inouye, Akaka, President Bush  
18 time for all of them to start focusing on this project. If  
19 not, we can write to them come to visit this means of  
20 revenues to support our Hawaiian community.

21 Finally, I tell you why, you know in the back you  
22 said Hawaiian community? How come you folks targeted the  
23 Hawaiian community? Why not the public? You know the other  
24 site one of you was showing, you wanted to do the outreach  
25 for the Hawaiian community. Why wasn't this targeted for the

52

1 general public? That's the question I'm asking. Somebody  
2 was afraid of the Hawaiian community? You got it on your  
3 visual, but why you folks use the Hawaiian community? Us  
4 Hawaiians every time we're used like that.

5 MR. BARR: I understand. I think the reason we  
6 made reference to the Hawaiian community, and I can only  
7 speak for myself, is because we consider you to be very  
8 prominent, interested stakeholders in what we do here.

9 MR. KULOLOIO: Stakeholders.

10 MR. BARR: Certainly.

11 MR. KULOLOIO: Thank you. We need a lot to talk  
12 about. Thank you.

13 MR. LINDSEY: Ed Lindsey. This question is for  
14 Jeff the scientist. I appreciate your passion and your  
15 delivery for the importance of the study of the sunspots, as  
16 far as the scientific community is concerned. And for Jeff  
17 the architect, how many stories is your building?

18 MR. BARR: If you identify it, you refer to it as  
19 something like a 10-story building.

20 MR. LINDSEY: In other words, the building will be  
21 higher than the county building up on Haleakala, and that's  
22 going to be pointed white; is that correct?

23 MR. BARR: Correct.

24 MR. LINDSEY: And that's for scientific reasons  
25 and usage. Somehow, I feel like the fox is in the chicken

53

1 coop asking the chickens when they want to be eaten, because  
 2 I would rather have this project built in Colorado, Montana,  
 3 New Mexico, or California, rather than here on Maui. That's  
 4 one of the problems that we have here on Maui being the best  
 5 place for everything.

6 So right now we find our local people in a pickle,  
 7 not being able to even get housing, leave alone the lands.  
 8 And so we have homeless Hawaiians here, and we have the  
 9 federal government supporting a project such as this. And  
 10 as worthy as it may be, there's a complete disregard from  
 11 the federal government for supporting the needs of the  
 12 Hawaiian people and including the rest of the community over  
 13 here on Maui.

14 The impact on traffic is going to continue, the  
 15 impact of construction is going to continue, the degradation  
 16 of our cultural sites will continue. I just returned from a  
 17 hearing where more cultural sites are being destroyed under  
 18 the name of private ownership and private ownership rights.  
 19 Now we have seeded lands, and I believe they are 5F lands;  
 20 is that correct?

21 In other words, another word for seeded lands is  
 22 stolen lands, and it belonged to the Hawaiian people. And  
 23 yet, there's a continuous degradation in both the Hawaiian  
 24 students, our Hawaiian culture, our Hawaiian elders, and the  
 25 basic community fabric of our Hawaiianness.

54

1 Number one for Charlie is, what is the carrying  
 2 capacity? You said there was a plan set out for by the  
 3 university that was available online and yadah, yadah, yadah  
 4 (sic). Do you have copies of them? We're not people who are  
 5 going to be keeping up with all these assaults on us. So it  
 6 would be good at your next meeting if you have this carrying  
 7 capacity records or proposals on for the community.

8 MR. FEIN: The long-range development plan --

9 MR. LINDSEY: I can see someday we'll have  
 10 telescopes all over the place up there.

11 MR. FEIN: The long-range development plan  
 12 discusses very specifically what the potential projects  
 13 might be in the next decade, and this and a much smaller  
 14 potential one are the only ones that I'm aware of for the  
 15 next decade. The long-range development plan is available  
 16 online. If you would like a copy, we can bring a copy.

17 MR. LINDSEY: That's my point. It should be made  
 18 available, at least one copy, so if you have interested  
 19 citizens who want to look at it and need to familiarize  
 20 themselves they can do this.

21 MR. FEIN: We can do that. We'll bring a hard copy  
 22 in.

23 MR. LINDSEY: Thank you. What kind of mitigations  
 24 are being proposed as far as we talked about birds, bats,  
 25 endangered species? What kind of mitigations are being

55

1 proposed for these archeological stabilizations?

2 MR. FEIN: The first thing we need to do are the  
 3 survey studies and inventories for those sites. Mitigations  
 4 for potential impact come after we know what it is that the  
 5 possible impacts might be. We don't have that information  
 6 yet, because the survey studies and inventories have not  
 7 been done yet.

8 When they are completed, we will propose  
 9 mitigations, where necessary, provide them in public forum  
 10 for the public to have an opportunity to say whether those  
 11 mitigations are adequate, inadequate, don't address the  
 12 problem, and so on. I can't tell you what those  
 13 mitigations might be at this point.

14 MR. LINDSEY: So your mitigations -- if you decide  
 15 a certain mitigation that needs to be completed in this  
 16 project, then that would be -- your word would be the rule  
 17 of law; is that correct?

18 MR. FEIN: No. The environmental consultants  
 19 simply recommend mitigations to the proponent, to the folks  
 20 who are responsible for this project. It is their  
 21 responsibility to exercise the mitigations with the public  
 22 approval. The public must approve the process. We are not  
 23 going to do anything in terms of mitigation, changes to the  
 24 site, or anything like that without the public being fully  
 25 aware and agreeing with it.

56

1 MR. LINDSEY: I would like to give one positive  
 2 input for you in that the mitigations for our archeological  
 3 sites, birds, plants, and so on, to put it in a form that  
 4 gives or tells the story or gives a complete picture and not  
 5 to say a finger here, a hand there, a skull here and so on,  
 6 but to give a full and complete picture of what exactly the  
 7 cultural impact that is taking place up there.

8 MR. FEIN: Okay. I appreciate that. We will do  
 9 that. It will be an expansion of the cultural resource  
 10 evaluation, but it's already been done for the site a very  
 11 detailed evaluation. That's already been done, but it will  
 12 be upgraded and added to this project. The cultural  
 13 resource evaluation has already been done. It's available  
 14 again in the long-range development plan, and we'll have a  
 15 hard copy of that at the next meeting.

16 MR. LINDSEY: Charlie, in your capacity you  
 17 understand the cultural impact; is that correct?

18 MR. FEIN: Absolutely.

19 MR. LINDSEY: What other culture in the Pacific  
 20 look at Haleakala as a sacred place?

21 MR. FEIN: What other culture? Correct me if I'm  
 22 wrong --

23 MR. LINDSEY: I'm asking you sir.

24 MR. FEIN: Well, to the native Hawaiian it is  
 25 sacred.

57

1 MR. LINDSEY: What other culture. If you don't  
 2 know, that's okay.  
 3 MR. FEIN: Polynesians --  
 4 MR. LINDSEY: Maoris. Anytime the Maori people  
 5 come here, they come to Maui, and they go to Haleakala to  
 6 visit the effects that Maui has had on the au te aroa  
 7 (phonetic). Au te aroa (phonetic) was also brought up by  
 8 the demi God Maui. So when we talk about building something  
 9 on Haleakala, we're not just talking about something that's  
 10 a dead entity. It is a spiritual entity that crisscrosses  
 11 and has deep spiritual meaning to cultures not only here,  
 12 it's not only here in Hawaii but throughout the -- and you  
 13 are right, throughout Polynesia, specifically the Maoris.  
 14 Would it be appropriate in your vision to build  
 15 something like this in on a sacred place.  
 16 MR. FEIN: My personal feeling about that?  
 17 MR. LINDSEY: Yes.  
 18 MR. FEIN: Is that with the appropriate protocol,  
 19 protections, and respect, it can be done. That's my  
 20 personal opinion.  
 21 MR. LINDSEY: You can't build it in a church or  
 22 some other places like that as a traditional religious  
 23 practitioner and that would be okay; is that correct?  
 24 MR. FEIN: That is an issue, yes. If those who  
 25 consider Haleakala to be a church, I understandably am not

58

1 willing to see other structures that are not spiritual in  
 2 nature.  
 3 MR. LINDSEY: Excuse me for my tone because we  
 4 have been assaulted many, many times in every way possible  
 5 because we, being the best in the world, all of a sudden  
 6 everybody wants a piece of us. If you were the best person  
 7 in the world, everybody wants to come in and park on your  
 8 body, I don't think you would appreciate it. And this is  
 9 the position that we are coming from.  
 10 One last thing. This is for Jeff the scientist.  
 11 When you talked about the sunspots and its economic impact,  
 12 how is it going to impact us over here on Maui?  
 13 MR. KUHN: I don't think it is. It's not going to  
 14 affect the price of the land that you have to live in or the  
 15 cost directly of what you pay for milk. What it impacts is  
 16 future generations. It affects fact your children and my  
 17 children.  
 18 MR. LINDSEY: Thank you. Any of the Hawaiian  
 19 people asked to have this place built up there? Thank you.  
 20 MR. BRASS: If you have written comments you would  
 21 like read into the record, give them to Claudia or me by a  
 22 quarter of.  
 23 MR. MAXWELL: Haleakala through executive order  
 24 18.16 acres was taken away by executive order in the '30s;  
 25 right?

59

1 A VOICE: 1960.  
 2 MR. MAXWELL: In 1960, sorry. From 1960 up until  
 3 when this -- I don't want to call it what I have been calling  
 4 it because I promised everybody -- that AEOS, I fought that  
 5 AEOS they took out 150 tons of rock. It came out in the  
 6 paper. Myself, Dana Hall, and I think Leslie Kuloloio --  
 7 MR. KULOLOIO: No was me.  
 8 MR. MAXWELL: Wasn't you, Leslie. Was me and Dana  
 9 had to fight for them to return the 150 tons. Come along  
 10 the Faulkes observatory, nobody fought for it. The county  
 11 council approved it. They don't like me in England because  
 12 I walked out on Prince Albert. When they were going to sign  
 13 away.  
 14 I did the cultural study before this came up.  
 15 There's burials, possible burials, there's archeological  
 16 sites on that 18.6 acres, there's shelter sites, there's a  
 17 cultural practice that occurred up in Haleakala, and we did  
 18 that. This was a very sacred place. And from way back,  
 19 where were the people that should have grumbled about  
 20 building on this site? Only the kahuna po'o (phonetic) used  
 21 to go up there. Nobody else. Papakealakea (phonetic)  
 22 called this place not Haleakala. What is her name?  
 23 Kealaheiakala (phonetic) the calling of the sun.  
 24 I'm going to contact everybody that's talking  
 25 against this because I'm doing the cultural study for this

60

1 new observatory here. And if you are against the height,  
 2 this is when to do it. Not only talk at the meetings but  
 3 let me put it down in my cultural study that you wanted no  
 4 -- I don't give a darn if height makes the difference.  
 5 It's what is acceptable. I don't want to see it  
 6 from downtown, from down the rest of Maui. It's going to be  
 7 in my report. I got to tell you, if they want a different  
 8 color, we're in modern technology now. Find a different  
 9 color to change that, where it's not such an insult on our  
 10 cultural site.  
 11 This is going to be in my report. This is going  
 12 to be my recommendation. Go on the internet, look in the  
 13 IFA site, and I did, the cultural practices and the  
 14 religious practices of Haleakala. So we did. We did care  
 15 all these years, and we have to come together.  
 16 Let's fight for it. Let them know what we want up  
 17 there. Don't just come to meetings and sit down and no say  
 18 nothing. Let's all do it together.  
 19 MR. BRASS: Is there anyone here who has not had a  
 20 chance to speak who would like to speak.  
 21 MR. BAILEY: Aloha, my name is Tim Bailey, and I  
 22 just have a few questions. I understand the process of all  
 23 this. Because of who I work for, we have to do this  
 24 routinely. So I understand where we're at and where we're  
 25 going to be; it looks like 2006.

61

1 So a couple of questions I had was, any time we do  
 2 this type of planning, you have your alternatives, and I see  
 3 alternatives sites and primary sites. But to back up a  
 4 step, the alternatives that we usually work with are  
 5 obviously no telescope as one, your third alternative is new  
 6 telescope, and the second alternative is. Have you guys  
 7 ever considered just upgrading an existing site that's up  
 8 there with technology, like say, that big mirror building?  
 9 It's just a question I had. Was that ever in the output?  
 10 Is there an existing observatory that could be used instead  
 11 of erecting a brand new one?

12 The second question is more on the information  
 13 there on the petrel burrows. I think when you guys do your  
 14 funding speeches to benefit a lot of people that are not  
 15 aware of the Hawaiian bat, the 'ope'ape'a; the petrel, the  
 16 'ua'u. You need to explain more of the bird or find  
 17 somebody that knows -- some people know, and I know about  
 18 these birds and the bat -- but I want to know where that  
 19 information on those plots -- who gave you guys the  
 20 information about where those petrel burrows are?

21 MR. FEIN: I can answer that, Tim. The  
 22 information about the petrel burrows that's shown on this  
 23 map was provided by the Haleakala National Park resource  
 24 biologist Kathleen Bailey. She monitors those burrows on a  
 25 regular annual basis. She files the report with U.S. Fish

62

1 and Wildlife every year. She has a team monitoring the  
 2 burrows right now. That's where that comes from. That map  
 3 gets upgraded every year, depending on whether they find new  
 4 burrows, whether the old burrows were ever used or not. The  
 5 burrows are frequently numbered and her staff goes in and  
 6 checks on the fledglings on a weekly basis, during the  
 7 fledgling season; so that's where that came from.

8 MR. BAILEY: When was that map -- do you know when  
 9 was the last -- what is the date of that update?

10 MR. FEIN: That's a good question. That map was  
 11 done at the end of the last fledgling season 2004. So this  
 12 map will be upgraded at the end of this year when Kathleen  
 13 publishes her next report.

14 MR. BRASS: The other question was, have other  
 15 sites been considered for upgrading rather than building  
 16 something new?

17 MR. KUHN: Yes, basically the alternatives, site  
 18 alternatives. You mean alternatives not on Haleakala?

19 A VOICE: No, upgrading of other existing --

20 MR. KUHN: So you are talking about the Mees  
 21 observatory site, have we thought about that?

22 A VOICE: Yeah, the amount of money to erect the  
 23 new building and then you have the one there already.

24 MR. KUHN: Remember the picture what the Mees  
 25 building looks like compared to the ATST?

63

1 A VOICE: I understand. I'm just curious if that  
 2 was not a consideration, because I don't see that in the  
 3 planning for the public.

4 MR. BARR: When you refer to the mirrored  
 5 building, you are talking about the Air Force building, the  
 6 one that's shiny?

7 A VOICE: The mirrored one that's not supposed to  
 8 be visible.

9 MR. KUHN: The deal with the Mees building and why  
 10 we don't just put this on top of the Mees building is that  
 11 right now NASA and the NSF paid us, I don't know, a few  
 12 hundred thousand dollars a year to support the science that  
 13 we do there.

14 So we have 10 years of data that we have on the  
 15 sun. That's how we have this record that goes back. This  
 16 record that goes back is what we now use to understand how  
 17 the sun changes over 10 years. If you make us take the Mees  
 18 building and put this on top of the Mees building, then for  
 19 about 10 years we do nothing. There's no data, we have none  
 20 of this record, and so we can't make the linkage between the  
 21 new place and the old place.

22 So the compromise that the architect -- that Jeff  
 23 described was to use the space in the old building as we  
 24 could to shrink the extra space we needed for the ATST. So  
 25 we thought that was the best way to go from the old to the

64

1 new but still have something that we can run for the 10  
 2 years it takes to make this other telescope work. That was  
 3 the idea.

4 MR. BRASS: If we could check -- make sure there  
 5 are other people who have not had a chance to talk.

6 MR. KULOLOIO: I have last question for you. Who  
 7 is the lead agency? Who is going to be the signees or the  
 8 sign-offs? Is it going to be a partnership when this is  
 9 complete? Is UH standing by themselves? Are you going to  
 10 be signing for everything else in regards to damage control?  
 11 Who is going to be responsible for this in case there's  
 12 feedback?

13 MR. FOLTZ: The principal investigator on the  
 14 proposal is the director of the National Solar Observatory.  
 15 The National Solar Observatory, along with the National  
 16 Optical Astronomy Observatory, comprise a federally funded  
 17 research and development center which is funded by NSF. We  
 18 provide the money to them to run the facilities to make the  
 19 data and the facilities available to the public. The  
 20 scientific public and the general public.

21 In the end, that responsibility for the funding  
 22 for the maintaining of the operation falls on the NSF, but  
 23 it will be administered through the federally funded  
 24 research and development center.

25 MR. KULOLOIO: Here on Maui, right?

65

1 MR. FOLTZ: The National Solar Observatory is not  
 2 on Maui.  
 3 MR. KULOLOIO: They are not on Maui?  
 4 MR. KULOLOIO: Okay.  
 5 MR. FOLTZ: I'll pass this to the project manager  
 6 for comment.  
 7 MR. KULOLOIO: I just like know where they are at.  
 8 Sometime they ghosts all over the place in Washington.  
 9 MR. WAGNER: The National Solar Observatory is  
 10 based in two locations: one is in Sacramento Peak in New  
 11 Mexico, the other is in Tucson, Arizona currently. We  
 12 operate the facilities in Arizona and New Mexico. We have a  
 13 number of small solar telescopes like these that are placed  
 14 around the world. And that's what we do.  
 15 MR. KULOLOIO: Are they on Maui?  
 16 MR. WAGNER: The National Solar Observatory does  
 17 not run facilities on Maui at this point.  
 18 MR. KULOLOIO: That's all I wanted to know. Thank  
 19 you.  
 20 MR. BRASS: Any other questions or comments?  
 21 A VOICE: Your proposed observatory would be a  
 22 daytime operation for both of your operations? Would it be  
 23 during the day, nothing at night or anything at night?  
 24 MR. KUHN: So you are asking if this telescope can  
 25 only be used during the day? The answer is, the only people

66

1 that are talking about using now are during the day.  
 2 Could I say that it would never be used at night?  
 3 I don't know. The telescope up there could look at stars.  
 4 One of the things that the scientists talk about -- we don't  
 5 have money to do it, we don't have any of the facilities to  
 6 do it yet -- is the scientists talk about looking for  
 7 planets around other stars.  
 8 It turns out that this telescope has some  
 9 capability that would allow to possibly work at night, but  
 10 there's no money to do it, and it's only talk. Ask that  
 11 question formally and you'll get a formal response. My sense  
 12 of it is there will be people that will want to use it at  
 13 night. Honestly.  
 14 A VOICE: I have a follow-up question. If it is  
 15 used at night, you are going to have complaints of light  
 16 pollution. I seen that a few years ago. Some of the people  
 17 started complaining about too much lights interfering with  
 18 the operation. I took that very negatively. These people  
 19 up there don't give a damn about people living down here  
 20 because they wanted the lights turned off. Etcetera,  
 21 etcetera. So maybe that can be included in your studies if  
 22 and when.  
 23 MR. KUHN: Is there light pollution in night  
 24 operations?  
 25 A VOICE: If you could answer the question in your

67

1 study about light pollution, although the bulk of the  
 2 operation is during the day, if you choose to use it at  
 3 night, will they complain about the lights down here? If  
 4 they are making the county and Maui Electric change the  
 5 lighting, some of the lights, they are very terrible the  
 6 lights. You can't see at night, so there's a safety factor  
 7 that I -- I'm only one guy. People up there complain about  
 8 light pollution. They have to start thinking about people  
 9 down here. We're federal taxpayers. Hey, don't turn off  
 10 the lights on us, please.  
 11 MR. BRASS: Any other comments? Do we have  
 12 written comments to be read?  
 13 A VOICE: Just a quick question. Has there --  
 14 probably not because we're in the early process -- is there  
 15 an intent to just have a Hawaiian consultation as is  
 16 supposed to be under federal law for any projects; and if  
 17 so, who, what, when and where?  
 18 MR. FEIN: The Federal law requires a Section 106  
 19 consultation with native Hawaiian interests. Yes, there  
 20 will be, of course. That will be rather extensive and occur  
 21 over a fairly long period of time during the EIS process.  
 22 Then it will begin shortly within the next 30 to 60 days.  
 23 Part of that process will be handled by our  
 24 environmental partners. We have a firm that we retained to  
 25 do the actual regulatory scripting for that. But we're also

68

1 going to involve our cultural specialists and the native  
 2 Hawaiian groups and individuals on this island to  
 3 participate in that.  
 4 So we intend to meet all of the regulatory  
 5 requirements and do as much as we can to involve the native  
 6 Hawaiian people in the Section 106 process. We have done  
 7 this before in other projects. Of course, this is not the  
 8 first time that that would have been done. But certainly if  
 9 you wish to participate in that, you will be involved.  
 10 Okay.  
 11 MR. LINDSEY: Charlie, just a follow up. Do you  
 12 have a list of all the different Hawaiian organizations that  
 13 are represented here on Maui.  
 14 MR. FEIN: Yes, I believe we do have that list.  
 15 We do. We put together that list at the beginning of the  
 16 process. It was part of the process for winning this  
 17 contract. My company needed to do that in order to  
 18 demonstrate that we were aware of all of the native Hawaiian  
 19 groups and individuals that would have stakeholder interest  
 20 here on Maui. So we did do that.  
 21 MR. BRASS: Any more questions or comments?  
 22 There's time for a couple more.  
 23 MRS. LINDSEY: I'm Puanani Lindsey. My concern is  
 24 technology is changing all the time. And if the completion  
 25 date is somewhere around 2014 or a little later, many of us

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1 are moving up in our ages, I'm wondering if you are going to  
2 be changing the height of that telescope. I mean, it's high  
3 enough as it is right now and with technology changing, I  
4 suppose one day you might want a bigger and better telescope  
5 up there. I have a real concern about more.

6 MR. FOLTZ: Once the EIS is published, the height  
7 would be kept, so it cannot be increased. The other issue  
8 here is the technology does change, but we have to not  
9 change the technology.

10 At some point, we need to say this is the  
11 technology that we use. The technology that's in the design  
12 right now is achievable technology. We would not fund it if  
13 the technology were not achievable. So we will continue to  
14 allow technology to develop; but in a project like this, you  
15 must say these are the boundary conditions, this is the size  
16 of the mirror, this is the height of the structure, and so  
17 on. That was a very good question.

18 MS. WAHL: More questions? Okay, going once,  
19 going twice. Okay. In closing, I would just like to thank  
20 you all of you who have come and contributed. Your  
21 contributions are on record, and I would also like to thank  
22 the panel for their presentations this evening and also our  
23 court reporter, Gloria. And a big mahalo nui loa for  
24 attending.

25 If you do have any written questions or comments,

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1 the deadline is August 14th. And you can get those forms  
2 out on the sign-in table. Thank you.

3 (The proceedings concluded at 9:00 p.m.)  
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1 CERTIFICATION  
2 STATE OF HAWAII )  
3 ) SS.  
4 COUNTY OF MAUI )  
5  
6  
7

8 I, GLORIA T. BEDIAMOL, CSR/RMR 262, Notary Public  
9 in and for the State of Hawaii, do hereby certify:  
10 That the proceedings were taken by me in machine  
11 shorthand and was thereafter reduced to print under my  
12 supervision by means of computer-assisted transcription;  
13 that the foregoing represents, to my best ability, a true  
14 and correct transcript of the proceedings had in the  
15 foregoing matter.

16 I further certify that I am not an attorney for  
17 any of the parties hereto, nor in any way interested in the  
18 outcome of the cause named in the caption.  
19

20 Dated this 25th day of July, 2005.  
21  
22  
23  
24  
25

Signature on File

NOTARY PUBLIC, State of Hawaii  
My commission expires: 1/18/08

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**Appendix B(2): Transcripts  
Public Scoping Meeting, Kula Community Center, July 13, 2005**

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1                   ADVANCED TECHNOLOGY SOLAR TELESCOPE (ATST)

2                                   PUBLIC MEETING

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12                                   PROCEEDINGS

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14   Held at the Kula Community Center, Kula, Maui, Hawaii,

15   commencing at 7:00 p.m. on July 13, 2005.

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24   REPORTED BY:   Rachelle Primeaux,   CSR No. 370

25

1 ATTENDANCE

2

3 MEETING FACILITATORS:

4 David Brass and Kim Lompoc, Mediation  
5 Services of Maui

6

7 HAWAIIAN LANGUAGE TRANSLATOR:

8 Kiope Raymond

9 PANEL MEMBERS PRESENT:

10 Dr. Jeff Kuhn - Associate Director of the University  
11 of Hawaii, Institute for Astronomy (Oahu)

12 Dr. Craig Foltz - Program Officer with the National  
13 Science Foundation, Washington, D.C.

14 Dr. Charlie Fein - KC Environmental (Maui)

15 Jeremy Wagner - ATST Project Manager with National  
16 Solar Observatory, Tucson, Arizona

17 Jeff Barr - ATST Project Architect

18 Mike Maberry - Assistant Director, University  
19 of Hawaii, Institute for Astronomy (Maui)

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PROCEEDINGS

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MS. COMPOC: Good evening. Aloha.

AUDIENCE: Aloha.

MS. COMPOC: Thank you for being here. My name is Kim Compoc. I'm with Mediation Services of Maui.

MR. BRASS: And I'm David Brass from Mediation Services.

MS. COMPOC: And we're a community organization that was founded in 1982 to find creative and appropriate ways of resolving disputes. We've been here for 23 years. David and I are here tonight to help with this process tonight and make sure that everyone has a chance to speak that would like to make a comment about the proposal. Before we get into all of that, I'm going to introduce Dr. Charlie Fein, and he's going to start the pule and then introduce the presenters and then we'll talk more about the evening and the agenda. Thank you.

MR. FEIN: Thank you, Kim. My name is Dr. Charlie Fein. I am the environmental planner for KC Environmental, Incorporated, which is the company that is doing the Environmental Impact Statement and Conservation District Use permit for this project, for the Advanced Technology Solar Telescope. Before I begin, I would like to briefly introduce our environmental team, and then I'm going to ask

1 Kahu Maxwell to offer the pule.

2 Our team consists of those individuals here,  
3 Leslie Garlinghouse, who is with Tetra Tech, Incorporated.  
4 They are providing us with logistic and environmental survey  
5 support. My project manager, Sharon Loando-Monro, who is --  
6 who will be handling the day-to-day operations for this  
7 environmental impact assessment and our cultural specialist  
8 Kahu Charles K. Maxwell. So before we begin, I would like  
9 to ask Kahu Maxwell for the pule.

10 KAHU MAXWELL: Could you stand, please?

11 (Hawaiian language spoken.)

12 Our heavenly father with your precious child, we  
13 ask and pray that you bring forth knowledge about our sacred  
14 place of Haleakala and bring the wisdom of all of us  
15 gathered here together so we might continue as we keep our  
16 place sacred even though there's buildings and all, but the  
17 aina is the most sacred thing for the Hawaiian people. We  
18 ask this in your name.

19 (Hawaiian language spoken.)

20 MR. FEIN: Mahalo, and aloha to everyone this  
21 evening. Thank you for coming. I know there are a lot of  
22 other things you could be doing on a Wednesday evening and  
23 we appreciate you coming out this evening to hear about this  
24 project. Before I bring the folks from Mediation Services  
25 back up here to lay out the ground rules for the evening, I

1 would like to introduce the individuals who are going to  
2 briefly present information about this project to you. But  
3 I want to say at this point that the prime purpose for us  
4 being here is to receive your comments and to get your ideas  
5 up front about this project. This is a scoping meeting. We  
6 don't have all the answers, and we won't have all the  
7 answers. We probably may never have all the answers.

8           This meeting is principally designed to get your  
9 input so we can develop a scoping document to know what to  
10 include in the Environmental Impact Statement and the  
11 Conservation District Use permit. So this evening I would  
12 like to introduce the people who are going to present the  
13 information to you so that you'll have an opportunity to  
14 comment and ask a few questions. First of all, from the  
15 University of Hawai`i, Dr. Jeff Kuhn, Associate Director of  
16 the University of Hawai`i Institute for Astronomy. He's  
17 going to present the science behind the need for this  
18 project. Dr. Craig Foltz is program officer with the  
19 National Science Foundation in Washington, D.C., and Craig  
20 is going to discuss the role as a proponent in sponsoring  
21 the ATST. I'll be speaking about the environmental process  
22 a little bit later on and what it is that we're going to do  
23 in terms of public and internal steps.

24           Jeremy Wagner, ATST project manager with the  
25 National Solar Observatory in Tucson, Arizona, is going to

1 offer a brief overview of the project schedule. Mr. Jeff  
2 Barr is the ATST project architect. He's going to talk  
3 about the facility design and the features of the ATST with  
4 various figures. Also tonight I would like to acknowledge  
5 our court reporter Rachelle Primeaux, who will be the  
6 recording stenographer. And if anyone chooses to speak in  
7 Hawaiian, we have Kiope Raymond available for Hawaiian  
8 interpretation if necessary.

9           So once again, I'll bring back our meeting  
10 facilitator Kim Compoc to lay out the ground rules for this  
11 evening. Kim.

12           MS. COMPOC: So we want to make sure that  
13 everybody has a chance to say what they would like to say.  
14 This is actually the second of three scoping meetings that's  
15 been funded by the National Science Foundation. Last night  
16 we were in Wailuku at the Cameron Center. Tonight we're  
17 here in Kula, and tomorrow will be Pukalani Community  
18 Center. And as Dr. Charles Fein was talking just now, these  
19 are scoping meetings, and the idea really is the public  
20 comment. So we'll be in charge of that portion making sure  
21 everybody gets a chance at the mic. I'm wondering if all  
22 these empty chairs are going to get filled because it seems  
23 like we're probably going to have an easy time of that, but  
24 I just wanted to make it clear that there's a feedback  
25 problem. So if anybody tries to take the mic, wants to come

1 up to the mic, please line up on the end one there so  
2 there's not "eek, eek" kind of sound. We don't want to have  
3 that. The other thing that's important is come right up to  
4 the mic like that, say your name so that Rachelle can have  
5 it for the official record because that's really important.

6 We want to make sure that nobody's remarks get  
7 lost. And David, tell us a couple of other ground rules,  
8 please.

9 MR. BRASS: We have a few ground rules that we  
10 would like to ask that you observe so that everyone gets an  
11 opportunity to voice their concerns and ask their questions.  
12 First we would like to ask that until the presenters finish  
13 that you hold your questions. You could jot down any  
14 questions that you have. There will be ample opportunity to  
15 ask those questions of the presenters. Then we're changing  
16 this a little bit with the different mics tonight. If you  
17 have a comment or a question, if you could line up behind  
18 the microphone in the center aisle here. When you get to  
19 the mic, if you could state your name, then make your  
20 comment or ask your question. In order to ensure that  
21 everyone gets a chance to speak and in the event that there  
22 are more people arriving later, if you could keep your  
23 remarks to about five minutes, that would be helpful.

24 And then after everyone has had a chance to voice  
25 their concerns, if you have more to ask, you would be

1 welcome to go back up to the mic. There are comment sheets  
2 on the back table and on the sign-in table. If you would  
3 prefer not to speak at the microphone, you can put your  
4 questions on a comment sheet, give them to Kim or I, and we  
5 will read them at the end of the meeting so that they are  
6 responded to and they become part of the record of this  
7 meeting. You can also fill out a comment sheet and put it  
8 in the box for it to be incorporated into the scoping  
9 process, or you can mail those comment sheets and they need  
10 to be mailed in by August 14th if you do that.

11 We ask that you not interrupt or make comments  
12 while someone else is speaking just out of respect for all  
13 of the people who are present. And just a reminder that the  
14 whole meeting process is being recorded by the court  
15 reporter. She can only record one person at a time. So we  
16 ask that you not talk while somebody else is talking because  
17 it will not be -- end up being part of the record if you do  
18 that. So those are the guidelines that we would like to  
19 request that you follow. And we will be the ones that will  
20 kind of remind you if you veer off.

21 MS. COMPOC: So just a little logistical thing as  
22 well. The restroom, if anyone hasn't been here, is through  
23 these doors and outside that part there. Are there any  
24 questions before we get to the panel? Okay. Without  
25 further adieu, Dr. Charles Fein.

1           MR. FEIN: Thank you again, Kim. Okay. Our first  
2 presenter is Dr. Jeff Kuhn from the University of Hawai'i  
3 and Jeff is going to present the science behind the need for  
4 the Advanced Technology Solar Telescope. I invite you to  
5 watch his slides. He has great slides.

6           MR. KUHN: My name is Jeff Kuhn, and I'm a  
7 scientist. I'm one of the people that will use this  
8 hopefully if I'm not dead by the time it finally gets built  
9 somewhere. My background is in physics and solar physics,  
10 and I've got to tell you this project has a long history in  
11 the past. We started talking about telescopes like this. I  
12 got involved in it about 12 years ago when we were talking  
13 about the telescopes of a similar design. I think my job  
14 for you and what the organizers have asked me to do is try  
15 to give a flavor of the science, the answer to the question  
16 why do we need the ATST, so I'll try to go fast. There's a  
17 lot of stuff there, and if you have a quick question, I  
18 invite you to raise your hand and I'll answer it real  
19 quickly if it's not something that bears directly on a lot  
20 of the logistics. I think it helps to keep material flowing  
21 if we do it in tempo.

22           And finally, the other question is why Haleakala  
23 from a perspective of the science, not from a prospective of  
24 some of the other issues. The sun itself is an object that  
25 we usually see as a big orange ball, but the truth is it

1 changes. And it changes a lot. About a year and eight  
2 months ago right around Halloween, the sun did something  
3 that we haven't ever seen it do before. And what you're  
4 looking at is a picture of the sun, and you're seeing the  
5 rotation. And there's been a month of time or a few weeks  
6 of time compressed into this movie. And the really amazing  
7 thing in this picture is if you watch right around here,  
8 you'll see the appearance of a -- there it is -- in a matter  
9 of a few hours, a region grew on the sun. It's size was  
10 about three times the diameter of the earth. And it's what  
11 we call a sun spot.

12           And when that region got to the edge of the sun,  
13 something really remarkable happened. It produced a burst  
14 of energy that we call a coronal mass ejection, which lucky  
15 for us was a projection off to the side and not directly to  
16 the earth. These are images that were taken from space.  
17 They're images not in light like the previous one, but  
18 they're images taken in x-rays. And again, the size of the  
19 earth would be a ball about like that. Energy you can see  
20 is projected out into space. It's connected to the earth.  
21 And if you were to step back from the sun and look at an  
22 image like this, again, this is from space, so the sun is  
23 underneath that white circle.

24           This is now further out into space. You can see a  
25 comet that goes through the picture. It actually doesn't

1 survive against the sun. This burst of energy and light I  
2 think -- there it goes. It goes out into space is that  
3 coronal mass ejection, and it connects with the earth. That  
4 energy, it's energy and particles, interacts with our  
5 environment.

6           For the most part, it interacts with the  
7 technology of our environment, so you may remember two  
8 Halloweens ago, there was -- there were news reports of  
9 planes that were rerouted because of the threat of radiation  
10 in the Polar regions, also because of communication.  
11 Communication was interrupted. In fact, what happened is  
12 planes were rerouted. We lost a couple of satellites,  
13 Japanese communication satellites because of this energy up  
14 above the earth's atmosphere. There was a power grid shut  
15 down in Sweden again up in the northern environment. There  
16 were cell phone interruptions and communication  
17 interruptions. There were some GPS problems. So most of  
18 the effect on the sun on this sort of scale has to do with  
19 our technology.

20           We're largely protected. Here is a picture of the  
21 earth. This structure around it is a computer estimate of  
22 what we call the magnetosphere of the earth. That's just a  
23 fancy word for a shield, a magnetic shield that protects us  
24 from the radiation from the sun. That radiation is -- or  
25 that shield is a variable thing. And, in fact, from that

1 movie that I just showed you, it blows like the wind. And  
2 it's part of this problem that we're now beginning to  
3 appreciate, which we call space weather, the environment  
4 between the sun and the earth that effects the earth. And  
5 it's related in large measure to things like that magnetic  
6 field right there around the earth.

7           Sort of an idealized picture of that is here is  
8 the sun. The sun produces energy, and the magnetic field of  
9 the earth and the sun are connected in ways that affect how  
10 that energy makes its way into the earth's atmosphere. In  
11 fact, that's not the only manifestation of the sun's  
12 interaction with the earth. The other is probably more  
13 profound. And that's an interaction that we're only  
14 beginning to understand based on current records and  
15 historical records. If you look at the sun, that sun spot  
16 that we saw in that first movie, sun spots vary and they  
17 fluctuate. Here is a record that goes back to the 1600's,  
18 goes back to the time of Galileo. It shows that sun spots  
19 come and go, and the theme here is the sun is variable and  
20 the sun changes.

21           Roughly every 11 years, there's a bunch of sun  
22 spots. Only very recently since we've had satellite  
23 measurements in space that we've noticed the brightness of  
24 the sun is also changing, okay. This plot up here at the  
25 top shows the brightness of the sun measured from satellites

1 and where there's a peak in the brightness, it turns out  
2 there's a large number of sun spots on the sun. Lots of sun  
3 spots make for a brighter sun. Paradoxical.

4           Nobody really knows why it is when we put dark  
5 spots on the sun, the sun actually produces more energy, but  
6 it's true. The other feature of this historical record is  
7 that sun spots are not a regular phenomena. It's not a  
8 cycle like the lunar cycle or the tide cycle. Sometimes it  
9 completely vanishes. In the late 1600's, it was gone.  
10 Sometimes it's diminished. Right around the 1800's, it was  
11 very weak. And then in the 1900's, we've been in a phase of  
12 growing solar activity. Why is that interesting? Well,  
13 it's interesting because we have records, economic records  
14 that extend back to this period of time. And it's pretty  
15 clear that there were climate effects, which were, for  
16 example, affected agriculture.

17           This is a graph that shows from 1200 to 1900 the  
18 cost of wheat in Dutch guilders per 100 kilograms adjusted  
19 for inflation. What it shows that the peak in the cost of  
20 wheat went up right here. This is the period of the Maunder  
21 Minimum, and right here, this is a period of where there  
22 were hardly any sun spots. We expect when there weren't  
23 very many sun spots, the sun was what?

24           UNIDENTIFIED SPEAKER: Dim.

25           MR. KUHN: Dimmer, right. The weather was colder

1 somehow on average and probably the growing season was  
2 shorter and the cost of wheat was higher. So there's  
3 indirect evidence of climate variability. In fact, there's  
4 even direct evidence back here. This period of time was  
5 known in Europe to be a very cold period of time. The River  
6 Thames froze in the winter and growth patterns were --  
7 agricultural cycles were certainly disrupted. So there's no  
8 question that there's some influence, some connection on the  
9 climate of the earth and what the sun is doing.

10 In fact, we think that there's a connection  
11 between in some cases the evolution of civilizations. If we  
12 go back a little bit further in this case to 1000 A.D. and  
13 we look at those climate records, by looking at records of  
14 what the sun is doing, it certainly looks like according to  
15 the solar record, there should have been a warming phase  
16 starting around 1000 A.D. reaching a peak in perhaps 1300  
17 and then a cold phase culminating in the Ice Age, that 1700  
18 period right down here, that dip.

19 Well, this warm rise in the early part of this  
20 Millenia corresponds to the decline of southwestern  
21 cultures, the Mogollon, the Hohokam, the Anasazi. It's  
22 almost certainly true that a warming trend in a climate in  
23 North America was responsible for the decline in those early  
24 civilizations. Similarly the cooling phase right here in  
25 towards the Maunder Minimum corresponds to what we know

1 about what happened to the Greenland cultures. The  
2 Greenland colonization that started back here in 1100 A.D.  
3 was gone by 1500 A.D. And their records that show that  
4 the -- for example, the food that the Viking colonizers of  
5 this eastern coast of Greenland changed dramatically because  
6 they couldn't grow the crops. The cooling phase right here,  
7 which is in synchrony with the sun corresponds with the  
8 decline of that colonization.

9           So it seems clear that the sun is important not  
10 just to -- to our technology, but also to what happens to  
11 cultures over time scales that are much longer than human  
12 time scales. How bad is it? Well, over our lifetime, the  
13 probability of a major solar storm or brightness change  
14 affecting commerce with the multibillion-dollar impact is a  
15 virtual certainty, because it's already happened. We've  
16 lost satellites, communication satellites that are of value,  
17 billions of dollars. The effect on agriculture is something  
18 we can't yet gauge, but it's almost certainly on the same  
19 scale and probably much more important.

20           Over the next 1,000 years, the probability of  
21 major climate affecting agriculture or global commerce is  
22 probably also likely. And again, the evidence for that is  
23 go back 1,000 years and look at what's happened. So the  
24 truth is that an investment of some millions of dollars is a  
25 very valid and important investment, and we need it. We

1 need it to understand in the future what's going on with the  
2 sun, because right now we can't tell you as physicists  
3 whether or not the next solar cycle will be a few tenths of  
4 a percent warmer. If it will be, that has dramatic  
5 consequences on things as simple as the sea level, the sea  
6 level heat, which is important to us here. So why  
7 Haleakala? We need the ATST. Haleakala is important from a  
8 scientific perspective because we started -- a bunch of  
9 scientists started with over 70 different sites we looked  
10 at. We looked at things as diverse as the number of  
11 airplane contrails flying overhead.

12 We looked at the weather patterns. We looked at  
13 the growth patterns. We took that spread sheet and we  
14 narrowed the possible sites down to six sites, and the six  
15 sites were Big Bear Lake in California, Haleakala, LaPalma  
16 off the coast of Spain -- off the coast of Africa,  
17 Panguitch, which is a lake in Utah, Sacramento Peak, which  
18 is an observatory site in New Mexico, San Pedro, which is a  
19 site off Baja in Mexico. We built a tower on each one of  
20 these sites and measured the atmospheric characteristics and  
21 the weather characteristics.

22 And one of the most dramatic things we learned,  
23 and it was a surprise to some of us, it wasn't a surprise to  
24 those of us that know the mountain, but I think the rest of  
25 the scientific community, they did not realize how unique

1 Haleakala was. This is a plot which is a little  
2 complicated, but what it shows is a function of height, so  
3 as you go to the right here in the scale, you're looking  
4 higher up in the atmosphere.

5 Up on this scale shows how clear -- not how clear,  
6 how pristine the atmosphere is. You know, the atmosphere  
7 blurs our images. We're after the ability to see the small  
8 detail of those spots like that spot you saw on that first  
9 movie. In order to see that detail, we want a number which  
10 is high on that scale. Which of these curves do you think  
11 corresponds to Haleakala? It's the red one, of course.  
12 What this shows is how fine the detail is we can see through  
13 the atmosphere versus how high we are above the ground.

14 The black curve which doesn't vary very much is  
15 Big Bear in California. This curve right here is Haleakala.  
16 The green curve, the next closest competitor for this  
17 performance measure is LaPalma in the Canary Islands. So  
18 what's happening here is the ground produces turbulence, and  
19 as you get a little bit above that turbulence, the clarity  
20 in which you can see fine objects in the sky improves  
21 enormously. And the best place in the world we think for  
22 these observations at this height is from Haleakala. Yes.

23 MR. WILSON: Southern hemisphere, no sites?

24 MR. KUHN: In the southern hemisphere, we did not  
25 survey any of the sites in part because many of the

1 performance measures we needed to get started we didn't  
2 really have. And also we didn't feel that we could ever  
3 afford to go to the southern hemisphere with this facility.  
4 We had some initially, but it didn't look like it produced  
5 at least from the initial data anything that was unique or  
6 added to the performance.

7           This is daytime. Nighttime performance is  
8 different. And part of the reason why this curve is  
9 increasing as you go upwards has to do with how the ground  
10 is heating and the effect the turbulence versus height and  
11 solar heating, and of course, at night, you don't have solar  
12 heating. Finally, the other characteristics have to do with  
13 what the sky looks like in Haleakala. And if you've been to  
14 the summit and you take your thumb and you hold it over the  
15 sun, it's a remarkable thing. Hold your thumb over the sun  
16 and the sky is a dark blue, almost a black all the way up to  
17 the edge of your thumb. And you don't know the sun is under  
18 your thumb because that sky is so dark. There isn't any  
19 other place we looked at that the dark sky, which is what we  
20 need to see those energy events propagate out into space. A  
21 big part of what the ATST does that no other instrument does  
22 is measure the environment between the sun and the earth.

23           So these numbers don't necessarily mean much to  
24 anybody but scientists, but the sky brightness was 5.8 on a  
25 scale where it was between 100 and 800 at the second best

1 sites. It's just there's no comparison. The amount of dust  
2 in the sky, which is related to how bright the sky is, is  
3 down by a factor of 10 to 100 compared to the other sites.

4           So the conclusion to the scientists was that  
5 before we were to understand the solar magnetic fields which  
6 causes all these changes in the sun, we need a site like  
7 Haleakala with a telescope like the ATST. It's the world's  
8 best location for a solar observatory, and it sure seemed to  
9 us that we couldn't get what we could get out of this  
10 facility anywhere else. And why are we here? We're here  
11 really because we're hoping for an invitation from your  
12 community to bring this new window onto the sun onto the  
13 summit of Haleakala. That's all I had.

14           MR. FOLTZ: Thank you, Jeff. My name is Craig  
15 Foltz. I'm an astronomer and physicist by training. I'm a  
16 nighttime astronomer. I study extragalactic astronomy and  
17 observational cosmology, which is pretty far afield from the  
18 study of the sun. In my current job, I'm the program  
19 manager for the National Science Foundation. I live inside  
20 the Beltway. I work and live in Arlington, Virginia. I'm  
21 going to say a few words about what the NSF, how it works  
22 and how it relates to this project and what the status of  
23 this project from the point of view of the NSF. The  
24 National Science Foundation was founded about 55 years ago  
25 to provide support, and when I say support, I mean money, to

1 provide funding to support basic research and applied  
2 research in science, engineering, and also very importantly,  
3 to support science education and the public knowledge of  
4 science. We fund almost all fields of science, biology,  
5 math, physics, atmospheric science, oceanography, astronomy.  
6 We don't spend too much money in support of life sciences.  
7 The National Institutes of Health does that.

8           And we don't spend too much of our money in  
9 support of space science because NASA does that. We are a  
10 federal agency, and I think most people have a feeling about  
11 federal agencies that federal agencies are powerful and move  
12 forward at their own pace in an autonomous way. And this  
13 may apply to many federal agencies. It does not apply to  
14 the NSF. The NSF is interesting because it's not proactive.  
15 That is we don't decide what science should do. We respond  
16 to scientists. We expect the scientists to tell us what's  
17 important, what problems they need to solve, how they would  
18 solve them, how much money they would need to solve them.  
19 And then, if possible if the project is judged to be good  
20 enough and if we have sufficient funding, then we provide  
21 funding.

22           So, in fact, we take direction from the people  
23 that we serve, which makes us -- I mean not a unique federal  
24 agency, but a somewhat unusual federal agency. And actually  
25 it's an agency that I like to work for, and there are many

1 agencies I wouldn't like to work for. Just if you get a  
2 chance later, you can look at basically how this is laid  
3 out. This is a very small part of the NSF's organization  
4 chart, and basically this box is me right here. And I'll  
5 talk about how that -- how the funding and the support flows  
6 down to the project, which is down here.

7           Now, as I said, our ideas come from the community.  
8 And as Jeff said, and Jeff was instrumental in this project,  
9 over a decade ago, planning started which did not involve  
10 us. It involved astronomers, solar physicists and  
11 astronomers from around the country, including international  
12 scientists, who got together to build the science case for a  
13 new telescope because there was nothing that we had on the  
14 ground and there was nothing we had in space and nothing  
15 that we were planning that could actually -- would be  
16 capable of making the observations that are necessary to  
17 answer the questions that Jeff laid out. And so they built  
18 a science case for a large and very capable solar telescope  
19 and they got the community support and they came to us with  
20 a proposal, which we funded.

21           And over the last five years, we've spent about  
22 \$12 million in support of the design of this telescope.  
23 About a year and a half ago, the project had proceeded to  
24 the point where it felt that it was ready to request money  
25 for construction. And a proposal was submitted to us, which

1 involved a number of institutions who were in collaboration  
2 and the lead agency on that was the National Solar  
3 Observatory of which these two gentlemen are employees, and  
4 they asked us for money to construct it. We have been  
5 scrutinizing, scrubbing, evaluating over and over again the  
6 proposal, the management structure, the budget, the schedule  
7 and in trying to come to a decision as to whether this  
8 project will be funded. This is a big project. It's a big  
9 project by NSF's standards. It's not the biggest one that  
10 the NSF has ever done, but it's certainly not the smallest.  
11 It is a small project, very small project compared to  
12 telescopes that go into space, I'm talking about in terms of  
13 cost, and so we treat it very carefully.

14           And, in fact, in the end, whether this project is  
15 funded or not, or actually let me put it a different way.  
16 The funding for this project must be specifically approved  
17 by Congress. So when you have to go to Congress to ask for  
18 money, you have to be careful. You have to make sure all  
19 your ducks are in a line. And, in fact, you need to make  
20 sure that the project, that these guys have done their job  
21 and they have a design that is construction ready, and it  
22 cannot be construction ready until you know where you're  
23 going to put it. Because you don't know how to build it.  
24 If you build it on cinders, it's different than if you build  
25 it on granite, which is different than if you build it on

1 lava.

2           So, in fact, a very important part of the planning  
3 for this telescope, which its planning needs to be done  
4 before we can actually make the decision to fund or not is  
5 the evaluation of the environment on cultural impact. So  
6 that's why we're here today, and I want to stress we have  
7 not funded the construction of this telescope. There are  
8 people in the room, including myself, who hope that decision  
9 is positive, but that decision has not yet been made. And I  
10 want to say secondly that this is not premature. It is the  
11 right time to do this.

12           We should not have started this process two years  
13 ago. We should not start it a year from now. So we're  
14 right on time, and with that, I'm going to turn this over to  
15 Jeremy who is going to talk briefly about the schedule,  
16 except to say that I'm -- you know, we will be -- we are  
17 very concerned about your questions, and we will take your  
18 comments and questions very seriously. Charlie. Back to  
19 Charlie.

20           MR. FEIN: Thank you, Craig. Once again, I'm  
21 Dr. Charlie Fein, and I am the environmental planner for KC  
22 Environmental. Our job is to prepare the environmental  
23 impact assessment documentation for this project. As Craig  
24 said, this is the time to do it. In order to reach a  
25 decision about this project with respect to the

1 environmental efficacy, the environmental correctness of  
2 this project, we need to go through a rather lengthy  
3 process, and we're going through a lengthy process right  
4 now. I see it on the screen, okay.

5           And once again, now this process will end with --  
6 okay, shall I sing for a while?

7           (Laughter.)

8           Stand by. We are experiencing technical  
9 difficulties. Ah, it's a chart. This time line shows the  
10 Environmental Impact Statement and Conservation District Use  
11 permitting extent or scope beginning the process last year.  
12 We are at the point now of obtaining public comments for our  
13 final scoping. So we're in the informational phase,  
14 community information meetings and final scoping. We are  
15 here to attain your comments. We are here to determine  
16 those things which need to go into the final scoping for  
17 this document. What we're planning to do is to complete the  
18 final scoping this summer and begin the impact assessment  
19 surveys and consultations at both our primary and  
20 alternative sites on the mountain.

21           I'm not going to get into detail in that. Jeff  
22 Barr, the architect, is going to talk about the primary and  
23 alternate sites. There are two sites, primary and alternate  
24 site. We're going to examine those very carefully. Now,  
25 some of you are aware of the fact that in 2004 we prepared a

1 very complete long-range development plan for the University  
2 of Hawai`i Institute for Astronomy High Altitude Observatory  
3 site. The 18.16-acre site was studied very closely and in  
4 great detail to look at various environmental parameters,  
5 archeological, biological, avifaunal parameters. We looked  
6 at all the environmental resources, the archeological  
7 resources. We looked at the cultural resources and the  
8 traditional practices that were conducted at the site  
9 historically and back in prehistory, and that is the basis  
10 for our planning for this facility for the ATST.

11           The ATST was one of a few facilities, potential  
12 facilities at Haleakala observatories. It is first to --  
13 actually, it's not the first, it's the second to come under  
14 our review. Our Environmental Impact Statement will be a  
15 joint federal and state document, so we'll be following both  
16 NEPA and Chapter 343 requirements of the State of Hawai`i.  
17 When we complete the impact assessments, we will prepare a  
18 draft Environmental Impact Statement. Once again, the  
19 public will have an opportunity to comment on the draft  
20 Environmental Impact Statement. We will hold public  
21 hearings as well. And we will, according to law, be  
22 responsible for responding to those community and agency  
23 comments. We'll hopefully distribute a Final Environmental  
24 Impact Statement in late 2006 and obtain a record decision  
25 on this project. Simultaneously, we'll be doing a

1 Conservation District Use application, going through that  
2 application process. The 180-day process also involves  
3 public hearings. So there are several steps along the way  
4 here that involve public input. And we welcome that public  
5 input, and we are hoping to receive the thoughts and  
6 feelings of the community.

7           When the process is completed in late 2006 and a  
8 recorded decision has been published and by law this project  
9 is then permissible, we then will reach the point of being  
10 construction ready. And then the process after that,  
11 funding and so on is the next phase. The overall time line  
12 then is much longer, and I would like to bring up Jeremy  
13 Wagner, the ATST project manager, to talk momentarily about  
14 that.

15           MR. WAGNER: Thanks, Charlie. Okay, I'm Jeremy  
16 Wagner. I'm the project manager for the ATST project. I'm  
17 based in Tucson, Arizona. I work for the National Solar  
18 Observatory. What I want to do is give you a quick overview  
19 of the project schedule, where we are currently in the  
20 schedule for the design phase, when construction could  
21 start, the earliest possible start and then when operations  
22 might start. Another chart here. We're currently in the  
23 design phase right in the middle of 2005. We're working  
24 through our design of the telescope and the facility.

25           We've gone through a number of reviews, as Craig

1 indicated. We're starting the site EIS process. Tonight's  
2 meeting is part of that. We're looking at many more design  
3 reviews coming up. And if the proposal is approved at the  
4 NSF, if the site EIS process were approved, the earliest  
5 that site construction then could begin, the earliest that  
6 the construction could be funded would be essentially in  
7 early 2007. However, I understand now that that's likely  
8 not to happen, that the earliest date would probably be late  
9 2007, so this chart is already a little bit out of date. So  
10 just move this over slightly, but the site construction  
11 would last about four years. The major construction, you  
12 think of digging foundations and things like that, erecting  
13 the structures, would consist of the first two years. At  
14 the end of that, we would essentially be inside the  
15 buildings working on assembling the telescopes, bringing the  
16 optics in, putting things together.

17           Once we get that done, then we have to test them.  
18 We have to see that they work, understand that they're  
19 delivering the kind of performance that we're after. We  
20 bring along the instrumentation, integrate the optics, the  
21 control systems, put the telescope facility together and  
22 start using it as a telescope looking at the sun and then we  
23 begin operations out here. Once we understand that things  
24 are working the way we expect, then we would begin to  
25 observe the sun, produce the data that folks like Jeff Kuhn

1 are after. So that gives you an idea of the time line that  
2 we're talking about. And since the NSF is still considering  
3 the proposal, we're working through the site EIS process.  
4 We're working through our design effort. It's likely that  
5 the earliest start possible if everything came together  
6 would be in late 2007.

7           Okay, now, I'll turn the mic over to Jeff Barr.  
8 He's our project architect, and he'll walk through a  
9 description of the facility and why it looks the way it  
10 looks now.

11           MR. BARR: Thanks. I am, as Jeremy said, the  
12 project architect, and I'm working as part of a design team  
13 in Tucson, Arizona, that's larger than myself and has put  
14 together the proposed design that we're presenting here  
15 tonight. Most of you have had a chance to see the posters  
16 around the room here and probably pictures in the paper and  
17 so a lot of what I'm going to talk about is sort of  
18 explaining why it looks the way it does. And as Charlie  
19 promised, I'm going to talk about the site and where  
20 specifically -- where specifically on Haleakala it will be.

21           The pictures on the right here are of the two  
22 proposed sites on Haleakala, the way they look right now.  
23 This is the primary site and just in terms of the  
24 terminology, we refer to this as the Mees site. It's right  
25 next to, east and a little bit north of the existing Mees

1 building, which is over here. This is the tower that Jeff  
2 Kuhn referred to was on six sites around the world. This is  
3 the one that's on Haleakala, and that is, as I say, our  
4 primary proposed site. An alternate site, we're calling it  
5 the Reber Circle site. There was an experiment done on a  
6 different -- I have a plan following this so you'll be able  
7 to get these a little better oriented, but there was an  
8 experiment done in a different area on the observatory  
9 compound there, a radio experiment, and the person's name  
10 was Reber. And there's a big concrete circle here, so this  
11 is by nomenclature the Reber Circle site.

12 Both of these sites were identified as potential  
13 locations for ATST specifically. In the Haleakala High  
14 Altitude Observatory long-range development plan, this  
15 Web site link here gives you the full plan, so you can take  
16 a look at it for yourself and see what it says about that  
17 issue and a lot of other issues. The issues or some of the  
18 concerns that were taken into account in identifying those  
19 sites and then the other planning aspects for the  
20 observatory were some of these. The biological obviously,  
21 the endangered species were a major issue. Cultural  
22 resources and traditional practices. Kahu Maxwell served as  
23 a cultural consultant on that and is serving as our cultural  
24 consultant for the continuing EIS or more or less to Charlie  
25 Fein in that capacity. And we're very pleased to have his

1 input on that

2           And very much in line with that also, the  
3 archeological inventory was of concern and was taken into  
4 account. Clear line of sight, in this case, that's not  
5 talking about the line of sight of the telescope. That's  
6 talking about the line of sight you see the telescope from  
7 areas around Maui. Taking that and a lot of other things  
8 into consideration, design and construction guidelines were  
9 put together for any project in the future that's to be  
10 built on Haleakala.

11           Both of these sites were identified as being big  
12 enough for ATST and both were tested and have excellent  
13 seeing conditions. The potential sites, this is looking  
14 down from the top. Just to get you oriented, the road in  
15 from the park is over on this side. North is up. Things  
16 are about this big, 100 feet, 200 feet. The Air Force  
17 facility is here to the north of us, or this just by way of  
18 immediate identification is up. Showing the telescope at  
19 both sites. Obviously one, it won't be two telescopes. It  
20 will be at one or the other of those sites. The Faulkes  
21 telescope, if you're familiar, and again, the Mees telescope  
22 is down here, this being our primary site and being east  
23 essentially and a little bit north of the existing Mees  
24 facility. This smaller kind of orangeish-brown structure is  
25 a remote utility building would be built for the ATST. And

1 the same, essentially the same composition of buildings  
2 would be necessary at the Reber Circle site, which is this  
3 one here a little farther to the north. This one, again,  
4 this is a topographical map, so as you look down at it where  
5 the lines get close together, that means that the terrain  
6 gets very steep. So the area that's really buildable is up  
7 here on the top within the observatory boundaries, which is  
8 this red line here. And so you can see that a site like  
9 this is constricted by some things, not least of which is  
10 the slope around it that we are limited in space. And the  
11 same thing can be said up here.

12 But that's not the only thing. We also have the  
13 existence of the petrel burrows, which have been identified  
14 as part of the long-range plan and will be relocated and  
15 identified. And there's a continuing program, as I  
16 understand it, to maintain the location accurately of those.  
17 And also there are known archeological sites. These blue  
18 circles around here, that also restricts us, and we know in  
19 any planning we have to do to put the buildings there, we  
20 have to respect those things and more. Go ahead.

21 The building requirements essentially, as the  
22 architect for this project or any observatory project,  
23 really it's a pretty straightforward mission. You support,  
24 you provide structures to support, protect, operate and  
25 maintain the telescope period. And those buildings have to

1 -- I'll just cut to the chase here. There's essentially two  
2 kinds of those buildings, the enclosure, what you think of  
3 as a dome. It's right around the telescope and protects it  
4 directly, provides immediate maintenance space and support  
5 building, which can be attached to the telescope or the  
6 enclosure and sometimes are a little bit more remote. But  
7 the main thing about, the cardinal rule for all of those  
8 buildings is that they shall have minimal impact on the  
9 seeing, which is the way the astronomers describe the  
10 clearness of the observing conditions and the environment as  
11 well.

12           So those are essentially the driving influences on  
13 what will -- how the building is designed. Dimensionally  
14 speaking, how big this facility is is dictated by those very  
15 things. This structure that you see on the inside of this,  
16 the framework structure, this is the telescope that we're  
17 all talking about. The primary, the largest mirror about 14  
18 feet across is right here. And you can see that to swing  
19 that telescope inside of the dome and have a little bit of  
20 room for maintaining and equipment around it and clearance  
21 for safety reasons, it requires a dome about this big, which  
22 gets to be about 86 feet across and the other dimensions you  
23 can read for yourself on here.

24           The one thing that, as Jeff showed you on his  
25 graph of the seeing height is a critical factor. And about

1 halfway across where it gets to be to the level they need  
2 for the scientific objectives, that's right at about 92  
3 feet, so the telescope has to start out about this high. It  
4 has to have about this much space, so you end up with a  
5 building about that high and about that large.

6           The pier to support that is -- also has to have  
7 certain size requirements. It has to be large enough to be  
8 stable to provide a very good vibration-free mount for the  
9 telescope, and it has to be big enough inside here. On the  
10 bottom here is a large observing platform that rotates with  
11 the telescope and is where most of the instrumentation that  
12 -- where most of the science is really done is there. The  
13 support building out here is exactly that. It supports that  
14 operation. It provides a place for the operation console  
15 for the telescope. It also provides an instrument lab for  
16 direct use with the instrument lab that's in active rotating  
17 with the telescope. And then it has space down below for  
18 bigger things, notably a coating chamber for recoating the  
19 mirror and other large mechanical equipment that has to be  
20 close to the telescope.

21           One other thing here that's maybe notable in this  
22 picture here is this shaft way up in the middle, which is  
23 necessary because we have to be able to take the mirror off  
24 from the telescope and down for the recoating process and  
25 also large instruments have to be brought up onto this

1 platform.

2           So essentially, that's what this building is, and  
3 that's why it has the dimensions it does. The other things  
4 that you can see in this are the existing Mees Observatory,  
5 so you can see that we are on the scale larger than that.  
6 And it -- the plan is to even use the Mees building and then  
7 the utility building, the remote utility building, which you  
8 can see is a much smaller structure off to the side here.  
9 I'm going to move sort of fast through this. If I went into  
10 a lot of technical detail, I'm sort of technically oriented,  
11 it probably wouldn't be what you would be interested in  
12 anyway.

13           So in the interest of getting to your questions  
14 quickly, I'm going to move through stuff, and we can come  
15 back to this if there's anything special you see that  
16 concerns you. Again, the enclosure, the support building,  
17 the things inside it that require it to be the size that it  
18 is. This is probably the best indication of scale. This is  
19 a big 40-foot flatbed truck that gives you an idea of how  
20 big the whole thing is. There's a service yard in between  
21 the service building and the remote utility building that's  
22 associated with the operation here. And then it's worth  
23 mentioning here this is the existing Mees Observatory, and  
24 one thing that has come up already and may come up again is  
25 why don't we get rid of the Mees building and put our new

1 ATST facility where that is. And there are good reasons for  
2 that which are worth mentioning. The Mees building, it's  
3 not an NSF building, and it's not directly associated with  
4 ATST. It has missions. IfA, as Jeff Kuhn may know, they  
5 use it for their support for programs on the mountain. And  
6 so, in essence, if we were to remove that, we would have to  
7 incorporate more space in here to compensate for it because  
8 there's legitimate uses for that space.

9           So in other words, our building would become a  
10 little larger if we did that. Also, the operation of the  
11 telescope, in order to get a correlation between the  
12 observing that's going on now and the new observing that  
13 would be done with ATST, the observing has to be more or  
14 less continuous, so the telescope dome for Mees, which is  
15 right here, will be in operation until ATST is up and  
16 operational, so there's kind of a continuum that's necessary  
17 there. Also -- sorry, Jennifer wants me to move ahead here.  
18 The Mees building is in an area that, as you saw in that  
19 first plan, is kind of close to the edge of where it begins  
20 to fall off and there's petrel nests and other concerns over  
21 there.

22           It's unlikely that if we were to remove the Mees  
23 building that we would be able to put the kind of  
24 foundations and kind of building structure we would need for  
25 ATST on that spot anyway, so there would be, in essence,

1 more disturbed footprint of building area.

2           Okay, go ahead. As to what it looks like, the  
3 first thing to mention is that anything close to the  
4 telescope because it's a solar telescope and is observing  
5 during the day when the sun is beating down on not just the  
6 telescope, but everything around it, including the soil and  
7 the buildings and everything, has to be white. Everything  
8 that's close to the telescope and exposed to the sun really  
9 has to be white. We've looked at that, and again, I'm going  
10 to go into a little bit of technical detail here.

11           Our thermal modeling shows that if we -- the main  
12 object and the main thing, the closest thing to the  
13 telescope is this area right here I guess you call the dome.  
14 If we paint it -- if we have it be something other than  
15 white and even a special kind of white, the -- if we did,  
16 for instance, sky blue kind of like in the color of the  
17 background here so it blended in a little better,  
18 immediately the heating we have to remove from that so as  
19 not to degrade the observing conditions that comes down  
20 through this aperture tube right here. The amount of heat  
21 we have to remove goes up to a factor of four even with sort  
22 of a light blue color. If we go to something like a darker  
23 color, it would be probably, you know, as I say, I don't  
24 remember all the exact thermal modeling, but it would  
25 probably double beyond that. And it's also worth mentioning

1 from a technical standpoint that all of the electricity that  
2 this entire new facility is going to utilize, half of that,  
3 a full half of it is going to be dedicated to only just  
4 cooling this dome. So if you take that half of our entire  
5 power budget and multiply it times four or eight or some  
6 other number, it really does become economically unviable to  
7 operate this telescope for the period of time that we  
8 anticipate. And the capital expenditure to put that much  
9 more cooling into it is also a huge factor.

10           And so for that reason I've gone into a little  
11 detail here to kind of explain to you why it really does  
12 have to be white and the obvious feature being it makes it  
13 more visible from distant locations, so it really kind of  
14 does have to be white. Also on the dome here, the areas  
15 even though it's white still heats up some, so the line you  
16 see in here, some of this other stuff is material called  
17 plate coil that has kind of a liquid cooling that goes  
18 between two sheets of metal and extracts away heat, so this  
19 is a very active and a very heavily thought out issue here.  
20 And we have really looked into it in some depth.

21           The other thing that is probably worth mentioning  
22 here is there's a white apron. You can actually see it  
23 better if you've had a chance to look at this poster over  
24 here. Outside on the east and to the south of the  
25 telescope, there's something like 30 feet wide white

1 concrete apron that would go around the building and shield  
2 the telescope from heat that would be generated otherwise by  
3 the volcanic cinders that are out there. The utility  
4 building is out here, and it's painted brown. It's far  
5 enough away, and in any way that we can, we do intend to  
6 minimize the visibility of our structures. I think that's  
7 getting close to the end here.

8 I've got kind of a review slide here. We have two  
9 potential sites. Both of them have good seeing and enough  
10 area for ATST. The dome is the primary visual element that  
11 we have to deal with and you'll have to deal with, and it's  
12 high enough to allow for good seeing. It's high because it  
13 has to allow for good seeing for the telescope at that  
14 height. It's large because the telescope has to rotate  
15 inside. And it's white because of the heat. The support  
16 and operations building is a little simpler kind of  
17 structure, and we do intend to minimize that in any way we  
18 can. And part of that strategy is to keep the existing Mees  
19 building. That was the support building. The utility  
20 building is even less of an issue. It's just a way of  
21 getting the heat and vibration away from the telescope, and  
22 it will be sound insulated because we understand that's an  
23 issue as well and will be painted brown. I've got a couple  
24 of pictures here, which are really the posters. This is  
25 looking, as it says, at the -- with the telescope at the

1 Mees site looking at it from the north, and it gives you an  
2 idea of the rendering of what that would look like in its  
3 eventual construction. This one is at the Reber Circle site  
4 and looking at it from the opposite direction, looking from  
5 the south to the north, and these are other telescope in the  
6 foreground here, so again, you can sort of see for  
7 yourselves the scale of it. And that's it.

8 I think as I'm the last speaker, I'm not sure if  
9 we need any formal introduction to the process of asking  
10 questions, but that's it for the presentations.

11 MS. COMPOC: I just want to acknowledge that they  
12 were exactly on time, 45 minutes, which is better than what  
13 happened last night. Thank you all for that presentation.  
14 See we're at 8:05. We have an hour. But do people need a  
15 quick bathroom break before we begin the second portion?  
16 Would that be helpful? Keep going, okay. So a reminder,  
17 please use the mic. Introduce yourself. Speak right into  
18 it so Rachelle can capture it all. If you're not  
19 comfortable with that, we have comment cards. If you're not  
20 comfortable with that, take it home and mail it back by  
21 August 14th.

22 MR. BRASS: One thing to add. Go ahead, make your  
23 comments, ask your questions, and then whomever among the  
24 presenters is appropriate to respond to it will come forward  
25 to this mic and respond to your question.

1                   MR. RIZZO: My name is Frank Rizzo, and I've got a  
2 couple of questions. There's a dome, the AEOS facility is  
3 coated in silver. Is there a reason why you couldn't use  
4 silver as opposed to the white?

5                   MR. BARR: We did look at silver as a possible  
6 color. In the first place, we thought you weren't going to  
7 be crazy about that anyway. The experience with the AEOS  
8 telescope, in my understanding of it, was that it's bright  
9 in the sort of the specular reflection, that sort of diamond  
10 that you see in mornings and afternoons is not a good thing  
11 either, so we understood that going in from an environmental  
12 standpoint, it wasn't necessarily preferable. But we looked  
13 at it anyway because we wanted to know what the best coating  
14 for us would be. It's not as good. As I think Jeff  
15 mentioned, this is a daytime telescope, not a nighttime  
16 telescope. Essentially, you can think of anything that's  
17 dark. And a silver surface, in essence, is darker. It's  
18 darker because it's absorbing some of that light. It's also  
19 absorbing some heat, so it will absorb heat in virtually  
20 direct proportion to how light or how dark the color is.

21                   MR. RIZZO: So white will reflect more than the  
22 silver?

23                   MR. BARR: White reflects more heat than silver.

24                   MR. RIZZO: And I know there have been issues with  
25 the silver dome up there, like you said, in the morning and

1 the evening when the sun is at a low angle. But it's been  
2 my experience during the daytime hours, it does sort of  
3 blend in. It reflects the sky.

4 MR. BARR: Yeah, it would. It reflects the sky  
5 color. It's a different problem, in essence.

6 MR. RIZZO: Thank you. Do you know, are you  
7 planning on using any solar panels, solar panels to  
8 supplement your power and cooling up there?

9 MR. BARR: We're just in the early stages of  
10 figuring out how to economize, and that's certainly a  
11 possibility. We haven't actually incorporated that. We've  
12 been in touch with MECO to find out what the power up there  
13 is, and we're looking at some of our -- as I'm sure you're  
14 all well aware, power is expensive here. We're finding that  
15 out.

16 MR. RIZZO: Take advantage of the sun.

17 MR. BARR: Something like 18 cents a kilowatt hour  
18 or more than that. So we are going to have to find ways to  
19 minimize our power consumption. We're looking at, again I  
20 don't want to go into a lot of technical detail, but one of  
21 the things we're looking at is ice storage, which you  
22 generate power cooling that you need during the night so you  
23 can use it during the day, and that way you're using power  
24 at a time when it's cheaper. And the grid isn't maximized  
25 anyway. Solar panels are possible as well.

1           MR. RIZZO: And then just the height, that's a  
2 pretty enormous building that's going to go up there. Do  
3 you know how that -- I'm not familiar with the sites on the  
4 Big Island but how does that compare height-wise to the Keck  
5 and the other observatories?

6           MR. BARR: It's on the order of the same type.

7           MR. RIZZO: Over 100 feet?

8           MR. BARR: Over 100 feet, yeah. Those buildings  
9 are over 100 feet.

10          MR. RIZZO: It's ribbed on the top. Are there  
11 catwalks on the exterior?

12          MR. BARR: There was a catwalk. No, they're  
13 awnings essentially that you see there. This is a -- these  
14 are because I guess I kind of blitzed over this, because we  
15 have ventilation openings in the dome. And because we have  
16 openings, we have to shield those openings so the sun  
17 doesn't come directly in and heat up the surface including  
18 the telescope inside. So these are awnings. That really is  
19 the only description for them, and they're made out of that  
20 same plate coil material I talked about before. This is a  
21 catwalk, and that is necessary and it does effect the  
22 overall profile of the building. It's worth mentioning its  
23 justification. In order to maintain the wheels that the  
24 dome rolls on, essentially from here on up, this thing  
25 turns, and from here on down, it doesn't turn. And there

1 are big wheels in there. To maintain those, we have to have  
2 the catwalk, which is the widest element in terms of the  
3 circular plan of the building.

4 MR. RIZZO: And just one last comment. They've  
5 been sending satellites, SOHO and such, to study the sun.  
6 Why would this be better than using satellites that could  
7 actually get closer to the sun?

8 MR. FOLTZ: Certainly if you get to the point  
9 where you get out of the atmosphere, you lose the  
10 turbulence. There's a couple of problems going into space.  
11 The first one is it's hard to have and very, very, very  
12 expensive to have a long-lived space mission. You know,  
13 Hubble is running up costs of 4-plus, 6-plus billion dollars  
14 for the total cost of the mission. But the real issue here  
15 is that in order to see the detail that we need to see, Jeff  
16 needs to see, you need to have a mirror of a certain  
17 diameter. Because, in fact, the detail you can observe with  
18 any optic depends on its diameter. So you need 150 inches  
19 of diameter. Hubble is 90 inches, so in order to get the  
20 detail that you need, whether you're on the ground or in  
21 space, you need that diameter, and launching that will be  
22 factors of much more expensive than that.

23 MR. RIZZO: Thank you very much, and good luck.

24 MR. WILSON: Good evening, I'm John Wilson. And  
25 I'm here as a member of the Kula Community Association and

1 also an interested citizen of Kula. I have several comments  
2 you might want to consider as you go forward with the  
3 process. One has to do with the mirror coating shop that's  
4 being considered for the Air Force facility, and that may  
5 cause you to redesign that shop if you don't need that.  
6 Now, I noticed in their EA, they talk about on Mauna Kea,  
7 they have three of those shops because that was an  
8 alternative for locating the shop here. So one of the  
9 things you need to consider is would that shop be large  
10 enough that they're planning for the Air Force facility?

11           The second thing is power line requirements. I  
12 believe they use one single power line going up Haleakala  
13 now for serving the power at the summit. I'm not sure your  
14 power requirements would require a much larger transmission  
15 facility or not. And Maui Electric is also currently  
16 working on what they call their integrative resource  
17 planning process and part of that is to reduce demand as  
18 well as to look at supply requirements. And so they're  
19 looking at various alternative ways customers could reduce  
20 their power.

21           But there may be a way of working with Maui  
22 Electric that might be technically feasible so you can maybe  
23 put things of an artist at the top rather than just ATST,  
24 something to do with recovering the power. So that was just  
25 a comment one of the concerns we have is visual impact of a

1 much larger transmission facility, if that was ever  
2 required. Another thing is the -- in their planning, the  
3 long-range planning, they talk about the possible  
4 replacement of the Mees Observatory, so I guess from a  
5 university standpoint, once this is in place, would you be  
6 able to not need the Mees Observatory and that be removed  
7 from there?

8 MR. KUHN: Do you want me to respond to that?

9 MR. BARR: Yeah, why don't you do that.

10 MR. WILSON: And my last comment, these are just  
11 comments for you to think about. The last comment is in  
12 your planning process for looking at the mountain, I think  
13 this has already been mentioned by one of the staff members  
14 here, is that the visual site plans -- I live down the slope  
15 here at 2,000 foot elevation. I can see this observatory at  
16 sunlight reflected, and I can see the two other smaller  
17 domes there. Probably I could see this. And in addition to  
18 that, as you go further down the slope of the mountain,  
19 there is the transmission tower from Hawaiian Telcom that's  
20 also visible. So you might want to consider how your visual  
21 sight lines will be presented and from where they will be  
22 presented.

23 The EA for the mirror coating shop shows a picture  
24 from the entrance road there, but if you had pictures from  
25 several other locations further down the mountain where

1 people live and would be able to see what the impact would  
2 be, that might be a consideration also in your -- those are  
3 my comments. You can respond any way you want to.

4 MR. KUHN: That's a lot of questions. I think  
5 from the prospective of the Mees Observatory, we are very  
6 aware that 18 acres up there is very precious. We're never  
7 going to expand beyond that for doing astronomy, so the Mees  
8 facility is valuable and has been valuable for studying the  
9 sun, because as we know, the sun changes. So the record  
10 that is of interest to us is the time record. We have ten  
11 years of data. We want to have that data in place when the  
12 observatory comes on line, so the idea that we could stop  
13 operations now and begin doing the observatory would put us  
14 out of business for probably --

15 MR. WILSON: That wasn't the comment.

16 MR. KUHN: I understand. The answer I think to  
17 your statement is that we more than anyone are sensitive to  
18 the notion that space is at a real premium up there, and  
19 once ATST comes on line, I think it's a virtual certainty  
20 that the Mees will have to morph into something else, and it  
21 may become a site where instruments are tested. It may  
22 become an auxiliary to make the ATST to work more  
23 efficiently, but it certainly isn't going to work in the  
24 mode that it is. And if you look at the picture, under the  
25 picture of Mees compared to the ATST, that space right there

1 is so small in comparison to the observatory that it doesn't  
2 really have a large influence on the overall space that is  
3 required for the ATST telescope. So the answer is yes the  
4 Mees will change. What it changes into is going to be some  
5 very efficient use of a very small amount of space because  
6 we know we're not heading outside of that 18 acres.

7 MR. BARR: Okay. I'll talk to the other issues  
8 that you brought up, and they're all very good, valid  
9 points. The -- I can't read my own writing. Oh, the mirror  
10 coating facility. It is -- we are working with the Air  
11 Force, and we hope that we will be able to coat our mirror  
12 in their building. And if we do, there's a very good chance  
13 that we can shrink down this floor plan and the amount of  
14 coverage and the amount of building that we have to do.  
15 This entire wing of our structure up to something like 20  
16 feet is dedicated to just that with the exception of we  
17 probably definitely would have to still have to have some  
18 kind of receiving area to bring things in off of the lift,  
19 most notably the mirror itself, and other instruments and  
20 things coming in. But the amount of space that we may be  
21 able to reduce here is definitely a factor of whether or not  
22 we can work it out with the Air Force to have them coat our  
23 mirror.

24 You referred to a shop, and essentially, this is  
25 the shop for doing that mirror coating. The mirror comes

1 down. It goes onto a wash rack. The existing coating is  
2 stripped off, goes into a tank, comes back and goes back  
3 onto the telescope. So it all sort of happens in here.

4           They have a facility of order a little bigger than  
5 this because it's the Air Force, but they have a little bit  
6 more space than this for coating their 3.5 meter telescope  
7 mirror and they are intending at this point to make that  
8 large enough to coat our 4.2, 14-foot mirror, so there's a  
9 good chance, but we can't make that assumption. And we're  
10 in the early stages with them, so we have to incorporate  
11 this. And in terms of the EIS process, we really in good  
12 faith have to show what we consider to be the maximum size  
13 of the facility and not, you know, kind of bet on any  
14 optimistic assumptions. So that's on the mirror coating  
15 facility.

16           The power capacity coming up the mountain, from  
17 our initial contacts with MECO and from talking with Mike  
18 Maberry, the site representative for IfA who deals with them  
19 directly regularly, the power capacity coming up there is --  
20 has been made big enough to accommodate something like 1,000  
21 kilowatts more of capacity. That's right around what we  
22 expect to need. So we're kind of on the edge, and we  
23 realize that upgrading the transmission capacities up to the  
24 mountain would be a big deal, and we can do things. Again,  
25 I mean it comes back to the heat again. If we had to paint

1 the dome brown, I can't see how we could possibly stay  
2 within that power budget, but there's a really good chance  
3 if we can economize it, we can do sort of a sensible, modest  
4 approach, that we can stay within the capacity and we  
5 certainly will work to do that.

6           Also, their substation up there is of that  
7 capacity. We understand that it has that much overage with  
8 the express intent that something like this might come  
9 along, so when they put in that transmission capacity, they  
10 made that available. The sight lines you talked about, and  
11 honestly, I don't have a lot to say about that other than  
12 what is in the long-range development plan. There is a  
13 table that's appended to that that analyzed the sight lines  
14 from both of these sites by name, the Mees site and the  
15 Reber Circle site, and it talks about -- and you all know  
16 the communities better than I do -- so where your house is  
17 and where it would be critical to you, it would be evident  
18 looking at that table.

19           But it gives you a height aboveground that you  
20 would be able to see things from that location, and the math  
21 from there is pretty easy. We're at about 140 feet high, so  
22 if it's a 90-foot high sight and then above that you see  
23 something, then you see 50 feet of our building. If it's  
24 120 feet, you see 30 feet of it. If it's 200 feet, you  
25 don't see our building at all. And it's not absolutely

1 clear. When that was done, the specific location on those  
2 sites wasn't identified, so we need to do that work again.  
3 That analysis will be redone for the purposes of EIS.

4 MS. BRAGG: I think it would be nice to see the  
5 renderings like from Kihei.

6 MS. COMPOC: Can you come to the microphone and  
7 introduce yourself?

8 MS. BRAGG: Lori Bragg. I was just going to say  
9 it would be nice to see and I think the community would want  
10 to see down the road what they see from Kihei or what they  
11 see driving from Lahaina.

12 MS. COMPOC: Could you introduce yourself on the  
13 mic?

14 MS. BRAGG: Lori Bragg.

15 MR. FEIN: I could respond to that. Part of the  
16 EIS process will be rendering from Kula, Pukalani, Kahului,  
17 even Lahaina, and the individual who did these beautiful  
18 renderings is already working on renderings from those  
19 various locations using -- yeah, we'll give him credit. Tom  
20 Kekona will be doing those for us, and the community will  
21 get to see posters that size showing visual, potential  
22 visual impacts.

23 MR. RIZZO: Frank Rizzo again. The sight line,  
24 your first choice is the Mees location as opposed to Reber's  
25 Circle, so I'm assuming from down in the central valley if

1 you're -- if the building is located in the Mees site, it  
2 would be less visible?

3 MR. FEIN: That is correct, Frank, the Mees site  
4 affords less visibility from Kahului-Wailuku than the  
5 Reber's Circle site.

6 MR. RIZZO: And what is going to determine which  
7 site is chosen?

8 MR. FEIN: The environmental impact assessment  
9 process and potential significant impacts and mitigation and  
10 so on. We will arrive at a final recommendation for that.

11 MR. RIZZO: Thank you.

12 MR. WILSON: John Wilson again. I just had a  
13 thought. Could you coat that thing in polyoptic instruments  
14 and create your own electricity to cool the building? I  
15 mean it's way out, but that's a scientific question.

16 MR. FOLTZ: Thanks. Correct me if I'm wrong, the  
17 solar constant is one kilowatt per square meter, so if you  
18 could -- so basically if you had a perfectly efficient  
19 photovoltaic -- I love photovoltaic -- but if you had a  
20 perfectly efficient photovoltaic, you're going to get one  
21 kilowatt per square meter of solar constant. So doing the  
22 math, if you were going to run at 500 KVA, you would need  
23 roughly 500 square meters, which would be a substantial --  
24 cover a substantial part of the site. I think it's not out  
25 of the question, I think as Frank said, too, to consider

1 economizing and doing everything you can, and as Jeff said,  
2 try to use the power during low power usage in order to both  
3 save money and also save capacity. But certainly these  
4 things can be considered.

5 MR. BARR: Right, it's also worth mentioning that  
6 the heat generated or the heating of that surface would  
7 still occur, and we still would have to cool that somehow.  
8 And as you say, that may be how you generate your power to  
9 cool it, but again, most photovoltaics are a dark color, so  
10 we would start out at a disadvantage in terms of cooling the  
11 dome.

12 MR. KUHN: But it's a good idea.

13 MR. BARR: It's a good idea.

14 MS. BRAGG: Since it's quiet, Lori Bragg again. I  
15 have a quick question. How many employees are you looking  
16 at or it hasn't really been talked about how many people  
17 would be working at the facility.

18 MR. WAGNER: We're currently studying that. We  
19 have operational scenarios. The estimate right now and that  
20 was in the proposal for the NSF was essentially of a staff  
21 of around 35 to 40 individuals, and that's the whole staff  
22 for the entire supported facility. That would include  
23 administrative staff. That would include the scientific  
24 staff. That would be include engineering. That would  
25 include the facilities. All of those folks wouldn't be up

1 at the telescope. They wouldn't be traveling to the  
2 telescope each day, but you can imagine that you would have  
3 a couple of telescope operators, that you would have  
4 scientists there. Initially you would have a few engineers,  
5 that sort of size staff to get things going. Now, that's  
6 assuming that the construction end its completed.

7 MR. WILSON: Would some of that staff be located  
8 with the Astronomy Institute?

9 MR. WAGNER: We're still studying that. We're  
10 trying to understand that exactly what opportunities we have  
11 for synergy with the Institute for Astronomy and how it  
12 might work and whether scientists would be based some here  
13 on Maui, some in Oahu, whether there would actually be a  
14 headquarters facility associated with some university in the  
15 U.S, but all of that is part of the planning and discussions  
16 that are going on associated with the design of it right  
17 now.

18 MR. FOLTZ: May I?

19 MR. WAGNER: Sure.

20 MR. FOLTZ: I just wanted to add one comment on  
21 that. The National Solar Observatory now currently is  
22 headquartered both in Tucson, Arizona, and near Alamogordo,  
23 New Mexico, and they have facilities in both places. This  
24 telescope, if it is built, will render many of those  
25 facilities redundant, and so the National Solar Observatory

1 will have an opportunity to look at its future in terms of  
2 relocating, finding a new home, consolidating and reducing  
3 its operations costs by closing existing facilities. None  
4 of this is certain, but there are opportunities for -- for a  
5 reorganization of the observatory.

6 MR. KUHN: Can I respond to that? So the NSO has  
7 asked to bring the telescope to Haleakala of which their  
8 scientific collaborative involves the University of Hawai`i.  
9 We haven't convinced them yet that they need to bring their  
10 entire scientific operation to Hawai`i, to Maui, but we're  
11 trying. And I think that it's the plan of the university  
12 and most of the scientists that are involved in any -- in  
13 many aspects of the this to convince the National  
14 Observatory that they should not only locate what Jeremy has  
15 already explained, that there's an operations staff, but  
16 then there is the full research staff of the National Solar  
17 Observatory, which we think should naturally be located  
18 here, potentially half in Maui and half in Oahu. But they  
19 should be here. But that part of the discussion hasn't  
20 progressed very far.

21 MR. WILSON: Do you need help?

22 MR. KUHN: Yes, I think we do.

23 MR. FOLTZ: But I'm going to close my ears.

24 MR. TRUITT: I'm Stan Truitt, T R U I T T. And  
25 most of my other questions have already been answered except

1 for a specific number. Has there been a power budget  
2 determined for the whole facility? As I recall, that the  
3 Air Force Observatory was around a megawatt of maximum load,  
4 and that was at night. Of course, they won't be operating  
5 at probably those same power levels during the day. But has  
6 the study been done, and has the time dependence of the  
7 power been determined?

8 MR. BARR: The time dependence is a little  
9 trickier. We do have a preliminary power budget. We don't  
10 have a full building design engineering team on board at  
11 this point. It really would be expensive and preliminary to  
12 getting through this and understanding whether or not the  
13 site is viable and what the circumstances are. But we have,  
14 and you say a megawatt, I say 1,000 kilowatts, it's the same  
15 number. We're approximately the same as the Air Force power  
16 budget.

17 MR. TRUITT: So it would be practically doubling  
18 it?

19 MR. BARR: Essentially that's our guess.

20 MR. TRUITT: Okay, thanks. My second --

21 MR. BARR: It's worth mentioning, and Craig  
22 reminded me, that's a peak load. That's the maximum at any  
23 point we would probably -- and I'm not sure what that  
24 megawatt is in terms of the Air Force. That may be their  
25 normal operating budget.

1           MR. TRUITT: Okay. So in terms of the petrel  
2 diagram, it's perfect because it's right there, are all  
3 those petrel burrows from active nesting birds, or is that  
4 just things that have been found around that are possibly  
5 not in use or being used fractionally?

6           MR. FEIN: That's a good question, and what you  
7 see on the screen are active burrows. Those are the ones  
8 that were there at the end of 2004 by the National Park  
9 staff. Those birds were active in 2004. Now, at the end of  
10 this year, the active burrow configuration might change.  
11 All together I think all over the summit area, it's  
12 something like 430 active burrows around the summit area of  
13 which there are a fair number as you see on the south side  
14 of that site. Those burrows are monitored constantly.  
15 They're being monitored right now by the National Park  
16 staff. They are looking at them every week and will update  
17 them at the end of this year. So we use this map from the  
18 previous nesting season.

19           MR. TRUITT: Thanks, Charlie.

20           MR. FEIN: You're welcome.

21           MR. KAIMIOLA: Aloha, my name is George Manulani  
22 Kaimiola, and I'm sure Uncle Charlie Maxwell has discussed a  
23 lot of the archeological, historical, cultural significance  
24 of the place. I like your plans. I think it's all great,  
25 but I have a hard time really, honestly with what you folks

1 are doing up there. I'm just sitting here listening to  
2 everybody speak, and it reminded me of a time when my  
3 grandmother was in a care home and the caregivers and my  
4 uncle and my cousin was talking about her as if she wasn't  
5 even there. And I'm sitting here listening to everybody  
6 talk megawatts and looking at the sun and all this other  
7 stuff and everything, and I'm like, wow, did anybody even  
8 ask the mountain if she wanted that stuff on top of her?  
9 You know, I mean that's the thing that really needs to be  
10 considered. I don't know. It's just something that really,  
11 really needs to be thought about.

12           You know, I'm thinking that, you know, one of my  
13 first questions I jokingly asked how does that benefit the  
14 Native Hawaiians, yeah? Why do you need it? You had a  
15 beautiful slide up there of Haleakala with no structures on  
16 it. I thought that was the most beautiful slide you had all  
17 evening. You know, so I -- you know, I really appreciate  
18 you folks trying, but I think you folks really, really need  
19 to look a lot deeper and really try and, you know, figure  
20 out if it is really necessary or are we just curious about  
21 what's going on up there. And do we just -- you know, are  
22 these answers really significant? Do we really need these  
23 answers, you know, to these questions that we have? Yeah,  
24 or are we just niele? Are we just curious and want to find  
25 things out? Or do we just want to write a grant so we can

1 go ahead and just have a job and really look at the stars  
2 and the sun and spots and all these other things? And even,  
3 the, you know, the EIS is an economic impact. You know, how  
4 many people are you bringing from the outside to do a lot of  
5 the work? You know, how many people are you going to be  
6 bringing here? How much money is even going to get down to  
7 the community itself and those sorts of things, yeah? So  
8 it's great. Personally one part of me would really like to  
9 see it, but I have a hard -- another part of me just really  
10 has a hard time with what you folks are doing. Just  
11 something to think about. Mahalo. Thank you.

12 KAHU MAXWELL: Kahu Charles Kauluwehe Maxwell.  
13 It's interesting, George, what you say. Buildings started  
14 to go up on this mountain way back in the '40s. Finally in  
15 1962 by executive order they took this 18-point-so-many  
16 acres. I was one of them that fought against the AEOS, and  
17 I had a pet name that I called it, which I won't refer to it  
18 now, but they hired me as a cultural consultant. And they  
19 spoke with forked tongues because they promised me that they  
20 wouldn't touch, you know, the cinders. They would control  
21 the dust, and they wouldn't take nothing off the mountain.  
22 And yet they took 150 tons of rock, sacred soil that  
23 belonged to Pele, took it off the rock and went down to  
24 Puunene and crushed it in big mounds. It was such a  
25 cultural insult. And I had the Air Force people come,

1 papa kalakea, myself, my mo'opuna, and we went and pule and  
2 asked forgiveness. And I personally followed. Once the  
3 rock was taken out of Haleakala, you couldn't put it back  
4 because of environmental concerns, so we -- I followed the  
5 150 tons crushed rock back to the National Park and gave it  
6 for them to cover trails within the crater, not put concrete  
7 over it, but cover the trails. I was one of the only people  
8 to fight against the Faulkes Observatory that you see up  
9 there now.

10 I even stood up in a -- I invited myself with  
11 Prince Andrew or Albert, one of them -- Andrew. And I  
12 invited myself, my sister and my grandchildren to the press  
13 conference they had. And when Governor Cayetano and the  
14 Prince of England was going to sign the contract, and I  
15 stood up, I said, "If you're going to do anything in  
16 Haleakala, on Haleakala, you make sure you include the  
17 Native Hawaiians." And slowly, I tell you slowly we got  
18 them, because of the studies that you see on the desk there,  
19 the cultural practices and what they have to follow all the  
20 cultural rules about how if any soil is lifted, if any hole  
21 is made, they've got to pray before they do anything. And I  
22 was so proud of that. And after ten years of fighting for  
23 restoration of two ahu, we finally completed one right by  
24 AEOS, yeah, Charlie, by AEOS. Because this site in ancient  
25 times was used by the kahuna po'o, the teaching kahuna. It

1 was so sacred, that site, that nobody could even go up there  
2           So for the Native Hawaiians to look at things that  
3 are being built there, it's really an insult. It's really  
4 an insult, but we're in modern times. We've got to make  
5 them follow protocol. They've got to learn. They've got to  
6 follow protocol. We have to be included in every aspect of  
7 the work that is being done, and it is happening. We have  
8 monitors that will be up there. One of my grandsons has  
9 been working up there for three years now, two and a half  
10 years monitoring everything that everybody does. And even  
11 the Air Force, we're trying to make them culturally  
12 compliant.

13           So I've been hired to do this Environmental Impact  
14 Statement to again show all the cultural, prior cultural  
15 uses, present and in the future, and that's what I plan to  
16 do.

17           MR. RIKOWSKI: My name is Rod Rikowski, and in our  
18 recent deep impact event that we had, the kids from  
19 Kamehameha School in conjunction with the Faulkes telescope  
20 did some observing. Will there be any possibility of the  
21 kids maybe being interactive with this telescope?

22           MR. FOLTZ: Let me comment on that. It is a very,  
23 very high priority of the National Science Foundation that  
24 research at the highest level and education at all levels  
25 public and private be integrated. And, in fact, we -- I

1 oversee the funding for the National Solar Observatory. I  
2 also oversee the funding for the National Optical Astronomy  
3 Observatory, which is in Arizona and in Chile. And they  
4 have significant public outreach programs and education  
5 programs from kindergarten through 12 through postgraduate  
6 through postdoctoral, but an enormous -- and family science  
7 outreach at NSO in Tucson.

8           And I know in Tucson we go to local Native  
9 American communities as well as education in the Tucson  
10 schools. In Sacramento, at Sac Peak, they reach out to the  
11 Alamogordo schools and around and concentrate on some school  
12 systems that are traditionally largely Hispanic. So there  
13 is lots and lots of opportunities. We being the NSF make  
14 them do it. They do it well. They do it happily, but we  
15 also -- I would also note that there are programs already in  
16 place on Maui that are a part of the Center for Adaptive  
17 Optics, which is actually in some way linked to this  
18 project. That's at the University of Santa Cruz, and there  
19 was an internship program going on for a few years on Maui  
20 to get Native Hawaiian students involved in high tech  
21 enterprises here on Maui and to develop a work force.  
22 Because if we develop a technologically adept work force  
23 here that can stay here, we help ourselves, and we help the  
24 communities. And so, you know, I'm preaching. This is  
25 very, very important to me.

1           MR. FEIN: I wanted to make one other comment  
2 about that. It's not well-known in some parts of the  
3 communities that 32 percent of the individuals who work on  
4 the mountain are Hawaiian born individuals, and that  
5 includes management and supervisory personnel as well. Many  
6 of these people were brought back from the mainland to work  
7 in these high technology jobs, and so I think that's part of  
8 the overall objective and goal of all of these projects on  
9 the mountain.

10           MR. PELAZAR: Good evening. My name is Sergeant  
11 Mitch Pelazar with the Maui Police Department. I'm here  
12 basically on a different, I guess on a different plane from  
13 what everybody else has been talking about. But my thing is  
14 mostly concerning I guess pedestrian and traffic safety  
15 coming in and out of Haleakala during the construction  
16 phase. Some points I wanted to bring up, as far as the  
17 trucks that are going to be used going up and down the hill  
18 transporting the construction supplies, how many of them are  
19 you guys going to have per day, per week, per month, per  
20 year, how much? You know, just consider that. I guess the  
21 road wear being generated because of the trucks. If there's  
22 any kind of additional safety, traffic safety as far as  
23 trucks that can and sometimes lose their brakes as they're  
24 coming down the hill, if you guys are going to plan for  
25 anything like that with National Parks or with the State

1 Department of Transportation.

2 I know there was a slide earlier with like a time  
3 element for the construction phase for the building. During  
4 this construction phase, how or what is you guys' estimate  
5 or maybe you guys should consider how during this  
6 construction phase is it going to affect the multiple  
7 downhill bike tours, the regular tourist traffic going up  
8 and down the hill as well as the bus tours as well and what  
9 kind of anticipated delays their construction traffic is  
10 going to generate during this construction phase.

11 MR. BARR: Well, let me just say a word or two  
12 about the --

13 MR. PELAZAR: Let me just finish one more point.  
14 The last point now since 9/11 is, of course, the security  
15 thing with any kind of terrorist attack. And you know, now  
16 with the site being proposed on Haleakala, what might be I  
17 guess the chances or the percentage of Haleakala now being  
18 targeted as a possible site?

19 MR. BARR: That one is hard. Let me talk about  
20 the construction phase because that's a little easier. All  
21 of your points are very valid and need to be looked at as  
22 part of this EIS process. That's the purpose of this  
23 meeting is to get this kind of thing out, so it's very well  
24 taken. As far as the construction traffic, if I was a  
25 general contractor, I could tell you better. I'm an

1 architect, and in my experience, it is a significant volume  
2 of truck traffic, and safety is an issue and timing that  
3 certainly with the bike tours and the rest of that will  
4 definitely be an issue.

5           We know we're going to have concrete trucks and  
6 trucks with steel, something probably like averaging a truck  
7 a day, a large truck a day coming up the mountain and down  
8 at least during the heavy part of the construction schedule.  
9 I don't know, did you want to talk at all about the vehicle  
10 miles as part of the EIS?

11           MR. FEIN: Yeah, those are really good questions.  
12 Traffic and traffic safety is a part of the environmental  
13 impact study. It's a whole section in the study. And what  
14 we do is start with the baseline traffic that we are aware  
15 of right now. We had a baseline survey done in the  
16 long-range development program, so we know how much traffic  
17 is going in and out of the site right now through the  
18 National Park on a daily basis. And so we will have to  
19 incorporate additional traffic in our survey.

20           One thing I would like to say that is in the  
21 construction of the AEOS telescope in 1994 and '95 produced  
22 a lot of lessons learned about traffic, traffic safety, road  
23 wear, rules and procedures driving through the park,  
24 National Park and state road as well, and we'll apply those  
25 rules. Some of those lessons were hard learned with

1 construction traffic, some road damage and that sort of  
2 thing, so we're aware of that. We will put that into the  
3 EIS, so I really appreciate those questions.

4 MS. COMPOC: We're in the last 15 minutes here.  
5 There is still a couple of people who haven't spoken. I  
6 just wanted to encourage you if you had any other questions  
7 or comments.

8 MR. RIZZO: What do we do to get rid of those  
9 bicycle tours?

10 (Laughter.)

11 MS. COMPOC: That's a different study all  
12 together. So if there are no other questions or comments,  
13 then I think that that concludes our time here today.  
14 August 14 is the final deadline if you're writing your  
15 comments out. Please feel free to do that and take the  
16 literature and the information. If you would like to invite  
17 someone for tomorrow night, it's going to be Pukalani  
18 Community Center at 6:30. Thank you all for being here.  
19 Mahalo.

20 (The meeting ended at 8:45 p.m.)

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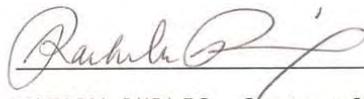
C E R T I F I C A T I O N

I, RACHELLE PRIMEAUX, Notary Public for the State of Hawaii, certify:

That the proceedings contained herein were taken by me in machine shorthand and were thereafter reduced to print under my supervision by means of computer-aided transcription; that the foregoing represents, to the best of my ability, a true and accurate transcript of the proceedings had in the foregoing matter.

I further certify that I am neither attorney for any of the parties hereto nor in any way concerned with the cause.

Dated this 28<sup>th</sup> day of July 2005.

  
\_\_\_\_\_  
NOTARY PUBLIC, State of Hawaii  
My commission expires 6/14/08

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**Appendix B(3): Transcripts  
Public Scoping Meeting, Pukalani Community Center, July 12, 2005**

1

1                   ADVANCED TECHNOLOGY SOLAR TELESCOPE (ATST)

2                                   PUBLIC MEETING

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12                                   PROCEEDINGS

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14   Held at the Pukalani Community Center, Pukalani, Maui,

15   Hawaii, commencing at 7:00 p.m. on July 14, 2005.

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24   REPORTED BY:   Rachelle Primeaux,   CSR No. 370

25

1 ATTENDANCE

2

3 MEETING FACILITATORS:

4 David Brass and Kim Lompoc, Mediation  
5 Services of Maui

6

7 HAWAIIAN LANGUAGE TRANSLATOR:

8 Kiope Raymond

9 PANEL MEMBERS PRESENT:

10 Dr. Jeff Kuhn - Associate Director of the University  
11 Of Hawaii, Institute for Astronomy (Oahu)

12 Dr. Craig Foltz - Program Officer with the National  
13 Science Foundation, Washington, D.C.

14 Dr. Charlie Fein - KC Environmental (Maui)

15 Jeremy Wagner - ATST Project Manager with National  
16 Solar Observatory, Tucson, Arizona

17 Jeff Barr - ATST Project Architect

18 Mike Maberry - Assistant Director, University  
19 of Hawaii, Institute for Astronomy (Maui)

20

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24

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1 PROCEEDINGS

2 \* \* \*

3 MS. COMPOC: Aloha, welcome.

4 AUDIENCE: Aloha.

5 MS. COMPOC: We're about to begin. Thank you all  
6 for being here. My name is Kim Compoc. I'm with Mediation  
7 Services of Maui.

8 MR. BRASS: My name is David Brass. I'm also with  
9 Mediation Services of Maui.

10 MS. COMPOC: MSM was founded in 1982 to find  
11 creative and appropriate ways of resolving disputes. David  
12 and I will be acting as facilitators tonight, which means  
13 that we are neutrals. We have no vested interest in the  
14 outcome of this meeting. Our whole focus is making sure  
15 that you as the public have a chance to get all the  
16 questions and comments you have about the proposed Advanced  
17 Technology Solar Telescope, get asked and answered tonight  
18 as orderly and fast as possible and we stick to the agenda.

19 Before we get into the ground rules and the rest  
20 of the evening, I want to turn the mic over to Dr. Charlie  
21 Fein, who will introduce the panel. Charlie.

22 MR. FEIN: Thank you, Kim. Good evening and  
23 aloha. My name is Charlie Fein, and milk, butter, eggs.  
24 That's the wrong --

25 (Laughter.)

1           I'm here to introduce the panel to you this  
2 evening to begin the process. First of all, we have  
3 Dr. Jeff Kuhn, Associate Director of the University of  
4 Hawai`i, Institute for Astronomy, who is going to present  
5 the science behind the need for this project. We also have  
6 Dr. Craig Foltz, who is the Program Officer with the  
7 National Science Foundation in Washington, D.C. He's going  
8 to discuss briefly the role of the NSF proponent in  
9 sponsoring this project. We have Jeremy Wagner, the ATST  
10 project manager with the National Solar Observatory in  
11 Tucson, Arizona, who is going to offer a project schedule.

12           Mr. Jeff Barr, he's the ATST project architect.  
13 He's going to talk about the facility design and features of  
14 the proposed ATST. I would also like to introduce our court  
15 reporter Rachelle Primeaux. She'll be the recording  
16 stenographer. This is all part of the administrative record  
17 for this scoping meeting. And for Hawaiian interpretation,  
18 Kiope Raymond is here and available for interpretation if  
19 needed. Again, our meeting facilitators Kim Compoc and  
20 David Brass are the neutral parties who will be handling the  
21 logistics for this meeting.

22           Let me tell you that this is an Environmental  
23 Impact Statement scoping meeting. The purpose of this  
24 meeting is to inform the public about the proposed project  
25 and allow time for you to offer your comments, questions and

1 so on. Bear in mind that we are in the process, just in the  
2 beginning process of the environmental impact analysis, and  
3 therefore, we may not have answers to your questions, but we  
4 want to hear your questions and we want to hear your  
5 comments. Before we begin, I would like to introduce our  
6 cultural specialist for this project Kahu Charles K.  
7 Maxwell, and I've asked him to do the pule.

8 KAHU MAXWELL: I know it's very appropriate before  
9 we do anything pertaining to Haleakala because it's a  
10 wahi pana, a sacred place, that we pule, do a prayer to it.

11 (Hawaiian language spoken.)

12 Our father in heaven, we ask and pray that as we  
13 gather this evening and we exchange ideas and comments that  
14 might protect and preserve this beautiful land of Haleakala,  
15 Kolekole, let's make sure the comments that you hear here  
16 and the ones that are exchanged that we do it in good  
17 feeling and we always keep the respect that is for this  
18 beautiful wahi pana, the sacred place. We ask this in your  
19 name.

20 (Hawaiian language spoken.)

21 MR. BRASS: As Kim said, the first thing that  
22 we're going to do is kind of go over the guidelines for this  
23 process so that everyone understands the best, most  
24 effective way to do it. As Dr. Fein said, we have a court  
25 reporter here who is recording the proceedings so that there

1 will be a record of your questions and concerns. It's  
2 really important, for one thing, that people talk one at a  
3 time during this meeting because the court reporter cannot  
4 record more than one voice at the same time. So we're going  
5 to ask that you use the mics so that she can hear you when  
6 you ask a question and take turns talking so that everything  
7 can be recorded and we get the fullest report of this  
8 meeting. We ask that you hold your questions until the  
9 presenters are finished. They may answer your question.  
10 You might want to jot down the question as you think of it  
11 so that you remember to ask it.

12           Please, as I said, stand at the microphone to make  
13 your comments and questions. There's a microphone back here  
14 for the audience to use, and the presenters whoever is  
15 appropriate to respond will come to this mic up here and  
16 respond to your comment or question. There are comment  
17 sheets over on the table. I think that Kim has some as  
18 well. If you would prefer not to speak in front of the  
19 group, you can write your comments or questions down, give  
20 them to Kim or I before quarter to 9, and we will read them  
21 into the record so that they become a part of the record.  
22 You also have the option of submitting those after the fact.  
23 You can submit them in the box over here tonight or mail  
24 them no later than August 14th to become part of the record.

25           When you go to the microphone to speak, please

1 begin by stating your name and then go ahead and make your  
2 comment. That's so the court reporter can identify who has  
3 spoken. Especially since we have a pretty good turnout  
4 tonight, we ask that you keep your comments brief, and we do  
5 have a time keeper. She even has a stop watch. And she  
6 will be timing the comments, and if you're getting up close  
7 to five minutes, she will just show you the amount of time  
8 that you've used so that you get a little feedback that it's  
9 time to wrap it up. So we also ask that you not interrupt  
10 or comment during someone else's comments. Part of the  
11 reason is so that everything gets recorded, also out of  
12 respect for everyone who is here.

13           And then just to reiterate, the court reporter can  
14 only record one person at a time, so it's really important  
15 that we adhere to that. Any questions about the guidelines?

16           MS. COMPOC: And bathrooms are this way in case  
17 anybody hasn't been here before, and I would like to just  
18 pass out the comment sheets right now. The presentation  
19 that you're going to hear is about 45 minutes, and there's a  
20 lot of slides and a lot of information, so if you would like  
21 to take a piece of paper and pen right now, I have that and  
22 that might help keep you folks' comments brief. Without  
23 further adieu --

24           MR. BRASS: One other housekeeping piece that we  
25 just found out tonight, at the end of the presentation, the

1 court reporter needs to take a quick break so that she's  
2 able to -- this is a pretty intense process, typing  
3 everything up, so there's going to be a five-minute break  
4 for the court reporter at the end of the presentation, and  
5 then we'll get right into the comments.

6 MR. FEIN: Thank you, David. So without any  
7 further adieu, I'm going to present Dr. Jeffery Kuhn from  
8 the University of Hawai`i Institute for Astronomy who is  
9 going to talk about the need for ATST and why it needs to be  
10 on Haleakala. Jeff.

11 MR. KUHN: My name is Jeff Kuhn. I'm a scientist.  
12 I'm one of the people that will likely use this telescope  
13 when it's built, if it's built in our lifetime. This is a  
14 project that for some of us has gone on for many, many  
15 years. My first introduction to this project was about 12  
16 years ago when we organized in New Mexico. It's had its  
17 roots in the scientific community for a long time, and it's  
18 only over the fairly recent past it's appeared publicly in  
19 the form that you see it now. Two questions that I think  
20 the organizers have asked me to try to address from a  
21 science perspective is why do we need the ATST? What value  
22 does it have for science and perhaps for us in a broader  
23 sense. And why is it that we come to ask to put it on  
24 Haleakala? What is it about Haleakala that makes it so  
25 important for science? So those are the questions I'm going

1 to address in the next few minutes.

2           The main theme to what I'm trying to tell you is  
3 that the sun as we see it when we go out and we look outside  
4 is much different from the sun as we see it through the  
5 instruments and through our telescopes. So about a year and  
6 a half ago, the sun, if you were to look at it from a  
7 telescope, looked something like this. This is an image  
8 taken in regular light. It shows that the sun is something  
9 that changes. You see here in this image, the sun is  
10 rotating, and this time span is a couple of weeks. The  
11 really remarkable thing about this period of time, a couple  
12 of Halloweens ago, is a development right there of that  
13 enormous group of sunspots, which happened more rapidly than  
14 we've seen before, that group of sun spots, the dark region  
15 on the sun, which in size is roughly three times the size of  
16 the earth. And when that region as it appeared rotated to  
17 the edge of the sun, it did some pretty dramatic things. In  
18 a matter of just a few seconds, it released an enormous  
19 amount of energy into space.

20           So this is an image that was taken from space. We  
21 can now only see images like this from space, and we happen  
22 to have a satellite called SOHO that's able to do this. The  
23 size of the earth is like that. This burst of energy  
24 traveled out into space, and if we could step back from the  
25 sun, we would see something that looked kind of like this

1 where this was the sun and that burst of energy that you see  
2 flying outwards to the right was what we call a coronal mass  
3 ejection. It's millions of tons of matter, lots and lots of  
4 energy, and it travels out into space at hundreds of  
5 kilometers per second. For us, luckily that burst of energy  
6 was directed off to the side. The earth is in this  
7 direction, so most of that energy was lost to us. But the  
8 net effect of that energy in general can be enormous.  
9 During that flare event that took place a couple of  
10 Halloweens ago, we knocked out some satellites, Japanese  
11 communication satellites. The Swedish power grid, a region  
12 in the far north was knocked out. Communication to  
13 airplanes was disrupted so that airplanes were rerouted that  
14 were flying over the north, the north polar regions. GPS in  
15 some cases was interrupted, and cell phones were disturbed  
16 by that. So most of the effect of what I just described to  
17 you, the interaction of the sun with the earth is through  
18 our technology and effects on our technology. And we have  
19 no way of predicting these events.

20 We see sun spots. In fact, it's auspicious that  
21 today, in fact, late last night, we saw the largest flare  
22 we've seen in about a year. Here is a plot. We do have a  
23 satellite that monitors these events in real time. The  
24 National Weather Service maintains this, and this is a graph  
25 of x-rays, and this is July 14th. It's universal time. And

1 this was late last night our time. This big bump right here  
2 is where the amount of x-rays out in space increased by  
3 about a factor of 100. So all of the sudden, there were 100  
4 times more x-rays than there were normally. This is an  
5 example of what's called an X class flare. That event that  
6 I showed you in the previous slide was over ten times  
7 larger. In fact, it was so large that our instruments  
8 weren't able to measure its strength because they were  
9 saturated by the strength of the x-ray production in that  
10 event.

11 So these events are going on all the time, and one  
12 of the mysteries for us is that the sun, which is now in a  
13 state of decline, goes through a cycle and it's in a state  
14 of decline, not very much activity at all, should show such  
15 a rapid event like this event from last night. What we  
16 really want to think about is that the sun is connected to  
17 the earth by these lines here that are symbolic of what we  
18 call the magnetic field. And the ATST is designed to  
19 measure those magnetic fields. That's what we're after.  
20 The magnetic fields is what make your compass needle work.  
21 It points to the north and the magnetic field in the outer  
22 reaches of the solar atmosphere is about the same strength  
23 as that field that makes your compass needle work. But we  
24 can't measure it. It's invisible, yet it channels and  
25 directs all the energy that you saw coming off, for example,

1 that coronal mass ejection out into space. And one of the  
2 primary goals of the ATST is to make these invisible lines  
3 visible to us. They're now invisible. We can't see them.

4           The other effect of the sun is perhaps more  
5 profound. We've learned only over the last decade or two  
6 that the sun, it's brightness changes. So here is a graph  
7 that shows time. This is about 20-some years. The  
8 brightness is going up and down, and it turns out that the  
9 brightness is going up and down harmonic with the change --  
10 here is a graph that goes back to the time of Galileo, so  
11 this is the western record of sun spots, the number of sun  
12 spots on the sun, those dark regions I showed you. And they  
13 have a cycle to them. About every 11 years, there's a lot  
14 of them. But it's not a very regular cycle, and the rhythm  
15 of those sun spots is a complicated song, which, in fact,  
16 even has a period of silence back in the late 1600's.

17           It seems quite likely these bumps, these 11-year  
18 bumps are affecting climate and weather, and we know that  
19 because of this graph up here, it turns out that the sun is  
20 brighter when we have more sun spots. It turns out when we  
21 have more sun spots, when there are more of these dark  
22 features on the sun, somehow it's brighter, it produces more  
23 energy that makes the earth slightly hotter, so you might  
24 imagine that when there's no sun spots, the sun gets colder,  
25 and maybe there's an effect on climate. And well, in fact,

1 from the records that we know, the historical records --  
2 this is a fun graph. This is a graph from 1200 to 1900, it  
3 shows the price of wheat in Dutch guilders adjusted for  
4 inflation going back to 1200. And this bump right here and  
5 this bump right here correspond to these periods of time  
6 when there weren't very many sun spots. We think this is  
7 evidence of climate change.

8           So there's an economic impact associated with the  
9 change in climate, which is clearly reproduced in the  
10 agriculture records that we can come up with. Historical  
11 records show that back in the -- we call this the Maunder  
12 Minimum -- it's quite clear that Europe was much colder than  
13 it is now, so over historical times, the climate is being  
14 changed by the sun in ways we don't understand. It's not  
15 just an economic impact though. If you go back 1,000 years,  
16 we think we know what the sun is doing from this graph. And  
17 it shows -- it's complicated -- it shows the amount of  
18 Carbon 14. The amount of Carbon 14 in the atmosphere is  
19 related to what the sun is doing, the sun's activity and its  
20 magnetic field. We can turn that into a temperature.

21           And it turns out there must have been a warm  
22 period back here in the early part of this Millennium and  
23 then a cold period in the 17, 1800's around the time of the  
24 Maunder Minimum. Well, it turns out that the disappearance  
25 in the southwest of the Mogollon, Hohokam and Anasazi native

1 peoples coincides almost exactly with the rising warm period  
2 associated with what the sun was doing here. And then  
3 towards the Maunder Minimum, you may remember from your old  
4 history books that the Vikings in the Nordic cultures had  
5 settled the eastern coast of Greenland. Those settlements  
6 vanished as the earth got colder. And we even have records  
7 of what happened to the -- what foods were being eaten, and  
8 it turns out that agriculture was in decline.

9           The extinction, the transition of these cultures  
10 was almost certainly tied to what the sun was doing. So I  
11 think we can say, and many scientists agree, that within our  
12 lifetime, the probability of a major solar storm with  
13 brightness change affecting commerce with billions of  
14 dollars of impact is virtually 100 percent. It's already  
15 happened. We've lost satellites that are worth that much.  
16 Over the next 1,000 years, it's also virtually certain that  
17 there will be some event, some change in the sun which  
18 affects society in some fundamental way, and that's probably  
19 likely. And we have evidence of it happening over the last  
20 1,000 years.

21           Why is it we think these important questions  
22 should be studied from Haleakala? We started with a site  
23 study a few years ago that started with over 70 sites all  
24 over the world. We looked at the weather patterns. We  
25 looked at the contrails, the amount of airplane traffic over

1 the site. We narrowed that list down to six sites  
2 worldwide, and those six sites were Big Bear in California,  
3 Haleakala, LaPalma, Panguitch Lake. LaPalma is in the  
4 Canary Islands. Panguitch Lake is in Utah. Sac Peak is in  
5 New Mexico. San Pedro is in Mexico. These were sites where  
6 we erected a tower, and from that tower we studied several  
7 different characteristics of the atmosphere, how clear it  
8 was, how bright the sky was, how much blurring the sky  
9 produced, if it would wash out the fine detail that we need  
10 to see what's happening in these magnetic regions of the  
11 sun, the sun spots.

12 This is a plot that shows how much clarity, how  
13 little blurring there is in the sky depending on how high  
14 you are above the ground, okay. And there's one of these  
15 curves for each of those six sites that were be selected to  
16 study out of this list of 70. And a big number here means  
17 that there's not very much blurring, and you have the  
18 capability with the right instrument of seeing very fine  
19 detail in the objects that you look at through that  
20 atmosphere. So which of these do you think is Haleakala?  
21 It's the red curve. Haleakala surpassed all other sites for  
22 the ability to see very fine detail if we can build an  
23 instrument, which is this is ten meters above the ground.

24 So this shows the effect of hot rising air that's  
25 heated by the sun that blurs these images, and because of

1 the wind and because of the position of the ocean around  
2 Haleakala and Maui, the best, the best conditions occur in  
3 this site on this island for seeing and clarity. I added  
4 another curve to show what happens during the daytime. This  
5 is that same number. A big number here means the sky is  
6 very clear and you can see fine detail, but this is a plot  
7 from Haleakala that shows what happens if you don't go above  
8 that layer, that ten meters layer. This is a plot that  
9 shows sky clarity versus time of day, and so this is the  
10 local time of day. This is midnight. This is 5 in the  
11 morning. This is 10. And what does it show? It shows if  
12 you can't be above the ground, then the effects of that  
13 ground heating cause your ability to see fine detail to go  
14 almost to zero on this scale. So that distance scale is  
15 very important to understanding and seeing fine detail in  
16 the sky. It turns out that Haleakala was far superior to  
17 other sites because the sky was dark and because there  
18 wasn't very much dust in the sky.

19 For all those reasons, we think that any other  
20 location but Haleakala will prevent the ATST from doing the  
21 job that we have for it, which is to see these magnetic  
22 fields on the sun and to be able to see out into the space,  
23 to see the fields that channel the energy from the sun to  
24 the earth. That understanding is surely worth an expense of  
25 some money. Being able to predict and understand what

1 happens in the next 11 years, whether the sun is a few  
2 percent brighter, is something we can't do now. The  
3 importance of being able to do that I think is obvious. So  
4 we're here hoping for an invitation from this community to  
5 bring what we think is a new window onto the sun onto the  
6 summit of Haleakala. That's what I have.

7 MR. FOLTZ: You can turn the lights up. I don't  
8 have any slides. My name is Craig Foltz. I'm an  
9 astronomer. I'm not a solar astronomer. I spent my career  
10 studying very distant objects in the realm of observational  
11 cosmology, but I'm now an employee of the National Science  
12 Foundation. I live and work inside the Beltway in  
13 Arlington, Virginia, just across the Potomac from  
14 Washington, D.C. And I want to talk a little bit about what  
15 the NSF is, how it works and what its relationship is to  
16 the project today because you've heard the NSF is the lead  
17 agency in this environmental impact study process.

18 So the NSF is an independent federal agency. It's  
19 about 55 years old. It has an annual budget of about \$5  
20 billion, and its charge is simple. It's to give that money  
21 away, which is kind of nice. And it is charged to support  
22 science engineering, science education and public  
23 understanding of science. And we do that by providing funds  
24 to scientists, to engineers, to science educators and so on.  
25 And we are different from many federal agencies. And I want

1 you to understand this, because it's important. The NSF  
2 does not direct science. It does not tell scientists what's  
3 important. It doesn't tell them how to do the science and  
4 so on.

5 We operate in a process that allows the scientists  
6 to propose to us what they think is important, so this is a  
7 process of unsolicited proposals. A proposal comes to us  
8 for a new idea. This is different, for example, than some  
9 agencies that launch -- for example, the agency that  
10 launches things into space, they can say to their  
11 constituency, "We want a proposal for a satellite that will  
12 measure the cosmic microwave background." They direct that  
13 community. We don't do that. We take our direction from  
14 the community that we serve. And I want -- wanted to make  
15 that clear. So what is our relation to this project? Well,  
16 as Jeff said, more than ten years ago, the solar astronomy  
17 communities realized that they needed a new facility that  
18 had a very large aperture, a very large mirror, 14 feet in  
19 diameter.

20 The reason for that we can explain if you're  
21 interested. But they got together and built what's called a  
22 science case. They tried to understand what the telescope  
23 should do, how it should do it, and they came to us with a  
24 proposal to begin the development of the design for the  
25 ATST. That was funded. It's been funded over the last five

1 years for a total of about \$12 million. We did not fund it  
2 at \$12 million a year. It's been a total of about \$12  
3 million. And the result of that design is actually a very  
4 advanced conceptual, beyond conceptual design for the  
5 telescope, the instrumentation and the building that you see  
6 here.

7           As a result of the success of that, the fact that  
8 these scientists demonstrated that this could be built with  
9 technology that was in hand or we were confident could be  
10 developed, about a year and a half ago, a proposal was  
11 submitted to us to provide the funds for construction for  
12 this telescope. And that proposal is then examined by us in  
13 detail. It's not only examined by us, it's examined by the  
14 peers of the scientists who have submitted it. So we engage  
15 large parts of the community to look at that proposal. That  
16 proposal is still under review. And so we -- I want to say  
17 right now we have not committed funds to the construction of  
18 this project yet.

19           And, in fact, whether we do do that is, number  
20 one, it's a decision made by Congress, not NSF, although we  
21 have to recommend it to Congress. And number two, it's a  
22 decision that is reliant on the design of this telescope  
23 being ready for construction. But what does it mean to be  
24 ready for construction? It means we know how to build it.  
25 We know we have a place to put it, and we know what the

1 conditions of that place are. So we know, for example, are  
2 we building this on cinders, are we building it on lava, are  
3 we building it on granite. And so as part of the actual  
4 design, which is a prerequisite to us making a decision to  
5 fund it, we need to know where it can go. And as a result  
6 of that need, the environmental impact process has begun.  
7 And so we look forward to your comments. We look forward to  
8 trying to address your concerns. We may not address them  
9 tonight, but we will -- they will be addressed in the  
10 Environmental Impact Statement. And I thank you very much  
11 for coming and thank you for allowing me to speak. Charlie,  
12 you're up.

13 MR. FEIN: Thank you, Craig. So you heard a  
14 little bit about the science and the need for the project  
15 and why Haleakala and the role of the NSF. And my purpose  
16 here this evening is to briefly tell you what the  
17 Environmental Impact Statement process is for the project.  
18 I better come on this side. We have begun the process back  
19 in May, and we have filed for a joint federal and state  
20 Environmental Impact Statement. And we are at the point now  
21 of soliciting public comments, public input so that we can  
22 prepare our final scoping document, which then becomes part  
23 of the Environmental Impact Statement preparation notice or  
24 initial EA, and we go on to prepare a full draft  
25 Environmental Impact Statement.

1           Once we've finished the final scoping in the next  
2 30 days or so and we receive all of your comments by August  
3 14th, we're going to prepare the impact assessment surveys  
4 and consultations, so we'll be doing inventories, surveys  
5 and studies at the site. We have prepared the long-range  
6 development plan in 2004. That was published as a draft in  
7 mid 2004. It was on line open for public comments. We did  
8 receive quite a few comments, and the final version of the  
9 long-range development plan for the Institute for Astronomy  
10 High Altitude Observatories includes the ATST as one  
11 potential new facility.

12           At the same time that the long-range development  
13 plan was being prepared, we committed to numerous studies  
14 and surveys of the 18.16 acres that constitute observatory  
15 property. Those studies included archeological inventories,  
16 cultural resource evaluations, traditional practice  
17 evaluations, arthropods, botanical resources, avifaunal  
18 resources, endangered species. We tried to do everything  
19 possible to characterize the 18-acre site. We are going to  
20 go back and do it all over again for the two sites within  
21 the 18 acres that are potentially construction sites for  
22 ATST. The two sites that were selected, the primary and  
23 alternate sites, were two sites that had no cultural  
24 resources right within their confines, no botanical  
25 resources of any endangered type or anything else that would

1 potentially be impacted in a significant way. Nevertheless,  
2 even though we don't see potential significant impact to  
3 those resources, we are going to do an Environmental Impact  
4 Statement anyway. And we're going to do that with the  
5 presumption that there may be potential significant impacts  
6 that we have to address and mitigate.

7           Once the draft EIS is published, there will be a  
8 public comment period again. We'll hold public hearings on  
9 the draft. We will go ahead and respond to the community  
10 and agency comments and ultimately distribute a final  
11 Environmental Impact Statement. We'll also be preparing a  
12 Conservation District Use application because it is  
13 conservation land. And part of that process will get public  
14 hearing as well after the application is accepted, so there  
15 are various opportunities for the public to get involved in  
16 this. We welcome that involvement. We want to hear what  
17 those comments are. If there are potential significant  
18 impacts that we're not aware of or that are of public  
19 concern, we need to address those, okay.

20           For example, last evening a police Sergeant  
21 mentioned some concern about traffic safety during  
22 construction. We need to address that in the Environmental  
23 Impact Statement. Those sorts of things are important so  
24 that we don't overlook anything that potentially may impact  
25 the environment. Anyway, we're hoping to complete the

1 process in late 2006 or early 2007. Then we will be  
2 construction ready as far as the NSF is concerned. With  
3 that, I would like to turn the microphone over to Jeremy  
4 Wagner, who will discuss the overall project schedule from  
5 beginning to final operations.

6 MR. WAGNER: Thanks, Charlie. My name is Jeremy  
7 Wagner. I'm the project manager for the ATST project. I  
8 work for the National Solar Observatory. I'm based in  
9 Tucson, Arizona. What I would like to do is give you an  
10 overview of the project schedule, maybe answer a couple of  
11 questions here that you might have, where are we in the  
12 current design schedule, when could construction start, how  
13 long would it last, when might operations begin.

14 We're currently working through the design of the  
15 facility that you see here. We've gone through a number of  
16 design reviews. As we mentioned, we went through the site  
17 survey, identified Haleakala. We're beginning the site EIS  
18 process. There are many more reviews that we will go  
19 through before we become construction ready. Site  
20 construction would start when the NSF approves the project  
21 after their review process. The earliest it could start,  
22 and I understand actually I think this slide is slightly out  
23 of date. I understand from this week that the earliest that  
24 could occur would be late 2007, so you might slip these  
25 dates slightly. The major site construction as you would

1 think of it where you're digging foundations, erecting large  
2 structures, would occur in the first two years. After that  
3 point, we would be inside the buildings. The buildings  
4 would be up. We would be assembling the telescope, putting  
5 the control systems together. Towards the end of that, we  
6 would bring the large optics in, assemble those systems,  
7 start doing the integration and commissioning, which is  
8 where we begin to test the systems and understand that they  
9 are meeting our requirements, that they're performing at the  
10 level that we require. And that would -- that would occur  
11 for quite a while.

12           Once we understand that those systems are  
13 performing at the level that we expect, that we require, we  
14 would begin initial operations then and start taking the  
15 data that folks like Jeff Kuhn require to do their science.  
16 Okay. I'll turn the mic over now to our project architect  
17 Jeff Barr, who will give you an idea of what the facility is  
18 and why it looks the way it looks. Jeff.

19           MR. BARR: Yeah, as you've heard, I'm Jeff Barr.  
20 And I am the architect working on the project with the  
21 design team based in Tucson, Arizona. And essentially,  
22 you've had a chance to see the pictures we have of it and  
23 maybe in the paper and looked at the brochures and other  
24 things. And I'm here to talk about more or less the  
25 exterior features of the ATST, why it looks the way it does.

1 And there are, we understand from the last couple of nights  
2 and certainly came in understanding, legitimate concerns  
3 about the size and visibility and those kinds of things, so  
4 I'll get to that, also where specifically on Haleakala this  
5 is. As Charlie said, we have two sites, so I'll be showing  
6 you those.

7           There they are. What we're calling the primary --  
8 what is our primary proposed site is next to the existing  
9 Mees Observatory and this is the tower that Jeff Kuhn  
10 referred to that was erected on six different sites. This  
11 is the one on Haleakala. As you can see, the road goes  
12 right by there, and this is essentially the site right here.  
13 The other one, the alternate site also on Haleakala and  
14 within the boundaries of the observatory is a site where a  
15 radio experiment was conducted some years ago by a person  
16 named Reber. And this circle of concrete is a remnant of  
17 that, and we call it the Reber Circle site for obvious  
18 reasons. The high altitude observatory long-range plan,  
19 development plan that Charlie Fein went into some detail  
20 about I don't need to go over again, but that was the  
21 document that we started with that identifies the two sites  
22 on Haleakala that we looked into. And we pretty much  
23 confirmed for our own purposes as well that those really are  
24 the sites that would support a project the size and scope of  
25 this. Both of them, as I say, are big enough, and both of

1    them were tested and found to have the excellent observing  
2    conditions that Jeff Kuhn referred to.

3                    This is a plan, so essentially you're up above  
4    looking down at this point, and this is a topographical map,  
5    so where the lines are sort of farther apart in the central  
6    area, it's flatter land.  And then where it falls off, you  
7    can see the lines -- the picture gets darker and the lines  
8    get closer, so that kind of defines not only the physical  
9    boundaries, the legal boundaries of the observatory area,  
10   but also kind of the buildable area that's also there.  
11   Again, the primary site, this is the Mees Observatory that  
12   you saw in the picture a moment ago.  This would be the  
13   telescope enclosure, the support building, and then there's  
14   a small out-building, a remote service building associated  
15   with it and essentially the same composition of buildings  
16   shown up here on a different site, both of them on the same  
17   map, although obviously, we're not building it in two  
18   locations.  Either/or is what you can imagine there.

19                   And then the restrictions that again Charlie  
20   referred to in some detail we've looked -- they looked at as  
21   part of the long-range development plan and identified the  
22   locations of the petrel burrows and the archeological  
23   features that you see here in blue.  And so those are  
24   restrictions that we know we have to respect, and those  
25   aren't the only ones, but those are the ones that we knew

1 about going into this process, so you can see sort of how  
2 those sites were shaped out there based on that.

3 MR. MAYER: Where is the observatory at the top in  
4 relation to that?

5 MR. BARR: Which one?

6 MR. MAYER: The visitor's center. Where in  
7 relation to this map is the present --

8 MR. BARR: Oh, okay, the visitor's center. This  
9 road coming in -- I probably should have oriented you before  
10 I jumped into it. The park is over here. It's off the map  
11 in this area over here, and this would be the road coming in  
12 from the east that gets you in from the park. So you come  
13 in here and then as you come in that main observatory road,  
14 these two sites are off to the left and right-hand side of  
15 the road. Is that the question?

16 MR. MAYER: Yes.

17 MR. BARR: I really should have made that a little  
18 clearer. Okay. Those are the sites, and then what we build  
19 on there and the size and breadth of it is the first thing  
20 we do is figure out how much of a building we need. And  
21 really it's pretty simple from the standpoint of an  
22 observatory architect. What you do is get just enough  
23 buildings to support, protect, operate and maintain the  
24 telescope, period. That's really -- and less is more  
25 really. The astronomers and the public as well, the size of

1 the building impacts both seeing and environmental issues,  
2 so really there's never -- observatories tend to be sort of  
3 just enough. The kinds of buildings that we're looking at  
4 and I'll be showing you here and you can see in the  
5 rendering are really the enclosure, which you think of as a  
6 dome, which serves these purposes here, and the support  
7 buildings which are other kinds of spaces that you need as  
8 well. And you can see over here in the spaces next to it  
9 that aren't directly associated with the enclosure would be  
10 kind of this big cylinder with a dome on top of it, and then  
11 everything else would be the support buildings. All of  
12 those, as I say, are kept minimum in size in order to keep  
13 the seeing conditions or the clarity of the seeing good and  
14 also for environmental reasons.

15           This is kind of the diagram that I've put together  
16 to show why it is the size it is. The -- you could see  
17 the -- to start with the height that again Jeff Kuhn  
18 referred to here, this is 28 meters, so about halfway across  
19 that chart up and gets them to where they need to be in  
20 terms of height above ground to get away from that  
21 blurriness that he was referring to that they could meet the  
22 scientific objectives of the project, so this 92 feet is a  
23 canonical number that we came up with as the right height  
24 for it on Haleakala, and that was what we started with.

25           This is the telescope, this framework structure in

1 the middle here, and this is the 14-foot wide mirror, the  
2 main optic of the telescope. So when you put that telescope  
3 at that height and swing an arc with it, you get a dome size  
4 really with a little bit of room for clearance and safety,  
5 and so that's the site, the size and height of really the  
6 most dominant visual element associated with this whole  
7 observatory.

8           Underneath of that supporting the telescope is the  
9 pier, and the reasons for its size and shape have to do with  
10 stability. First off, wide enough to sit on the cinders and  
11 get a good enough vibration-free mount for the telescope  
12 that it doesn't damage the seeing conditions again and then  
13 also big enough that inside of it there's room for an  
14 observing platform that where most of that rotates with the  
15 telescope inside of the pier and where most of the  
16 instruments that would take the scientific data are located.  
17 And then out beyond that, as I showed you over here, this is  
18 the support building and inside of that is a relatively  
19 small control room for the telescope, an instrument lab and  
20 a few things that just need to be close for reasons of  
21 functionality. Down below that are some big pieces  
22 equipment that also need to be close to the telescope. And  
23 in the middle of all that is a big elevator shaft that you  
24 use to bring the 14-foot mirror down when it needs to be  
25 recoated and to put big instruments onto this platform.

1           Beyond that, you're seeing the existing Mees  
2 Observatory here in the foreground. And on the other side  
3 of that is the small remote utility building. So these  
4 dimensions, and again, this 92 feet is the number you saw if  
5 you read the paper this morning. And it really is the  
6 height of the telescope, not really so much the height of  
7 the entire structure.

8           MR. MAYER: It's 137 feet?

9           MR. BARR: 137 feet to the top of the dome, that's  
10 right. If you cut through that last picture I had there at  
11 the very ground level, cut through those three buildings,  
12 this is what you would see in our proposed plan. This  
13 again, the enclosure, the support building here, the service  
14 yard in between and then the remote utility building over  
15 here and the existing Mees facility here. Just to kind of  
16 walk through it quickly, this is the equipment, the coating  
17 facility that we have as a baseline requirement, that would  
18 be incorporated in, the platform lift or elevator in the  
19 middle and enough space for the big equipment that needs to  
20 be near the telescope. These gray rings are the pier that  
21 you saw there in the section before.

22           It's worth talking a little bit about the existing  
23 Mees building. We do intend that -- our proposal has it  
24 staying there and not being replaced, so to speak, by the  
25 ATST and for good reasons. First and foremost, it's an IfA

1 building, and the IfA has uses for it. They -- it's their  
2 base of operations for not just Mees but other things that  
3 they do on the mountain, and so for that reason, we really  
4 can't get rid of that space without then incorporating some  
5 compensating space into our building. In other words, we  
6 would have to build a bigger building to replace some of the  
7 functionality of the spaces that are already there.  
8 Secondly or maybe primarily, the telescope there won't be  
9 replaced until ATST is built, so in that something like, as  
10 Jeremy showed you, the time span is significant before that  
11 happens.

12           It's important to have a continuum of observing so  
13 that there's a way to correlate the data and also give the  
14 space to do the experimentation programs they have now. So  
15 this will continue to be a working observatory until then  
16 and then will be ostensibly replaced by the ATST capacity.  
17 Also, it's not in the location where we would be likely to  
18 locate ATST anyway. It's closer to the edge, which is more  
19 difficult for the foundations. It's also closer to the  
20 petrel burrows, and so chances are that that footprint  
21 wouldn't be covered up by the new footprint anyway. I guess  
22 that's probably good enough for the floor plan.

23           The look of it is something that is a bit of an  
24 issue, and understandably so. It needs to be white, and the  
25 reason for that is simple; one word, heat. It's a solar

1 observatory, and while it's in operation, it's being heated  
2 up by the sun, the surface of the dome especially because  
3 that's very close to the telescope. But even these other  
4 buildings that are in the same vicinity of the telescope,  
5 the amount of heating that they experience from being  
6 exposed to the sun is enough that it heats the air around  
7 them, and then that creates that blurriness that we're  
8 trying to avoid and really has to be avoided if the  
9 telescope is to meet the scientific objectives that are set  
10 out for it. So then -- and even with white, it still has to  
11 be cool because this line you see on there is a series of  
12 panels. That would be double-skin metal panels through  
13 which liquid cooling flows to extract even that slight  
14 amount of heat, which would still be plenty to ruin the  
15 seeing, so even so, we need a mechanical cooling system to  
16 cool the parts that are really close to the telescope.

17           And it's worth going into a little bit more detail  
18 on that. The issue of whether or not this telescope could  
19 be something like maybe blue to blend with the sky, silver  
20 to reflect the color of the sky or even brown to match the  
21 color of the cinders is a bit of an issue. And we've looked  
22 at -- we have computer programs that predict accurately what  
23 would happen and how fast it would heat up and how much it  
24 would heat up with different coatings and different color  
25 material, and it's pretty dramatic.

1           Even if you go to kind of this -- pretty much this  
2 sky blue color here, the amount of heating is literally four  
3 times as much than if it's a good quality and the right kind  
4 of white coating. And what that means, and another  
5 statistic that's worth of kind of bringing in this on sort  
6 of a technical level, is that the entire electrical budget  
7 for the observatory is about a megawatt at peak. And that  
8 sounds like a lot of power, and it is a lot of power. And  
9 about half of that is consumed only in cooling the dome even  
10 if it's white.

11           And so if you take that half and multiply it times  
12 four, you can see that pretty quickly we get into pretty  
13 staggering amounts of power that are required, and we  
14 immediately get past what's right there on the mountain now  
15 in terms of the transmission lines of the substation on the  
16 mountain. So it literally makes the project unfeasible  
17 economically to make it something other than white in the  
18 way that we imagine doing the cooling. And we've looked at  
19 enough schemes to know that we've tried with as much  
20 cleverness as we could. We understood it was an issue, the  
21 visibility of the telescope, so we looked pretty carefully  
22 at that. And it's, as I say, a pretty dramatic difference.  
23 And certainly if we go to brown, it's even worse than the  
24 blue, and that was kind of the baseline in the long-range  
25 development plan for any new building that didn't have to be

1 white for particular reasons, specifically solar telescopes  
2 would be painted the same color as the cinders in order to  
3 make them less visible. That's pretty much it. Just as a  
4 kind of a quick recap, we have the two potential sites and  
5 both of them have enough area and have been tested, have  
6 good seeing. The dome is the most dominant visual element  
7 of the whole thing, and it has to be that way. It has to be  
8 high enough to get above the blurry seeing. It has to be  
9 large enough to allow the telescope to be maintained and  
10 rotate inside it. And it has to be white because of heat.

11           The other buildings are of less import and much  
12 less visibility. They're much lower. The support and  
13 operations building is near the telescope, and it also has  
14 to be white. It really is just large enough for the  
15 functions that are directly related to activities of the  
16 telescope. And we do intend to continue to use to some  
17 extent the existing Mees structure and to use that in  
18 whatever way we can to minimize our footprint on the  
19 mountain. The utility building is less an issue for us.  
20 It's a little farther away to remotely exhaust the heat that  
21 we're taking off in the form of air flow and also to get the  
22 sound and the vibration away from the telescope, but that  
23 building still would have to be sound insulated because we  
24 understand certainly that the serenity of the environment on  
25 the mountain is also important and would be painted brown

1 because it's far enough away that it doesn't matter too  
2 much.

3           So that's what I had. There's a couple of  
4 pictures here with sort of larger views of those nice  
5 renderings that you see there. This is the -- looking from  
6 the north at the site, the primary site, and this is a  
7 little bit better artist's conception of what that facility  
8 would actually look like. One thing I hadn't mentioned in  
9 some of the other things, and you see it better here than  
10 elsewhere, is this white apron on here is the same reason as  
11 -- it's a piece of concrete that wraps around the east and  
12 south side of the building. And it provides, allows that  
13 the -- the heating on the cinders here would be considerably  
14 -- it's like a 40 percent increase on the lower enclosure  
15 cooling, so that also is for the reasons of reflecting the  
16 heat and not allowing it to heat up.

17           This is looking at the alternate site in this case  
18 from the south, and these are other telescopes, existing  
19 telescopes in the foreground. And again, you see kind of a  
20 nice realistic view of what that would look like, the  
21 support building and the enclosure. And this is an aerial  
22 view from the east looking back and then this is the primary  
23 site again, Mees just beyond, and the Reber Circle site is  
24 up here. That's what I have, and I guess our hard working  
25 court reporter gets a break. And after that, we'll be happy

1 to hear your questions.

2 MS. COMPOC: So we'll take a five-minute break  
3 then. How many people think that they do want to make a  
4 question or comment after the break? One. Oh, we might end  
5 early. 8:00 we'll come back. Thank you.

6 (Recess taken.)

7 MS. COMPOC: We're ready to begin now. So let's  
8 just go over the rules real quick. Please remember Rachelle  
9 is only a human being. She can only type as fast as what, a  
10 Super Hero? So as you come up to the mic, say your name,  
11 speak slowly and please remember the five-minute rule, okay?  
12 Be as concise as you can so everyone gets a chance to speak.  
13 And scientists, also be as concise as you can so everyone  
14 gets a chance to speak. Any questions before we start?  
15 Does anybody have any papers, by the way, that David and I  
16 can collect and we can read on your behalf if you're not  
17 comfortable on the mic? Okay, whoever would like to start.

18 MR. BRASS: Just go ahead and if you would like to  
19 make comments or questions, line up at the mic over on this  
20 side.

21 MS. SUZUKI: Carol Suzuki. My question is what's  
22 the economic benefit to the people of Maui? And a couple of  
23 things that we've talked about in our neighborhood is the  
24 jobs and education for our children and also the general  
25 public. And then one other question is why is it okay for

1 the existing domes to be silver and not the new -- I think  
2 it's the type of research.

3 MR. BARR: Maybe we'll start with the second one  
4 first. The existing dome on Haleakala that's silver, of  
5 course, is the Air Force dome here. And in the first place,  
6 it's a nighttime telescope. That's one thing, and the  
7 heating isn't as critical in that case. And we did look at  
8 silver as an alternate here as I mentioned before, and it --  
9 because silver is, in essence, darker than white, it not  
10 only absorbs more light, it also absorbs, yeah, absorbs more  
11 heat. And there's other domes, too, and all of the ones  
12 that you'll see that are silver are nighttime telescopes.  
13 White is a common color. And for reasons of environmental  
14 sensitivity, the brown, you know, the base of this building  
15 can be brown because, again, it's not a solar telescope.  
16 And within the context of a long-range development plan,  
17 solar observatories are specifically excluded from that for  
18 that reason. I don't know of a solar observatory that's  
19 anything other than white, so that's --

20 MR. WAGNER: When it comes to economic impact,  
21 what we're currently working through is trying to understand  
22 how best to support this, the operations of this facility.  
23 You could imagine a staff of approximately 35 to 40. That  
24 would include the whole range of skills, so administrative,  
25 scientific, engineering, facility support. All of those

1 folks wouldn't be based up on the mountain, of course, or  
2 working up on the mountain. Also in consideration is where  
3 the National Solar Observatory ends up, and so we've been  
4 discussing with our partners, the universities around the  
5 Country where would you put the National Solar Observatory  
6 in an era that includes the ATST, and the Institute for  
7 Astronomy at U of H is very interested in that and would  
8 like us to come out here. And I'm putting words in Jeff's  
9 mouth.

10 MR. KUHN: It's not very hard.

11 (Laughter.)

12 MR. WAGNER: Yeah, it's not very hard. When it  
13 comes to education, I think Craig Foltz can talk to that,  
14 but I can tell you the National Solar Observatory, it's part  
15 of its mission. And it's something the NSF tells us to do.  
16 It's something that we want to do. It's something we  
17 happily do. We have programs for public and educational  
18 outreach with students, with teachers. We hold workshops.  
19 We bring the students in. We want folks to see what we're  
20 doing. We want them to understand what we're doing. It's  
21 to our benefit. We live in the communities where we work as  
22 well. And the interesting thing about this telescope is  
23 that it's a solar telescope. It's in operation during the  
24 daytime, so people can actually understand that the work is  
25 going on right then. It's not at nighttime. You're seeing

1 it right when it's happening. Craig.

2 MR. FOLTZ: I just want to just add an exclamation  
3 point to what Jeremy just said. At the NSF, there are  
4 really two priorities that we judge a proposal by. One is  
5 the intellectual merit. That's science, right. The other  
6 is the broader impact to society, and that is often  
7 construed and typically it contains a large component of the  
8 integration of research at the highest level with education  
9 at all levels, K-12, universities, graduate students and so  
10 on.

11 So all of our facilities, and the NSO, the  
12 National Solar Observatory, is a facility that we support  
13 the operations of, must have, they must, it's part of their  
14 charge, public outreach and education components. And NSO  
15 and OAO, the National Optical Astronomy Observatory, which  
16 is joined at the hip, have exquisite programs for teachers  
17 and for outreach in New Mexico to both Native American and  
18 to Hispanic communities. And the same in Tucson. So  
19 that -- those opportunities will be there. I think I can  
20 say that without any worry of being proven wrong for both  
21 public and private education and for the public at large.

22 MR. WAGNER: I should also mention the  
23 construction because this is a project which would be funded  
24 at the level of \$175 million. There's a lot of work to do.  
25 We will do much of it here on the islands, and so there's a

1 benefit there as well to the economy.

2 MR. MAYER: My name is Dick Mayer. Since you've  
3 given professional background, Professor Emeritus of  
4 university and also the vice-president of the Kula Community  
5 Association and also I was vice-chair of the community -- of  
6 the group that put together the citizen's advisory group  
7 that put together the community plan for this whole  
8 upcountry region, which includes the top of the mountain,  
9 just to give you some background.

10 Several comments, not all of them are questions.  
11 I am a bit disturbed that the pictures that were utilized  
12 may be deceptive to all of us in the audience, that they're  
13 aerial photos that make the building look much shorter than  
14 it actually would be. And what I'm asking is that a proper  
15 way would be to have the building there next to the other  
16 buildings, the ones we see in the distance there to the  
17 summit observatory to this building. The pictures you have  
18 of the buildings themselves show the building, but there's  
19 no way to get a scale by looking at those buildings, so I  
20 think for the public, it would be very helpful to have a  
21 portrayal that would accurately portray it really. Number  
22 two, the angle at which it's shown -- it's showing here at  
23 the summit. I think in the publicity that goes out to the  
24 public as well as certainly in the EIS, the preparation  
25 notice, et cetera, there should always be viewplanes from

1 the observatory on top of the mountain as well as from the  
2 bottom of the valley as well as from Kula where the  
3 residential area is and from the inside of the crater.

4           Being further away from the edge there, it's  
5 actually sitting very much above the crater itself. And one  
6 of the most beautiful things we have on Maui is that crater  
7 and the hike through the crater, which is a major tourist  
8 activity here on the island. And to have that sitting there  
9 at the top of the viewplane as you look up at that very  
10 natural view is something that should be done, and there  
11 should be a real look at it. I happened to be last night  
12 down in Maalaea, knowing this meeting was taking place  
13 tonight, and looked up, and I was surprised at what a  
14 sizeable profile the existing telescope had in the sunlight  
15 at sunset time.

16           This building stands -- it looks like, appears  
17 here to be dozens -- and again, I can't tell from this  
18 view -- dozens of feet higher at its base than the other  
19 ones in the distance there in that picture. And its overall  
20 elevation is considerably higher, and it would be useful for  
21 us to see from a place like Maalaea, Wailuku, Kahului how  
22 much of an interruption on the profile of Haleakala these  
23 facilities would be, because this is very deceptive. And  
24 even the picture that was in the paper this morning, also an  
25 aerial view, looks down at the thing and makes everything

1 look relatively flat by comparison, so that's very critical.

2           Also what bothered me in the presentation, several  
3 times the number of 92 feet was mentioned. It was mentioned  
4 in the Maui News today, and yet if you sat tonight in the  
5 front row, you saw the elevation of the building is 137  
6 feet, not 92. And that's the height people will see. No  
7 one outside the building will know what level the telescope  
8 is. That's an irrelevant number. The relevant number for  
9 the public, because we will be outside the building, not  
10 inside the building, is the 137 feet of height, which is  
11 taller than any other building on the island of Maui by law,  
12 taller than any hotel on the island, and people should be  
13 aware of that. The elevation shouldn't be perceived as 92  
14 feet, which would be about two-thirds of the height.

15           There's a community plan that's been prepared and  
16 now a community plan for the summit of Haleakala. And in  
17 that community plan, it says the maximum height of any  
18 facility, any building in this community plan district  
19 should be 35 feet. This facility is about four times the  
20 height of what the community plan calls for. This project  
21 has to follow the community plan. Another statement that I  
22 need to point out to you that should be in your final  
23 documents in the EIS is the statement on Page 25 of the  
24 upcountry community plan, which reads as follows:  
25 "Encourage federal, state and county cooperation in the

1 preparation of a comprehensive Haleakala summit master plan  
2 to promote orderly and sensitive development which is  
3 compatible with the natural and native Hawaiian cultural  
4 environment of Haleakala National Park."

5           This has not been done. We've asked UH to prepare  
6 a master plan, and we also have asked them to do that in  
7 conjunction with the National Park at the summit of the  
8 mountain. So far UH has taken a look only at the 18-acre  
9 site and has not done that in conjunction with the other  
10 users at the top of the mountain. I'm going to ask if this  
11 \$160 million could not help us on Maui fund a proper plan  
12 for the summit of the mountain in conjunction with the Air  
13 Force, federal government facility, the National Park, NSF,  
14 UH. They're the ones who should be working together. And I  
15 don't know whether it would cost \$50,000, \$100,000,  
16 \$200,000, but I would ask that with the EIS process, that  
17 you help us prepare a master plan for the summit of  
18 Haleakala. And that would allow us then to see the  
19 relationship of all these facilities to each other. The  
20 presentation today concentrated, as you probably correctly  
21 did, on the telescope that you're building. Five minutes?  
22 Do you want me to sit down? Does anybody else want to  
23 speak? Okay, I'll sit down and come back.

24           MS. WYLIE: Are you going to answer him first?

25           MR. BARR: Yeah, I just want to make one

1 clarification. And as you correctly stated, a lot of what  
2 you have are comments and points well taken, but the one  
3 point you made about the height and it said 92 feet in the  
4 paper this morning, I intentionally intended to clarify  
5 that. And we didn't put out anything, I don't think  
6 anything deceptive, on Tuesday night when that reporter made  
7 that, so really the dimensions were there and the dimensions  
8 are in the brochure. So that was just one thing. Also, the  
9 deceptive angle, you're right, there's really no way to take  
10 an aerial or any other kind of angle and make an apt  
11 comparison necessarily.

12 But the combination of angles was the intent, and  
13 also I just wanted to mention that as part of the EIS  
14 process, we will be doing those viewplane analyses with  
15 actual views from the other critical communities and areas  
16 around, so I just wanted to clarify.

17 MR. MABERRY: Hi, I'm Mike Maberry, Assistant  
18 Director for the Institute for Astronomy. Relative to the  
19 planning issue is that the National Park does have a general  
20 plan that was studied and reviewed in the progress -- in the  
21 process of developing our long-range development plan. We  
22 specifically did not call or plan for the 18 acres that we  
23 are stewards for a master plan because of the request of the  
24 community to have a master plan for the summit area.  
25 Unfortunately, we found out very quickly in the process of

1 putting and starting the process to do the long-range  
2 development plan that there are numerous federal, state and  
3 private land holders surrounding the area. And there wasn't  
4 any trigger or any way that we could force them to  
5 participate in the process, so we concentrated on the area  
6 that we are stewards for and did a very thorough, the most  
7 thorough plan that has ever been done for an 18-acre area  
8 probably on the island. And that will be our contribution  
9 to a master planning process should there ever be one that  
10 is undertaken.

11 MR. TRUITT: Hello, my name is Stan Truitt, and I  
12 would like to comment with regards to the deceptiveness of  
13 such a photo. And that is that from the point of view of  
14 the camera that took this picture, that the angles that each  
15 one of those structures makes with a local vertical is about  
16 the same angle, and therefore, each of the structures is  
17 reduced in proportion as a function of that angle. And so  
18 when you do everything in one photo like this when it's not  
19 absolutely vertical, it does give you a very good measure,  
20 so it's not deceptive when it comes to the balance between  
21 the size as viewed in each photograph of each observatory,  
22 each structure with regard to the proposed, which is  
23 rendered in this one.

24 MS. WYLIE: Okay, my name is Prentise Wylie. I'm  
25 an interested citizen. And regarding the first speaker in

1 the yellow shirt, I thought your information was really  
2 interesting, but you haven't convinced me of what is the  
3 usefulness of predicting what's happening with the sun.  
4 Like if we know the volcano is going to erupt, we can get  
5 out of the way, but our houses are still going to be  
6 destroyed. And if we know a hurricane is coming, it's still  
7 going to come, so perhaps you would like to say a little  
8 more about that.

9 MR. KUHN: I think the pursuit of science is to  
10 understand the future. That's what we do as scientists.  
11 Science is about predicting the future, and what we as  
12 humans do and civilizations do is up to us. If I were to  
13 know that the climate would be one percent cooler 11 years  
14 from now, I think there's quite a bit we would do as  
15 civilization to try to placate the effects of that on  
16 humanity. I can't argue from the basis of science what you  
17 can do with that information, but I can argue that I feel  
18 that life would be better off knowing rather than not  
19 knowing, and that's what this is about.

20 MR. ORSZULA: Good evening, my name is Ed Orszula.  
21 I'm a Chicago transplant. I retired out here in 1998, so  
22 I'm happy to be in an area like this. My concerns are that,  
23 just as the people that preceded me, is that what is the  
24 impact of me moving out here versus other people coming  
25 after me? And in that respect, how many people do you

1 expect to run this observatory and where do you expect to  
2 find the homes when the homes are so difficult to find in  
3 the first place?

4 MR. WAGNER: As I said, I would expect the staff  
5 to be at the level of about 35 to -- I would expect the  
6 staff to be at the level of about 35 to 40. I mean we're  
7 studying this to understand what it takes to support the  
8 facility, but I think that's a reasonable estimate at this  
9 point. And it would cover administrative, scientific,  
10 engineering and facility staff. You would require a support  
11 team for the operation of the facility that would travel up  
12 to the mountain, and then you would have staff in town below  
13 the summit. Also, you would expect that some of the  
14 scientists would likely be back and forth to Oahu, that sort  
15 of thing.

16 You could imagine that some of the folks would  
17 come to the island. Some of the folks would be hired on the  
18 island. My experience with some of the other observatory  
19 operations in the Hawaiian Islands is that you end up with a  
20 staff of local folks. And you're talking about  
21 administrative. You're talking about engineering. You're  
22 talking about facilities. Some of the folks are going to  
23 come over and stay. Some of them will come over and they  
24 won't stay and they'll leave. But you'll end up with a  
25 staff of mainly local folks is my understanding of how it's

1 worked out. As far as housing and all of that, you're  
2 talking about those numbers of people. The time frame  
3 involved, I think -- I can't predict what the housing market  
4 or the availability would be. It's something that we look  
5 at.

6 MR. ORSZULA: Thank you.

7 MR. FOLTZ: I just want to make one statement that  
8 bears on that, and I think it's something that will be  
9 included. And the statement is that this is a facility for  
10 everybody. The facilities that the NSO runs and the  
11 facilities that the National Optical Observatory runs are  
12 for everyone, for all scientists. This is not for a small  
13 number of scientists, so in addition to the staff here,  
14 there will be visitors. There's good sides and bad sides to  
15 that, but there will be economic impact. There will be  
16 people who will travel to use this facility, and that should  
17 be estimated in the EIS.

18 MS. HAN: My name is Keala Han. And to the  
19 previous speaker who is concerned about people moving here,  
20 if we -- there's no way you can stop people from coming  
21 here. Because if we tried, 99 percent of us in here  
22 wouldn't be here today, so there's no way we're going to  
23 stop people from moving to Hawai'i.

24 MR. PACHECO: Good evening, I'm Walter Pacheco  
25 with the Maui Police Department. I'm their communications

1 coordinator, and my responsibility is running the  
2 communications systems for the police department. We are  
3 one of the users on the hill. We have a facility at the end  
4 of the road, which is right next to the FAA's receiver trans  
5 site. We partner with the State of Hawai`i, which is in the  
6 left corner along with the now Hawaiian Telcom, and we're  
7 the users of the lower road.

8           One of our concerns is the work that happens at  
9 the high site does have impact on the lower site,  
10 specifically the January storms that we had, work done there  
11 caused runoff to obstruct the road with a cinder pile 3 feet  
12 high. It required the National Park service to come up,  
13 clear the roadway with their Bobcat before we could get into  
14 our key communication facilities. Additionally, at that  
15 site that I deal with, there's a lot of emissions. That  
16 place, there's transmitters, all kinds of things up there,  
17 and we're working through most of that. A concern I would  
18 have of a facility like this is what types of emissions,  
19 probably minimal, would be generated as well as what kind of  
20 issues would you folks have with the existing RFI and other  
21 emissions that are on site.

22           And my third question is relating to the power  
23 delivery to the top of the hill. There is limited resources  
24 coming up, and you folks are talking about significant uses  
25 of power. This will eventually limit any other work

1 potentially being done at the site, so we're kind of  
2 concerned about buffers. What kind of cushion would be left  
3 behind for the rest of the facility up there? Thank you.

4 MR. MABERRY: Thank you very much. I'll take a  
5 shot at this. The road that you're referring to is this  
6 road?

7 MR. PACHECO: Correct.

8 MR. MABERRY: Your site is out here and this road  
9 runs around. It is on part Department of Land and Natural  
10 Resources land and part Hawaiian Homelands. It was  
11 originally a four-wheel drive road. The FAA paved it at one  
12 point in time and have not maintained it. The way the road  
13 was cut in was just rough cut. It was not a planned, you  
14 know, designed road. It was rough cut with a Cat, a  
15 Caterpillar. The runoff area that you're talking about, we  
16 had an unusually wet winter that year, and the runoff came  
17 from actually not even from property near ours. We are  
18 responsible, as you saw from the other one, for an area sort  
19 of like this. There's another piece of land in this area  
20 right here that is under the control of the FAA just like  
21 the part out here at the end.

22 And when you study this area, the blockage of the  
23 road you're talking about is right here. And some have  
24 suggested that the amount of pavement in the area is  
25 significant and contributed to the runoff, but I think you

1 can see just by looking there, there's not a lot of  
2 pavement. Now, we have commissioned a hydrology study and  
3 an erosion study, and we should have results from that  
4 within about a month, and then we'll actually be able to  
5 prove quantitatively what the situation really is. The next  
6 that you mentioned was I believe was power. We have our own  
7 substation for the Haleakala High Altitude Observatory site.  
8 There's another set of lines that come down this way over to  
9 your site. They were recently upgraded, and Maui Electric  
10 contacted us and checked to see what kind of plans we might  
11 have for the future, and the substation was increased in its  
12 size in order to handle the capacity necessary for a  
13 facility such as ATST.

14           Third issue was radiofrequency interference, and  
15 this has been a problem that several people in this room who  
16 are even now retired started working on back in the '80s.  
17 When the facilities were first up here, most of the data was  
18 taken with streaming tape or photographic plates, but with  
19 the advent of the charge-coupled device, the CCD's that many  
20 of you probably have in your cell phones for taking  
21 photographs in here, became sort of the standard for really  
22 getting deeper imaging. It allowed us to greatly increase  
23 our ability to capture the photons, the particles of light,  
24 amplify them and to be able to see more of the sky. It just  
25 multiplied the efficiency of the telescopes that we use.

1           So radiofrequency interference began to become a  
2 problem for us, and you can see right here there's a piece  
3 of property that is on a month-to-month revocable permit  
4 from the Department of Land and Natural Resources that is  
5 commonly referred to as the Lee Enterprise Broadcast site.  
6 You can see that they are extremely close to us, whereas  
7 most of the other antennas are not. The National  
8 Astronomical Union has done a study and determined that the  
9 acceptable level for radiofrequency interference measured  
10 outside an observatory during optical or infrared  
11 observations is two microwatts per square meter. People in  
12 this room have measured right here at this site just to give  
13 you a direct example over 184,000 microwatts per square  
14 meter, so it is significant the amount of RFI.

15           There has been a process over many years. I think  
16 there have been three different draft environmental  
17 assessments to look at helping these broadcasters locate to  
18 a permanent site. In fact, I think it's even been part of  
19 the community's plan to recommend having a consolidated  
20 broadcast site for commercial broadcasting. And just this  
21 week the process has begun on a new draft environmental  
22 assessment to start to look at a site where the broadcasters  
23 at this site will be -- will be able to operate together  
24 without interference with each other and without  
25 interference to the observatory site, so that will be

1 probably a future meeting that others will be -- that the  
2 community will be invited to participate. Did you have a  
3 followup question?

4 MR. PACHECO: Actually, the information I got  
5 regarding the flow came from the FAA, their technician. I  
6 realize the Department of Energy and the FAA site below this  
7 is in that area. So that's where I got that information  
8 from. But the question comes back to your operations, how,  
9 you know, the RFI that is on site and potentially may  
10 increase. There's K-5 Broadcast down in the saddle just  
11 beyond the state site. That's all there.

12 MR. MABERRY: That's all there. At this point in  
13 time, there is no plan to relocate these facilities right  
14 here because there were extensive studies done before their  
15 permits were granted to show that they would not break the  
16 threshold of the 2 microwatts per square meter.

17 MR. PACHECO: All these things combined is the  
18 issue. And we have mixing of frequencies at various places.

19 MR. MABERRY: Right, I think I see where you're  
20 coming from. This facility will not be generating any RFI  
21 period. Typically -- there was a situation where we did  
22 have a very brief period of time that I think you're  
23 referring to with regards to the FAA. We had an instrument  
24 that went bad and that was giving off a signal and the FAA  
25 contacted us and we made the correction. But under normal

1 circumstances when everything is operating correctly, I'm  
2 sure as a -- in your line of work, you're familiar with the  
3 fact that getting a good ground at this site is very  
4 difficult because there's cinder and very little moisture,  
5 and so things can accidentally become transmitters. But by  
6 design, we do not transmit RFI intentionally.

7 MR. PACHECO: And in your statement regarding your  
8 substation, that substation actually also impacted us on the  
9 road at the same time they were trying to change out a  
10 transformer. Earlier they were actually shutting power off  
11 to the site up the hill, so we do get power to the same  
12 lines which transition through there.

13 MR. MABERRY: So the lines come from here and go  
14 back around? I thought I saw a separate set of lines.

15 MR. PACHECO: No, as I understand it from the MECO  
16 people, when they were actually replacing a transformer at  
17 the site, it affected everybody.

18 MR. MABERRY: I'll look into that.

19 MR. PACHECO: Just that question.

20 MR. MABERRY: Thank you. We'll consider that in  
21 the process of development.

22 MR. BRASS: Just I want to interject a reminder  
23 here that if you would prefer to have Kim or I read your  
24 comments or questions, get them to us by quarter of so we  
25 have time to get them in before 9:00.

1           MR. MAYER: One thing that was mentioned was that  
2 you would have some people working off site down below,  
3 et cetera. And certainly it would be useful for the  
4 community to know what other facilities, buildings you would  
5 be building as part of this project and what kind of  
6 transportation up and down the mountain there might be  
7 between that. That would certainly be useful. And also are  
8 there any connections via fiberoptics and those kinds of  
9 things? With all the data you're collecting, will that all  
10 be processed internally, or do you send it down to the  
11 computer in Kihei, and et cetera? So the connections to  
12 other areas I think would be of use to the community.

13           Also you mentioned the conservation use permit  
14 that you would need there. As I said, this facility and  
15 these facilities are not part of the community plan. The  
16 upcountry community plan does not have any recognition of  
17 these activities, and I would recommend that you look into  
18 the possibility of going through various county approvals to  
19 see whether these things are consistent with the county  
20 general plan and the county community plans and not just the  
21 conservation use permit. Thank you very much.

22           Oh, one last question. You mentioned 175 million.  
23 I think it would be useful for us to see -- because a lot of  
24 the money would be going for very expensive optics and other  
25 things which would be processed off island out of maybe the

1 mainland somewhere, and how much actually is the  
2 construction figure and the actual generation of economic  
3 benefits to the community in terms of jobs? That's  
4 something I think we need rather than just the gross figure  
5 for the whole project. A lot of that money goes for design,  
6 for architects, for many of you folks who are a far distance  
7 from here and don't benefit the local community. Thank you  
8 very much.

9 MR. MABERRY: Just to address a couple of those  
10 issues. Some of you may be aware that just up the road up  
11 here at Kulamalu, the University is in the process of  
12 building a new facility to provide sort of base station  
13 facilities, research, the opportunity to work on our  
14 equipment before taking it up to the summit, and we have  
15 made arrangements to provide space for base operations for a  
16 small number of partners. We would probably not house all  
17 of the people that would be involved in this project, but it  
18 would definitely serve their needs for many years, for  
19 several years during the construction process and into early  
20 operations.

21 As far as connectivity, there is currently fiber.  
22 And for those of you, there's the Internet pretty much is  
23 connected through fibers under most circumstances. In this  
24 case, there are fibers that are buried in the ground and  
25 there is what is called lit fiber or fiber that's actually

1 operating and dark fiber that is there that is not being  
2 used that can be lit, so to speak, or can be. And there's  
3 plenty of dark fiber available for this project, so we  
4 wouldn't be needing to add anymore fiber to the summit.

5 MR. MAYER: Thank you.

6 MR. MABERRY: Somebody want to cover the --

7 MR. MAYER: The approval process. The approval  
8 process. Community plan, general plan, consistency.

9 MR. BARR: Let me just talk a little bit about  
10 that. Maybe we'll bring Mike back because he knows more  
11 about this than I do. Our understanding was that this is  
12 university owned land and that we are, for better or worse,  
13 we're exempt from the planning process, the county planning  
14 process, and so we don't have to -- obviously, there's  
15 reasons why you would want in some cases to abide by the  
16 same rules, but my understanding was that we weren't and we  
17 haven't incorporated that into our planning. And certainly  
18 that 35-foot height limit would preclude anything like a  
19 telescope.

20 MR. TRUITT: What about the ones that are already  
21 there?

22 MR. MABERRY: What he's referring to is that we  
23 have been granted stewardship of this land under an  
24 executive order that specifically specifies for observatory  
25 purposes and education, and it is under the state. And the

1 state is exempt, although we do everything we can to comply  
2 and to be good neighbors within the community. Obviously  
3 from a scientific standpoint, that 35 feet would be a little  
4 difficult for us to adhere to, but in all other ways, we  
5 strive very hard to work within the community. But we'll  
6 definitely include your comment in the EIS, and we'll  
7 address it.

8 MS. COMPOC: I just wanted to say that there are  
9 some people who haven't spoken yet tonight, and I just  
10 wanted to say the obvious, which is you don't have to have a  
11 Ph.D. to talk on the mic. These are public comment  
12 meetings, so if anyone is feeling any shyness or hesitancy,  
13 this is really -- the whole purpose of our meeting tonight  
14 is to collect public comment. And if you haven't had your  
15 chance, you made the effort to come down here tonight. And  
16 if you have something that you want to say, a question or a  
17 comment, that's what the panel is here for. That's what the  
18 environmental impact survey is all about. Take your chance.

19 MS. SING-LEDESMA: Good evening, my name is Karen  
20 Hue Sing-Ledesma, and I'm a resident here on Maui. And  
21 first I would like to say congratulations on your discovery,  
22 Mr. Kuhn, on the sun spots. That's very awesome. I know  
23 why you especially and the science community would like to  
24 have this observatory here on Haleakala, and I'm here just  
25 to simply say I would rather you not be here on the island

1 of Maui. I come here as a kanaka maoli. And I've seen this  
2 is millions and millions of dollars that would be invested  
3 here on the island, and I see the simpler side of life such  
4 as many of my brothers and sisters being homeless here --  
5 here on this island. And so this is where I come from  
6 asking that we keep Haleakala sacred and that you keep the  
7 mana of Hawai`i and that you really believe in sustainable  
8 living. And I ask that you take your incredible telescope  
9 to the other part of the United States. Thank you.

10 KAHU MAXWELL: Kahu Charles Kauluwehe Maxwell.  
11 Several years ago I did a study, cultural study, but I've  
12 got to go back and relate as to what happened many, many  
13 years ago, and I spoke about this in Kula, but in the '40s,  
14 they were using this place for communications. And in the  
15 '60s, they acquired this 18. acres and they started to build  
16 the observatories. Nobody said much; however, when they  
17 built the AEOS, I got involved from day one. I was promised  
18 all kinds of things that that entire building would be like  
19 a mirror, that if you look from downtown, it would reflect  
20 the lava around it and the sky above. They were actually  
21 wanting to fly me to New Mexico to show me the observatory  
22 there.

23 However, as the work progressed, we had met and  
24 talked about the sacredness of Haleakala, how the dust, the  
25 soil, the cinders are sacred to Pele and, of course, the

1 lava is what Pele is all about. About eight months into the  
2 project, I got ill about five weeks. And on the sixth week,  
3 which I went up from the 8,000 foot level, there was a huge  
4 truck that had turned over and one boulder weighing about  
5 three tons was lying on the side. And this Hawaiian truck  
6 driver came run up to me with tears in his eyes and told me,  
7 "Uncle Charlie, this is the last load. They took everything  
8 down the mountain."

9           When I went up to the site, I was so shocked that  
10 they had dug this huge massive hole without me saying one  
11 blessing, saying nothing. It was really, really hurtful. I  
12 had a press conference and the Air Force, one of the top Air  
13 Force people came here to Maui. I met with them and I made  
14 them go down to the crusher in Puunene. They crushed 150  
15 tons of rock from Haleakala. Myself, papa kalakea and my  
16 grandson here, we prayed and asked forgiveness and I  
17 followed the 150 tons of rock. I made them bring it back to  
18 Haleakala, but they couldn't take it up to the top because  
19 once you take out material from the top there, you cannot  
20 take it back. So I made them give it to the National Park  
21 to pave -- to use in the crater with no asphalt or anything  
22 but to fill up all the crevices in the trails, and that's  
23 what they did with the 150 tons.

24           You know, we're talking here. We don't want this,  
25 but how come when we look at the pictures like this, where

1 was everybody when all that facilities was built? You know,  
2 Mary Everson, myself, we fought. We fought the big AEOS.  
3 We fought against the Faulkes. I even stood up and I  
4 invited myself, my sister, my grandson and my other grandson  
5 to a press conference they had with the Prince of England  
6 here at the space center in Kihei. And I disrupted the  
7 hearing when the Prince was going to sign with Governor  
8 Cayetano. And I stood up and I left. And security -- I  
9 didn't know that he had the Secret Service following him,  
10 and I sat on the sidewalk outside. And as he passed by, I  
11 said to the Prince, I says, "Make sure that you are aware  
12 that whatever planning happens at Haleakala that you include  
13 the Native Hawaiians." So two years ago, thanks to Mike,  
14 after all my -- at one time, I didn't like Mike Maberry or  
15 even Charlie Fein because I couldn't trust them. I don't  
16 know if I trust them now, but anyway.

17 (Laughter.)

18 He gave me the opportunity the draw -- to do the  
19 cultural assessment and I brought forth cultural things that  
20 they have to follow. If anything is touched, even if they  
21 move soil up there, they have to have prayers. It has to be  
22 culturally correct. If workers work up there, they got to  
23 do mele komo, an entry chant and an exit chant asking  
24 permission to come on that property and work the land. And  
25 when they leave, they apologize for they disturbed anything.

1 And so that's what have been going on this last year.

2 My grandson is one of the monitors up there. And  
3 he goes up. He prays with the people. Even Japanese, some  
4 Japanese came from Japan about eight months ago and they all  
5 went through our classes with interpreters to find out --  
6 they saw the movie called "Haleakala" with myself, a friend  
7 Charlie Kaupu, Kaeo, and it covered everything. So that,  
8 you know, if we all not going want this up on Haleakala,  
9 fine. But for us as Native Hawaiian people, it's a  
10 wahi pana. It's a place, a sacred place. And even I said a  
11 couple days ago at a meeting with the new Lieutenant  
12 Colonel, I says, "I wish there as nothing up there." That's  
13 what I wish. That's a sacred place. It was sacred before.  
14 How come it's not sacred now? So I'm doing the  
15 Environmental Impact Statement, and they might not want what  
16 I'm going to recommend. But I will recommend strong  
17 cultural observance when they're using the site and when  
18 they're building, if it ever happens. So I had to do some  
19 clarification. Thank you.

20 MR. MABERRY: If I may very briefly just add to  
21 what Kahu said. There is a process that was outlined in the  
22 long-range development plan, and many of you attended, I  
23 recognize seeing you there, the showing that we had of the  
24 "Sense of Place" video of Haleakala down at the MACC just a  
25 few months ago. It's a wonderful piece and it does a very

1 good job of letting those who aren't kanaka maoli get a  
2 sense, get a feel of how important the aina is to the kanaka  
3 maoli. And all of the people on this project that you see  
4 here today have -- even before most of them, before they  
5 even came out here have seen the video. They have  
6 communicated with Kahu and others. We've worked very  
7 closely, as Kahu said, with Dane at the summit.

8           And we are very sensitive and appreciative of  
9 being able to be at the holy site. It is very important to  
10 us. It has -- you know, religion is very individual, right.  
11 Some people have a sense that is not -- that others may find  
12 similar to religion that is not really religion, but that  
13 sense of awe, of being at Haleakala anyone who goes up there  
14 whether you consider yourself religious or not can feel.  
15 And we feel that and we appreciate the opportunity to be  
16 able to work in such a place.

17           I have had the opportunity to work at Haleakala  
18 for 21 years, and that's where my spirit will always be. I  
19 just want you to understand that we do appreciate it.

20           MR. MAYER: I have just one question. Can someone  
21 tell me the elevation of your prime site at the ground  
22 level? What elevation is that?

23           MR. BARR: That's about right, the elevation of  
24 the mountain is at 10,000, and it was at 9,960, something  
25 like that. I can't tell you the exact elevation, but it's

1 in that range.

2 MR. MAYER: 9,960, the base of the thing?

3 MR. MABERRY: Yeah.

4 MR. BARR: That's right. On the floor plan, I  
5 think --

6 MR. TRUITT: The elevation plan.

7 MR. BARR: And these are based on the  
8 topographical map you saw earlier. It's actually not that  
9 one. I think the floor plan has it. Yeah, 9,983 actually.  
10 And again, that's based on the topographical map, which was  
11 this first one and taken off of -- and that's somewhat  
12 imperfect. There's a little bit of work to be done to  
13 verify that, but that would be at the primary site, and then  
14 this site is the base level of the building would be  
15 approximately 10 to 20 feet higher. That's to be  
16 determined, too.

17 MR. MAYER: In other words, the 137 feet added to  
18 that would actually make the top of this building somewhere  
19 around 50 to 100 feet higher than the summit of Haleakala,  
20 is that correct, 137 feet added?

21 MR. MABERRY: On the top of Kolekole Puu.

22 MR. MAYER: The highest point of Haleakala.

23 MR. MABERRY: No, the highest point of Haleakala  
24 is red hill, which is 10,023.

25 MR. MAYER: Okay, it is higher. Some of this

1 building then, the top of this building would be somewhere  
2 in the order of 50 to 80 feet higher than the highest single  
3 point of Haleakala, and I think that's something the public  
4 should be aware of. And that was the profile I was trying  
5 to describe.

6 MR. BRASS: There are still a few people who  
7 haven't had a chance to speak. We have about ten minutes  
8 left.

9 MR. MABERRY: Something that he addressed earlier  
10 that we didn't respond to was viewplane.

11 MR. FEIN: Part of the environmental impact  
12 statements and part of many environmental impact statements  
13 now is something called view corridor analysis. There's  
14 really specialized software now that allows you to perceive  
15 on contour maps exactly where you would see a facility and  
16 where you wouldn't. In addition to that, the Environmental  
17 Impact Statement will also contain renderings from Pukalani,  
18 Kula, Kihei, even Lahaina showing what the facility will  
19 look like from those communities, how much of it you will  
20 see or not see from each of those communities.

21 The long-range development plan actually did some  
22 of that modeling work. We looked at those two sites last  
23 year and we went up step by step to see where visibility  
24 would occur in the different communities. Above something  
25 like 60 feet or 70 feet at the Mees site, the facility would

1 be visible, for example, in Pukalani, but not in Kihei. So  
2 it depends on the community that you're in. It depends on  
3 the height that you're talking about, but we will render  
4 close to -- very close to -- as close to reality as we can  
5 so the public will have an opportunity to see how much of  
6 the building will be visible from your community. I think  
7 that's important. It's come up again and again. It  
8 certainly was important with the AEOS facility, which  
9 sparkles out there in places as distant as Lahaina.

10 And we will make sure that we do that visibility  
11 study so that everybody can see what it would look like.

12 MR. MAYER: Thank you.

13 MR. BARROS: How wide is it?

14 MR. BARR: How wide is it?

15 MR. BARROS: Yeah.

16 MR. BARR: At the widest --

17 MR. MABERRY: The dome.

18 MR. BARR: Right, this -- and I probably should --  
19 I was a little remiss in not going through these dimensions  
20 for those that can't read from all the rows. Essentially  
21 the dome diameter as dictated, as I said before by the  
22 telescope, is 86 feet from side to side. And I kind of  
23 showed an extension here because the widest profile of that  
24 cylindrical shape would be where the catwalk extends out  
25 another six feet beyond that on all sides. Was that the

1 question?

2 MR. MABERRY: Yes.

3 MS. MARTIN: May I speak?

4 MR. MABERRY: Please.

5 MS. MARTIN: My name is Martha Martin, and I have  
6 lived most of my life in Hawai'i. I am now 72 and I have  
7 lived on Maui for over 40 years. And the reason I came to  
8 have chosen to live on Maui is because to me it is a special  
9 place that has evolved from geology for many years, and it  
10 is unique. And I consider Haleakala something like a great  
11 masterpiece that man had made, Chartres Cathedral or  
12 whatever it is that you admire. Haleakala is a special  
13 thing.

14 Now, I respect science a great deal. My father  
15 was a scientist, and I know that people who devote their  
16 lives to science do it not to get rich but because in their  
17 hearts, they feel they can contribute to mankind by  
18 following the science which calls to them. But I know why  
19 you want to come to Haleakala and knowing that you don't  
20 have to ask us in order to do it, you are now asking us to  
21 tell you how we feel. And so what I feel is that I wish you  
22 would build it somewhere else and not on Haleakala, and I  
23 know that astronomers have studied the sun for thousands of  
24 years and have learned a great deal and I think you can  
25 still do it without building the observatory you are

1 planning here but do it some other way. Thank you.

2 MR. BRASS: Any last comments? We have a few more  
3 minutes. Last call. We would like to thank you all for  
4 coming and for giving your input, and if you -- I would  
5 encourage you to take a comment sheet. There is still an  
6 opportunity up until August 14th to submit comments, so if  
7 you should think about this tomorrow and think of something  
8 else you're concerned about, go ahead and submit your  
9 comments. That's the purpose of this process. So thank you  
10 all for coming.

11 MS. COMPOC: There's also lots of literature here  
12 if you think other people in the community would benefit  
13 from what you learned here tonight and would make a comment  
14 based on literature, that's a possibility as well. And if  
15 any of you have a meeting that you would like David and me  
16 to come and facilitate, take a brochure of Mediation  
17 Services of Maui, which is on that table. Mahalo for  
18 coming.

19 (The meeting ended at 8:55 p.m.)

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C E R T I F I C A T I O N

I, RACHELLE PRIMEAUX, Notary Public for the State of Hawaii, certify:

That the proceedings contained herein were taken by me in machine shorthand and were thereafter reduced to print under my supervision by means of computer-aided transcription; that the foregoing represents, to the best of my ability, a true and accurate transcript of the proceedings had in the foregoing matter.

I further certify that I am neither attorney for any of the parties hereto nor in any way concerned with the cause.

Dated this 27<sup>th</sup> day of July, 2005.



NOTARY PUBLIC, State of Hawaii

My commission expires 6/14/08

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## **APPENDIX C**

### **TRANSCRIPTS – SECTION 106 MEETINGS**

- (1) Pukalani Community Center, March 28, 2006**
- (2) Paukūkalo Community Center, May 1, 2006**
- (3) University of Hawai‘i, Institute for Astronomy, Maikalani Facility  
June 16, 2008**
- (4) University of Hawai‘i, Institute for Astronomy, Maikalani Facility  
June 17, 2008**
- (5) University of Hawai‘i, Institute for Astronomy, Maikalani Facility  
August 27, 2008, Afternoon Session**
- (6) University of Hawai‘i, Institute for Astronomy, Maikalani Facility  
August 27, 2008, Evening Session**

**Appendix C(1): Transcripts, Section 106 Meeting, Pukalani Community Center, March 28, 2006**

1

1 NATIONAL SCIENCE FOUNDATION  
2 SECTION 106 FORMAL MEETING  
3 FOR THE ADVANCED TECHNOLOGY SOLAR TELESCOPE  
4 TUESDAY, MARCH 28, 2006

12 Held at the Hannibal Tavares Community Center,  
13 Pukalani, Maui, Hawaii, commencing at 6:15 p.m. on Tuesday,  
14 March 28, 2006.

22 REPORTED BY: JEANNETTE W. IWADO, RPR/CSR #135

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3

1 NATIONAL SCIENCE FOUNDATION FORMAL MEETING  
FOR THE ADVANCED TECHNOLOGY SOLAR TELESCOPE  
2 TRANSCRIPT OF PROCEEDINGS  
3

4 DR. FEIN: Aloha. Good evening, everyone. My  
5 name is Dr. Charlie Fein. I am the environmental consultant  
6 for a proposed project which is called the Advanced  
7 Technology Solar Telescope. This evening we have called for  
8 a meeting concerning the National Historic Preservation Act,  
9 and we will explain more about that in a few moments.

10 I've asked Kahu Charles K. Maxwell to conduct a  
11 brief pule. This is not an endorsement of the project, nor  
12 in any way to be construed as anything other than a  
13 pule. Kahu?

14 MR. CHARLES MAXWELL: Would you rise, please?  
15 (Blessing given in the Hawaiian language)

16 DR. CHARLIE FEIN: We thank you, Kahu. The  
17 Advanced Technology Solar Telescope project is in the  
18 process of undergoing environmental impact analysis leading  
19 to an Environmental Impact Statement. Part of that process  
20 is a federal requirement to adhere to and to deal with the  
21 National Historic Preservation Act, and that's why we're  
22 here tonight.

23 I'm going to tell you briefly about the agenda and  
24 how this is planned to go, and then I will turn the meeting  
25 over to Charisse Carney-Nunes in a moment.

2

1 ATTENDANCE  
2 National Science Foundation Formal Meeting  
3 March 28, 2006  
4

5  
6 Dr. Charlie Fein, Vice President  
KC Environmental, Inc.  
7 P.O. Box 1208  
Makawao, Hawaii 96768  
8

9 Dr. Craig Foltz, Program Officer  
National Science Foundation  
10 4201 Wilson Boulevard, Room 1045  
Arlington, Virginia 22230  
11

12 Jeremy Wagner, Project Director  
National Solar Observatory  
13

Wayne Van Citters, National Science Foundation  
14 Jean McGovern, National Science Foundation  
Tony Gibson, National Science Foundation  
15

16 Charisse Carney-Nunes, Assistant General Counsel  
17  
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1 By the way, anyone who feels like giving testimony  
2 this evening and does not wish to be tele-recorded on video,  
3 please let us know and I will ask that that be turned off.  
4 That is not part of our process. We have a court  
5 stenographer to record testimony.

6 We are in the process of preparing the  
7 Environmental Impact Statement. We've identified historic  
8 properties potentially affected by the proposed Advanced  
9 Technology Solar Telescope, or ATST. In order to assess its  
10 affects and seek ways to avoid, to minimize and mitigate any  
11 adverse effects on these historic properties, we have  
12 initiated consultation with knowledgeable individuals and  
13 groups.

14 Tonight we are going to be requesting to hear from  
15 those individuals and/or groups concerning potential  
16 impacts, perhaps mitigations, or any other comments that the  
17 community wishes to make. This is not the only meeting for  
18 this purpose, there will be further meetings, which will be  
19 discussed in a few minutes.

20 The evening is planned to go as follows. After  
21 Charisse Nunes gives us or lays the ground rules for this  
22 evening -- and by the way, Charisse is a general counsel for  
23 the National Science Foundation, which is the proponent for  
24 this project. Once we go through the ground rules, I notice  
25 that there are people in this room that have not been in

5

1 prior meetings, and so we will provide a brief overview of  
2 the project, just a few minutes, so that you have an idea  
3 about what it is that we're talking about. And then we will  
4 open the floor up for any comments, testimony, and so on.

5 Charisse, would you give us the ground rules?

6 MS. CHARISSE CARNEY-NUNES: Sure. Aloha. I don't  
7 like to think of what I'm doing as setting the ground rules  
8 really, but I do want to make sure that everybody  
9 understands what this Section 106 process is, what that  
10 means, so that we know how we are going to proceed tonight.

11 So first of all, again, my name is Charisse  
12 Carney-Nunes, and I am an assistant general counsel at the  
13 National Science Foundation. I bring you greetings and I  
14 thank you for welcoming us to your island.

15 I wanted to introduce not only myself from NSF,  
16 but also Craig Foltz. He is the program officer for the  
17 proposed ATST project. And we also have Wayne Van Citters  
18 from NSF, and he is the division director for our astronomy  
19 division at NSF. We also have Jean McGovern here from NSF,  
20 and she works to help us plan large facilities projects.  
21 And finally, we have Tony Gibson from NSF, and he works in  
22 our office of legislative and public affairs.

23 So we thought it would be a good idea before the  
24 meeting actually gets started that I explain to everyone a  
25 little bit about the process. So this is a process that's

6

1 called the 106 process. It is our first formal Section 106  
2 consultation meeting for the ATST project.

3 Section 106 refers to Section 106 of the National  
4 Historic Preservation Act. That is a federal law that is  
5 concerned with conserving or enhancing the productive use of  
6 the nation's historic properties. So sometimes we call it  
7 the NHPA, but it's the National Historic Preservation Act.  
8 And Section 106 is a special part of that act that is pretty  
9 simple. It requires federal agencies like NSF to consider  
10 the effects of our actions on historic properties.

11 So basically Section 106 is designed to give the  
12 public, all of you all here tonight, a voice in the federal  
13 decisions that are being made that could have an impact on  
14 historic properties.

15 So, you know, last night it seemed like some  
16 people were like, "Section 106, what are they talking  
17 about?" So I just really wanted everyone to understand that  
18 this is about historic and cultural properties, and  
19 decisions that the federal government is thinking about  
20 making that could have an effect on that.

21 So we're here because NSF is currently considering  
22 a proposal to fund the construction and the operation of a  
23 solar telescope that would be sited on top of Haleakala.  
24 NSF's decision as to whether or not to fund the project has  
25 not been made yet. Before we make the decision we have to

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1 do many things. But two of the things that have to be done,  
2 two of the processes that we have to go through are one, as  
3 Charlie said, we have to conduct an environmental analysis.  
4 We have to prepare a document that's called an Environmental  
5 Impact Statement. And then the second thing that we have to  
6 do is why we're here tonight. We have to consider the  
7 impact that this decision that we're going to make might  
8 have on historic properties.

9 Now, we're still relatively early in both of those  
10 processes, we're still pretty early on. We started the  
11 first step, the environmental analysis, last summer, and  
12 that was when we had public scoping meetings. And many of  
13 you were here for that and some of you were not, and that  
14 process will continue. The next stages in that process are  
15 -- you can ask questions about what those next steps are,  
16 but that's really a separate process to this one. So that  
17 will continue in the coming months.

18 The next thing, we will have an Environmental  
19 Impact Statement, a draft of that that everyone will be able  
20 to comment on, okay. So that's the first process. But  
21 we're here tonight because of the second step, and that is  
22 the step that concerns historic properties.

23 So that brings the obvious question of what is the  
24 historic property. Well, obviously to each of you here  
25 tonight, you know that it's Haleakala, your beloved

8

1 mountain. But the federal regulations actually put the  
2 burden on the federal agency to determine whether or not a  
3 property is historic, okay. So under the federal law it  
4 requires that the agency do that.

5 Well, of course how would we know this? I mean we  
6 don't know your stories, we don't know the legends, and so  
7 the only way that we can do this is to consult with you all.  
8 And so what we did was we hired an expert, we hired a  
9 cultural expert, Kahu Maxwell, and Kahu Maxwell submitted a  
10 report to NSF. It's also been available to the public, and  
11 there have been some public comments on it. But the purpose  
12 of the report was to educate us as a federal agency about  
13 the sacredness of Haleakala and why Haleakala should be  
14 preserved.

15 The report was not in favor of the project. We  
16 simply needed an expert to educate us about the sacredness,  
17 and the report did just that. So what is the result of the  
18 report? Well, I'd say there are three things that are  
19 important. First and foremost, after receiving the report,  
20 NSF made a determination that Haleakala is indeed sacred to  
21 the Native Hawaiian community. We did receive, like I said,  
22 some comments about some details and about the accuracy of  
23 some of the details about maps and things like that. But  
24 that's really not important. The bottom line is that the  
25 sacredness of Haleakala to the Native Hawaiian community is

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1 indisputable.

2 Now, the legal word for this that the regulations  
3 use, as we call it, it's a traditional cultural property.  
4 So in this process you might hear the words traditional  
5 cultural property, or TCP, but that just refers to an  
6 acknowledgment that Haleakala is a sacred place to the  
7 Native Hawaiian community. So that's the first thing.

8 The second thing is that NSF also recognizes the  
9 historic significance of Haleakala to the public here in  
10 Maui and beyond. So we recognize the cultural importance  
11 and the historic importance of Haleakala to the entire  
12 community.

13 And finally, I would say that the third most  
14 important outcome of Kahu Maxwell's report is that NSF is  
15 recognizing that if we go forward with our decision to fund  
16 the ATST project, then that decision would have an adverse  
17 effect on Haleakala, and that adverse effect would have to  
18 be resolved or mitigated. So that brings us to why we're  
19 here tonight.

20 There's just a few things that I am going to end  
21 with for you all to keep in mind about why we're here  
22 tonight, and things that are important about the  
23 regulations, okay. Now I talked about resolving the impact.  
24 The regulations talk about resolving the impact in terms of  
25 avoiding the impact as one thing, minimizing the impact, and

10

1 mitigating the impact. So that's what the regulations talk  
2 about.

3 The other thing to keep in mind is that the  
4 National Historic Preservation Act was amended in 1992.  
5 It's a really old law. I think it was passed like in the  
6 late '60's, but it was amended in 1992 so that it would  
7 place a special emphasis on Native American and Native  
8 Hawaiian organizations. So the law was specifically amended  
9 to let federal agencies know that when they conduct these  
10 Section 106 consultations they have to place a major  
11 emphasis on Native Hawaiian organizations.

12 Okay, so based on this, NSF must consult with  
13 Native Hawaiian organizations if we're considering an action  
14 that might impact a resource. Here it's Haleakala that the  
15 Native Hawaiian community attaches cultural or religious  
16 significance to.

17 So we're being as open and as up-front about this  
18 process as we can, but we do need your help in identifying  
19 the right organizations to bring into this process, and to  
20 make sure that NSF fulfills its obligation to place a major  
21 emphasis on hearing from Native Hawaiians and the Native  
22 Hawaiian community.

23 Now, with all that being said, it doesn't mean  
24 that we're not also interested in hearing from the public,  
25 because we do, as I said earlier, respect the historical

11

1 significance and the majesty and the cultural importance of  
2 Haleakala to the entire public as well.

3 The only thing that I would ask is that remember  
4 that this process, the 106 process, is about the historic  
5 and cultural significance of Haleakala and not about  
6 environmental matters generally, okay. Those matters are  
7 going to be dealt with in the Environmental Impact Statement  
8 process. But this process here is to talk about the  
9 historic and cultural significance of Haleakala with a  
10 special emphasis being placed on the Native Hawaiian  
11 community.

12 And with that said, we ask you again to help us  
13 give the Native Hawaiian community the proper respect and  
14 deference. And on behalf of NSF, we just want to thank you,  
15 Kahu, for the blessing that you gave to this process,  
16 because it's truly our hope that this discussion here this  
17 evening will be undertaken with a spirit of mutual respect,  
18 productive consultation, education, and enlightenment for  
19 all of us in the process.

20 If you have any questions about the process,  
21 please let me know. I have cards I'll give to anyone. So  
22 that's it.

23 DR. CHARLIE FEIN: Thank you, Charisse. As I  
24 mentioned when we first began, there are individuals here  
25 who have not seen or been exposed to this proposed project,

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1 and so we will spend a few minutes at your indulgence in  
2 going through a brief overview of the scientific objectives  
3 and the facility designed for this project, proposed design.

4 I'd like to begin that process by asking Craig  
5 Foltz, who is the program officer for the National Science  
6 Foundation, to speak briefly about the project.

7 DR. CRAIG FOLTZ: Aloha. I will try to be brief.  
8 And I want to add my thanks to Charisse, because I love my  
9 job. Working in a place like the NSF you never stop  
10 learning. But I have to say that that which I have learned  
11 in this process has been very not only extensive, but very  
12 meaningful, and I hope that that continues.

13 I want to change the subject a little bit from the  
14 talks that most of you I think have heard me talk about  
15 before, because as I think about this project I realize that  
16 what is second nature to us when we say acronyms like NSF or  
17 NSO are not familiar to you. And it is difficult I think  
18 for you to jump in with both feet and understand what is the  
19 role of the NSF, what is the NSF, and specifically what is  
20 the relationship between the NSF and this project. But I  
21 would just like to talk for maybe 10 minutes at the most.

22 The NSF, the National Science Foundation, is a  
23 federal agency that is in the executive branch of the  
24 federal government. So we work for the president. We have  
25 a mission that is encapsulated in our mission statement,

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1 which is simply put, "Enabling the nation's future through  
2 discovery, learning and innovation."  
3 Well, those are grand words, but what does it  
4 mean? At the heart of the NSF is the fact that the NSF is a  
5 responsive agency, it's not a proactive agency. It is  
6 different in many ways from many other federal agencies,  
7 such as the Department of Defense, NASA, the Department of  
8 Energy and so on, and it's different in the following way.

9 The Department of Defense or NASA can decide  
10 unilaterally to do projects. They have a budget, they can  
11 make their plans, they can establish their own priorities,  
12 and they can do the project. NSF doesn't work like that.  
13 NSF's priorities for that which it will do, for that which  
14 it will fund, basically we are a funding agency. We provide  
15 money. We provide money to organizations, to individual  
16 investigators, to universities, to laboratories and so on to  
17 carry out science, technology, engineering, mathematical  
18 research, and education.

19 And the priorities that we adopt are not set by  
20 the NSF, and that's very important. We are scientists.  
21 Wayne is an astronomer, I am an astronomer. We would not be  
22 so presumptuous as to say we know best what the nation  
23 wants, we know best what the astronomers need. In fact,  
24 what we do, rather than unilaterally designing,  
25 constructing, and operating particle accelerators or

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1 observatories or laboratories, we respond to requests from  
2 the broad scientific community, and those requests are based  
3 on curiosity. At the heart of science is curiosity.

4 And so we talk about the science drivers for a  
5 project or for a new facility, and that's basically what is  
6 it that we're curious about, that we need to know about, and  
7 how can we design a facility to get at those problems.

8 In the case of this project, the Advanced  
9 Technology Solar Telescope, as you can probably tell from  
10 its name, it is a telescope that will study the sun. The  
11 principle things that we are curious about, some of them are  
12 actually fairly obvious. What is the connection between the  
13 activity on the sun, the magnetic fields in the atmosphere  
14 of the sun, and the earth's climate. What is the interface  
15 or what are the mechanisms that cause the sun to drive what  
16 we call space weather.

17 Space weather is the interaction of material that  
18 flows off of the sun throughout the solar system and impacts  
19 the earth. It actually has an impact on our lives because  
20 it can shake the earth's magnetic field. It can pose a  
21 hazard to people in space or high elevations and so on.

22 Thirdly, the sun is a star, it's the nearest star,  
23 and as such it's a model for our understanding of other  
24 stars. And I think it's safe to say if we didn't have the  
25 sun -- this is an absurd question. If we didn't have the

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1 sun we wouldn't be able to worry about what the other stars  
2 were, because we wouldn't be here. But if we did not have  
3 the sun as a model we would not understand what we do  
4 understand about the way stars form and live and age.

5 And finally, the sun is a laboratory for physics,  
6 because the conditions that exist in the solar atmosphere,  
7 that is, ionized material in a turbulent state that's linked  
8 to strong magnetic fields have analogies throughout the  
9 universe and actually in laboratory situations. So we can  
10 study things on the sun that would apply to other objects of  
11 astrophysical importance. Not necessarily importance to us  
12 on earth, but this is a subject that drives our curiosity,  
13 and we pursue.

14 These questions are important enough that the  
15 development of a new large solar telescope was a  
16 recommendation of the entire solar physics and solar  
17 astronomy community. It was a recommendation to the  
18 community. The community then responded to that  
19 recommendation by writing a proposal to us. Actually, a  
20 series of proposals. These are big documents and they're  
21 very rigorous and very difficult to write, and they lay out  
22 the science case. They try to convince us that such a thing  
23 can be built. They ask us for money to design it, and  
24 eventually they would ask us for money to construct it.

25 And we evaluate those projects not by the five of

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1 us sitting down and saying, "Hey, this one looks good." We  
2 send these out for peer review to other scientists  
3 disconnected from the project. We also ask engineers, we  
4 ask project managers and so on to evaluate them, and we look  
5 at their importance with respect to other fields. We have  
6 lots of criteria. And we may fund them if we have enough  
7 money and if they meet a rigorous set of standards.

8 What I want to point out, and this should be  
9 stressed and you may see this as a fine line, a fine  
10 distinction, but honestly it's not. The ATST is not a NSF  
11 project, it's a project of the whole community of solar  
12 physicists led by the National Solar Observatory.

13 We are here today because we have funded its  
14 development. We have not established its design. We funded  
15 its development and we would fund or will fund its  
16 construction, a large part of its construction, perhaps not  
17 all of its construction, if this process that we're going  
18 through, the review process, the evaluation of the site, the  
19 impact and so on, if it is successful.

20 So keep it in mind, this is not an NSF project,  
21 this is a project that is led out of the community. I am  
22 not going to go into this, but this is the recommendation  
23 which comes from a survey that astronomers do every ten  
24 years. Every ten years huge numbers of astronomers get  
25 together and say, "What are the big outstanding problems?"

17

1 What is the best way for us to spend our money?" And in  
2 fact, this is the endorsement.

3 And as I said, I won't read it, but if anybody is  
4 interested I can certainly provide it. The ATST will study  
5 solar activity. I am not going to talk about this in any  
6 detail. I talked about it last night.

7 It should suffice to say that the outer surface of  
8 the sun is not a simple smooth surface. It's not like a cue  
9 ball. It's in fact a boiling, turbulent, very hot, 10,000  
10 degrees Fahrenheit or so medium, which has magnetic fields  
11 entwined in it, which occasionally come together and form  
12 sun spots.

13 The sun spots underlie active regions, regions of  
14 extremely energetic activity, which sometimes throw off  
15 prominences and spicules. Occasionally they flare into  
16 enormous explosions, enormous explosions. You know, you  
17 don't measure these things in kilotons or megatons, these  
18 are tremendous explosions which throw material out, and this  
19 material can impact the earth or other objects in the solar  
20 system. The ATST will also study the outer envelope, the  
21 outer atmosphere of the sun, the corona. It's a very  
22 general purpose, a competent design.

23 This is what it looks like in brief. Jeremy  
24 Wagner, the project manager, will talk a little bit, but I  
25 just want to point out a few salient features. If this

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1 project is funded and constructed -- once again, we have not  
2 made that decision, and I want to reinforce that -- the ATST  
3 will replace all major solar facilities of its kind. There  
4 is nothing else like it planned right now worldwide. It  
5 would be the flagship facility for ground-based solar  
6 physics. It will do science that cannot be done from  
7 spacecraft.

8 Now, there's science that can be done by  
9 spacecraft that won't be done by this telescope, but for  
10 observing the sun in exquisite detail there is nothing that  
11 would compete with this instrument. And in fact, we have to  
12 observe the sun in exquisite detail. It has tremendous  
13 impacts, it might address issues of climate change, it might  
14 address astronaut safety, space weather, of course  
15 educational programs. And it provides flexibility and  
16 upgrade paths to give it a reasonably long lifetime, and it  
17 would be the cornerstone for the next generation of solar  
18 physicists.

19 The project team is broad. It's lead by  
20 astronomers from the National Solar Observatory, which is an  
21 observatory in New Mexico, the high altitude observatory in  
22 Boulder, Colorado, the University of Hawaii Institute for  
23 Astronomy, the University of Chicago, and the New Jersey  
24 Institute of Technology, and there are roughly 22 other  
25 institutions. There are also international partners. The

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1 poster over there lists them. So it's a very broad-based,  
2 ambitious project.

3 And I want you to keep the following points in  
4 mind. This is a very expensive project. The estimates of  
5 the cost for the total construction right now are running on  
6 the order of \$175 million. We have not made the decision to  
7 fund or not to fund the project. That will only be made  
8 after the project undergoes yet more review. The project  
9 has been reviewed extensively. Jeremy is very tired; I'm  
10 tired. We review for science return, we review for the  
11 management, the capability of the team, the breadth of the  
12 science, the impact on society, the impact on other fields,  
13 and so on.

14 We also evaluate on the impacts on the site. And  
15 I have to say here we have spent more time with you in the  
16 broadest sense -- and I have enjoyed almost every minute of  
17 it -- than we have in a typical review of the science  
18 capability of this instrument. We are not taking the impact  
19 of this telescope on the site lightly, and I mean that from  
20 my heart.

21 However, the telescope is well-advanced in the  
22 decision process. It has received extremely favorable  
23 reviews. If it had not, as much as I have enjoyed my time  
24 with you, I wouldn't be here, the decision would have been  
25 made. So the project is moving forward. It has not yet

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1 reached a decision point, but the reviews have been good.

2 Finally, the selection of the Haleakala site and  
3 the precise locations for the possible construction really  
4 followed an exhaustive process. A selection from 72  
5 potential sites. The site selection was not done  
6 capriciously. We did not say, "Hey, those guys in Hawaii  
7 have a nice looking site on Maui and it's got a road and  
8 it's got a sewer. Let's put it over there." We didn't do  
9 that. The site selection was done on the basis of objective  
10 criteria that were applied to 72 sites, down selected to  
11 six, down selected to three. An enormous amount of money  
12 was spent, an enormous amount of time was spent, down  
13 selected to one.

14 So the site selection was not done haphazardly.  
15 And I give you my word, nor will the assessment. Thank you.

16 DR. CHARLIE FEIN: Thank you, Craig. I am going  
17 to ask Jeremy Wagner, who is the ATST project manager, to  
18 briefly talk about the facility itself for those of you that  
19 have no information about the proposed project, and what it  
20 might look like.

21 MR. JEREMY WAGNER: Hi. I'm Jeremy Wagner, I'm  
22 the project manager for ATST. Craig says I'm tired. I  
23 don't feel tired. But I can give you a quick overview of  
24 some of the details that went into the design and some of  
25 the details about how it will appear if it were to go to

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1 Haleakala.

2 This is just a quick rendering of what ATST is.  
3 Its support buildings, an enclosure, a pier to hold the  
4 telescope, with the telescope and its optics right there in  
5 the middle. An idea of what ATST does, you can take a  
6 region on the sun, start moving in to look at it closer and  
7 closer and closer. And what we want to do with ATST is get  
8 down here to the fundamental size of the structures on the  
9 sun that actually affect the physics of the magnetic fields.

10 And so in some respects it's almost a microscope. I  
11 mean we're looking at very small features on the order of 20  
12 miles, 30 miles, to understand what drives the sun.

13 So let me tell you a little bit about ATST and  
14 what it might look like, where it is up on the telescope --  
15 up on the mountain, excuse me. This is an overall site plan  
16 of the Haleakala Observatory site. This is the primary  
17 proposed site for ATST. It's just east of the existing Mees  
18 telescope here.

19 The alternate site is referred to as the Reber  
20 Circle site. It's slightly higher than Mees, slightly  
21 closer to the Air Force facility. You can see the petrel  
22 burrows here where the birds are. There are archeological  
23 sites indicated, so all the restrictions are there. So that  
24 gives you an idea of where it is.

25 Here's a couple of images of the two proposed

22

1 sites. The Mees site, existing Mees telescope, this is our  
2 site survey test tower, one of the six that we set up on the  
3 sites that we tested in detail. And then the Reber Circle  
4 site. Both sites were in the long-range development plan  
5 that Haleakala Observatory put together and finalized a  
6 little over a year ago.

7 And so we started our Environmental Impact  
8 Statement process building on that process. Many of the  
9 studies that were done during that process we can then pick  
10 up and update and apply to our process as well. And the  
11 public has seen the long-range development plan and has had  
12 a chance then to come up to speed on some of these issues in  
13 our process.

14 Here is a cut-away view of the ATST to give you  
15 some idea of what it's about. As I said, the telescope  
16 optical support structure is here, the large four meter  
17 aperture mirror is here. So the light from the sun as we  
18 track it would come through the entrance aperture of the  
19 enclosure, strike the primary mirror, and then start to form  
20 a focus down at the different instrument stations where the  
21 astronomers would actually obtain the data that they would  
22 then use to try to study these features on the sun.

23 So there's a laboratory space which will allow a  
24 number of instruments to observe the sun simultaneously in  
25 different wave lengths. Different colors of light, for

23

1 example. There is another station up here which is  
2 primarily focused at the corona. Craig talked about this  
3 tenuous outer atmosphere. So we have a station up here that  
4 has very few mirrors between it and the sun, and that  
5 reduces the scattered light enough so that we can look at  
6 this very faint corona around the sun. And so we've built  
7 those two requirements into this.

8 And Haleakala, there were a couple of reasons that  
9 it really came to the top of the list of sites that we  
10 looked at. It has very dark skies during the day. I mean  
11 if you hold your thumb over the sun when you are up there on  
12 a good day the sky is uniformly dark. It's uniformly the  
13 same color blue as you move in towards the sun and ride up  
14 to where the sun is, because there's very little dust in  
15 that air up there.

16 So we did the site survey, understood what the  
17 characteristics of the various sites were. The height of  
18 the telescope right here above the ground was established  
19 from that data. This is to allow the telescope optics to  
20 get above the disturbed air that's created by the sun  
21 heating the volcanic rock.

22 So I don't know if you have driven on a road and  
23 you see the shimmering on the road. We have to get up above  
24 that. So that actually establishes the height of the  
25 facility. So you place the mirror there, then the enclosure

24

1 goes around it to protect it from rain and ice and wind and  
2 that sort of thing. The support facilities then are really  
3 kept to a minimum, but they contain a control center,  
4 computers, a facility for servicing the aluminum coatings on  
5 the different mirrors, that sort of thing.

6 Here is the existing Mees facility for scale,  
7 because we don't want to hide how big this thing is. I've  
8 put the dimensions up here. It's 143 feet, so 92 feet up to  
9 the primary mirror, 137 feet up to the top of the enclosure,  
10 an additional six feet up to the top of the entrance  
11 aperture, which has to have a cover to keep snow and such  
12 out. So 143 feet tall. So it's not a short structure,  
13 okay.

14 And there is a utility facility over here which is  
15 far enough away from the main buildings and the enclosure  
16 that we can actually paint it the same color as the lava  
17 rock. Unfortunately, with a solar telescope in the sense  
18 that you have heat light energy from the object you are  
19 observing impinging on the structures itself, it's not like  
20 nighttime where you don't really have that.

21 So when we raise the telescope to get it up away  
22 from these hot lava rocks we have to keep the sun from  
23 heating the structures around the telescope, because that  
24 would do the same thing, it would create a boundary layer up  
25 around the telescope and destroy the beautiful image quality

25

1 that we can obtain from the site that the site provides. So  
2 the structures are painted white and the enclosures, for  
3 example, are cool.

4 This is a plan view looking down. This is  
5 actually the primary proposed site just east of Mees. So  
6 you have the existing Mees facility here, the pier for  
7 supporting the telescope, the optical support structure, the  
8 mirrors, the drives, the mounts, the foundation for the  
9 enclosure, the building, the utility building, parking lot,  
10 access for getting mirrors in and out, large pieces. And a  
11 similar design for the Reber Circle site, the alternate  
12 site.

13 Okay, the materials and appearance. I talked a  
14 little bit about the heating and why it's white. But there  
15 are cooling panels here that have liquid that would carry  
16 the heat away from the energy that the sun is putting on the  
17 structure. And so we can control then the temperature so  
18 that we don't disturb the image quality that's delivered  
19 from the site.

20 We also have vents in the enclosure. This is the  
21 rotating part. As you track the sun, the enclosure then  
22 would rotate with that to allow you to observe the sun. But  
23 we have vents so that we can allow the air that moves across  
24 the top of the mountain to flow through the facility so that  
25 heat, for example, doesn't build up inside the enclosure.

26

1 So we can maintain the quality of that image all the way  
2 across as we track the sun.

3 Let's see, what else can I say? The utility  
4 building is painted brown. This is where pumps and  
5 generators and that sort of thing would be. It's a little  
6 bit further away from the buildings so that it doesn't  
7 produce anything that would disturb the air here as well.  
8 There are solar panels on the lower enclosure that would  
9 allow us to gently draw the air through that as well,  
10 because in the morning on Haleakala that's when the scene is  
11 the best. The sun rises, and very quickly the scene is just  
12 excellent up there. So the sun will be hitting this whole  
13 structure in the morning coming from the east, so we have to  
14 cool these areas as well.

15 Here is a rendering of what the ATST might look  
16 like at the Mees site. The existing telescope is here.  
17 Here is a doorway to give you another idea of the scale,  
18 just so that's clear. This is a rendering then looking  
19 north from that site on the Reber Circle alternate site with  
20 the ATST structure and building there. The utility building  
21 is over here.

22 So to summarize then, two potential sites up there  
23 that were identified. They're at good seeing locations.  
24 There is enough available space to accommodate the  
25 structures, the buildings, the support. The enclosure would

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1 be the most dominant visible element. It is high enough to  
2 allow good seeing for the telescope, large enough to allow  
3 the telescope to exist inside of it, white to minimize the  
4 solar heating. The support operations building is close to  
5 the telescope, so its also white, and just large enough for  
6 the telescope-related activities.

7 Its interesting to me the astronomers and the  
8 public agree on this, they want the telescope structures and  
9 the buildings to be as small as possible because they don't  
10 want to disturb the image quality that's provided by the  
11 site, any more than the public wants to see the facilities.  
12 The existing structure is utilized for Mees so that we don't  
13 have to build something else.

14 The utility building is remote, far enough away  
15 that it doesn't disturb the scene. It can be painted brown.  
16 It's sound insulated because there will be pumps and such  
17 inside up there. So we want to maintain that quiet up on  
18 the mountain as well.

19 A quick overview of the schedule, just to make  
20 sure that you have a good understanding of this. The orange  
21 line indicates where we are today. We've gone through a  
22 number of reviews. The NSF has been looking at this  
23 closely, as Craig said. We are finishing up our designs.  
24 The site EIS process is underway. The NSF has a number of  
25 steps that it has to take before it could make a decision on

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1 this. The site construction would take about this period of  
2 time.

3 The heavy excavation would be done right up front,  
4 then you go into the erection of the structures, get the  
5 enclosure together, bring in the mounts for the optics, test  
6 those in this period, bring in the optics then, put the  
7 telescope together, put light into the facility, make sure  
8 that all of your control systems, that the performance of  
9 the system is meeting the science requirements, bring in the  
10 scientific instrumentation, the camera systems, the data  
11 handling systems, and then move into first light out in this  
12 period, operations then in 2014. This is the earliest  
13 possible start for construction if the NSF were to approve  
14 the project.

15 And actually, NSF doesn't necessarily even approve  
16 the project, they propose it to the National Science Board.  
17 The National Science Board, if they're satisfied with the  
18 project, then you start talking about the Office of  
19 Management and Budget and Congress and the NSF working  
20 through that to see if they actually want to appropriate the  
21 money. Congress actually makes the decision. Okay.

22 DR. CHARLIE FEIN: Thank you, Jeremy. In  
23 deference to the fact that this is a Section 106  
24 consultation, I am only going to spend a few moments on the  
25 status of the environmental impact process, and then I'd

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1 like to begin the testimony.

2 This is the Environmental Impact Statement  
3 process. This is where we are now. We anticipate releasing  
4 a Draft Environmental Impact Statement sometime in May,  
5 perhaps late May. That document will be a public document,  
6 it will be available for public review, it will be in all  
7 the libraries. Individuals who signed up for notification  
8 will receive notification. We will assist anybody who can't  
9 get to a library, we'll make sure that anybody who wants to  
10 read that document will have an opportunity to read it.

11 I will not go into the various surveys, studies,  
12 potential impacts this evening. What I wanted to do  
13 quickly, for those of you who have not been in one of these  
14 before, is to give you a brief look at what it potentially  
15 might look like from various places around the island.

16 So we've looked at various places and produced  
17 renderings on the various weather conditions. This is what  
18 the facility would look like if, for example, it were built  
19 at Reber Circle. This would be the most visible. The  
20 alternative site would be the most visible from that  
21 location. Okay, this is again what it would look like from  
22 Ma'alaea Harbor. It would be visible. You see it up there.  
23 That wasn't a particularly clear day, but it was a more  
24 typical tradewind day.

25 This is what the facility would look like in the

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1 Mees position from North Kihei, Mokulele Highway, Piilani  
2 Highway. You would see it right there, so it would be  
3 visible from that location. Again, from Lipoa this is what  
4 it would look like. It would be visible from South Maui if  
5 you had really good binoculars.

6 Okay, this is Keonekai. This was on an  
7 exceptionally clear day, which we don't get very often, low  
8 humidity, and it would be visible here. This facility is  
9 the Air Force Electro Optical System. This is -- I'm sorry,  
10 this is the Air Force Electro Optical System. So you can  
11 see how it would look compared to those.

12 This is how it would look in the proposed Reber  
13 Circle site. From the same location even more visible. The  
14 alternative site is more visible in most places than the  
15 primary site, as you can see. And this is how it would look  
16 from the Red Hill overlook in the national park. This is in  
17 the Mees location. I didn't bring the Reber Circle, but  
18 simply move the building over to here (indicating). The  
19 alternative location is right there at Reber Circle.

20 This is the University of Hawaii facilities, the  
21 magnet facility, and back in here other University of Hawaii  
22 facilities. So this is how the new facility would look at  
23 that location from Red Hill.

24 Okay, that's all I wanted to do this evening,  
25 because I wanted to give ample opportunity for individuals

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1 with Native Hawaiian interests to express testimony, make  
2 comments, and so on. And Kahu Maxwell has asked to go  
3 first. I know he's not feeling 100 percent tonight, but I'd  
4 like to give him the opportunity to do that.

5 MR. CHARLES MAXWELL: Aloha, everybody. First of  
6 all, before I begin, let me tell you that I was hired to do  
7 the cultural and the traditional studies of Haleakala, but  
8 that doesn't make me in favor of ATST. I am not in favor of  
9 this. Let me explain, first of all, though, the history in  
10 the back of this.

11 I was born in Lahaina, raised in Kula, and when I  
12 was about 13 years old it was the first time that I went  
13 into Haleakala Crater hunting with my neighbors. And over  
14 the years I had the honor to hike in there and hunt, and I  
15 got to know the crater like the back of my hand.

16 So finally in about 1965, 1968, Hugo Huntzinger  
17 came to the national park and he told me, you know, if I  
18 knew where the burials were in Haleakala National Park. I  
19 said yes, some of the trails that goes down in the crater  
20 goes right next to some burial caves. So we spent, oh,  
21 about a year and a half relocating all the trails within  
22 Haleakala so that it wouldn't impact burial caves. And  
23 there is a lot, there is burial caves.

24 And so in the late forties and the early fifties  
25 activity started to happen up in Haleakala with antennas.

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1 First it was just antennas. I was a young boy, I couldn't  
2 do nothing. But you have got to remember at the time when  
3 these things were happening Hawaiians had no say. They did  
4 anything that they wanted to the land. They had no say.  
5 They could build anything on anywhere. They had no say.

6 So finally, after getting very discouraged with  
7 what's happening in Haleakala Crater itself, where the  
8 trails that the horses used to go through was only four feet  
9 wide, now it's 14 feet wide. And if you go up in a  
10 helicopter you see trails all on the sacred pu'u that never  
11 had before. And apparently it's not being taken care of.  
12 So I have a lot of hope in this new superintendent that came  
13 here.

14 Okay, about twelve years ago, nine years ago they  
15 asked me questions about building this what I call the  
16 blight up in Haleakala, the EOS, the Air Force observatory.  
17 And it was amazing, these people from Washington and  
18 everywhere else laid maps and they said, you know, it will  
19 have a reflective finish. You could not see it from down  
20 here, it would reflect the lava. And they showed me  
21 pictures of New Mexico, and it looked nice. Stupid me, I  
22 never tell them. They wanted to take me to New Mexico. I  
23 never want to go. I said, "No, no, it's cool."

24 So they hired me as a consultant and I set  
25 restrictions. The restrictions that you saw in my report

33

1 was not for ATST, it was for EOS. And I told them, you know  
2 what, Hawaiians in the past used to go up there and pay  
3 tribute. They used to teach, the kahuna poepoe, everything.  
4 And my knowledge came from Papa Kaalakea. In fact, the real  
5 name of Haleakala is Alahalekala, The Calling of the Sun,  
6 according to Papa Kaalakea.

7 Okay, I got sick on a five-week period. At the  
8 end of five weeks I'm up in the 8,000 foot level going to  
9 make an inspection. And in fact, before that I asked them,  
10 "How come, you know, it looks aluminum, the thing." "Oh,  
11 no, the final thing going be all mirror."

12 So about the 8,000 foot level I see this huge  
13 truck turned over on its side, and a 3 ton boulder rolled  
14 out of the truck. And this Hawaiian truck driver ran to me  
15 and he said, "Uncle Charlie" and with tears in his eyes he  
16 said, "This is the last load of 150 tons of rock that we  
17 took out from EOS." I went berserk, I went crazy. And I  
18 called Dana, I called the newspapers. And they didn't want  
19 to tell me where the rock was until I insisted where it was.  
20 And they had taken it down to Puunene and crushed the 150  
21 tons of rock.

22 Papa Kaalakea, who I was blessing places with, I  
23 was really upset, I was crying, I told him, "Papa, they have  
24 no respect. This is the lava. This is Pele. This is the  
25 essence of Pele, and they have no respect." He said, "Boy,

34

1 you know what we have got to do? We have got to go pule."

2 So I called whoever. They came from New Mexico, I  
3 don't know who else was here, I don't know if Charlie Fein,  
4 you was probably there. I didn't like Charlie Fein, I hated  
5 his guts at that time. I tell you the truth, I couldn't  
6 trust him. And anyway, you know, I'm sorry, but my emotions  
7 coming out, Charlie.

8 Okay. So Papa, myself and my grandson Uluwehi, we  
9 went down to the pile of rocks. We had all the workers  
10 stop. I told them, "You know what, we are going to take  
11 this back to Haleakala. I want every piece of rock taken  
12 back to Haleakala."

13 I found out that once it left the top you cannot  
14 put back because it's crushed and it has invasive species.  
15 So what I did was I donated to the national park for them to  
16 cover the cracks in the crater of the trail, but don't put  
17 no asphalt on it or concrete. So I followed nine or ten  
18 truckloads up to Haleakala. I followed personally one after  
19 another and returned that 150 tons of rock up there. And I  
20 was completely blown away. I quit.

21 But see, just like this project, when they asked  
22 me if I wanted it, I had experience. If they don't find  
23 somebody who will take it, they will find somebody. Even  
24 from Honolulu they had found someone to do a cultural impact  
25 statement about Haleakala, and I protested against it

35

1 because they're not even from here.

2 So when this project came along I asked these  
3 people so many questions, "Is it bullshit what you are  
4 telling me?" "Is the Air Force going to take over this some  
5 day?" "Is this part of the space thing where, you know,  
6 we're the number third target in the State of Hawaii?" And  
7 they promised me over and over that it was not.

8 So I talked to some people. One of them is in the  
9 room here. And incidentally, after EOS became the Faulkes  
10 Observatory they wanted to hire me. And it's on my website,  
11 they dug down. In fact, poor Charlie Fein, his picture is  
12 on my website still yet. But Ben Cayetano and all these  
13 state officials had a press conference in the Kihei  
14 Technology Park, and the only one here that was with me was  
15 my sister right there and my grandson Kamalii, and Prince  
16 Albert. He came from England.

17 And in the middle of the press conference I stood  
18 up before they were going to sign the paper. I said, "Hey,  
19 how can you do this without even consulting Hawaiians? It  
20 is our sacred mountain. What the hell are you doing?" And  
21 I never know had Secret Service. They went stand up. I  
22 never know that. Me, my sister, my grandson, we walked out.  
23 But nobody else came out because they were all told to stay  
24 in the room.

25 So I sat on the sidewalk out there by that -- what

36

1 is that, DEBD, the meeting room. I sat on the sidewalk.

2 And here Prince Albert and Cayetano, Mazie Hirano, they all  
3 came out. I said, "Remember, Prince Albert, what I told  
4 you. This is a sacred mountain." So he came up to me, and  
5 his security was trying to push him in the limo. I says,  
6 "Ben can tell you this is a sacred mountain." He told me,  
7 "Who is Ben?" I said, "The governor right here next to you.  
8 He can tell you." And Ben with his laugh, his smile, you  
9 know, he left it out. For Faulkes, for EOS, we have nothing  
10 as Hawaiians. They used our land, but we have nothing.  
11 They didn't give us any cultural impact, nothing, nothing at  
12 all.

13 This time it's different, much different. This  
14 time and this is the right place, I never gave this out.  
15 This is for you, if they're going to build this. And, you  
16 know, we have got to be practical, because even Dan Inouye  
17 called me with EOS. He told me, "Charlie, what's the fuss?  
18 I want you come out and bless the place." I said, "Hell,  
19 no, I'm not." But they got Akone Akana and his dancers to  
20 go up there to bless the place, okay.

21 This time I told him no way. It's going to be  
22 different. If Congress -- and it depends on Congress, you  
23 heard him say that right here. Put up your hand. You said  
24 it depends on Congress. Congress is the deciding factor.  
25 Who the hell are we if Congress says yes, it's going to

37

1 happen? And if it's going to happen, this is my proposal.  
 2 To create Halau Ehime Na Nahoku, Center For Traditional  
 3 Hawaiian Navigation and Astronomy.  
 4 Proposal for creation: Halau Ehimi Na Nahoku,  
 5 Center For Traditional Hawaiian Navigation and Astronomy  
 6 will be a collaboration of community and cultural resources  
 7 to provide a venue to Ehime Na Nahoku, or to search or  
 8 gather knowledge about the bright stars above us.  
 9 The center's purposes will be two. One, to create  
 10 and produce, collaborate and administer curriculum for  
 11 students from kindergarten through secondary and  
 12 post-secondary collaboration which focus on traditional and  
 13 modern astronomy and traditional Hawaiian navigation. This  
 14 product would be for public and private schools. I was  
 15 thinking I wanted for Kamehameha School only, because it's  
 16 right here. But there's a lot of Hawaiians who are not in  
 17 Kamehameha School, they should have the right to go through  
 18 this.  
 19 Number two is to promote edification of  
 20 traditional Hawaiian techniques in astronomy and navigation,  
 21 and to integrate these concepts with scientific knowledge,  
 22 and produce traditional interpretations of the universe, and  
 23 the understanding of the Native Hawaiian relationship to the  
 24 surrounding areas and the world. You know, unlock the  
 25 methods that the Hawaiians used to come here.

38

1 We as Native Hawaiians have only six senses, but  
 2 our ancestors had six, seven and eight senses that we do not  
 3 possess today. Where is it? You know, they said they could  
 4 levitate, they could move rocks by praying, they could plant  
 5 bananas. In five minutes it would grow and give fruit,  
 6 flower and give fruit. This is what our kahunas used to do.  
 7 Where is this knowledge? If we can tap just a little bit,  
 8 just a little bit from the skies and share it with our  
 9 people, it would be all right.  
 10 To prepare students of all ages with traditional  
 11 knowledge and modern scientific techniques that would cause  
 12 future interest in astronomy and establish Native Hawaiian  
 13 expertise in this subject.  
 14 See, all of these guys from the mainland don't  
 15 understand that we live on an island. We're an island with  
 16 water surrounding us. This is the difference with the  
 17 continent. You have to have a different mentality, and this  
 18 is what we want to find out.  
 19 To create and manage a scholarship fund for  
 20 individuals seeking a post-high education on the island of  
 21 Maui. And statistics show, and I see some teachers in here,  
 22 Kiope, and they will show that our people are on the bottom  
 23 of the learning curve in everything, welfare, all the social  
 24 ills Hawaiians make up. And that's where -- and that's why  
 25 we should need something like this to help us to regain what

39

1 we lost.  
 2 Even Kamehameha Schools, everybody says "Ah,  
 3 that's for Hawaiians." But 165 years ago what happened to  
 4 our people and why did Princess Pauahi create Kamehameha  
 5 Schools was because the conditions then is the same if not  
 6 worse with our people now.  
 7 Okay, to create a planetarium. I'm saying that  
 8 right? To create a planetarium with celestial bodies of the  
 9 solar system that duplicate traditional methods used by  
 10 Hawaiians to travel thousands of miles throughout the  
 11 Pacific in double-hulled canoes using the knowledge of their  
 12 natural elements and the traditional and native instincts as  
 13 their guides.  
 14 In 1492 Columbus sailed the ocean blue. Hawaiians  
 15 were sailing thousands of years before that. They knew the  
 16 world was round. In fact, in a Hawaiian concept, the canoe  
 17 stays in one place, the world turns, and that is how the  
 18 concept is. That was explained to me by Mau Fialot  
 19 (phonetic) and by Nainoa Thompson.  
 20 Finally, this Center For Traditional Hawaiian  
 21 Navigation and Astronomy should be built at the same time  
 22 funding is approved for ATST by Congress. Ideas like this  
 23 tend to get lost in the shuffle of progress. The completion  
 24 date could be worked on by the parties involved at that  
 25 time.

40

1 In presenting this idea to master navigator Nainoa  
 2 Thompson of the Polynesian Voyaging Canoe Hokulea, who  
 3 sailed thousands of miles throughout the Pacific using  
 4 traditional navigational methods, he felt that this method  
 5 is the missing component in teaching the youth of Hawaii  
 6 about the brilliance and resilience of their ancestors, and  
 7 the enormous feat they accomplished thousands of years ago.  
 8 He has committed his support and that of the  
 9 Polynesian Voyaging Society to make this happen. He told  
 10 me, "Uncle Charlie, can you imagine, yeah, a scientist  
 11 that's working up Haleakala can navigate the Hokulea at the  
 12 same time because he's kanaka. Can you imagine that?"  
 13 That's what he told me.  
 14 The potential outreach of this session could be  
 15 enormous, but the more compelling reason is because it is  
 16 right. A center of this magnitude possibly will produce  
 17 world class Hawaii Maui-based scientists in this subject  
 18 matter. Because of the training in these two worlds,  
 19 Polynesian discovery and modern science, these future  
 20 scientists and astronomers could bridge the past to the  
 21 present and beyond. Thank you. (Applause).  
 22 DR. CHARLIE FEIN: Mahalo to Kahu Maxwell. At  
 23 this time I would like to invite anyone else who has  
 24 prepared testimony, has comments, or would like to discuss  
 25 any other matters relating to the Native Hawaiian concerns

41

1 based on this proposed project.  
 2 MR. KIOPE RAYMOND: I do.  
 3 DR. CHARLIE FEIN: Kiope Raymond.  
 4 MR. KIOPE RAYMOND: Good evening. My name is  
 5 Kiope Raymond. I am here accepting the invitation to  
 6 participate in a formal Section 106 consultation meeting.  
 7 The letters I received from Mr. Lawrence Rudolph, General  
 8 Counsel for the National Science Foundation, and Dr. Charlie  
 9 Fein, the NSF's authorized representative personally  
 10 inviting me are appreciated and respected. I thank  
 11 Mr. Charlie Fein for allowing my request for a 30-day  
 12 extension to turn in written comments or questions regarding  
 13 the cultural resource evaluation and traditional practices  
 14 report. Charlie, you will have them on or before April 20,  
 15 2006.

16 My comments, observations and questions this  
 17 evening will hopefully be brief. I am a Hawaiian who does  
 18 attach religious and cultural significance to Haleakala. I  
 19 will be negatively affected and offended by the proposed  
 20 undertaking of the Advanced Technology Solar Telescope.

21 I want to talk about cultural paradigm differences  
 22 though for a minute. The definition of formal for this  
 23 evening means following the guidelines set forth by the  
 24 Advisory Counsel on Historic Preservation. As has been  
 25 clearly explained, the National Historic Preservation Act

42

1 includes provisions that specifically address federal  
 2 agency's responsibilities when their activities involve  
 3 national historic landmark properties. We heard that.

4 Section 106 and its implementing regulations,  
 5 protection of historic properties, federal agency  
 6 responsibilities when an undertaking will affect properties  
 7 eligible to be listed on the National Register of Historic  
 8 Places. So that's one formal aspect.

9 But I also wanted to talk about formal clothing.  
 10 Why am I the only one wearing a coat and tie? No one else?  
 11 You know, from my perspective as a Hawaiian, this is  
 12 disrespectful of the process. Hawaiians have had to  
 13 historically mold themselves into a cultural paradigm that  
 14 is not theirs. I have to change literally and figuratively  
 15 to fit your formal paradigm, but you do not have to change  
 16 to understand mine.

17 Wayne, most days, Charisse, most of you coming  
 18 from Washington, DC, Arlington, you wear a coat and tie  
 19 every day at formal meetings. If this were held, if this  
 20 were -- if I had to go to Washington, DC or Arlington, I  
 21 would respectfully try to enter in their cultural paradigm.  
 22 I have never been to a meeting in Washington, DC or  
 23 Arlington where everyone representing a federal agency  
 24 wasn't wearing a coat and tie. Everybody wears coats and  
 25 ties if they represent the federal agency at what seem to be

43

1 official meetings.  
 2 Now, it's me trying to understand. Now, I'm  
 3 coming from my cultural paradigm. I'm trying to respect the  
 4 certified letter I got from Lawrence Rudolph. It's an  
 5 interesting paradigm. It's not my paradigm. So we can  
 6 dispense with that.

7 You know, this little tie pin right here is my  
 8 father's, and it's the coat of arms of the State of Hawaii.  
 9 The State of Hawaii. But, you know, ironically the state  
 10 motto is, "The Life of the Land is Perpetuated in  
 11 Righteousness, Ua Mau ke Ea o ka Aina i ka Pono." It  
 12 implies consciousness in the land itself. And how does it  
 13 stay alive? Well, interestingly, "ea" is also the word for  
 14 sovereignty. How is this land's life perpetuated? By doing  
 15 the right thing, but being pono. Thanks, Dad, it reminds  
 16 me.

17 Can't stand it, the monkey suit. Don't be  
 18 offended, because I have got a T-shirt on underneath. I'm  
 19 just having fun trying to make a point that when I enter the  
 20 cultural paradigm in Washington, DC I try to enter that  
 21 cultural paradigm. Now I'm offended. And I like your aloha  
 22 shirts, they're real nice, but why isn't the process the  
 23 same everywhere? If you go to Washington, DC you wear a  
 24 coat and tie. Put on your coat and tie, you're going to  
 25 talk to the feds.

44

1 I'm more comfortable now. This is who I am, it's  
 2 my cultural paradigm. And I think we're all just trying to  
 3 understand each other. But I don't know who put it in  
 4 everybody's heads that when you come to a federal meeting  
 5 aloha shirts are okay. I was always under the impression  
 6 for all my life, you do something like this you be  
 7 respectful of the government, you be respectful of the  
 8 agencies. You show them that respect by wearing and  
 9 entering their cultural paradigm.

10 You know, this is an interesting process. I'm  
 11 beginning to understand it. There was a site feasibility  
 12 report done for I believe the six major sites. And the  
 13 architect, who I don't think is here tonight because Jeremy  
 14 was speaking on his behalf, in the 2003 site feasibility  
 15 report for Haleakala, Jeff tells the National Solar  
 16 Observatory the entire Haleakala mountain is rich in  
 17 traditional and spiritual significance to the indigenous  
 18 Hawaiian culture.

19 We've known this. I mean we know it, but that  
 20 cultural paradigm is being informed, as I understand it.  
 21 That's one of the first things that informs, is the site  
 22 feasibility report, and it's informing them this is a sacred  
 23 place to Hawaiians. Then I look at all the other site  
 24 feasibility reports -- and I might be wrong so I'll catch  
 25 myself there and have a caveat, maybe I'm wrong here -- I

45

1 didn't see any other site that said sacred. La Palma did  
 2 not say sacred. Big Bear, not sacred. Haleakala, sacred.  
 3 In the next sentence Jeff says, "The presence of  
 4 observatories on the summit is considered a desecration by  
 5 some, and ATST would undoubtedly encounter some public  
 6 comment to that effect." We've known since 2003 some are  
 7 going to consider this desecration of the sacred, but be  
 8 ready for it.

9 In his Risk of Denial section in the site  
 10 feasibility report, Jeff says, "The potential for a negative  
 11 result from the EIS and CDUP process, that is, i.e.,  
 12 precluding the construction of ATST on Haleakala, is  
 13 difficult to assess in advance." Mahalo, Jeff, for that.  
 14 The fact that the Air Force and Falk's telescope projects  
 15 have both been recently successful probably bodes well for a  
 16 positive outcome. We've known for a long time.

17 But there are a couple of other interesting -- one  
 18 other actually interesting thing that Jeff says in his site  
 19 feasibility report. And as I stated earlier or read  
 20 earlier, I'll be putting this in, I alluded to it last  
 21 night. Jeff says, "The fact that there are already several  
 22 other large observatory buildings on Haleakala may actually  
 23 weigh against ATST in consideration of the cumulative effect  
 24 of all the development on the mountain." Mahalo, Jeff.  
 25 You're darn right, there's too many buildings up there. One

46

1 more 14-story structure is just heartbreaking.

2 So you know what has bothered me in finding out  
 3 and in talking to Jeremy and Mike last night, you know, I  
 4 thought about it. I'm just someone who wants to get  
 5 educated about the process. In finding out that the NSF --  
 6 and Craig, you are absolutely right, I understand that  
 7 process.

8 You know, we've known, the NSF has known,  
 9 therefore probably NSO has known, therefore NSF has known  
 10 since 2003. Well, it's just unconscionable to me when in  
 11 2004 when there was over \$4 million in NSF's budget, that in  
 12 2005 when there was over \$2 million in the budget, and in  
 13 2006 when there's two more million in the budget, that  
 14 nothing was thought about to handle the sacred. And as  
 15 Craig so eloquently said earlier this evening, it's a  
 16 vetting process. I think it means it goes through layers  
 17 and layers, and everybody has got to have a say in it. And  
 18 then what we find is that a Hawaiian cultural expert has  
 19 been asked. But they knew it's been sacred the whole time.  
 20 I just don't understand that. It saddens me. I'm offended  
 21 by that. Could I have done anything? I don't know.

22 Just like I think what your ideas -- this is a  
 23 little side bar, Uncle Charlie -- absolutely beautiful.  
 24 But, you know, in the research I've done, NSF is not held to  
 25 give you any of that money. That's not what this is about.

47

1 It's to fund the science and the construction. And I would  
 2 again need to research, but there is nothing that NSF is  
 3 held to in helping the community, Hawaiian or otherwise.  
 4 That may be a subsequent grant. They can look for it in  
 5 some other way, but not in the money that's on the table or  
 6 to be on the table. So I thank you for the idea. We have  
 7 got to ask that question.

8 As I understand also, and I thank you for the  
 9 opportunity tonight, I'm 51, I was born in Lahaina, like  
 10 Uncle. And being in Lahaina 51 years ago, you know, you  
 11 don't come to this side of the island, much less the top of  
 12 the mountain, very often. But I do have a memory, and I was  
 13 told I was about five or six years old, of snow on the top  
 14 of the mountain, and mom and dad got to take a drive. It's  
 15 the first time it had snowed since I was born, apparently,  
 16 so everybody had to take a drive.

17 So I have had an intimate relationship with this  
 18 mountain for 45 years. I've loved this mountain for 45  
 19 years. And it took people like Uncle Charlie to bring it to  
 20 my attention, people like Mary Evanson, people who genuinely  
 21 care about this mountain.

22 How much do I love this mountain? This is going  
 23 to mean nothing to the people from Washington, DC, but this  
 24 particular group has had some recognition in the Hawaiian  
 25 islands. The group's name is Hapa. And on their CD I wrote

48

1 a song, and it says, Haleakala stands glorious; Haleakala Ho  
 2 Hanohano. And the Hawaiian says -- Oh, that's another  
 3 little side bar, but I'll get to it.

4 Let me read the English. Broad is the mountain to  
 5 gaze upon. Haleakala stands glorious, shrouded in billowy  
 6 clouds, as if garlanded. Creeping mist that adorns the  
 7 uplands. A cool, gentle breeze brings the fragrance of  
 8 Maui's flower. It's mine to cherish the lush mountain  
 9 sharing my delight. I behold the best in the beauty that  
 10 surrounds me, and I'm sheltered by the peace within.

11 I tell the story of Haleakala standing glorious.  
 12 So I'm honored. I get some pennies in royalties. That's  
 13 how I love the mountain. So over the course of my life.

14 And then I think the most recent thing that made  
 15 me remember how much I love the mountain was I was  
 16 graciously led by Charlie Fein to an awa. I've never seen  
 17 it before, it's the second awa built. And I involuntarily  
 18 started crying when I got there. And it's the kane side,  
 19 it's the side that faces east. We went over to the west  
 20 side and I couldn't stay, I don't know why, but Miki stayed,  
 21 another person who was with me. That's the women's side,  
 22 anyway. So Section 106, yeah, I don't want that structure  
 23 on the top of my sacred mountain.

24 But back to the Hawaiian, you know, it was  
 25 interesting when they did the public scoping, in July was

49

1 it, I was hired to sit right about where you're sitting in  
2 case somebody wanted to testify in Hawaiian. Is there  
3 somebody hired for tonight? No? So I could testify right  
4 now in Hawaiian, but I wouldn't be recorded. That's nothing  
5 to do with Charlie, that has nothing to do with Charlie.  
6 This is the legal one, this is the formal.

7 For all intents and purposes, although we would  
8 like to bring the two together, this is a big misstep. In  
9 essence fundamentally I'm precluded as a Native Hawaiian  
10 from testifying and having my testimony right there in  
11 perpetuity, although somebody would translate it and help  
12 that person out. I've got nothing.

13 Thank you for giving me the time. I sure wish I  
14 could have testified in Hawaiian. That was a mistake.

15 (Unintelligible question from audience).

16 DR. CHARLIE FEIN: His question was, and correct  
17 me if I am wrong about the question, NSF has no obligation  
18 and there is nothing in any law that requires that they  
19 fulfill the plan or proposal that Uncle Charlie presented,  
20 or any proposal.

21 MR. WAYNE VAN CITTERS: I guess it's a complex  
22 question, of course, because as Craig said, we have not  
23 committed in any way to go forward with this project on the  
24 top of the mountain. There has to be, if I understand the  
25 process, a Memorandum of Agreement which would be formulated

50

1 to take into account the cultural values on the top of the  
2 mountain, and a plan, perhaps the one that Charlie has put  
3 forward, to -- I may get emotional because I spent a  
4 sabbatical year, it's not much time, but I spent a  
5 sabbatical year here in the islands. My son rowed for Hui  
6 Nalu. He subsequently turned that experience into rowing  
7 for Dartmouth and so on. Our roots are nowhere near as deep  
8 as yours, I understand, but I do have roots on this island.  
9 I do have the Hapa CD.

10 But if we could reach a Memorandum of Agreement  
11 that would say in return and in respect for the site it  
12 would be given to ATST, we would undertake a program like  
13 the one that Uncle Charlie has proposed, or perhaps an  
14 expanded one, that would be part of our decision to go  
15 forward. It would be part of the program we present to our  
16 National Science Board, that's our ruling body, and that we  
17 would then present to Congress. And at the time that  
18 Congress made the decision to appropriate the money, they  
19 would also appropriate the money for programs like Uncle  
20 Charlie has put forward.

21 MR. CHARLES MAXWELL: So maybe I can have a legal  
22 response. Would that caveat be attached to the ATST  
23 proposal in Congress? Would that caveat be attached?

24 MS. CHARISSE CARNEY-NUNES: It could be, right,  
25 and it would be just the way that Wayne explained it. We

51

1 could make it as part of our Memorandum of Agreement. And  
2 as part of -- when the federal agency makes a decision to  
3 go forward, particularly in the light of a recognized  
4 adverse effect, which is what we are doing here, we are  
5 recognizing that there's an impact that needs to be  
6 addressed, needs to be resolved, and hopefully needs to be  
7 mitigated.

8 So when we make that decision we would issue a  
9 decision. It's called a Record of Decision ultimately, but  
10 the Record of Decision would lay out what all the agency's  
11 findings are. It's like an administrative law thing, which  
12 is a little complicated. But basically that document would  
13 be the NSF's decision to go forward and fund the project.  
14 And the only way we would reach that decision would be if we  
15 could come out with some way that we could resolve the  
16 adverse effect.

17 And so what we could do in the context of a  
18 Memorandum of Agreement is we could agree -- in our Record  
19 of Decision document ultimately we would recommend going  
20 forward only if we can resolve the adverse effect through a  
21 mitigation, recommending the mitigation to be funding for a  
22 proposal like what you have put forth.

23 MR. CHARLES MAXWELL: If mine or whoever's  
24 proposal is made, I would like to see some language that  
25 accompanies the ATST proposal to Congress. It's

52

1 hand-in-hand. Because if Congress says no, then it's no.  
2 But if they say yes to ATST, it's going to happen anyway,  
3 then they've got to fund this, whatever proposal is  
4 presented.

5 MS. CHARISSE CARNEY-NUNES: I hate to put you on  
6 the spot, Tony, but we have someone from our Legislative  
7 Affairs Office here. It's hard to place. There are really  
8 no guarantees, obviously. We're talking about federal  
9 funding.

10 MR. CHARLES MAXWELL: I understand. We are used  
11 to not being guaranteed and being discouraged later.

12 MS. CHARISSE CARNEY-NUNES: Right. But what I am  
13 saying, and correct me if I am wrong, is that we could --  
14 okay, the first step would be to reach a Memorandum of  
15 Agreement with members of the community, and specifically  
16 with Native Hawaiian organizations. That would be the first  
17 step, and that would sort of conclude the Section 106  
18 process, right. We could agree in that document that if and  
19 when NSF finishes its processes and finishes vetting the  
20 proposal to fund, if and when we finish that, if we  
21 recommend to our National Science Board and ultimately to  
22 Congress that we should fund this project, we can agree with  
23 you now or at the end of this process that we will carry  
24 forward, within the context of that recommendation, a  
25 recommendation that we would be required to mitigate a

53

1 recognized adverse effect, okay. So we could present it as  
2 part of our recommendation.

3 MR. CHARLES MAXWELL: See, I don't know how Kiope  
4 feels, but to me, this is not a -- it cannot be a carte  
5 blanch, you know, because of this. It's very difficult.  
6 Like I said, I'm not in favor of this, but I feel that if  
7 Congress says yes it's going to happen, it's going to  
8 happen. So I don't know, I'm just looking for guarantees,  
9 and Kiope brought that up.

10 MR. WAYNE VAN CITTERS: Wayne Van Citters. Could  
11 I add some words, and they are the following. The general  
12 goals that you put forward in your proposal are directly  
13 aligned with the type of -- the kinds of education and  
14 growth of a knowledgeable and diverse workforce, the goals  
15 of the foundation itself. So there is no question in my  
16 mind as a division director that that kind of program would  
17 be an acceptable program. Craig?

18 DR. CRAIG FOLTZ: Are you finished? I just wanted  
19 to add.

20 MR. WAYNE VAN CITTERS: Well, the only thing I was  
21 going to do was take on a -- and I think I can do this -- I  
22 will take on a personal promise to this community, and that  
23 is that if ATST goes forward and if the foundation and the  
24 Hawaiian community here on Maui have agreed on a program  
25 like this as being a reasonable tribute to the top of the

54

1 mountain in exchange for the site, I will not go forward  
2 with that project unless that money is included.

3 DR. CRAIG FOLTZ: It's hard to follow that. And I  
4 won't express my personal feelings about this man, but I  
5 would take that to the bank. Now, I also in my job oversee  
6 the funding and essentially the management of large  
7 observatories, the National Solar Observatory, the National  
8 Optical and Astronomy Observatory. We also have the Radio  
9 Astronomy Observatory, the National Atmospheric and  
10 Ionospheric Center, and the Gemini Observatory.

11 Every one of those observatories has as a part of  
12 its cooperative agreement, as a part of its work breakdown  
13 structure, as a part of its annual project plan, education  
14 and public outreach, education in an informal sense,  
15 education in a formal sense, and these encompass large  
16 numbers of programs.

17 They don't do this because it's nice, they're  
18 devoted to it. They do it because they have to do it. They  
19 do it because we tell them to do it. So a part of the  
20 operations budget that we pay to every one of our  
21 observatories goes into educational programs, public  
22 outreach programs, informal education programs, et cetera.  
23 Visitors centers and so on.

24 We do not tell them how that money is spent. We  
25 review what their programs are and we say, "Within the

55

1 bounds of your agreement, this is appropriate." If the ATST  
2 is built, the NSF will pay probably the majority of its  
3 operations cost. And as a federally-funded research and  
4 development center which operates under the NSF's rules, it  
5 will be expected to provide education and public outreach  
6 programs.

7 So in addition to adding my -- you have no reason  
8 to trust me, okay, you don't, but you can hear me. You  
9 don't have to believe me when I say you can trust what Wayne  
10 has said. In addition, you can look at the budgets and you  
11 can see that our money is spent in part in education and  
12 public outreach, because if you look at the mission  
13 statement of the NSF it says that our job is education.  
14 Broadly defined. That's all I wanted to say.

15 MS. CHARISSE CARNEY-NUNES: And that's exactly  
16 what -- what Craig just said is something I wanted to point  
17 out. Particularly, for you Kiope, because you talked about  
18 what may or may not be in line with NSF's goals and mission,  
19 and suggesting that the kind of program that Kahu was  
20 proposing would not be in line. But in actuality, NSF  
21 really is different from other federal agencies in that we  
22 truly have as our mission not only supporting science and  
23 research, but education.

24 And personally I've been at the NSF for, I don't  
25 know, since 1997, and I love the mission of the agency

56

1 personally because it's so dedicated to education and to  
2 programs that promote diversity in education. We call it  
3 broadening participation.

4 MR. KIOPE RAYMOND: I think you can stop there.  
5 And actually, that's one of the meetings that I have gone  
6 to, is the Broadening Participation for Information  
7 Technology, and a number of others. I think you may have  
8 misheard me, and what we'd have to do is go back to the  
9 stenographer to confirm.

10 And if I, in fact, said what you think you heard  
11 me say, I retract. What I was intending is that as far as  
12 any research I had done up to now, it would seem that the  
13 current money on the table, if you will, for the operations,  
14 160 million has nothing to do with community helping. Yes,  
15 it has education, but it has nothing to do with it. I'm not  
16 finished. And there will always be clarification.

17 All I'm saying is it will be clarification for  
18 everyone. And for me, that when I was reading this it was  
19 my understanding, and that's why I was just opening it up --  
20 that's what I'm understanding tonight is about, the  
21 opportunity for me to either voice my objections or raise  
22 questions.

23 And so to come at me with the clarifications right  
24 away, maybe we should just all step back for a minute. It  
25 would seem that when I read it that there was no link. If

57

1 there is a clarification, that would be great. But there  
2 didn't seem to be a link anywhere in the research that I was  
3 able to do that would show clearly that the money that will  
4 be for the construction and the money that would be -- I am  
5 not talking about the operations, the construction, that  
6 those kinds of deals that Uncle Charlie was looking for  
7 could not be made right now.

8 That's why we jumped, as I understand it, into  
9 discussions of possible Memorandums of Agreement, because we  
10 do not have something right now. But it is possible.

11 MS. CHARISSE CARNEY-NUNES: Got it. That's right.

12 DR. CRAIG FOLTZ: Kiope, may I ask you a question.

13 MR. KIOPE RAYMOND: Sure.

14 DR. CRAIG FOLTZ: In your research when you were  
15 trying to understand how the funding could be used, do you  
16 recall whether that was a discussion of a funding line that  
17 was called the major research equipment facilities  
18 construction funding, or MREFC.

19 MR. KIOPE RAYMOND: I don't recall. That's the  
20 new imposition for NSF for anything this big.

21 DR. CRAIG FOLTZ: If indeed that was the case,  
22 then what you say has merit. The MREFC construction line,  
23 which is what we would use, we would ask, request for money  
24 for, is outside of the astronomy department's annual budget.  
25 It's a separate line within the NSF which is used for large

58

1 projects.

2 MR. KIOPE RAYMOND: I appreciate the confirmation.  
3 That's how I read it.

4 DR. CRAIG FOLTZ: That money has constraints as  
5 defined by the appropriations language which appropriates  
6 that fund.

7 MR. KIOPE RAYMOND: In fact, if we're just in a  
8 little repartee, I love it. What I also read is that you  
9 folks are trying to solve the problem. You folks are nice  
10 enough to have the portable file documents on line for  
11 everybody to see that you folks have. You, NSF, or the team  
12 has tried to communicate that, that it's now gotten  
13 cumbersome, it's now become very constrained and confining,  
14 and it's different.

15 DR. CRAIG FOLTZ: I would not make a comment on  
16 the public record, and I think you understand my point. But  
17 my point is this. In fact, the constraints on the MREFC  
18 funding line do not allow them to be used for education.  
19 What Wayne is saying is, and what I am saying, is that there  
20 are other funding sources. What I discussed specifically  
21 was, and I believe that this is the way that we would fund  
22 this, we would fund a program like this out of the operating  
23 expenses for the observatory.

24 We can stipulate that in a Memorandum of  
25 Agreement. And that's -- please, help me as to how legally

59

1 binding a Memorandum of Agreement is.

2 MS. CHARISSE CARNEY-NUNES: Well, in order for the  
3 Memorandum of Agreement, if we do reach one, to be binding  
4 or to be enforced, you would need to be a signatory actually  
5 to it. We will, if we get that far in this process, we will  
6 certainly invite Native Hawaiian organizations and other  
7 organizations, community organizations as well, we will  
8 certainly invite you to be a signatory to the Memorandum of  
9 Agreement.

10 If you are a signatory as a concurring party, and  
11 actually I was looking at the Memorandum of Agreement for  
12 Mauna Kea for the Outrigger telescopes, and there was  
13 actually some organizations that concurred with caveat.

14 So if you are a signatory as a concurring party,  
15 however, you would have the right, if NSF did not live up to  
16 the terms of the Memorandum of Agreement, you would have the  
17 right to challenge that. You would have the right to notify  
18 the State Historic Preservation Division. You would have  
19 the right to notify and to ask for the Advisory Council on  
20 Historic Preservation to step in.

21 So it is enforceable, but you do need to be  
22 brought in as part of the process so that you have the right  
23 to make sure that the document is enforced.

24 DR. CHARLIE FEIN: Okay, before we continue, I  
25 wanted to clarify one other thing. While there is not a

60

1 translator in the room, we are recording everything on tape.  
2 And if someone wishes to present testimony in Hawaiian, we  
3 will have it translated and distributed to anyone who  
4 requests the testimony, or we will make it public on the  
5 Internet. So I did not mean to constrain you in any way.

6 MR. KIOPE RAYMOND: Good. Then I will testify in  
7 Hawaiian.

8 DR. CHARLIE FEIN: Great. Did you have -- yes,  
9 please.

10 MS. MIKAHALA HELM: Aloha kakou. Aloha, Uncle  
11 Charlie, and thank you. You know I respect you for all of  
12 your work. This evening I would like to share my written  
13 comment on the cultural resource evaluation, and address my  
14 concerns as a Native Hawaiian. I have also added in some  
15 other comments after I mailed this to Charlie.

16 And I was born and raised here on Maui. I am  
17 opposed to the proposed Advanced Technology Solar Telescope,  
18 ATST project. It negates the needs of the Hawaiian culture  
19 for the needs of everyone else. Once again, the needs of  
20 science are seen as more important than the needs of the  
21 Hawaiian people.

22 Haleakala is important because it has continually  
23 been an important feature maintained in story and mele from  
24 precontact Hawaii until today. Since Haleakala was  
25 prominent in many of the stories in mele, it shows us that

61

1 Haleakala was important to our kupuna.  
 2 This aloha appreciation, awe, and reverence for  
 3 Haleakala comes from all of my experiences in going to  
 4 Haleakala. I have studied hula since I was five years old,  
 5 and first learned of Haleakala, the appreciation for  
 6 Haleakala through the singing of my family. I have studied  
 7 it further through halau, and have a deep appreciation for  
 8 the value of Haleakala to our people and to our culture.  
 9 Our cultural practitioners to this very day  
 10 continue to use Haleakala as a way to communicate with the  
 11 greater beings in ceremonies and rituals. The cultural  
 12 resource evaluation on page 62 states, "In conclusion, the  
 13 fact remains that any building or structure built on this  
 14 site is an intrusion on the sacredness and spirituality of  
 15 this mountain revered by the Hawaiian people past and  
 16 present."  
 17 It goes on further. And I understand, Uncle  
 18 Charlie, that you have fought for this for years, and your  
 19 trust has been tested because in this conclusion it says  
 20 that -- the next sentence says, "One must find the balance  
 21 of building on this site, and at the same time protect at  
 22 the best the cultural impact and methods used to mitigate  
 23 these impacts."  
 24 In my opinion, we don't carry on to that second  
 25 sentence. The essence is carried in the first sentence. I

62

1 do not believe that there is mitigation or a way to make the  
 2 development of the proposed ATST less severe or intense.  
 3 I would like to ask for more time, an extreme  
 4 extension of time, because there are other Hawaiians who  
 5 want to testify, who want to present how they feel about  
 6 Haleakala. And how important it is to us Native Hawaiians  
 7 not only here on Maui, but to the Native Hawaiians  
 8 throughout the state and those who are living in many other  
 9 places.  
 10 So I would like to get that information, Charlie,  
 11 to find out how other people can testify, and if I may  
 12 provide additional information in the future.  
 13 And in closing, I believe that we should not have  
 14 any more telescopes on Haleakala. I respect the scientists,  
 15 I respect the visit when we went up there, showing us what  
 16 was there on our precious site of Haleakala. And to see  
 17 that the existing EOS is taller than our natural highest  
 18 point of Haleakala, and to know that this ATST would be  
 19 higher than that, I believe that we should have no more  
 20 telescopes on Haleakala because it will continue to damage  
 21 physically and spiritually the specialness of our majestic  
 22 Haleakala. Mahalo nui. (Applause).  
 23 DR. CHARLIE FEIN: Before we continue, I would  
 24 like to say that of course this is not by any means the last  
 25 meeting, it's only the first meeting. We have a proposed

63

1 schedule over the next few months for additional meetings.  
 2 We will be contacting more people as we learn who is  
 3 available and who is out there. There will be additional  
 4 meetings. I will let Charisse speak to the specifics of  
 5 that when the testimony is done.  
 6 But in response to that extension, of course this  
 7 process is by no means over, it's only beginning. So we're  
 8 looking for more input, okay.  
 9 MS. CHARISSE CARNEY-NUNES: I just want to  
 10 specifically answer one of your concerns, which was getting  
 11 an extension. And I just want to say this to you and to  
 12 everyone, that the purpose of the 30-day deadline that you  
 13 read about was it's prescribed in the federal regulations,  
 14 but it is not meant to cut off any opportunity for you to be  
 15 heard.  
 16 In actuality, as it pertains to this meeting. We  
 17 want people to submit their comments in advance so that we  
 18 could have a robust discussion, so that everyone will have  
 19 read the cultural resources report for the benefit of this  
 20 meeting here. But by no means was it meant to cut off any  
 21 opportunity for anyone to be heard.  
 22 And of course, you can have an extension. And of  
 23 course, you can submit a comment about the historic and  
 24 cultural significance of the mountain at any time, at any  
 25 time. And as Charlie explained, this is only the first

64

1 formal meeting, and there will be follow-up meetings as  
 2 well. But you don't have to wait for a meeting to formally  
 3 testify, you can submit your comments.  
 4 It's best if you can do it in writing, because  
 5 that way we can make it a part of our administrative record  
 6 that we will be looking at when we ultimately do make these  
 7 decisions. And you can submit it by email, by regular mail,  
 8 or you can come to a public meeting and say it and have it  
 9 recorded.  
 10 DR. CHARLIE FEIN: Okay, Charisse. Are there  
 11 other individuals who would like to testify? Warren.  
 12 MR. WARREN SHIBUYA: Good evening members of this  
 13 panel and audience. I am Warren Shibuya. I am a returning  
 14 Maui resident after retiring from the Space and Missile  
 15 Systems Center in El Segundo, California. Mahalo for  
 16 allowing me to present my testimony.  
 17 I support basic and applied research and the  
 18 proposed housing of the Advanced Technology Solar Telescope  
 19 systems, a project within the 18.166 acre University of  
 20 Hawaii Institute for Astronomy Haleakala High Altitude  
 21 Observatories site at the summit of Mount Haleakala, Maui,  
 22 Hawaii.  
 23 I ask you and all project members to behave  
 24 respectfully and malama mau ka la a, preserve the sacredness  
 25 of Haleakala, specifically the summit area. Proper cultural

65

1 respect should be demonstrated by the ATST project and other  
2 projects housed at the Haleakala High Altitude Observatories  
3 site, especially while sharing very sacred summit grounds.

4 As you well know, Haleakala is home to all 40,000  
5 Hawaiian gods and goddesses. Haleakala is spiritual power  
6 and the home of inspired Hawaiian beliefs. Besides being  
7 physically inspiring. Haleakala's summit, or Kolekole, is  
8 near wao akua, a level of earth's stratosphere where gods  
9 and goddesses are believed to reside and culturally guide  
10 everyday living. Ala Hea Ka La, "The path to calling the  
11 sun," presents basic rhythms of night and day, and  
12 establishes the sun being the source of life for Kanaka  
13 Maoli, Hawaiians, and citizens of Maui and Hawaii.

14 In ancient days, Kolekole was the site where  
15 Kahuna Po'o, high priests, consulted with gods and goddesses  
16 to answer difficult questions and delve into tough issues.  
17 Astronomy, aerospace, and solar study efforts at Kolekole  
18 should be respectful of wao akua, the sacred area above the  
19 summit and lava, the essence of Goddess Pele, despite her  
20 current home at Kilauea caldera.

21 Special care should be exercised in digging,  
22 saving lava, and restoring earlier pu'u, hills and wahi  
23 pana, and minimizing invading air space, and restoring all  
24 sacred places. To demonstrate proper respect, let us all do  
25 it right, as kapo e kahiko, or ancient people respected and

66

1 admired Kolekole. Recommend the Institute for Astronomy  
2 immediately. Remove intrusive, unused or excess facilities,  
3 poles, antenna, lines, signs and roads. Immediately begin  
4 respectfully restoring Kolekole to its ancient topography  
5 and its historic and highly sacred configuration. Further,  
6 rename summit roadways to more appropriate kapo e kahiko  
7 names, thus demonstrating sacred wahi pana, respect for  
8 Kolekole.

9 Today, ATST nobly seeks to observe and carefully  
10 study turbulent forces of our sun, which affects life on  
11 earth from a sacred site. As mentioned, Kolekole wahi pana  
12 was used by Kahuna Po'o, high priests, who consulted with  
13 gods and goddesses to answer difficult questions and delve  
14 into and resolve tough issues.

15 Today, in addition to consulting gods and  
16 goddesses and accommodating visitors, the scientific  
17 community is permitted to seek answers to heavenly questions  
18 through the use of high technology telescopes and systems,  
19 computerized instruments, all housed in large structures.  
20 As Kahuna Po'o shared gained insights with Maui residents, I  
21 ask ATST technology and other Haleakala Institute for  
22 Astronomy investigations and gained knowledge be regularly  
23 shared with host Maui and Hawaii state's people to include  
24 keiki, kupuna, kamaaina, and malama aina groups.

25 That shared knowledge and expressions of

67

1 appreciation be given to Mauians, such as support for  
2 Hawaiian education, culture, arts, develop sovereign rights  
3 and law, language programs and scholarships to pursue  
4 learning at higher institutions, centers and universities.  
5 Of course, Mauians should be employed with all projects on  
6 Haleakala.

7 I will remind you and other agencies operating in  
8 sacred wahi pana of demi god Maui, and other gods and  
9 goddesses, that your viewing or looking through wao akua,  
10 where gods reside, is invasive and not polite etiquette or  
11 behavior of a guest. Peeping through a neighbor's home is  
12 privacy-invasive, shameful, and not neighborly behavior.  
13 And if this behavior persists, by our laws today it could be  
14 a misdemeanor crime.

15 Western culture dictates, "It is most proper for a  
16 guest visiting a home to express appreciation to the host  
17 with fists filled with gifts." In no case should guests  
18 visit with closed fists, especially when visiting the sacred  
19 House of the Sun. I am embarrassed to remind you of proper  
20 etiquette. I truly trust you know and will do the right  
21 things to demonstrate your most honored respect for the  
22 host's customs and beliefs. Maui kanaka maoli and kamaaina  
23 should not need to tell terms to you more succinctly and  
24 emphatically.

25 I am no expert in Hawaii's culture, but simple

68

1 analogies mentioned should be more than adequate for  
2 respectful understanding and behavior of Hawaiian and  
3 visiting non-Hawaiian members. Hawaiian culture is founded  
4 on love and respect for each other, family ohana, the aina,  
5 which provides life sustenance, the importance of the sun,  
6 and the deeply felt reverence for wao akua.

7 Mahalo for allowing me to express my support for  
8 scientific pursuits for knowledge, expressing my thoughts,  
9 and trusting you and other visiting agencies will  
10 demonstrate your appreciation to Maui's citizens. Let your  
11 scientific pursuit for knowledge be a shared window of  
12 opportunity for studying our heavens, promoting educational  
13 opportunities for Mauians, and respecting Kolekole wahi pana  
14 and wao akua. Mahalo nui loa, Warren.

15 I have two notes. The Environmental Impact  
16 Statement Preparation Notice for the Advanced Technology  
17 Solar Telescope, August 2005, paragraph 2.6 development  
18 timetable and preliminary estimated costs, Table 2,  
19 preliminary estimated cost breakdown for a proposed ATST  
20 project lists, and I quote, "Education and public outreach  
21 set at zero dollars."

22 This closed fist proposed behavior and NSF's wish  
23 to use a sacred native site is absolutely unacceptable. Do  
24 it right, as kapo e kahiko, or ancient people respected and  
25 admired Kolekole wao akua and wahi pana. Ancients and

69

1 kamaaina kept sacred sites barren. It is not a privileged  
2 right for westerners to occupy these unused and barren  
3 locations, no matter for noble-intended purposes.

4 Note two. Drilling and driving 40-foot  
5 pre-stressed concrete pilings into lava substrate may offend  
6 sacred Kolekole wahi pana. Instead, suggest employing  
7 circular, concentric rings of concrete footings with  
8 overlaid patterns of pre-stressed concrete pilings to  
9 support telescope, domed, and support structures. Avoiding  
10 driving piles minimizes disturbing Ua u, the Hawaiian dark  
11 rumped Petrel, a federally listed species whose burrows are  
12 within a quarter mile of the proposed construction site.

13 In addition, using a construction method of  
14 driving piles into sacred ground is similar to driving  
15 spears into revered native grounds, and making a western  
16 cultural statement.

17 Before you tell us what you want, I remind you  
18 again, you start by doing it right. You show respect and  
19 care for Hawaii's people and aina. Thank you. (Applause).

20 DR. CHARLIE FEIN: Thank you, Mr. Shibuya.

21 Craig, did you want to say something?

22 DR. CRAIG FOLTZ: I have one thing, one  
23 clarification. First of all, thank you for a lovely  
24 testimony, concrete actions that can be taken, and the  
25 general spirit of good manners.

70

1 With respect to that budget item that refers,  
2 again, to the issue that I discussed with Kiope. That  
3 budget refers to that which would be asked for from a fund  
4 that would construct the telescope, and we are not allowed  
5 to take education and public outreach out of that fund.  
6 Education and public outreach would be paid for out of  
7 what's called our research and related activities money, our  
8 normal annual budget.

9 So marking that as a zero is true in the sense  
10 that it would not go into the request for the construction  
11 funds. It does not mean that we would not fund it. But I  
12 do agree with you it did not present the right impression.  
13 So thank you.

14 MR. WAYNE VAN CITTERS: May I respond just a  
15 little bit? I wrote the budget, and I was instructed by NSF  
16 that we weren't allowed to include that. I actually called  
17 it out and put it at zero to make that statement, that it  
18 was not included, and to draw attention to that. So we  
19 didn't just leave it out of the proposal. We put it in  
20 there and said zero, because I understood that the NSF would  
21 not accept that for the astronomy division, and it was  
22 purposely done to draw attention to it.

23 DR. CHARLIE FEIN: Thank you. Other testimony.

24 MR. EDWARD LINDSEY: Aloha. I am here as a  
25 Native Hawaiian under your Section 106 preservation act.

71

1 First of all, the number of kanaka maoli over here that this  
2 is supposed to be representing, if you look around you, a  
3 lot of familiar faces and they are absent. Just a few of us  
4 are here to hold up the fort. They are absent.

5 So this cannot be labeled as input by the kanaka  
6 maoli. This can only be shown as how hurtful that this  
7 telescope and this project is to our Hawaiian people. Today  
8 I called ten Hawaiian people that was close to me, and not  
9 one of them stated that they think it's a good idea. Not  
10 one. They all stated, "Are you crazy? What are they doing?  
11 Why are they destroying our mountain?"

12 And as far as the trade-offs, as I have said  
13 previously, I oppose this project. I respect gaining  
14 scientific knowledge, I respect what can come out of it, but  
15 not up at Haleakala. I refuse to have Haleakala prostituted  
16 for the sake of this project. You cannot take advantage of  
17 Haleakala and throw ideas out to what is sacred.

18 We have laws against digging up burials. But  
19 funny, we don't have laws about the desecration of sacred  
20 areas that belong to indigenous peoples. Does this mean  
21 that indigenous peoples are being marginalized? The  
22 entitlements, if you talk about the federal government, our  
23 Hawaiian entitlements are constantly under attack. Whether  
24 it's the Hawaiian Homelands, whether it's gathering rights,  
25 whether it's trying to get our country or our kingdom back.

72

1 The federal government has always been an obstacle to do  
2 what is correct. Even within the Pledge of Allegiance,  
3 justice for all.

4 So this goes back quite deep into, as we Hawaiian  
5 people say, into the na'ao. If you lose somebody special to  
6 you and when you cry and you weep the pain is in here  
7 (indicating), and this is what is happening with this  
8 project. We can do all kinds of mental gymnastics, but the  
9 point is it's hurtful. How can we trust a government, a  
10 Congress that has led us astray and taken and marginalized  
11 -- I use the word again, marginalized our Hawaiian people.

12 I prefer to stay at the spiritual side and the  
13 cultural side of things, instead of getting into a  
14 discussion on the upper cortical level of things, because  
15 this is where our strength is.

16 I asked some of the people in here if they were  
17 going to testify. They said no, they're scared or they  
18 shame or they feel unprepared. And I asked them, Just go up  
19 there and say, "I no like 'em." Simple. I talked to my  
20 children. They don't want it. As far as connection to all  
21 that, Haleakala is connected to all of us. It's the piko of  
22 our land divisions, it's the piko. Piko is right in here,  
23 the belly button. This is where all land divisions come  
24 out.

25 I talked about last night about the goddess that's

73

1 up there who is the goddess to hold off eruptions and to  
2 give and allow plants to grow. And yet when you put on  
3 those holes in the ground that you have to dig out 20 to 40  
4 feet there are being disemboweled.

5 So please, with humility and with humbleness, but  
6 with onipa'a behind, take the telescope someplace else.  
7 Aloha. (Applause).

8 DR. CHARLIE FEIN: Thank you, Ed. Anybody else  
9 who wishes to share testimony or anything at this time?  
10 Yes, sir?

11 MR. KEAHI BUSTAMENTE: I just wanted to say, my  
12 name is Keahi Bustamente, and I'm a Native Hawaiian, and I  
13 don't want it. (Applause).

14 DR. CHARLIE FEIN: Anybody else that would like to  
15 testify? Okay. I would like to ask Charisse to tell us  
16 what the next step or the next steps are here.

17 MS. CHARISSE CARNEY-NUNES: Okay, hopefully  
18 everybody got a copy of this sheet. We just wanted to give  
19 this to you all when you left so that you would know what  
20 the next steps in the process are going to be.

21 Again, this was tonight the first Section 106  
22 meeting, and the purpose of the meeting was to introduce the  
23 Section 106 process to the public, and I hope we did that.  
24 The purpose was also to allow the testimony, as we've heard  
25 tonight, from the Native Hawaiian community, and from the

74

1 community in general, and I hope we achieved that purpose as  
2 well.

3 Now that we're ending this meeting, as the  
4 National Science Foundation we are also asking for your help  
5 again as we go through this process of making this decision.  
6 And what we would like to do is to request any proposals  
7 that you can submit to us for you to submit them by April  
8 24th, and the contact information as to where we'd like the  
9 proposals to be submitted is right here on this sheet. It's  
10 to Charlie's company, KC Environmental. The proposals would  
11 be proposals to mitigate the adverse effect.

12 Again, like I had said in the beginning, we are  
13 not disputing the spirituality, the majesty of Haleakala at  
14 all, so that's indisputable. And we are also not disputing  
15 that if the proposal -- if the proposal to fund were to go  
16 forward it would have an impact on the traditional cultural  
17 property of Haleakala.

18 So what we need is information as to how that  
19 impact might be resolved, okay. And the way in which the  
20 regulations describe it, resolution proposals can include  
21 avoidance, the resolution proposals could include ways in  
22 which we can minimize the impact, and the resolution  
23 proposals can include mitigation. The proposals don't have  
24 to be as extensive as Uncle Charlie's, but the more the  
25 better. The more for us to consider, the better.

75

1 So we would like those to be submitted to KC  
2 Environmental by April 24th, and that would allow us time to  
3 go through them and to prepare for a second follow-up  
4 meeting with you all, and anyone else who you would like to  
5 bring with you. And we are thinking that that meeting would  
6 happen around May 1st. It's a Monday evening. None of us  
7 have really checked our travel schedules or our availability  
8 to come back here for sure, but it's looking like that may  
9 be a good time.

10 And so what we wanted to do was to give you a  
11 tentative date, but to make sure that you are on the sign-in  
12 list so that we have your contact information, so that we  
13 can let you know for sure what the actual date is going to  
14 be for the next meeting.

15 At that next meeting, which is going to be about  
16 May 1st, we will present to you all the proposals that we  
17 have received, and we will continue our discussion on the  
18 resolution of the adverse effects. And then we are  
19 surmising, at this point anyway, that we would likely need a  
20 third meeting, probably maybe the next month, but that would  
21 be -- that's dependent upon what happens at the next  
22 meeting.

23 So I'll just leave that out as a possible date of  
24 June 12th. And the purpose of that meeting would be, or the  
25 agenda for that meeting would be determined probably at our

76

1 next meeting. So does anybody have any questions for me  
2 about the process or about the schedule?

3 MR. KEAHI BUSTAMENTE: I want to know between now  
4 and May 1st or 2nd, whatever date it's going to be, what are  
5 you guys going to do to inform the community? Because as  
6 you can see, it's not the community here.

7 DR. CHARLIE FEIN: I can respond to that. First  
8 of all, we will again publish notification in the  
9 newspapers, letting people know of the meeting. We will  
10 send out invitation letters to everyone on our list. And  
11 our list got a lot longer today as well. We received a good  
12 deal more information from the Office of Hawaiian Affairs.  
13 There are quite a few more small groups and individuals that  
14 we will be contacting. We hope there will be more people  
15 here at the next meeting.

16 We will also put an announcement on the radio as  
17 well the week before. We will do everything we can to let  
18 people know there will be a meeting, and we hope there will  
19 be as many people as possible here.

20 MR. KEAHI BUSTAMENTE: Maybe like, I don't know, a  
21 suggestion, maybe like at the Hawaiian Homes Community  
22 Center, not Hannibal Tavares Community Center.

23 DR. CHARLIE FEIN: Our next meeting will be at a  
24 larger venue. We expect more people.

25 MR. KEAHI BUSTAMENTE: I'm not saying size, but

77

1 that's where Hawaiians live.

2 DR. CRAIG FOLTZ: He's recommending the community  
3 center down in Hawaiian Homes.

4 DR. CHARLIE FEIN: Got it. Thank you for that  
5 recommendation. That's a good suggestion. We will  
6 immediately look and see if that's available on that date.  
7 Thank you. Anything else? Yes, sir.

8 MR. CLARENCE SOLOMON: I had a question. Clarence  
9 Solomon. Throughout the presentation I didn't hear any  
10 reason for the purpose of this observatory or this site that  
11 you are putting up on the mountain. What's the purpose?  
12 How will it benefit mankind, the world, what's the purpose?  
13 If you are going to desecrate that mountain, I need to know  
14 why.

15 DR. CHARLIE FEIN: That's a good question. Craig  
16 did address that, but go ahead.

17 DR. CRAIG FOLTZ: This telescope is specifically  
18 designed to study the sun in detail. It turns out there's a  
19 lot about the sun that we do not understand. We understand  
20 why it burns, we understand it's been around for four and a  
21 half billion years, we understand it will be around for  
22 another four and a half billion years. But the details of  
23 the energy transport, how the energy gets out of the center  
24 of the sun, and how the gas motions interact with the  
25 magnetic -- in fact, make the magnetic field of the sun, is

78

1 not understood in detail.

2 Now, why do you study that? Well, you study it  
3 because it's academically interesting. Why did I study  
4 quasars? Because I love them, because they were a  
5 curiosity. I was curious, and that is valid.

6 In the case of the sun, you study it because you  
7 need to understand it, because you have some desire to  
8 understand it, curiosity about it. But in the case of the  
9 sun you also study it because it is the closest analog to  
10 the star, it is a star. It's our only example that's nearby  
11 that we can actually see the surface of. This is all  
12 academic. So by studying the properties of the sun we can  
13 learn about the properties of distance stars.

14 If this were just normal nighttime astronomy,  
15 that's about where I would stop. In the case of the sun,  
16 however, because of the interactions of the magnetic field  
17 and the gas, the sun becomes active and the activity varies  
18 on eleven-year cycles. Right now we're going into a period  
19 where the sun is relatively quiet. Eleven years from now it  
20 will be relatively active. And as a manifestation of that  
21 activity there are potential large solar storms which can  
22 expel enormous amounts of material that head towards the  
23 earth.

24 What does that do? And this is not jive, this is,  
25 you know, I can tell you that in October, October 23rd of

79

1 2003 there was an enormous solar storm that caused a power  
2 outage that shut down cellular communications, that disabled  
3 satellites. If we were to voyage to Mars and a large  
4 coronal mass ejection, which is a manifestation of solar  
5 activity, were to blow out and we had astronauts in space,  
6 their lives would be put in danger. I am not going to  
7 oversell it, but a large solar flare when astronauts are  
8 flying would be very dangerous. It is dangerous to people  
9 in airplanes.

10 So this is -- I mean to me, and I am not a solar  
11 physicist, I am not a solar astronomer, this is a remarkable  
12 thing, because in my professional life I have never done  
13 anything that has any practical application. But solar  
14 astronomy does bear on life on earth.

15 Now, you might say it bears on technological life  
16 on earth. And I will agree with you that if you are off the  
17 grid, if you have no power, if you have no cell phone, if  
18 you don't rely on communications, and if you don't rely on  
19 the Internet, then what is happening on the sun -- and you  
20 never go to the top of Mount Everest -- then what is  
21 happening on the sun really doesn't have any impact on you  
22 in terms of this activity. Yet we do live in a  
23 technological world.

24 The last thing I will say is it is very obvious  
25 that the sun has an impact on the climate. We don't

80

1 understand the fundamental radiance changes, the fundamental  
2 variations in the brightness of the sun. We have  
3 circumstantial evidence that shows that the lack of solar  
4 activity, the lack of solar activity -- there's a long  
5 period in the 17th century when there were no sun spots, and  
6 during that time that was a period that was extremely cold.

7 Now, you might say, "Well, that's cool, because we  
8 have got global warming and it's going in the other  
9 direction," but we don't understand why that's true. And  
10 you can say, "Well, can you do anything about it?" Well,  
11 probably not, but you might prepare.

12 So in any event, the connection between the sun,  
13 the variation of the sun and the climate is a valid thing to  
14 study. It has an impact on agriculture, where you are going  
15 to cultivate. What impact does it have on you on Maui?  
16 Probably very little. What impact does it have on  
17 civilization at large? A measurable impact. I won't  
18 oversell it, I won't say it's going to change our lives.  
19 But as we move into a more and more  
20 technologically-dependent civilization, the impact in my  
21 mind rose at least to a measurable level. I hope that gives  
22 you an answer.

23 DR. CHARLIE FEIN: Any other questions? Yes, sir.

24 MR. KEAHI BUSTAMENTE: So what is that going to do  
25 for me as a Hawaiian? What benefit do I get out of it?

81

1 DR. CRAIG FOLTZ: Do you want me to answer that  
2 from my heart?  
3 MR. KEAHI BUSTAMENTE: You will probably give some  
4 money, I don't know, reimbursement, if you can call it that.  
5 But I don't care about your money.  
6 DR. CRAIG FOLTZ: Do you have career plans.  
7 MR. KEAHI BUSTAMENTE: Yes, I do.  
8 DR. CRAIG FOLTZ: What do you think you are going  
9 to do?  
10 MR. KEAHI BUSTAMENTE: Something to do with  
11 Hawaiian studies.  
12 DR. CRAIG FOLTZ: Do you have any friends who want  
13 to stay and work in the Maui economy and live here?  
14 MR. KEAHI BUSTAMENTE: Sure.  
15 DR. CRAIG FOLTZ: Would it be of value to you or  
16 to them to become better trained in higher tech activities?  
17 MR. KEAHI BUSTAMENTE: Sure.  
18 DR. CRAIG FOLTZ: If there were programs that were  
19 set up that developed, that were specifically targeted to  
20 develop the Hawaiian workforce such that it was possible to  
21 work in high tech Maui, to bloom where you are planted,  
22 would that be something that would be appreciated?  
23 MR. KEAHI BUSTAMENTE: Sure. But how many  
24 Hawaiians work up there now?  
25 DR. CRAIG FOLTZ: You don't have to say up there,

82

1 there's high tech down here too now. I haven't got the  
2 number, we heard it the other day. What was the number? If  
3 you include Lockheed and Ocean Net and et cetera, several  
4 hundreds.  
5 MR. KEAHI BUSTAMENTE: Hawaiians?  
6 DR. CRAIG FOLTZ: If your economic development  
7 board is trying to develop Maui as a place that is high  
8 tech, and if high tech salaries make it possible for you to  
9 live in what is now the most expensive place in the United  
10 States to live, does it make sense for us to make an  
11 investment that might help not only -- you know, we have to  
12 be careful in terms of Native Hawaiians and, you know,  
13 Hawaiian -- can help Maui residents to --  
14 MR. KEAHI BUSTAMENTE: At what cost to Hawaiians?  
15 DR. CRAIG FOLTZ: Talk to me about the 14th  
16 Amendment. There are programs that happen on, there's a  
17 program that's on -- do any of you know about the Akamai  
18 Internship Program, have you ever heard of it? We fund it.  
19 And this year it's about 15 students, community college and  
20 university students.  
21 And Uncle Charlie, you know about this. We fund  
22 that, we pay for that. And we don't do it as a mitigation  
23 measure, we fund it because it's the right thing to do.  
24 What we have to do is broaden participation and develop the  
25 workforce. And what that program does is to allow to

83

1 identify students in junior college and university level, to  
2 put them in internships on the Big Island, here, at  
3 observatories, at high tech companies.  
4 We may not turn a single one into an astronomer,  
5 but there are a lot of people that work in observatories who  
6 aren't astronomers. They're programmers, they're mechanical  
7 engineers, they're electronic engineers. And what this  
8 program is developed to do, what this program is designed to  
9 do is to show students that there is a career path that can  
10 lead to a reasonable salary job where they live.  
11 This year there will be 15 students in the program  
12 on Maui, and I think you know these numbers, and five of  
13 them are Native Hawaiians. Now it's a target, it's a  
14 program. We cannot say that non-Native Hawaiians may not  
15 apply. My understanding, and I'll ask my counsel friend,  
16 but to my understanding, that would be prohibited by the  
17 14th Amendment, and it would be wrong for a federally-funded  
18 program. But one can recruit and target.  
19 MS. CHARISSE CARNEY-NUNES: Yes.  
20 DR. CRAIG FOLTZ: That is entirely consistent with  
21 an affirmative action program. So this is the kind of thing  
22 that we need to think about. I love your suggestions, I  
23 think there are other things. I love Warren's suggestions  
24 about simple manners that show good manners. You know,  
25 simple things that one can do. Think about renaming the

84

1 roads. My good friend and colleague said, "Oh, geez, don't  
2 ask me to do that."  
3 But let's get those things, make a list that says,  
4 you know, clean up the stuff that isn't being used, take out  
5 the paths or roads that aren't being used. These are the  
6 kinds of things that if we can get a punch list, give us  
7 your proposal, build a workforce proposal. There's lots of  
8 things that we can do. Now, we don't have infinite money,  
9 but some of these things that show a willingness to express  
10 our appreciation to be allowed to use that site.  
11 I understand this young man. I absolutely  
12 understand your position. And please don't get me wrong,  
13 this is an emotional thing. And we all have places that we  
14 hold sacred, and I have places that I hold sacred, and I  
15 understand and I appreciate it and hold onto that. But we  
16 need to, you know, if we can do this, if we can come up and  
17 if we can make this win-win, so much the better. If we  
18 can't do it, we can't do it. Yes, please.  
19 MS. MIKAHALA HELM: I appreciate what you're  
20 saying, and I am aware of projects that NSF has funded that  
21 have been very helpful for our students. In this case I  
22 understood that this was a Section 106 meeting, and we came  
23 here to give testimony about what the evaluation document  
24 was about.  
25 And what I heard you mention was, one of the three

85

1 choices is avoidance. And if it is, then we don't have to  
2 come here and give suggestions or proposals as to what you  
3 can do, and suggestions that would make it a little  
4 mitigated, or whatever terms we can use, to say that it's  
5 all right to build a telescope.

6 Some of us strongly feel that it is our  
7 responsibility to have a legacy for our children and the  
8 children's children's children, all the generations to come.  
9 And we feel it so deeply, that it is not our role to come  
10 here and give you proposals on what we can do to mitigate.  
11 But it is our role to strengthen what it is we want to do to  
12 avoid it being built here at all.

13 And I'm sorry I get emotional, but I know we both  
14 get emotional, but the point is that I feel that's what this  
15 meeting was about. And I feel that that's what I'd like to  
16 see strengthened is why when I heard you say at the other  
17 meeting that NSF has not decided on funding this. And I am  
18 believing you, I am believing you. And that's why, you  
19 know, don't be offended if we are not coming to your  
20 proposal and what we can do to mitigate.

21 DR. CRAIG FOLTZ: We are both right. You are  
22 absolutely right, avoidance is an option. You expressed  
23 your opinion very eloquently, and I respect your opinion.  
24 And you should express that opinion, and that's now part of  
25 the administrative record. But as you said, you called them

86

1 options.

2 MS. MIKAHALA HELM: I was merely stating what she  
3 said.

4 DR. CRAIG FOLTZ: They are options so one cannot  
5 close off. Because you feel strongly, you cannot stop  
6 discussion that would, for example, consider a mitigation  
7 package. So the purpose of this meeting is not simply to  
8 address one of those options. As much as we respect your  
9 opinion, it is now part of the administrative record, okay.  
10 And I say this -- please, I get emotional about this, and I  
11 understand you. And really, we come here -- we really come  
12 here with respect. What happens in the end, whatever  
13 happens in the end should not be construed as a lack of  
14 respect for you personally.

15 MR. EDWARD LINDSEY: All the thing that you talked  
16 about, all the things with NSF, you can do it without the  
17 telescope.

18 DR. CRAIG FOLTZ: You can write us a proposal, Ed.  
19 Go write us a proposal. We do it without the telescope, we  
20 do it right now. You want us to do more of it? Would you  
21 like us to do more of it?

22 MR. EDWARD LINDSEY: Let's see the wall, if you  
23 can do it without the telescope.

24 MR. CHARLES MAXWELL: You know, I specifically  
25 want to say this to address Mikahala. This is the same

87

1 feelings I had when EOS and when Faulkes was built on there,  
2 but it is built. Whether we liked it or not, it is built.  
3 I don't want to see this happen again, and that's the reason  
4 why I put that in my report.

5 If you had years of fighting these people and then  
6 winding up with nothing you would feel the same way that I  
7 do. I am looking for the future. If they're going to build  
8 it, then the future children is going to prosper from it.  
9 Not me, not you maybe, but the future. That's what it is.

10 MR. JAKE BARROWS: In my view, it's sad to see  
11 that Charlie's program or his proposal is being utilized per  
12 se as a resolution to have an adverse effect, when in your  
13 mission statement his program could be submitted for actual,  
14 right?

15 DR. CRAIG FOLTZ: Would you state your name?

16 MR. JAKE BARROWS: My name is Jake Barrows, Jake  
17 Barrows.

18 DR. CRAIG FOLTZ: First of all, let me reiterate a  
19 point that I made. We fund programs in work force  
20 development here, and we fund it out of our budget. Okay,  
21 we do that. And it was in response to a proposal written by  
22 a woman who lives in Santa Cruz, California. It would be  
23 possible for you to get together and write a proposal to us  
24 and ask for funding to do what Uncle Charlie has outlined.  
25 It would be possible. The decision as to whether that were

88

1 funded or not would not be tied to any project. That is a  
2 possibility.

3 I am going to turn to my boss and say if you want  
4 to add any other comments to what I have just said?

5 MR. WAYNE VAN CITTERS: No.

6 MR. JAKE BARROWS: It's also possible to make it  
7 further along the way for approval if it was attached to  
8 ATST, correct?

9 MR. WAYNE VAN CITTERS: Well, actually I'm not  
10 sure I would agree with that statement, because that  
11 assumes, that statement assumes then that somehow ATST, that  
12 there has been a positive decision on ATST already. So no,  
13 I wouldn't say that.

14 MR. JAKE BARROWS: That would more than likely  
15 happen if there was an approval that would come out of  
16 operating funds to fund that program.

17 DR. CRAIG FOLTZ: Let me try. If ATST was not  
18 built, the National Solar Observatory will spend none of its  
19 operations funds on Maui. It has no reason to. It has no  
20 feet on Maui. If ATST were constructed, the NSO would spend  
21 operations funds on Maui. The operations funds would  
22 include a component of education.

23 So yes, the availability of money from NSO  
24 operations funds that could go into education of special  
25 programs is in fact tied to the contingency of whether ATST

89

1 is built or not. So that having been said, you basically  
 2 asked the question, could these programs be developed  
 3 without the telescope being built. And my response to that  
 4 is yes, someone could write a proposal, an unsolicited  
 5 proposal to do exactly what Uncle Charlie has laid out, or  
 6 some variation of that, and submit it to the NSF. It would  
 7 be reviewed and it might be funded. It might be funded.  
 8 Because in general, the success rate for NSF proposals, the  
 9 success rate for proposals to the astronomy division this  
 10 year will be about one in four are funded. And overall the  
 11 agency tries to get a one in three, but it's rarely 50/50.  
 12 So you might, you know, you can take those comments however  
 13 you want, but that's the basic truth.

14 MR. KEAHI BUSTAMANTE: Sorry, just one more  
 15 question. I wanted the NSF to clarify that. You said you  
 16 acknowledge Uncle Charlie's report calling -- you  
 17 acknowledge Haleakala as being sacred.

18 MS. CHARISSE CARNEY-NUNES: Yes.

19 MR. KEAHI BUSTAMANTE: Now, will it fall under the  
 20 National Historic Preservation Act, is that under the  
 21 guidelines? I mean, are you acknowledging that it could  
 22 fall under these guidelines, or are you just saying yeah,  
 23 it's sacred?

24 MS. CHARISSE CARNEY-NUNES: We acknowledge that it  
 25 falls under the guidelines of the National Historic

90

1 Preservation Act, yes. That's the short answer. And I can  
 2 expand on that.

3 MR. KEAHI BUSTAMANTE: That's all I needed, thank  
 4 you.

5 MS. CHARISSE CARNEY-NUNES: It's strange the way  
 6 the regulations are set up, but they actually really do put  
 7 the burden on the federal agency to make the determination  
 8 as to whether or not something is historic property. What's  
 9 historic to me, as quite frankly, a person of African  
 10 descent in this country may not be what's historic to him,  
 11 may not be what's historic to you, but they put that burden  
 12 on the federal agency.

13 So what can we as a federal agency do? We have to  
 14 ask you, we have to ask you. And that's what the purpose of  
 15 Kahu Maxwell's report was, to educate us so that we can make  
 16 that decision.

17 MR. KEAHI BUSTAMANTE: Thank you.

18 DR. CHARLIE FEIN: Thank you. Anything else  
 19 before we conclude this evening's meeting?

20 Charlie, would you like to explain why Kahu  
 21 Maxwell was chosen and why he was asked to do the report or  
 22 hired to do the report?

23 DR. CHARLIE FEIN: There has been a question about  
 24 how Kahu Maxwell was chosen to do the cultural resource  
 25 evaluation. Kahu Maxwell was chosen through competitive

91

1 competition from a list of acceptable vendors provided by  
 2 the State of Hawaii. He is listed as a qualified cultural  
 3 specialist. And he, along with other individuals, submitted  
 4 quotes. And Kahu Maxwell was selected on the basis of prior  
 5 experience and best value for the position. Yes?

6 MS. KEALA HAN: I just have a few comments. My  
 7 name is Keala Han, and not because he's my brother, but you  
 8 made a good choice, because I have seen him walk the walk.  
 9 I haven't seen many of you here walking the walk, and he has  
 10 been doing that for years, years.

11 He started with the Faulkes telescope. He was the  
 12 only one that tried to disrupt the meeting. I was there  
 13 just to support him, but he disrupted the meeting and the  
 14 Air Force. So, you know, for years he's been doing that,  
 15 and he has walked the walk. And like I say, not because  
 16 he's my brother, but I think they made a good choice.

17 And to even bring up those proposals, he has known  
 18 for years our Hawaiians had nothing, our Hawaiians didn't  
 19 stand up for themselves. They let them build and build and  
 20 build, and there was no education attached. But I thought  
 21 it was a good proposal, and I want to thank you folks for  
 22 all that respect shown to our Native Hawaiians.

23 DR. CHARLIE FEIN: Any other comments before we  
 24 conclude the evening? Okay, I want to thank you all very  
 25 much for coming. I know it was a relatively small group.

92

1 Next time I really will be working very hard to have a  
 2 larger representation. And I am looking forward to getting  
 3 whatever comments and/or proposals and/or no action  
 4 alternatives, or anything else that you wish to submit. I'd  
 5 be glad to receive those, and they will all be included in  
 6 the administrative record. They will all become part of the  
 7 decision document, part of the Draft Environmental Impact  
 8 Statement, and will be considered in the evaluation of the  
 9 cultural resource impact for this project. So thank you  
 10 very much.

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12 (The proceedings were concluded at 10:00 p.m.)

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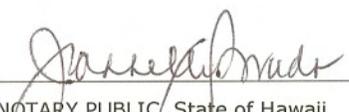
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1 CERTIFICATION

2  
3 I, JEANNETTE W. IWADO, Notary Public for the State of  
4 Hawaii, certify:

5 That the proceedings contained herein were taken by  
6 me in machine shorthand and were thereafter reduced to print  
7 under my supervision by means of computer-aided  
8 transcription; that the foregoing represents, to the best of  
9 my ability, a true and accurate transcript of the  
10 proceedings had in the foregoing matter.

11  
12 Dated the 9th day of April, 2006

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18 NOTARY PUBLIC, State of Hawaii  
19 My commission expires 2/5/08

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**Appendix C(2): Transcripts**  
**Section 106 Meeting, Paukūkalo Community Center, May 1, 2006**

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1 NATIONAL SCIENCE FOUNDATION  
2 SECTION 106 FORMAL MEETING  
3 FOR THE ADVANCED TECHNOLOGY SOLAR TELESCOPE  
4 MONDAY, MAY 1, 2006

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12 Held at the Paukukalo Community Center 655 Kaunualii  
13 Street, Waiehu, Maui, Hawaii, commencing at 7:00 p.m. on  
14 Monday, May 1, 2006

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22 REPORTED BY: SANDRA J. GRAN, RPR/CSR 425

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ATTENDANCE

National Science Foundation Formal Meeting

May 1, 2006

Dr. Charlie Fein, Vice President  
KC Environmental, Inc.  
P.O. Box 1208  
Makawao, Hawaii 96768

Dr. Craig Foltz, Program Officer  
National Science Foundation  
4201 Wilson Boulevard, Room 1045  
Arlington, Virginia 22230

Jeremy Wagner, Project Director, National Solar Observatory

Tony Gibson, National Science Foundation

Charisse Carney-Nunes, Assistant General Counsel

Jeff Bar, ATST Project Architect, National Solar Observatory

Mike Maberry, Assistant Director, University of Hawaii,  
Institute For Astronomy

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1 P R O C E E D I N G S :

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3 MR. FEIN: Aloha, ladies and gentlemen.

4 Could I ask you to please be seated.

5 Again, aloha and welcome. This is the second

6 formal National Historic Preservation Act Consultation

7 Meeting for the proposed Advanced Technology Solar Telescope.

8 My name is Charlie Fein. I'm the environmental consultant

9 for this project. And tonight we are going to go through a

10 series of steps and, ultimately, anyone who wishes to step

11 forward and comment may do so.

12 Again tonight we are recording everything

13 that is being said officially with a stenographer. If

14 somebody wishes to testify in Hawaiian, it will be recorded,

15 turned into a wav file, and it will be translated and posted

16 on the Advanced Technology Solar Telescope website as soon as

17 it is translated.

18 Before we go any further, I would like to ask

19 Kahu Charles K. Maxwell to offer a blessing to this evening.

20 This, by the way, is not an endorsement of the project. It

21 is simply a blessing to go on with the proceeding.

22 Kahu.

23 MR. MAXWELL: (Hawaiian.) Would you please

24 rise.

25 (Hawaiian.) Our Father in heaven, we ask and

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1 pray that you look down upon us here at Paukukalo that we  
2 might get the wisdom of what is happening up at Haleakala and  
3 we might share our input to protect this very sacred place.  
4 We ask this in your name. (Hawaiian.) Amen.

5 AUDIENCE: Amen.

6 MR. FEIN: Mahalo.

7 So this evening we are going -- There are a  
8 lot of people in the room tonight that have not been in any  
9 of the public meetings or in the previous National Historic  
10 Preservation Act meetings. And all together I believe there  
11 have been I think six meetings all together, but each time  
12 there are individuals who have not seen or heard much about  
13 the project except maybe what they have read in the paper or  
14 what they have heard from other people.

15 And so tonight we have with us individuals  
16 from the National Science Foundation, the National Solar  
17 Observatory, who are prepared to give us brief descriptions  
18 of the project, the role of the National Science Foundation  
19 and so on.

20 Before we begin those, I would like to ask  
21 the assistant general counsel for the National Science  
22 Foundation, Charisse Carney-Nunes, to tell us specifically  
23 who this meeting is for and what it is about.

24 Charisse.

25 MS. CARNEY-NUNES: Aloha.

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1 AUDIENCE: Aloha.

2 MS. CARNEY-NUNES: One more thing I want to  
3 add as a housekeeping matter, there is someone who may be  
4 videotaping in the back. And she is waving to us. Hi. She  
5 is not associated with the National Science Foundation or the  
6 project, but it's a public meeting and so she's welcome to  
7 videotape it. If anyone feels uncomfortable and not wanting  
8 something to be videotaped, then just let us know and she  
9 said that she'll turn it off. Okay? So just another  
10 housekeeping matter.

11 Okay. So I bring you greetings on behalf of  
12 the National Science Foundation. To the Native Hawaiian  
13 community and to all the people of Maui, mahalo for welcoming  
14 us this evening.

15 Again, my name is Charisse Carney-Nunes, and  
16 I am an assistant general counsel at the National Science  
17 Foundation. I have with me this evening Craig Foltz, who is  
18 the program officer for the ATST project at the National  
19 Science Foundation, and we also have Tony Gibson, who is from  
20 our Office of Legislative and Public Affairs.

21 When we last met in March I gave you all an  
22 overview of the process of why we're here this evening, and  
23 that's called the Section 106 process. This time we thought  
24 it would be a little bit more interesting to give you a very  
25 detailed, more in-depth understanding of the process. And so

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1 I'm just going to say a couple of words up here now, but I'm  
2 going to actually come back, I have a slide presentation so  
3 that I want everyone to really understand the kind of input  
4 that we're seeking from the Native Hawaiian community  
5 specifically and from the entire community here on Maui.

6                   So for now I'm just giving you a quick  
7 overview of why we're here. Again, it's our second formal  
8 meeting of the Section 106 consultation process. Section 106  
9 refers to Section 106 of the National Historic Preservation  
10 Act. What does that mean? It's a federal law that is  
11 concerned with preserving and enhancing the productive use of  
12 our nation's resources, historic resources particularly.

13                   It's pretty simple. It requires federal  
14 agencies like NSF to consider the effects of their  
15 decision-making on historic or cultural properties. Another  
16 important thing about Section 106 is that it is specifically  
17 designed to give the public a voice in that decision-making,  
18 and particularly Native Hawaiians and Native Americans are to  
19 have a voice in federal decisions that impact historic  
20 properties.

21                   So that's why we're here. NSF is considering  
22 a proposal to fund the construction and operation of a solar  
23 telescope that would be sited on Haleakala. NSF's decision  
24 as to whether or not to fund the telescope has not been made  
25 as of yet. Before we make the decision we have to do two

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1 things, one of which is the Environmental Impact Statement.  
2 It's an environmental analysis. That process is separate  
3 from the process that we are here tonight to go through,  
4 which concerns historic properties.

5                   The Environmental Impact Statement process  
6 actually started -- When was it? -- last summer. And it's  
7 moving forward parallel to this process. And, in fact, we're  
8 hopeful that very soon, within about a month or so, we will  
9 have -- we will be able to release a draft Environmental  
10 Impact Statement for the community to comment on. But that  
11 concerns environmental impacts of the project. This process  
12 that we're here tonight for is specifically for the Section  
13 106 process that concerns historic properties. We call them  
14 cultural resources, resources that are important to the  
15 Native Hawaiian community, Haleakala specifically.

16                   So that's the historic property we're talking  
17 about, the mountain, Haleakala. And first and foremost the  
18 thing that we want you to know at NSF is that we have already  
19 made the decision that Haleakala is, in fact, a -- it's  
20 called -- the legal word for it is called a traditional  
21 cultural property. We refer to it as a TCP for short. But  
22 the point is is that the way the law is set up, it's set up  
23 so that the federal agency is actually the one that's making  
24 the decision as to whether or not a property is historic.

25                   And the law is set up so that we have to go

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1 to the community to find this information out. We did that  
2 already. We utilized the services of Kahu Maxwell, who  
3 educated us about your stories and about your legends, and,  
4 therefore, we have already made the determination that, yes,  
5 Haleakala is a traditional cultural property or a TCP under  
6 the law. So that means that to move forward in the Section  
7 106 process, we have to talk about how to resolve the adverse  
8 impact that building ATST on top of the traditional cultural  
9 property might have.

10                   Because the traditional cultural property is  
11 just that, a cultural resource of Native Hawaiians, the law  
12 does require that we place a special emphasis on Native  
13 Hawaiian organizations, and so that's what we're here to do.  
14 But that's not to negate the fact that Haleakala is, of  
15 course, a majestic mountain to all of the citizens of Maui  
16 and beyond, and so we recognize that as well and want to hear  
17 from the entire community.

18                   So with all of that being said, on behalf of  
19 NSF I say mahalo to Kahu Maxwell for his blessing of this  
20 process. As I said in March, for those of who were here, it  
21 is our deepest belief that these discussions can be  
22 undertaken with a spirit of mutual respect, productive  
23 consultation, and education and enlightenment for all parties  
24 involved.

25                   So with that, I would like to introduce Craig

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1 Foltz. He is, again, the program director for the ATST  
2 project at the National Science Foundation. And he is going  
3 to talk to you a little bit about NSF and also about the  
4 science of, you know, why -- for us nonscientists sort of,  
5 you know, why do we even want to do so this.

6 MR. FOLTZ: Thank you, Charisse.

7 I add my thanks to Charisse's. Thank you all  
8 for coming.

9 My name is Craig Foltz. I work at the  
10 National Science Foundation. I am an astronomer. I am also  
11 a federal employee. And I wanted to talk tonight a little  
12 bit about the project very briefly and about how the NSF  
13 works, how the National Science Foundation works, what it  
14 does and how it does it.

15 We at the National Science Foundation are a  
16 federal agency that is in the executive branch. That means  
17 that our boss eventually is the President of the United  
18 States.

19 Our job at the NSF is to provide funding for  
20 endeavors in science, technology, engineering, mathematics,  
21 and education in the so-called STEM field: Science,  
22 technology, engineering and mathematics. And we do this, as  
23 I said, by giving grants, by providing funding.

24 What the NSF is not -- Ah, good. Thanks.

25 First of all, what is the NSF? We are a

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1 responsive agency. What do I mean by that? I mean that we  
2 are not like the Department of Defense. We're not like NASA.  
3 We're not like the Department of Energy and so on. We are  
4 not an organization that makes a decision unilaterally; that  
5 is, we don't get together as federal scientists and say, We  
6 think that what really the science and the education of this  
7 nation needs is a new particle collider that will live  
8 somewhere in Illinois. We don't work that way.

9                   What we do is we establish priorities that  
10 are set by the community at large; the science, technology,  
11 engineering and mathematical communities at large. We don't  
12 do this of our own will. We respond to what the community  
13 wants.

14                   So if you were a chemist and you have a  
15 wonderful idea and you have a collaboration of chemists, then  
16 you can come to us and say, We need support to study the  
17 following problem. Okay? That proposal that is written  
18 would then be considered by peers, by other chemists and  
19 other scientists, as to its intellectual merit and as to its  
20 broader impact; in fact, the society impact of education and  
21 so on. If it is judged appropriately -- of appropriate  
22 status, then we will fund it.

23                   What we're going to talk about tonight very,  
24 very briefly is a very familiar object, and that's the sun.  
25 The study of the sun is, of course, an important part of

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1 solar astronomy and of solar physics. And our picture of the  
2 sun -- I think most of our pictures of the sun are quite  
3 simple. If I asked my young daughter to draw a picture of  
4 the sun, this is probably what she would draw: A big yellow  
5 disk that is, in fact, an image of the sun that was taken in  
6 March. It's an image of what we call a quiet sun. It's a  
7 white light picture. The sun is a huge ball of gas. It's  
8 about -- You could fit a million earths inside of it. It has  
9 a surface temperature of about 10,000 degrees. And it's a  
10 very, very important object.

11 We understand or we think we understand a lot  
12 about the sun. We -- Within the context of our scientific  
13 beliefs, we believe that the sun formed about 4.5 billion  
14 years ago. We believe that it will burn as we see it for  
15 about 4 billion years, at which point it will swell up and  
16 envelope the earth. So we have lots of time, so we don't  
17 need to worry about that. Now, that's the sun in broad  
18 brush.

19 If you asked about what we don't understand  
20 about the sun, it turns out that there are a lot of  
21 phenomenon that we do not understand. And these are  
22 important phenomenon. The sun is actually a place of  
23 enormous activity. Most of this activity is tied to magnetic  
24 fields that are generated in the sun, that sometimes protrude  
25 out of the surface of the sun and occasionally give rise to

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1 very, very explosive events that can blow enormous amounts of  
2 material out away from the sun and, in fact, that can impact  
3 the earth. When the -- these impact the earth, they can have  
4 actually fairly profound effect on life on earth.

5                   But beyond the effects of the variable sun it  
6 is worth pointing out that with the exception of some nuclear  
7 energy sources and geothermal power, that all of the energy  
8 that we use on the earth is derived ultimately from the sun.  
9 Fossil fuels, coal came from plants which were allowed to  
10 grow by the sun. Solar power, wind power -- I know that's  
11 not a good word around here so I won't say it too loudly, but  
12 the --

13                   Well, we have -- I can talk to you about it  
14 later, Keoki, but we have these wind generators behind us and  
15 I know that they generate opinions.

16                   In any event, all of that is driven by the  
17 sun. Our climate is driven by the sun. Our weather is  
18 driven by the sun. So I think it's not even arguable that  
19 the sun has a profound impact on our life. It impacts our  
20 climate, which then, therefore, impacts our economy. It  
21 impacts our technology and it impacts life in space. If you  
22 were out in space or if you were at high altitude, activity  
23 on the sun can certainly have an impact on you directly. And  
24 it is absolutely -- Well, I would be happy to argue this, but  
25 it is absolutely my most firmly held opinion that without the

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1 sun life on earth would be impossible.

2                   So the sun is important. And there are a lot  
3 of unanswered questions about the sun. And the major  
4 questions that we want to try to understand are the  
5 relationships between the sun and climate, how variations in  
6 the solar output affect things like global warming or global  
7 cooling. We have good evidence that in the past there has  
8 been a direct connection between the amount of solar activity  
9 and the mean temperature of the earth, which is important if  
10 you're involved in agricultural or virtually anything else.

11                   We want to understand the sun's drive of  
12 space weather. Space weather is a phenomenon of material  
13 being ejected from the sun that impacts the earth.

14                   We want to understand the sun as a star  
15 because we're curious. We want to understand how stars work.  
16 We understand a lot about stars, but there are many things  
17 that we don't understand. The sun is the closest one. It's  
18 the only one we can see the surface of.

19                   And we also want to understand the sun as a  
20 physics laboratory, because there are phenomena that happen  
21 on the sun that cannot be reproduced in the laboratory. So  
22 understanding the basic issues of how plasmas work, how  
23 ionized gas interacting with magnetic fields work are often  
24 best studied in nearest astrophysical laboratory, which is  
25 the sun.

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1                   These questions were considered important  
2 enough that the development of a new large solar telescope  
3 was a recommendation of the solar physics and solar astronomy  
4 community. It was not the NSF's decision. As I said, we  
5 didn't sit down and say, Damn, the newest solar telescope we  
6 have is 40 years old. We really want to build a new one.

7                   Our job, then, is to evaluate proposals such  
8 as this via peer review, rank their importance across fields,  
9 and if appropriate provide funding for them if they meet a  
10 rigorous set of standards. Now, I want to point out here, I  
11 want to stress that the ATST is not an NSF project alone. It  
12 is a project of the entire solar physics and space physics  
13 community that, if successful, would be funded by us.

14                   Very quickly -- and I won't go through all of  
15 this -- the ATST, if constructed, would replace a number of  
16 major solar telescopes that are currently in place around the  
17 world. There is no project of this magnitude being planned  
18 internationally. This would become the world's flagship  
19 facility. Its design is based on broad interests from the  
20 solar physics and solar astronomy. It will address current  
21 and future challenges. It will provide flexibility to adapt  
22 to new scientific challenges.

23                   It cannot be done from space. The science  
24 cannot be done from space for any rational thoughts. And it  
25 has tremendous broader impacts; that is it -- that which we

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1 learn with this telescope will help us to understand issues  
2 like climate change, astronaut safety, space weather, and the  
3 relation between what is happening on the sun and what is  
4 happening on the earth.

5                   Finally, I just want to make a few points  
6 here so we have a context. The ATST, if it is built, will  
7 cost at least \$175 million. That even by federal standards  
8 and particularly by -- particularly in the context of federal  
9 support for science makes it a very expensive project.

10                   The decision to fund it or not has not been  
11 made. This is to fund the construction. We have funded the  
12 design of the telescope, but the design is separately from  
13 the construction. So we have not made this decision and it  
14 will only be made after even the project goes through even  
15 more reviews. And those reviews will consider potential  
16 science return, the cost, how well the project is managed,  
17 what impacts it will have on the field, what impacts it will  
18 have on society, and what impacts it will have on the site.

19                   Having said that, I will point out that the  
20 ATST is well advanced in the decision process, but the  
21 decision to fund ultimately relies on the highest level of  
22 management of the NSF, several steps above me, the National  
23 Science Board and the US Congress, which makes the ultimate  
24 decision as to whether to fund this or not.

25                   I also want to point out that the selection

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1 of the Haleakala site was not done capriciously. No one  
2 said, Hey, this is a really wonderful island -- It is a  
3 wonderful island -- and we really would love to put a  
4 telescope there so we can go there and use it and then enjoy  
5 the rest of the island. It was not done that way.

6 The selection of the site and the precise  
7 location for the telescope on the site followed a really  
8 exhaustive process. So the site selection was not  
9 capricious, nor is the assessment of the impact.

10 So I want to thank you all for coming. I  
11 want to thank you for your input.

12 And at this point I'm going to turn it over  
13 to Charlie Fein.

14 Pardon me. Jeremy. Jeremy Wagner, who is  
15 the project manager for the ATST project.

16 MR. WAGNER: Okay. Hello. My name is Jeremy  
17 Wagner. I'm the project manager for ATST. I'm going to try  
18 and answer a few of the questions here fairly quickly: A  
19 quick overview of where on Haleakala ATST would be, what it  
20 looks like, why it looks like that, what the schedule might  
21 be.

22 AUDIENCE SPEAKER: Can you move? Thank you.

23 MR. WAGNER: Excuse me.

24 First, I'd just like to say a student before  
25 the meeting asked me how I became involved in science and in

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1 technology. And to answer the question, I had to go back a  
2 long way. My mother actually gave me a telescope on my  
3 eighth birthday and I remember the day, and I was hooked ever  
4 since. Last month I celebrated my 26th year with the  
5 National Observatory, I actually celebrated my 26th wedding  
6 anniversary as well, but that moment with the telescope when  
7 I was a kid really was pretty inspiring to me. And I've had  
8 a chance to be involved in science ever since.

9                   And we talk about structures and why they are  
10 the way they are, but there's a lot of people involved as  
11 well and a lot of good experiences over the course of the  
12 time that I have been involved.

13                   This layout gives you an idea of where the  
14 proposed sites are. This is the existing Mees site on  
15 Haleakala. This is the air force facility. The primary  
16 proposed site is just east of Mees here. And we have drawn  
17 in a sketch of what ATST would look like. This is looking  
18 down at the site. The alternate site or the secondary site  
19 is up at Reber Circle, which is just a bit uphill from there.  
20 Okay?

21                   Here are images of those two sites. These  
22 were both in the Haleakala Long-Range Development Plan that  
23 was prepared by the Institute for Astronomy. This is the  
24 alternate site, the Reber Circle site, which was the site of  
25 a radio telescope experiment back in the 1950s.

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1                   And then this is the site just east of Mees.  
2 This is the existing Mees telescope and ATST on the primary  
3 site would sit here.

4                   To give you an idea of what it looks like and  
5 why it is so big, 137 feet from the ground to the top of the  
6 enclosure, another 6 feet up to the top of the entrance  
7 aperture to the telescope facility, so 143 feet tall. Okay?

8                   Now, one of the reasons it's set at that  
9 height is from the data that we took during the site survey  
10 we set the height of the main mirror, which is sitting  
11 here -- This is in cross-section -- at that height so that  
12 the telescope optics are above the turbulent layer that's  
13 produced by the sun's energy hitting the dark rock and  
14 heating up the air around it. So in order to preserve the  
15 excellent seeing that the site provides, you have to get the  
16 optics up above that disturbed layer, and that's why this was  
17 sit at the 92-foot level. Okay?

18                   Now, the enclosure then which is surrounding  
19 the optics and the telescope mount is set so that it can  
20 provide clearance for the telescope to track the sun as it  
21 moves and to protect it from wind, ice, rain, elements.  
22 Okay?

23                   There is a support building next to it which  
24 is as small as we can make it. The astronomers actually want  
25 the facilities to be as small as possible, too, because they

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1 don't want the support building to affect the seeing as well.

2                   The facilities near the telescope and the  
3 telescope enclosure are painted white because if the ground  
4 heats up, the dark lava rock heats up and you build the  
5 structure up above it, if you take a dark color like that and  
6 bring it up with the facility, it acts in just the same way,  
7 so you have defeated the purpose. The idea, then, is to keep  
8 these surfaces at ambient temperature essentially the same as  
9 the air temperature so that they don't destroy the seeing  
10 that's provided by the site. And so that gives you an idea  
11 of why it's at that height and why it's white.

12                   Now, we did a lot of studies of different  
13 colors, and the heat loading on these structures goes up by a  
14 factor of four. The utility electricity that's required to  
15 drive a cooling system for a dark structure would be at least  
16 four times what it takes to do this. And it actually exceeds  
17 the Maui Electric capacity up there.

18                   So that's why it's white. That's why it's  
19 that high. I think in the community there's been discussion  
20 about that, and I just want to make that clear.

21                   So if there are any questions, I'm happy to  
22 talk about that.

23                   The existing Mees facility --

24                   AUDIENCE SPEAKER: Question.

25                   MR. WAGNER: Sure.

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1                   AUDIENCE SPEAKER: The first meeting you held  
2 in the Cameron Center last year I asked somebody about the --

3                   MR. WAGNER: Sorry.

4                   MS. CARNEY-NUNES: We actually can't record  
5 your question or even -- If you can say it in here and if you  
6 could say your name. Sorry about that.

7                   AUDIENCE SPEAKER: Thank you.

8                   The first meeting you held in the Cameron  
9 Center last year I asked the question about the heat  
10 exchanger that you have for this building and I had wondered  
11 if they could not increase the size of the heat exchangers in  
12 order to cool the building more or more efficiently. That  
13 way could have a color other than white paint. I don't know  
14 who I asked, one of the gentleman here. I didn't follow up  
15 on it later, so I'm just asking again. If you can improve on  
16 the present heat exchange system which would, in turn, lead  
17 you to painting the structure a color other than white.

18                  MR. BAR: My name is Jeff Bar. I'm the  
19 project architect. And I wasn't directly responsible for  
20 designing the cooling system, but I'm well aware of it and  
21 what's involved in it. And it's a pretty simple system,  
22 really. There. On the -- some of the other pictures you've  
23 seen there's a kind of series of panels on the dome itself,  
24 and in the -- three of those panels there are like two sheets  
25 of metal and between them you flow coolant, which is just a

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1 water with something in it to keep it from freezing. And  
2 it's a pretty simple system and it's about the most direct  
3 and efficient means of removing the heat from -- that builds  
4 up on the dome.

5 We actually looked at other systems,  
6 potentially using air flowing between two skins of the dome  
7 or something like that, and all of that stuff uses even more  
8 power. This was the most energy-efficient means we could  
9 come up with. And, believe me, we would have -- if there's  
10 something else there, I think we would have sort of beaten it  
11 out of the bushes within the kind of search that we did. So  
12 it really is kind of minimum.

13 And when Jeremy talks about the four times,  
14 it's like -- you know, for those of you who think in terms of  
15 power units, it's about a megawatt of heat that builds up on  
16 the dome, which is a thousand kilowatts of heat that builds  
17 up on the dome if you have -- if you paint it brown. And if  
18 you paint it white, it's about 250 kilowatts. So it's about,  
19 as he said, one-fourth the amount of heat. And to remove  
20 that much heat from a dark-colored dome no matter what kind  
21 of efficiency you can come up with the cooling system was  
22 completely impractical.

23 So that's why, you know, that -- And we did  
24 explore other colors, too -- silver, which I know isn't  
25 popular, either, but other kinds of possibilities, and

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1 nothing even compares with the white finishes.

2 AUDIENCE SPEAKER: So, in effect, you could  
3 paint it another color, you're just saying from a practical  
4 point of view you can't do it or you won't do it because --  
5 it's not engineering or technologically impossible to do --

6 MR. BAR: It's not impossible.

7 AUDIENCE SPEAKER: According to what you say,  
8 it's simple to do. Can we paint it something other than  
9 white?

10 MR. BAR: Okay. Well, again, you're right.  
11 It's not impossible. Anything is possible. But it's not  
12 within the realm of feasibility on this mountain with the  
13 heating require -- the cooling requirements that we have.

14 AUDIENCE SPEAKER: The amount of control  
15 required on a surface like that we just can't do in order to  
16 maintain the kind of image quality that we need.

17 AUDIENCE SPEAKER: Let me back this up, just  
18 one little follow-up on this. You have not asked for  
19 funding; is that correct? You have not approached congress  
20 or the gentleman that spoke first for funding, so we have  
21 wiggle room in there; right? You can go in there and ask --  
22 go whole hog and ask for everything. Is that correct, you  
23 haven't asked for funding.

24 MR. WAGNER: Yes, we actually did propose for  
25 the level of fund.

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1                   AUDIENCE SPEAKER: You did ask for -- Did you  
2 put forth a figure?

3                   MR. WAGNER: Yes, we did. Actually, several  
4 years ago.

5                   AUDIENCE SPEAKER: Can you not revise that  
6 figure while we're in this talking process? Can you get two  
7 figures; the one that you have here and one with an improved  
8 heat exchange system that allows you to change the paint of  
9 that building from white to something else?

10                  MR. WAGNER: My understanding is that we're  
11 not in a position to request additional funding in that  
12 sense. And I don't see -- As Jeff said, I'm not sure what  
13 kind of system we could possibly come up with that would meet  
14 the kind of requirements that we have. I mean, we've worked  
15 this problem very hard.

16                  Let me go on so we can get to the Section  
17 106. Okay. So we talked about the surfaces. Let me get to  
18 the schedule because I think there's been some discussion as  
19 well in the community about that.

20                  The DND phase is ongoing now. The site EIS  
21 process is underway. We've been working through our design  
22 reviews and several of these have been focused on that  
23 thermal control system itself. The NSF has been reviewing  
24 our construction proposal that we submitted which had a  
25 figure in it. They will then in October hold a preliminary

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1 design review, which is essentially a baseline review of the  
2 project. They're going to look at the management, the  
3 technical, the cost, the risk, all of that.

4 If that's successful, they will then have an  
5 EMR, Exit Readiness Review. And if that's successful, they  
6 will submit a recommendation to the director of the NSF to  
7 consider submitting this to the National Science Board for  
8 consideration. Now, the EIS is all part of this. It's part  
9 of the criteria that they use to make these kinds of  
10 decisions. And so they are timing all of this to understand  
11 whether the environmental impact can be successfully  
12 completed or whether it can't.

13 Okay? So as Craig said, it's not funded.

14 MS. CARNEY-NUNES: We actually need questions  
15 to go to the mike.

16 MS. DIZON: Aloha. My name is Toni Dizon.  
17 I'm actually from Lahaina. I'm born and raised on Maui. I'm  
18 against this project totally. You guys don't belong there at  
19 all.

20 (Applause.)

21 MS. DIZON: You got \$170 million to offer  
22 these gentlemen to do scientific things, then do it off the  
23 water that they polluted, do it off the land that they  
24 polluted. We need that agricultural major at Maui Community  
25 College. Okay?

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1 I know what you guys are trying to do and  
2 stuff, that's great, but what the hell doing up there when  
3 you guys already forecasted what the sun is going to do, what  
4 it's going to do in the future. Let's do it on the land, do  
5 it on the ocean. Purify what we've got down here instead of  
6 futtin' around up there. I'm serious. And then all kinds  
7 monies you guys can give these guys, give it to the ag.  
8 department at Maui Community College.

9 (Applause.)

10 MS. DIZON: The hell with these guys. Give  
11 us the money so I can get my bachelor's degree, my master's,  
12 and the future of the land and the water. These guys don't  
13 belong up there and they damn well don't belong on Haleakala.  
14 That's sacrilegious to Peli itself as much as Maui. Because  
15 looking -- When you go outside and you look up, Welcome to  
16 beautiful Maui, you see a fricking (inaudible) that's up on  
17 Ma'alaea. That's a pain in the butt. Now we're going to  
18 have an eyesore of 14 towers. That's exactly what this  
19 kupuna told me it's going to look like on the mountain. Look  
20 at the mountain, that's what's going to be sticking up.  
21 (Gesturing.) Exactly.

22 But as a -- as an agriculture major, I'm  
23 pretty sure none of this should not be financed at all. Give  
24 it back to the people. You say it's for the community. Give  
25 us the money to bought our taro, give us back our taro. Give

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1 us the money to buy -- for us to finish our science degrees  
2 in agriculture and also for marine biology so we can clean  
3 our water besides our land.

4                   They don't belong with this stuff. This  
5 stuff is going to be ridiculous. It's not worth it at all.  
6 Don't give them the money. Don't give them 175. They don't  
7 deserve it. And they rightly should not be up there. That's  
8 cultural. Besides me being Hawaiian -- I'm proud to be  
9 Hawaiian. And as far as my kupuna and then my future,  
10 they're going to take that away from me and they don't  
11 deserve it at all.

12                   (Applause.)

13                   MR. WAGNER: Thank you for your words.

14                   MS. DIZON: Oh, you're welcome.

15                   MR. WAGNER: The site construction would  
16 occur in this kind of time frame given a late 2008 start,  
17 which is fiscal year 2009 for the NSF. The excavation and  
18 erection of the site -- of the structures would occur in the  
19 first couple years. Most of the work done in the last few  
20 years would be inside the structures. The optics then  
21 arrive, the primary mirror and the other optics. They get  
22 integrated within the structures, and then we have to go  
23 through a series of tests and adjustments to make sure that  
24 we can succeed in meeting the science requirements that we  
25 set for the facility.

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1                   Out in these later years then there would be  
2 a transition to initial operations. We would get what's  
3 called first flight when we first point at the sun and you  
4 fly through the system. More adjustments, more tests, and  
5 then operations would begin out here, 2014, 2015, on this  
6 type of schedule.

7                   AUDIENCE SPEAKER: Question about the  
8 schedule. Is that a schedule of where the site -- final site  
9 is selected, or is that the schedule presuming the site will  
10 be Haleakala?

11                  MR. WAGNER: This is the schedule for either  
12 the Reber Circle site or Mees site on Haleakala, is the  
13 answer. Just so that when you consider this, you understand  
14 the kind of schedule that's being proposed.

15                  AUDIENCE SPEAKER: Thank you.

16                  MR. WAGNER: Okay?

17                  Yes.

18                  AUDIENCE SPEAKER: I assume, and this  
19 (inaudible.)

20                  THE REPORTER: I can't hear.

21                  MR. MABERRY: Use the mike. Sorry. That way  
22 everybody can hear you.

23                  MR. DUKELOW: Am I -- Is this loud enough?

24                  (Laughter.)

25                  AUDIENCE SPEAKER: Where's your mike?

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1 MR. DUKELOW: I am Oliver Dukelow. I was  
2 born here on Maui. I've lived here all my life. I assume in  
3 listening to what you're saying, going through your rigmarole  
4 of this project that you had to do up on Haleakala, I assume  
5 that you have ownership to the land.

6 AUDIENCE SPEAKER: Nope.

7 MR. DUKELOW: Before we can discuss anything,  
8 I would like to see your title to that land.

9 AUDIENCE SPEAKER: They don't got title.

10 MR. DUKELOW: We need to look at the title to  
11 this land. You people come here with your agendas, you come  
12 here with your agendas and you disrespect our culture, our  
13 land.

14 (Applause.)

15 MR. DUKELOW: We need to see the title to  
16 that land. Before you can discuss any more of this you need  
17 to show me and the rest of our people here the clear title to  
18 this land. I think that's valid. I think that's a valid  
19 request.

20 MR. WAGNER: I would defer to Mike Maberry  
21 with the Institute for Astronomy for answering that question.

22 MR. MABERRY: Hi. I'm Mike Maberry. I'm  
23 with the University of Hawaii, Institute for Astronomy.

24 The land at Haleakala is ceded land. There  
25 was an executive order from Governor Quinn that set aside --

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1 I recognize this -- that set aside an 18-acre portion of  
2 Kolekole for observatory purposes. And if this project goes  
3 forward, then the National Solar Observatories would enter  
4 into a lease at that point in time with the University of  
5 Hawaii that would have to be approved by the Board of  
6 Regents.

7 AUDIENCE SPEAKER: That's not the answer.

8 MR. MABERRY: I recognize that.

9 AUDIENCE SPEAKER: In 1855 the land was  
10 adjudicated. Never changed. There's no such thing as ceded  
11 land. There's no such thing as ceded land. Legally no such  
12 thing as ceded land. So you need to readdress that. That  
13 needs to be an issue.

14 AUDIENCE SPEAKER: Just hang on. So for this  
15 executive order, talking about title here, how does this  
16 Governor Quinn in 1961 gain title to exactly this land?  
17 Talking about exactly title. Could you answer that question?

18 MR. MABERRY: No sir. This is an issue that,  
19 of course you're aware that, that OHA as well as the  
20 legislature are dealing with at this time, so I --

21 AUDIENCE SPEAKER: So the question of title  
22 is not confirmed, if they're still dealing with it?

23 MR. MABERRY: Correct.

24 AUDIENCE SPEAKER: They don't have title to  
25 that mountain up there.

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1                   MR. WAGNER: Let me give the mike back to  
2 Charlie Fein.

3                   MR. FEIN: Okay. There's a parallel process  
4 that both Charisse and Jeremy mentioned, and that's the  
5 Environmental Impact Statement process, that is not  
6 exclusively part of the National Historic Preservation  
7 process, but includes that. And the question in the  
8 community is: Where is the Environmental Impact Statement?  
9 The Environmental Impact Statement is in preparation at this  
10 time.

11                   It's a document that involves surveys,  
12 studies, inventories, public testimony. It involves a great  
13 deal of research. It involves graphics. It is a two-volume  
14 work that will ultimately be over 300 pages. And so it's not  
15 something that we turn out overnight and drop in all of the  
16 libraries for everybody to look at and comment on. It has to  
17 be carefully researched and include discussion of issues that  
18 have been brought up by the public even as recently as today.  
19 Okay? We received comments. We received letters. We are  
20 attempting to address everything that comes in up to a point.  
21 Of course, at some point we do have to publish the document.

22                   However, the Environmental Impact Statement  
23 addresses a number of issues that have already been mentioned  
24 here. I saw the finger -- the finger in the sky. Part of  
25 our job is to do the view plain analysis, the visual analysis

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1 for it. And I have brought these slides before. We keep  
2 taking photographs from various locations and we use  
3 sophisticated computer rendering techniques to insert this  
4 new facility so that you have an idea of what it would look  
5 like from various locations close up in Haleakala National  
6 Park, down in the valley, all aspects of the valley; where it  
7 is visible, where it's not visible and so on.

8 I'm just going to show a few of those again  
9 tonight to see once again whether we can at least agree that  
10 at least in some situations it's more visible than others and  
11 so on. So --

12 Let's see. Where did he go? Jeremy, put up  
13 the view plains.

14 I'll go through these real quick. We have  
15 been taking these photographs -- we have taken some of them  
16 as recently as last week.

17 Okay. Now, some of these -- or all of these  
18 have magnification because when you're, for example, standing  
19 in the parking lot at Foodland Upcountry and you look up even  
20 on clear days, it's difficult to discern what you're looking  
21 at. So in magnification in this location the proposed  
22 building would be where the arrow is and it would be somewhat  
23 hidden by other facilities. However, if it was at the  
24 alternative site at Reber Circle, it would be quite visible  
25 as you can see from that location.

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1                   Here's what it would look like from near the  
2 Kamehameha Schools campus. That photograph was taken just a  
3 few days ago and rendered in.

4                   Here's what it would look like from the Holy  
5 Ghost Church Upcountry. It's almost completely hidden at  
6 that location.

7                   Here's what it would look like from Piiholo  
8 Road in Olinda. It is visible there. The air force facility  
9 is in front of it -- I mean to the right of it.

10                  Here's what it would look like from High  
11 Street on a relatively clear day. It would be visible from  
12 there. Here's what it would look like at the Reber Circle  
13 site if it were looking -- being viewed from High Street.

14                  Here's what it looks like from the harbor.  
15 That is the longest distance away and difficult to get an  
16 extremely clear line of sight from there, there's so much  
17 moisture in the air.

18                  Here's what it looks like from the juncture  
19 Mokulele and Piilani Highways. It would be visible from  
20 there.

21                  Lipoa, that's -- We're still looking for a  
22 better shot.

23                  Here's Keonekai, Kihei. It would be visible  
24 at the arrow there. You would see the white domes from the  
25 other facilities as well. Here's what it would look like at

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1 the proposed Reber Circle site; a lot more visible.

2 Here's what it looks -- would look like from  
3 Red Hill, the Red Hill overlook in place.

4 This photograph was given to me by Keoki  
5 Raymond at our last meeting and he asked me to do a rendering  
6 from that position. And this is the way -- This was a snow  
7 photo taken by Frank Riso some years ago. This is what the  
8 facility would look like at the primary location. And this  
9 is what it would look like at the alternate location, Reber  
10 Circle.

11 These renderings will appear in the EIS along  
12 with computer models of where it would be visible from  
13 various places on the island and so on.

14 At this point I'm not going to go into the  
15 other issues in the EIS, the endangered species, all of the  
16 issues that one has to deal with in EIS because this is  
17 primarily a National Historic Preservation Act meeting. And  
18 so at this point I would like to turn the meeting over to  
19 Charisse again, who will go through the 106 process in some  
20 detail.

21 AUDIENCE SPEAKER: Quickly, those purple  
22 diamonds, what are they? What do those represent? Do you  
23 know what those are?

24 MS. CARNEY-NUNES: Jeremy, you want to  
25 comment on -- The question was what do the purple diamonds

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1 mean?

2 AUDIENCE SPEAKER: In the schedule.

3 MR. WAGNER: We have conducted a series of  
4 system design reviews of the facility looking at the optical  
5 design, the mechanical design, the control systems, the  
6 thermal systems. We've done a series of those. We will  
7 continue to do those as we move and progress the designs.  
8 And that's to ensure that we can meet the science  
9 requirements within the design that we are progressing.

10 And so we will continue that all the way up  
11 into construction. We will probably continue that into early  
12 construction. And that is to ensure that if the project were  
13 approved by the NSF, funded by congress, built on a site like  
14 Haleakala that we wouldn't waste the money, that we would  
15 actually achieve the science goals that the project is set up  
16 to achieve so that we can support the science community.

17 And that's what those purple diamonds are.  
18 I'm sorry that -- The green diamonds were system design  
19 reviews that were completed. The purple diamonds are design  
20 reviews that we will do as we move the design forward toward  
21 potential construction.

22 AUDIENCE SPEAKER: Okay.

23 MR. MAXWELL: Charisse, can I make some  
24 comments?

25 MS. CARNEY-NUNES: Sure. Of course.

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1 MR. MAXWELL: Because you guys are from  
2 Washington, you don't seem to get the idea. What you're  
3 experiencing here is hundreds of years of oppression of our  
4 people. When Captain Cook came in 1778, the missionaries  
5 came in 1820, the land put into sugar and pineapple;  
6 Hawaiians' culture were turned around. The trust lands,  
7 there's no such thing, and that's correct.

8 There's no such thing as trust land. It's  
9 the land that was taken away in 1893 and was controlled by  
10 Leleo Kalani. They made it into trust lands, then they had  
11 also government lands, but nobody has clear title of this  
12 land. You guys got to realize this.

13 So when you talk about Governor Whoever took  
14 the 18 acres, for Hawaiians it don't make sense because the  
15 lands were always supposedly in our control. But they did  
16 everything to the lands. United States came in here, they  
17 made us into a state without even checking the Native  
18 Hawaiian people. So what you hearing is the pain and  
19 suffering of a hundred years and more that's coming out every  
20 time something wants to be built on a sacred land. That's  
21 what you hearing.

22 So I needed to make that point because  
23 everybody is going to be frustrated. 'Til today there's  
24 groups that does not recognized the deed from everybody, even  
25 Hawaiian Homelands. And then more so they should not

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1 recognize because there's a question as to who owned -- the  
2 real owners are of the land. And it's Hawaiian people, but  
3 nobody seems to care. But if we ever come together as one,  
4 everybody will hear our voices.

5 (Applause.)

6 MS. CARNEY-NUNES: Kahu, thank you for that.

7 I just want to say to you personally and also  
8 to you that I do understand. I understand the passion. I  
9 understand the anger. I understand the frustration. I do  
10 understand that. I understand the things that this  
11 government has done in the past and has not atoned for. I  
12 understand that.

13 AUDIENCE SPEAKER: Well, it's about time  
14 then, yeah.

15 MS. CARNEY-NUNES: I understand that. We,  
16 though, are here -- and me personally, I have to say I'm here  
17 because I -- we want to do what we can with what we have from  
18 the position where we find ourselves. I don't have the power  
19 to do anything about that. There's a lot of things that this  
20 government has done that I don't have the power to do  
21 anything about, but I do have the power to make sure that NSF  
22 follows the law. And that has not even been done in the past  
23 by other agencies. So I just offer that in response with all  
24 due respect.

25 (Applause.)

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1 MS. CARNEY-NUNES: And I'm actually going to  
2 sit because I want to stay out of your way. I know that was  
3 an issue before.

4 And in following along, we thought that it  
5 would be helpful that -- to explain the process and explain  
6 why it is that we're here. We are here to engage in  
7 consultation under Section 106 of the National Historic  
8 Preservation Act. So we start off with the question: What  
9 is 106? Well, 106 refers to Section 106 of the National  
10 Historic Preservation Act. The overall purpose of the act,  
11 we call it the NHPA, is to preserve and enhance the  
12 productive use of our nation's resources.

13 Section 106 requires that federal agencies  
14 like NSF consider the effects of their decisions on historic  
15 properties. Section 106 was designed to give you a voice.  
16 So what is this all about? What is it that you have a voice  
17 about? A voice about your cultural resources and  
18 specifically in this case as you're Native Hawaiians and  
19 there's a traditional cultural property at issue. So that's  
20 what this is all about. That's why we're here.

21 Now, the next slide is to tell you a little  
22 bit about who participates in the Section 106 process. Well,  
23 first the federal agency has to participate; that's us, the  
24 National Science Foundation. We call it a consultation  
25 process because the -- it's the job of the federal government

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1 to consult with what we call consulting parties. Consulting  
2 parties are -- an example of consulting parties, Jeremy works  
3 for the National Solar Observatory. I have NSO here. They  
4 are a consulting party because they would like NSF to give  
5 them money to fund the telescope, so they are a consulting  
6 party in this. The University of Hawaii is a consulting  
7 party in this. They have stewardship for the land. Okay?  
8 And we know how we all feel about that. But that's where we  
9 are and they are a consulting party. Native Hawaiian  
10 organizations, consulting parties. All of you are consulting  
11 parties, the public.

12 AUDIENCE SPEAKER: Which Native Hawaiian  
13 organizations have been consulted?

14 MS. CARNEY-NUNES: Well, perhaps we can --  
15 Can somebody give specifics? Because, I mean -- There is an  
16 extensive --

17 AUDIENCE SPEAKER: That specifically support  
18 the construction.

19 MS. CARNEY-NUNES: No, no, no. What I'm  
20 trying to explain is that we are going through this process  
21 now. And so what we're doing now is consulting native  
22 organizations. Not that Native Hawaiian organizations have  
23 been consulted and have agreed that this is a fabulous  
24 project as of yet. Okay?

25 The other party that participates in Section

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1 106 consultation is a federal agency. This agency is called  
2 the Advisory Council on Historic Preservation. They are a  
3 federal agency that is charged with making sure that our  
4 history is preserved in our nation, but they only participate  
5 sometimes.

6 So the main parties here are NSF, the Hawaii  
7 State Historic Preservation Division, Native Hawaiian  
8 organizations, and the public, people like you. Okay? Those  
9 are the main parties to the consultation process.

10 Okay. So the NHPA, the law and the  
11 regulations, were --

12 AUDIENCE SPEAKER: Ma'am, can you come to the  
13 Mike, please, so everybody can hear.

14 MS. BURNS: I just have a question.

15 MS. CARNEY-NUNES: Sure.

16 MS. BURNS: I'm Suzanne Burns. I go to MCC.  
17 I'm learning about technology. I'm also Native Hawaiian.  
18 I'm learning about culture. I'm not knowledgeable about, you  
19 know, why this is not good, so I hope you all will teach me a  
20 little bit about why this is not good.

21 My question is: The advisory council on your  
22 last slide on historic preservation, you said they don't  
23 participate always. Are they participating in this?

24 MS. CARNEY-NUNES: You know, that's a really  
25 excellent question. Any time a federal agency finds that

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1 a -- something that we're going to do would have an adverse  
2 effect, a potentially negative impact on a resource that is  
3 important, a TCP I called it, a traditional cultural  
4 property; we are required to notify the Advisory Council on  
5 Historic Preservation. They -- At that point when they get  
6 the notification, they can decide whether or not they would  
7 like to participate.

8 Another thing that can happen is one of the  
9 consulting parties can write to them and ask them to please  
10 participate in the process. But as of right now, they are  
11 not participating in the process, but that doesn't mean that  
12 that will not be involved as of yet.

13 MS. BURNS: Where can I find out why they  
14 decided not to participate?

15 MS. CARNEY-NUNES: They -- I want to make  
16 sure that I'm clear. They didn't decide not to participate.  
17 We're actually still rather early on in the process. We have  
18 made a decision, like I referred to earlier, that if the  
19 project were to go forward, it would have an adverse impact,  
20 we call it, on a traditional cultural property. We are  
21 actually as we speak in the process of writing a letter to  
22 them to advise them of this. And then when they receive that  
23 letter, they'll make a decision. But they have a website and  
24 I'll -- talk to me afterwards, I'll give you my card, I'll  
25 write down the website for you.

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1                   Okay. So Native Hawaiians and Indian  
2 tribes -- The thing to remember about Section 106 and the  
3 NHPA law is that in the 1990s it was amended, and the purpose  
4 of the amendments were to place a special emphasis on Native  
5 Hawaiians and Native Americans. The purpose of the revisions  
6 to the law was to make sure that federal agencies took the  
7 time to consult with native peoples about resource -- about  
8 decisions that would have impacts on their resources in  
9 acknowledgment that this had not -- that that had not been  
10 done always in the past. So that was the purpose of that  
11 amendment.

12                   So because of that, like I said, you know,  
13 I'm from the General Counsel's office at NSF, I'm here to  
14 make sure that we follow the process, we follow the law. And  
15 the law says that agencies must consult with -- under Section  
16 106 with any Indian tribe or Native Hawaiian organization  
17 that attaches religious and cultural significance to an  
18 affected historic property. Okay?

19                   AUDIENCE SPEAKER: Question. You know, you  
20 keep on referring to Indian tribes or Native Hawaiians.  
21 You're talking about the wrong people. We're not Native --  
22 You folks have categorized us. Aboriginal, native,  
23 indigenous; these are terminologies that you people have put  
24 on us, labeled us. We're Kanaka Maoli Hawaii. We're not  
25 Native Hawaiian.

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1                   You folks are belligerently occupying here  
2 right now. You don't own it. And here we are just going on  
3 with your agenda and giving your spiel here without being  
4 respectful of us. How can we be respectful of you when  
5 you're not respectful of us?

6                   Uncle Charlie got up and explained this to  
7 you, Kalikoa explained it to you, and still you don't get it.  
8 Still you're going on and on. You need to clarify this  
9 title; otherwise what business do you have here? It's as  
10 simple as that. There's no point in going on. Who cares  
11 about how far you can see, what you can see?

12                   You know what's up there, gang? Does anybody  
13 here know what's really up there right now? Very scary.  
14 Very scary. And the target is -- We're the target. You guys  
15 need to understand that. They did that to us. You people  
16 need to understand that. We're the target right now. Can  
17 anybody deny that?

18                   So let's get down to business now. I'm fed  
19 up with this. And that's only my manao. But I know where I  
20 come from and I know where I stand.

21                   MS. CARNEY-NUNES: Well, I cannot comment on  
22 labels. I understand the frustration. Labels are what they  
23 are. But we know who we're talking about. We're talking  
24 about the people of this island who attach religious,  
25 cultural significance to this important, majestic, spiritual

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1 resource; Haleakala. That's who we are talking about.

2 Now, I can only use the language that the law  
3 gives me. I'm sorry, I'm a lawyer, you know, shoot me, but I  
4 am. And the way that the law that is written, of course, by  
5 the United States government, the way it refers to the people  
6 who are -- who we are required to consult with is as Native  
7 Hawaiians. So please do accept my apologies if that is not  
8 the proper way in which to refer to you. Honestly, please.

9 AUDIENCE SPEAKER: You're belligerently  
10 occupying this place. Your law does not apply here. The  
11 superior law of the land is the domestic law that applies  
12 here, the kumukanawai. The kumukanawai, what's going on up  
13 there is not supposed to happen. So what I'm saying is that  
14 what are you doing here? What are you doing here?

15 MS. CARNEY-NUNES: Okay. Well, okay.

16 So what the law -- what Section 106 law says  
17 is that, again, we have to make sure that we consult with the  
18 Native Hawaiian community and Native Hawaiian organizations.  
19 Okay? So looking at it from your perspective, there are some  
20 things to remember about what the law requires, what you as  
21 Native Hawaiians can hold us to as the federal government.

22 The first thing to remember is that Native  
23 Hawaiians must be consulted when they attach religious and  
24 cultural significance to historic properties.

25 The second thing -- And this goes to your

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1 point earlier in the back about which Native Hawaiian  
2 organizations are -- have been consulted with. The second  
3 thing to remember is that the agency must make a reasonable  
4 and good-faith effort to identify relevant groups. So we  
5 need your help in doing that. If you know of a Native  
6 Hawaiian organization that we have not consulted with, then  
7 we are asking you to let us know. Okay? So those are the  
8 two things that I thought were important to point out for you  
9 all to remember.

10                   However, there is another thing to remember,  
11 and this has really come through this evening, is that the  
12 law does not require that we get everybody to agree. It's  
13 called concurrence. Okay? Concurrence is not required. And  
14 it is important to remember that because the law -- you know,  
15 the law does require that we consult, but the law does not  
16 require concurrence. Okay?

17                   AUDIENCE SPEAKER: What's the point then?

18                   MS. CARNEY-NUNES: Well, that's a good  
19 question, what -- The question was: What's the point then?  
20 And I completely understand that question, but I will say  
21 that in the past consultation wasn't even undertaken. So the  
22 point is giving a voice. The point is developing a  
23 relationship and an agreement and getting NSF to agree that  
24 we're going to do certain things. That's what the point is.  
25 Those conversations in the past have not even taken place.

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1                   And so, no, it's not -- it's not like it's a  
2 vehicle that has these tremendous teeth that you can say,  
3 Okay, we're not going to agree and the project won't go  
4 forward. No, I want to be very honest with you that's not  
5 what the law says. But what the law does say and what we at  
6 NSF are honestly trying to make sure happens in this case,  
7 which hasn't happened in many other cases, is that we engage  
8 the community like we are supposed to do and we listen to the  
9 community like we are supposed to do and that we consider  
10 your opinions when we make our decisions.

11                   MR. WAGNER: Charisse, there's a lady back  
12 here.

13                   MS. LEHUANANI: Aloha to everyone.

14                   AUDIENCE: Aloha.

15                   MS. LEHUANANI: My name is Princess  
16 Lehuanani. I am from the village of Mokula, born and raised,  
17 and a true native of this island, the kingdom of Maui Nui.

18                   I just wanted to bring up concerning the law,  
19 as far as I was taught, the State and the County is just  
20 contractors on this land. And the law that was brought up on  
21 our land is from outside. It was nothing to do with our  
22 people getting together and making the law for us here on our  
23 own aina.

24                   Years back somebody said that they had a  
25 telescope when he was eight years old. When I was a seven

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1 you know what I heard? I heard bombing. And my whole house  
2 was shaking from bombs that was on the other island of  
3 Kahoolawe. Today we are the ones that have to clean this  
4 island. If you build this big, gigantic thing and it doesn't  
5 turn out, guess what? It will be left for us to clean again.  
6 Please, I ask for all of those who come to our islands,  
7 especially the kingdom of Maui Nui because it's so special.

8 I looked in your papers. I see nothing of  
9 our island. The picture of the island of Maui is nowhere  
10 found in your paper. If you look at the island of Maui, in  
11 the middle you will find the naau. Haleakala is right in the  
12 middle of our island. Please, that is the heart of our  
13 people and of our land.

14 I ask all of you: (Hawaiian.) Please grant  
15 us, this what it means, to grant us the respect and the honor  
16 to our ancestors and our kupuna, to our people and to our  
17 land. Please, that's all I ask from all of you. Mahalo nui.

18 AUDIENCE SPEAKER: I have a specific question  
19 for the Section 106 that you're asking. You're talking about  
20 traditional cultural practices, sacred sites, and so my  
21 question is very simple: When is a site considered too  
22 sacred to be built upon? Obviously there has to be something  
23 in the language that describes when it's all right to, when  
24 it's not all right to. And so I ask this question, you know:  
25 Would you construct this on Machu Picchu, Stone Henge,

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1 Pasapa, Mt. Fuji, Mt. Everest, Mt. Sion? Are those -- Would  
2 those be out of the purview of NSF funding? Or they're not.  
3 And if so, why not? And if so, why not, why is Haleakala  
4 even considered? Because I guess that's my point. Would you  
5 guys even consider building a telescope on Mt. Sion or  
6 Pasapa? Is that even in the realm of NSF?

7                   And so when you look at Section 106, that's  
8 why -- you're right, there is no teeth in there. So when you  
9 were the consulting -- I've been consulting for many years.  
10 I know the game. We come, we show, we say a few words, and  
11 they say "thank you very much" and they do what they do any  
12 way.

13                   AUDIENCE SPEAKER: Yeah.

14                   (Applause.)

15                   AUDIENCE SPEAKER: That's consulting to me.  
16 So if this is all this is, be truthful. Tell us the truth,  
17 that's what it is. It's just consulting. Because if you're  
18 going to do on to us what you have been doing all this time,  
19 say it straight, say it true. Thank you.

20                   (Applause.)

21                   MS. CARNEY-NUNES: Well, the honest answer to  
22 your question about whether -- what would happen if a science  
23 project was proposed on one of those other sites is that if  
24 the site was in the United States, we would be going through  
25 the exact same process of consulting the community.

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1 AUDIENCE SPEAKER: So it would be considered?

2 MS. CARNEY-NUNES: It would be considered  
3 as -- This is really not actually -- I'm probably not the  
4 best person to answer. It's kind of embedded, if you will,  
5 in what Craig Foltz said in that the NSF responds to the  
6 community. And so --

7 AUDIENCE SPEAKER: Not the community.

8 MS. CARNEY-NUNES: Well, there are different  
9 communities. There are different communities. There is this  
10 community. There is the science and education community.  
11 There is the solar physics community.

12 AUDIENCE SPEAKER: Which is where, the  
13 community? We want to be clear when you talk about the  
14 community.

15 MS. CARNEY-NUNES: I understand. But the  
16 legal answer to your question is very clear, and that is what  
17 would happen. If NSF were to receive a proposal like that  
18 for anyplace, we would go through the same kind of a process  
19 what we're going through right now.

20 The other place I think that the question was  
21 addressed a bit was in Jeremy's presentation when he talked  
22 about the number of sites that have been considered for this  
23 project. And that's really the best that I can do, to be  
24 honest with you. I mean --

25 AUDIENCE SPEAKER: I understand.

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1 MS. CARNEY-NUNES: What -- You're using my  
2 words back at me, so you know I'm being honest with you.  
3 Okay?

4 AUDIENCE SPEAKER: So the short answer is  
5 that it has to be within the territory of what's called the  
6 United States?

7 MS. CARNEY-NUNES: Oh, well --

8 (Laughter.)

9 MS. CARNEY-NUNES: You're saying does --

10 AUDIENCE SPEAKER: NSF cannot do something  
11 outside of United States?

12 MS. CARNEY-NUNES: Well, no. What I said is  
13 that a process like this under this law Section 106 would  
14 occur if the project were proposed within the territorial  
15 United States. But if we were to go and try to build in a  
16 foreign country, then we -- it would depend. It would  
17 depend, because, quite frankly -- Quite frankly, this process  
18 is a lot more than what NSF would be required to do if it  
19 were to want to go and to support a project in another  
20 country. We could decide that we would want to consult the  
21 community and, quite frankly, if we're being stewards of  
22 history and culture wherever we build, we would consult the  
23 community in a similar way that we're doing here.

24 But the question, as I understood it, was  
25 just what would be required, and (pause) --

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1                   Now, I know we talked about no teeth, I know  
2 we talked about no teeth, but the bottom line is that we are  
3 here and we are talking to you and the -- What this really  
4 means to you and what it means to us, too -- It's not easy  
5 for -- for anyone, really, in this room. It's uncomfortable.  
6 And that's okay because things like this are not necessarily  
7 intended to be comfortable for everybody. Sometimes it's  
8 okay to make people uncomfortable. But the bottom line is  
9 that what this means is that this process will work best if  
10 we can make -- collectively make consultation work.

11                   AUDIENCE SPEAKER: I'm very comfortable. I'm  
12 not uncomfortable at all. And I'm comfortable because of my  
13 beliefs in my culture. So, you know, I'm not uncomfortable.  
14 You're uncomfortable because you're coming into our house and  
15 you're telling us, yeah, you're telling us what we need to do  
16 by consulting us. We know what we want. We want you to  
17 leave us alone, that's what we want.

18                   MS. CARNEY-NUNES: I get that, but --

19                   AUDIENCE SPEAKER: You know, I'm just being  
20 sincere.

21                   AUDIENCE SPEAKER: Okay. I got one question.  
22 I just want you to come out and tell us again if you feel  
23 that a meeting like this is important for everybody and if  
24 this project were to go through anyway and it doesn't matter  
25 what we say, how we feel or how much it's going to hurt us --

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1 now you as a lawyer come and tell me if this means that we  
2 can stop it because we don't want it to happen, or you tell  
3 me right now that the government doesn't give a damn and it's  
4 going to be built anyway. It's just going to be ransacked up  
5 there and it doesn't matter what we say here. Because if  
6 not, I believe the meeting is over. Okay? Because you guys  
7 are going to tell us that whatever we say here is going to  
8 mean something. Because if it's not going to mean nothing,  
9 we may as well leave already.

10 MS. CARNEY-NUNES: Actually, if I can proceed  
11 with my presentation, I will try to answer that question. I  
12 cannot -- I can't say that the meeting means nothing. No, I  
13 can't say that, because we're here and we're listening. And  
14 as I said before, that is a lot more than has happened in the  
15 past. So I cannot say that it means nothing.

16 I have been very truthful and honest and  
17 deferential in that I'm saying honestly, as I said before,  
18 I'm going to back up, concurrence is not required. That is  
19 true. But just because concurrence is not required does not  
20 make this process insignificant. It does not make this  
21 process meaningless. The reason why is because if you are a  
22 concurring party, if you are a consulted organization, then  
23 you will have the opportunity to enter into an agreement with  
24 NSF. And if we don't do -- If the project goes forward and  
25 if you do enter into that agreement with NSF and we don't do

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1 what it is we say we're going to do, then you have the  
2 ability to hold us accountable for that. So I don't say that  
3 the process is meaningless and that if -- we might as well go  
4 home simply because concurrence is not required.

5 AUDIENCE SPEAKER: Can you move on to some  
6 examples? Pardon me for a second. She's almost to a  
7 point -- We're going to run out of time here, is what I'm  
8 worried about, before we actually get to the main point of  
9 having this discussion. Well, I mean, the main opportunity,  
10 I should say.

11 AUDIENCE SPEAKER: (Inaudible.)

12 THE REPORTER: I can't hear.

13 AUDIENCE SPEAKER: (Inaudible.)

14 MS. CARNEY-NUNES: One housekeeping thing.  
15 The stenographer is actually having a hard time recording  
16 everything. And we do -- Because NSF wants to consider all  
17 of the comments that we hear tonight -- We're going to go  
18 back over the transcript just like we did at the last meeting  
19 in March, and so it's very important for all of you to have  
20 your views expressed and properly recorded. So it's really  
21 important that we talk one at a time. And as we said in the  
22 beginning and we remember the words of Kahu Maxwell, we are  
23 able to do this with mutual respect. And so I just ask that  
24 we all speak one at a time and have respect for one another.

25 AUDIENCE SPEAKER: Hi. I'm Maile. And I'm

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1 also an MCC student. Many of my kupuna are sitting here.

2 And I just want to say some things.

3 Jerry, your mother might have given you a  
4 telescope. Our kupuna gave us that mauka.

5 (Applause.)

6 AUDIENCE SPEAKER: And according to the  
7 Section 106 process, preserving and enhancing productive use  
8 of historical and cultural properties. It's productive.  
9 It's fine the way it is. And how is a 14-story telescope  
10 going to enhance it at all?

11 The EIS was brought up, but the only thing  
12 about the EIS that was brought up today was the esthetic view  
13 of the mountain or was the visibility of the telescope.  
14 Nothing was -- Nothing else covered. And there is more than  
15 just the visibility of the telescope that is important to us,  
16 and that needs to be understood. So if you're going to bring  
17 anything here, bring it, all of it. Don't just bring the  
18 visibility.

19 The other thing, too, is Haleakala legally is  
20 a TCP, traditional cultural property, federally recognized as  
21 a TCP. Well, we already recognize that. And as -- According  
22 to the federal recognition of anything, it kind of like is a  
23 fallacy.

24 So the consultation process, like Kalekua was  
25 saying, it's a process, yeah, you're here, but like how

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1 everybody feels as it being meaningless because this is not  
2 consultation. On our half it's a determination. And the  
3 thing is is that if this like we're just going through the  
4 movements right now and it's not helping us, well, at least  
5 we're heard. Thank you.

6 (Applause.)

7 AUDIENCE SPEAKER: Normally I'd say aloha,  
8 but I think it died tonight with everybody.

9 I've got a couple questions mainly on the  
10 site survey that was done. I know all about consultation. I  
11 know all about the -- everything here that's been talked  
12 about. I've been following this very closely as a Native  
13 Hawaiian and also a worker up there at Haleakala National  
14 Park. I take care of a lot of the resources that give us our  
15 culture, that's the reason why I do it.

16 My big question was in these site surveys  
17 there were six other sites that I have never really gotten  
18 any information. The fact that there's one in Big Bear Lake,  
19 California; one in La Palma, Canary Islands, Spain; Utah; New  
20 Mexico; also Baja, California. These are other sites that  
21 they can deal with this problem.

22 When I looked at the general daytime  
23 characteristics of the sites that you guys selected -- And I  
24 hope we can get an answer because this is kind of the missing  
25 link how the -- how you say, deboning that was done in this

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1 whole EIS. They say that frequently clear skies. I can  
2 understand that. Excellent seeing. I don't know where you  
3 can get low humidity. I'm also a wild land firefighter.  
4 When I go to California, you guys get relative humidities in  
5 the 4 -- 3 percent. I have never seen us have that type of  
6 low humidity.

7                   Also some of the things that were selected  
8 was like few aircrafts' contrails. Now, I don't know what  
9 that means, if it's just over the site itself or if it's in a  
10 mile radius of our island. Because we live on an island,  
11 almost everybody comes here by airplane. So I'm not sure  
12 what you guys mean by that in the site selection. And also  
13 dust levels. I mean, everybody knows up to Haleakala there's  
14 a lot of dust abatement. I also work with the helicopter as  
15 a national instructor and that's a big thing is dust  
16 abatement when you work around a helicopter. And we don't  
17 fly up there because of that.

18                   So my question is: What about these other  
19 sites? Why isn't there any consideration on that? Because I  
20 can look at the three things that was mentioned here that we  
21 just don't have up here at this site. So that's my question.

22                   MR. WAGNER: We actually -- we started with a  
23 list of about 72 sites all over and looked at all of the  
24 existing data for those sites.

25                   AUDIENCE SPEAKER: Question. Which data?

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1 Your paper showed 72 sites and there was a discussion about  
2 what sites to choose. They were going to set up test sites  
3 of those 72, but there was a lack of funding so I don't  
4 believe they did the test on all 72 sites.

5 MR. WAGNER: No. We -- I mean, there's an  
6 infinite number of sites that one can consider for almost any  
7 project.

8 AUDIENCE SPEAKER: Right. 72 sites --

9 MR. WAGNER: We looked at 72 sites. We know  
10 from experience through solar astronomy, solar physics over  
11 the last century --

12 AUDIENCE SPEAKER: By discussion?

13 MR. WAGNER: No. We know from actual  
14 experience, hands-on experience the characteristics of sites  
15 which provide good seeing, a stable atmosphere during the  
16 daytime. There's been a lot of work for nighttime astronomy  
17 as well, but for solar astronomy it's different. The sun  
18 puts out a lot of energy. And so there are specific  
19 characteristics of those sites --

20 AUDIENCE SPEAKER: Was the NSF supposed to do  
21 a test on all those sites?

22 MR. WAGNER: No.

23 AUDIENCE SPEAKER: No?

24 MR. WAGNER: No. And there wouldn't be any  
25 point because if you go through the existing data -- And

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1 there is a lot of -- You'd be surprised at the weather data  
2 and such, the topography data for sites out there. There is  
3 a lot of data out there on many --

4 AUDIENCE SPEAKER: Not the data you needed to  
5 meet your requirements; correct?

6 MR. WAGNER: Quite a bit of data which was  
7 applicable to those requirements, yes. Absolutely, yes.

8 Now, we selected six sites -- down selected  
9 to six sites out of that for a full-blown test. All right?  
10 We tested those and it was clear that three of the sites were  
11 better than the lower section of three sites. And those  
12 three sites were down selected and we had three remaining  
13 sites that was Big Bear, La Palma, Haleakala. All right?

14 AUDIENCE SPEAKER: Canary Islands?

15 MR. WAGNER: Excuse me?

16 AUDIENCE SPEAKER: Canary Islands was --

17 MR. WAGNER: La Palma is in the Canary  
18 Islands off the coast of Africa and the Sahara Desert.

19 We did a phase 2 on those sites, tested them  
20 again extensively, and compared the data from those sites.  
21 It was clear that Big Bear would not support the kind of  
22 high-resolution solar physics that we want to do with this  
23 telescope. That site was taken off the list. Haleakala and  
24 La Palma were looked at extensively. And this was all in the  
25 same review, the same data set.

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1                   La Palma has a real problem. You get wind  
2 storms coming off the Sahara. And in the draft EIS this will  
3 be described, but these dust storms, some of these dust  
4 storms that come through actually reach the Caribbean. They  
5 come across the Atlantic. Huge amounts of dust that come out  
6 and cover the Canary Islands and the sky brightness during  
7 the day from the sunlight scattered off of the dust in that  
8 air will not allow us to observe the atmosphere at that site.  
9 It will not let us do it. It contaminates the light that  
10 comes to the telescope.

11                   AUDIENCE SPEAKER: How were the cultural uses  
12 and resources assessed in your determination for selection of  
13 the six sites?

14                   MR. WAGNER: That was considered in the site  
15 evaluation studies.

16                   AUDIENCE SPEAKER: Where did Haleakala rank  
17 in regards to --

18                   MR. WAGNER: We didn't rank the sites in that  
19 sense. We indicated what the environment was, what concerns  
20 there were, whether or not there were cultural significance  
21 associated with the site. I think Keoki Raymond actually  
22 read from that report at the last meeting. We did not rank  
23 the sites, though, in that sense. We tried to establish what  
24 the cost would be, what the infrastructure that existed might  
25 be, what didn't exist, the access, all of this.

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1 AUDIENCE SPEAKER: That's the cultural  
2 resource and --

3 MR. WAGNER: Yes. We described that in those  
4 reports.

5 AUDIENCE SPEAKER: It was seen that Haleakala  
6 was a better choice over those other five sites that would  
7 impact on the --

8 MR. WAGNER: Not in that report, no. We did  
9 not rank those sites based on that. We provided -- The  
10 project provided that analysis, that data, that assessment in  
11 parallel with the site survey so that could be considered  
12 when -- When the site survey working group wrote its report,  
13 its final report on the site survey, that report assessed the  
14 site, the feasibility of the site. It was submitted in  
15 parallel. So the decision-makers had all of that  
16 information.

17 AUDIENCE SPEAKER: My question is the same  
18 way as they look at the scientific -- the part about the  
19 value of the science, it seems like you did not place that  
20 kind of emphasis in the evaluation of the cultural resources  
21 and how important those sites were to the people of those  
22 areas. That's my concern.

23 MR. WAGNER: Yes, I understand it. It was  
24 discussed extensively and it was noted in the report. It  
25 was. And, Keoki, you did read from that.

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1 AUDIENCE SPEAKER: I did.

2 MR. WAGNER: And, actually, Jeff Bar prepared  
3 the report.

4 AUDIENCE SPEAKER: Yes. I'm sorry you  
5 weren't here on the 28th. Jeff, it's nice to see you again.  
6 It was good to see you in the top floor of the library at the  
7 community college, was the last time we saw each other. As I  
8 understand, you are the project architect, the site engineer,  
9 and that when you had done the 2003 Site Feasibility Report,  
10 not only in the Executive Summary, but back in 2003 you came  
11 to a conclusion that the presence and visibility of a new  
12 large telescope on a spiritually significant mountain would  
13 likely be an issue during the public review and comment. So  
14 you were telling NSO and the NSF this would happen tonight.

15 MR. BAR: Yes.

16 MR. WAGNER: That is correct.

17 AUDIENCE SPEAKER: And that under specific  
18 environmental concerns that Jeff had written, the entire  
19 Haleakala mountain is rich in traditional and spiritual  
20 significance to the indigenous Hawaiian culture. So everyone  
21 has known since 2003.

22 MR. WAGNER: That's correct.

23 AUDIENCE SPEAKER: And that you also wrote,  
24 "The presence of observatories on the summit is considered a  
25 desecration by some." So that was already known since 2003.

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1                   Of the other six I think I had also already  
2 testified that notwithstanding that they may have had --  
3 certainly all could have had spiritual significance,  
4 sacredness to -- for peoples of the earth, indigenous people,  
5 only one of the six -- to help clarify your question, only  
6 one of the six was ascertained to have significance, and that  
7 was Haleakala.

8                   And I think I'm hearing Kalekua say or ask if  
9 you knew back in 2003, which is really wording it just  
10 another way that I worded it on the 28th, if everyone has  
11 known since 2003 that of the six that went down to three that  
12 went down to one, Haleakala, was sacred, why was there no  
13 concerted effort made?

14                   And, in fact, it would seem to speak to  
15 Section 106, which from what I can read seems to say respond  
16 in a timely manner. So from 2003, just for clarification, it  
17 seemed to have taken until the fall of 2005 to initiate the  
18 process under the environmental project and then the actual  
19 first 106 was in January of this year. That seems to be  
20 something that's a major question for a lot of people.

21                   MR. WAGNER: Keoki, can I respond just to  
22 clarify?

23                   AUDIENCE SPEAKER: Sure.

24                   MR. WAGNER: The preparation of that report  
25 was done early on. The site selection for the proposed

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1 sites, the down selecting, the final down selecting was not  
2 done until the end of 2004. So January of 2005 is when we  
3 could say, okay, this is what the decision-makers have put  
4 forward. We have to proceed then to set up the environmental  
5 impact statement process, get these other processes going,  
6 bring the NSF in and get this moving.

7 AUDIENCE SPEAKER: It's helpful to have that  
8 clarification. And I guess from your perspective from  
9 January 2005 to the fall of 2005 in the big picture of things  
10 really wouldn't take -- isn't that long a time.

11 MR. WAGNER: What I -- I'm sorry. What I've  
12 found is that things are taking longer than I would have  
13 imagined.

14 AUDIENCE SPEAKER: Another thing, Jeff, that  
15 you wrote is that, "The fact that there are already several  
16 other large observatory buildings on Haleakala may actually  
17 weigh against ATST in consideration of the cumulative effect  
18 on all of the development on the mountain." So that's  
19 something that we have all known, that the mountain on the --  
20 We want the highest and best use -- or "we," I'm speaking  
21 from the voice of -- and Mike Maberry is right here. From  
22 the perspective of the Institute For Astronomy, you would  
23 want highest and best use. You're allowed to do scientific  
24 studies on the 18.1 acres, you're going to try and do the  
25 most you can.

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1                   But we're talking about 106. Now, I was  
2 very, very humbled to be able to have gone along with Uncle  
3 Charlie to take myself, Kahala Helm, some other people to  
4 Paia Kuai Kamoku, the ahu that has been built, the one that  
5 faces the Big Island. The one that also is the closest to  
6 the proposed project. If I go -- and I understand I can go  
7 to spiritually commune and anyone who feels the need can go  
8 to these ahu, when you -- How much noise is there going to  
9 be?

10                   We were also taken to the other ahu, Hina,  
11 and the chillers that were going for the AOS project were  
12 very disturbing. And so I'm wondering about the peace and  
13 serenity of the mountain itself that's going to be disturbed  
14 by the person at this particular designated ahu to the  
15 Institute for Astronomy for working it out and creating these  
16 two ahu. Has there been any sound, ambient sound --

17                   MR. WAGNER: Yes.

18                   AUDIENCE SPEAKER: -- sound decibels.

19                   MR. WAGNER: Let me clarify one statement.  
20 When I said that things took longer than I thought, it was  
21 setting up, getting a contractor for the EIS, getting a  
22 process going. I had imagined that that could be done  
23 quickly.

24                   AUDIENCE SPEAKER: Oh, I understand.

25                   MR. WAGNER: Okay. As far as studying the

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1 sound, we have done extensive work on that. And I can't talk  
2 about AOS, but the ATST at the Mees site -- and Jeff correct  
3 me if I misstate this, but the sound level at the ahu will be  
4 at a sound level which is consistent with what you would  
5 expect inside a cathedral, for example, a place of worship.  
6 And we've looked at what we have to do in the facility, what  
7 we have to do in the utility buildings, how we can manage  
8 that sound, and we can reduce it to the level that you would  
9 expect to see -- to hear in a cathedral.

10 AUDIENCE SPEAKER: A clarification on that,  
11 Jeff, would really be appreciated, because I'm wondering if a  
12 person is there, say it's me, say it's someone else, and the  
13 dome is shifting and the gears -- the sound of the gears to  
14 make it move would seem intrusive.

15 MR. BAR: You're right. And we have looked  
16 at that. And the first thing I'll just say is that the air  
17 force chillers that you're talking about are outside. And  
18 I've been down to the ahu, too, and you can hear them from  
19 down there. Our chillers will be inside. And we understood  
20 that the ahu were special places and especially tranquil  
21 conditions there were going to be important. And so we took  
22 that into consideration, made sure that we located all of our  
23 equipment; the generator, the chillers, compressors, all  
24 those kinds of things inside of the building where we can  
25 actually contain the noise.

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1                   The sound inside that building would be  
2 deafening. Outside the building, because we're going to take  
3 special measures -- And we have to ventilate to some extent  
4 so it can't be -- A completely closed building, you know,  
5 concrete block and a concrete roof or something like that  
6 would be the most effective way possible. We have to  
7 ventilate it, but we have looked into what the methods are  
8 necessary to reduce that level, as Jeremy says, to a level  
9 that's consistent with the ambient sound level inside of a  
10 church. And that seemed like an appropriate standard to  
11 apply in terms of the sound. And it is something we're very  
12 concerned about.

13                   And your second point about the dome  
14 rotation, you're right, there is some noise any time a big,  
15 mechanical, metal structure like that moves. One of the  
16 things that we intended was that we would begin -- especially  
17 because that the ahu is closest to the primary site is an  
18 east-facing ahu and the mornings would be the most critical  
19 time, and, of course, we'll be starting up observing then if  
20 the project goes ahead at that time, and so the intent is to  
21 have the dome pointed in that direction so that we don't have  
22 to move it any great distance, and then we really will be  
23 tracking the sun in relatively small movements. It's  
24 definitely will be something that you hear, though, so we are  
25 concerned about that and we're looking into what -- how much

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1 noise that's going to produce.

2 MR. FOLTZ: My project friends may not agree  
3 with this, but I simply point out that the purpose of this  
4 meeting is to try to arrive at essential mitigation  
5 strategies and mitigation activities. And were this to  
6 become an issue, I could imagine that one such strategy which  
7 they might not agree with, but this is what consultation is  
8 about, is to quiet the building when the ahu is in use. And  
9 that's something that certainly could be discussed. I  
10 understand that it may not be to everyone's wish that it be  
11 known that they are using the ahu, but, you know, this is  
12 give-and-take. And if that is important and we can schedule  
13 in advance or we can figure some way to work that, we can  
14 quiet the building.

15 AUDIENCE SPEAKER: I just want to comment to  
16 my brother Keoki and to my other brother behind here, he said  
17 there's no aloha. Well, to my brothers, my sisters, my  
18 kupunas in the house, aloha kaua.

19 AUDIENCE: Aloha.

20 AUDIENCE SPEAKER: Remember that word now,  
21 aloha, a two-fold word. To the lawyer, you used the word  
22 "concurrence." Big word, strong word. To me, I define that  
23 as suppression. Yeah? Because you say (Hawaiian), talk to  
24 them, but your own timeline of your schedule -- which is  
25 good, but do you have a timeline of all the Hawaiian

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1 organizations that you're going to talk to? Do you even know  
2 who they are? If we gave you a list, do you choose and pick  
3 the list, or do you talk to all of them? I think you need to  
4 address all of them because they all have concerns.

5 I'm a salesman by trade. You're trying to  
6 sell us a monstrosity. Yeah? That's the bottom line.  
7 You're trying to sell the community this monstrosity. You're  
8 trying to turn a negative into a positive. You can feel the  
9 energy. I mean, you can really feel the energy. It's not  
10 positive.

11 But the word "concurrence," I mean, that's --  
12 I'm actually afraid of that word because whether you do it or  
13 not, you're still within your guidelines of the law.  
14 Correct? You said it. It came from your mouth.

15 So if we came up with a list of all the  
16 Hawaiian organizations not only on our island, because if I  
17 stand on Haleakala and at times our ocean is very calm and I  
18 throw one pohaku, one stone inside the water, it creates a  
19 ripple. The ripple effect goes through all the islands, not  
20 only through all the islands, but it also touches your land  
21 where you come from. Guess what get over there? Get  
22 Hawaiians over there, too. You think they're not concerned  
23 about what's happening over here? I believe they are. I  
24 really do.

25 Concurrence. And Uncle Charlie said, you

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1 know, how the Hawaiian people were suppressed. You said you  
2 understand the word "suppression." Yeah? But if the  
3 concurrence that we're in concurrence -- Big word to us, \$5  
4 word there. Only use to the \$.25 kind word. Concurrence is  
5 a big word. By law you're not liable -- You said before you  
6 guys don't even -- we don't even have to talk to you guys.  
7 You only bring that up because that was then, this is now.  
8 That was yesterday because that shows. Up the mountain what  
9 there is now, that shows what you said. You don't have to  
10 consult to us. You guys still going to build them up there.  
11 Now you're accountable to us because of that Section 106.

12 But my question is: After all the dust  
13 clear, all is said and the law settles, who has the final  
14 stroke of the pen? Who has the final stroke of the pen?  
15 Because all this is just (Hawaiian), just talk. But what  
16 gives the ability of what is said here? You know, you have  
17 to understand -- And this is my own manao. Yeah? I only  
18 represent myself when I talk. You have to understand that  
19 these people here, the ones that voiced their opinion, that  
20 wasn't the words that was coming from their mouth, that was  
21 coming from the heart, from the naau, and you have to feel  
22 that. You have to feel that.

23 You cannot -- You know, I mean, I observe, I  
24 watch. Everybody's trying to share, and yet you keep -- you  
25 guys keep trying to go back to the agenda. You're worried

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1 about time here, that you're not going to have enough time.  
2 Well, you have plenty of time. 2000 what, 15? You got  
3 plenty of time to talk about this. That's why all -- every  
4 native organization has to be heard and get their input,  
5 because the things that we say here is different from the  
6 things they say there.

7 So aloha. I go back to the word aloha.  
8 Two-fold: It says hello and it also means good-bye. Mahalo.

9 (Applause.)

10 AUDIENCE SPEAKER: Aloha, everybody.

11 AUDIENCE: Aloha.

12 AUDIENCE SPEAKER: My name is Melia. And I'm  
13 going to try to keep this melia as my outfit.

14 (Laughter.)

15 AUDIENCE SPEAKER: So if it doesn't come out  
16 Melia -- But you know my ohana in the back over here is  
17 missing two members, but you know their spirit is still with  
18 us, you know. But our ohana used to go up to Haleakala every  
19 single year, maybe sometimes every month. But, you know, I  
20 was so disturbed when park ranger said that our ohana cannot  
21 go on -- beyond the restricted lines or whatever, you know.  
22 I am disturbed by that ever since that year when -- that was  
23 when I was 14. Right now I'm 18. You know, it was like four  
24 years ago, 2001. And the park ranger said that we cannot  
25 pass the lines and that we have to stop of what we are doing.

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1 And, you know, we used to go up there to that mountain,  
2 Haleakala, and we used to greet our ancestors, our kupuna and  
3 also the sun, you know. A ala ai, a ala ai.

4 How do I know or how do Kanaka Maoli know,  
5 you know, people of Hawaii know that we not going to get  
6 kicked out of that aina again? It's not our fault that you  
7 guys decide we can't go up there, you know. So, please,  
8 don't build that up there. We don't need any more  
9 restrictions. We like go up to that mountain and say a ala  
10 ai to our kupuna, you know. That's all I have to say.

11 (Applause.)

12 MR. MAXWELL: You know, I have to tell you  
13 guys, look what is up at Haleakala. Look what we have up  
14 there already. How you think that was built; the AOS, the  
15 Faulk Observatory? They never promised us in a 106  
16 consultation, but close. I had all kind promises from the  
17 air force, and that never worked. They took out 150 tons of  
18 rock when they built AOS and they brought it down here and  
19 crushed it and try to hid it from me. That's pain. And not  
20 too many of us was involved in trying to stop that.

21 But Jeremy had something on his presentation,  
22 I don't want let you find it, but the word said the "US  
23 Congress." Didn't it say that, Jeremy?

24 MR. WAGNER: That's correct.

25 MR. MAXWELL: So a lot of what these people

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1 are going through, they're not going to get the final say.  
2 And I know through experience, through AOS and through Faulk,  
3 if Dan Inouye and Congress wants that in place, it will  
4 happen. This, we all going through the motions. We all  
5 going through the motions. It's in my report about this.  
6 Dan Inouye, before AOS was built, he come, Hey, Uncle  
7 Charlie, how come you fighting that? I said, Danny, it don't  
8 belong there. So who you think they got to bless? Somebody  
9 else.

10                   Recently, AOS, they doing a little job over  
11 there, they went get Kalani Wong from Kamehameha School go up  
12 there go bless. When I found out, I said, You know what you  
13 going to do? He said, Oh, no, they just going to ask me to  
14 do a blessing. You got to be maka ala. We've got to be  
15 mindful. I mean, everybody is in pain over here, but the  
16 pain started when we became a state. We had no say when they  
17 took over Poliahu.

18                   So we have to ask them -- if they going to  
19 build that, ask them for something in return. I submitted my  
20 proposal for an educational component just in case by chance  
21 if I fall asleep and die tomorrow and this thing will be  
22 built, at least they're going to give back something to our  
23 keiki from young all the way to the high school and in  
24 college so they can become scientists. But it doesn't mean  
25 that I am for the project. I said no. It doesn't belong on

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1 the sacred mountain. But it just might be the third time  
2 that I have said this and it will happen.

3 AUDIENCE SPEAKER: It won't happen.

4 MS. CARNEY-NUNES: You know what, what I  
5 would really like to do is not just to blindly go back to the  
6 agenda, but, honestly, what I really would like to do is to  
7 offer you all a little bit of -- a little bit more context,  
8 which is what my job was to do here, was to give you the  
9 context as to why it is that we're here. And it really plays  
10 on what Uncle Charlie just said about making sure that if you  
11 are part of the process that -- if the project were to go  
12 forward, to make sure that the community will be a part of it  
13 and the community would get something back from the project.  
14 And whatever --

15 MR. MAXWELL: Excuse me. What you got,  
16 though, is the cart before the horse. You cannot even talk  
17 about that. I mean, actually, you know. Sorry, but --

18 MS. CARNEY-NUNES: No, no. I want to --

19 AUDIENCE SPEAKER: You know, we have hundreds  
20 of -- We have people over here who want to give their manao  
21 and give their thoughts. You're getting there to the  
22 Hawaiian Homelands and we have Hawaiian people here sitting  
23 down and waiting until all this blah, blah, blah thing is  
24 over. If you want to hear the thoughts of the people, let's  
25 start listening to the people and quit fooling around.

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1 AUDIENCE SPEAKER: Yeah.

2 AUDIENCE SPEAKER: People came out here --  
3 People are leaving now. What's your purpose here? To listen  
4 or no listen or listen to yourself talk? You should know  
5 already what the feeling is. Let's get on with the program.  
6 Listen to the people. Keep your mouth shut and just listen.

7 (Applause.)

8 MS. CARNEY-NUNES: And we have been taking  
9 questions the entire time all through the presentations and  
10 we will continue. But what I want to do is to make sure that  
11 when you do offer your comments, that you -- you fully  
12 understand the context and the -- you know, there's been a  
13 lot of questions about, Well, what's the process and what  
14 does this mean? And I want you all to understand the way in  
15 which you can -- the process would allow you to hold NSF  
16 accountable to do some of the things, to implement the  
17 proposal, if you will, that Uncle Charlie and that others  
18 have put forward. And to seek those -- that type of input  
19 from you all. So I just want to make sure that we have the  
20 right framework around it. But it is not to silence anybody.  
21 We're listening to everyone. We have been and we will  
22 continue to.

23 MS. LINDSAY: I am Puunene Lindsay. I'm  
24 sorry some of our people left without being able to testify  
25 here.

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1                   Two things on your side: Number one, you're  
2 doing the community process, giving us a chance to speak.  
3 Number two, okay, EIS is on your side. I am not for this  
4 project at all. I'll just say it out right now. Perhaps a  
5 superferry didn't do this, but at least you're going through  
6 that process. And they have their reasons for not doing it.

7                   If you started in 2003 it seems to me at this  
8 point you have -- you should with all the people, all the  
9 things that you have worked to put out to us, you would have  
10 had the list of Hawaiian agencies, Hawaiian groups on our  
11 islands. I don't feel we should give the list. You pay  
12 these people to do the research for you. And we have the  
13 offices right here on Maui and you should send your people  
14 there and get that information. This is 2003.

15                   And for you -- MCC to testify this has in a  
16 federally recognized sacred site. How much more sacred is  
17 sacred? Then you're going to -- Uncle Charlie mentioned 150  
18 tons of rock. This thing is a huge project going down  
19 deeper. 150 tons is nothing. And that's -- It's so sacred.  
20 I don't think you people who come here really understand what  
21 it means to our people. There are no more words to express.

22                   And this advisory historic preservation  
23 group, they should be in here. Federally recognized,  
24 Haleakala, and they have not been consulted yet. I don't  
25 understand that. They should have been here tonight like the

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1 rest of you, from the get-go.

2                   So, again, I'm against the project. I could  
3 say a lot more, but other people have come and have testified  
4 before and I know others will come after me. It's a good  
5 project in the wrong place.

6                   One last thing: I walk Olinda Road in the  
7 early morning hours and I can count the number of  
8 observatories up there. And when I think -- When I walk and  
9 I think of this white thing sticking up in the middle there,  
10 I've heard people use different words, use finger signs, it's  
11 true. This is going to be terrible. And this -- Is this  
12 what you call respect to our Hawaiian people? I don't think  
13 so.

14                   AUDIENCE SPEAKER: It will be our tomb stone.

15                   MS. LINDSAY: More than a tomb stone. I  
16 don't want to put all my eggs in one basket and say, Yes, I  
17 want something out of it. No, I don't want anything out of  
18 it. I don't even want it there. That's the bottom line. We  
19 don't need it here on Maui. Go to site No. 2.

20                   (Applause.)

21                   MR. FEIN: Before we continue, I would like  
22 to comment on the number of agencies and groups that have  
23 been consulted. To this point more than 50. We are going to  
24 post those on the website for everybody to look at. Okay.  
25 More than 50 at this point.

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1                   And, Ed, you have never signed up to receive  
2 anything. You have to actually sign up to --

3                   AUDIENCE SPEAKER: I already signed up.

4                   MR. FEIN: No. We don't have your address.

5                   AUDIENCE SPEAKER: Explain your contact --  
6 how you found about the agencies that you have contacted.

7                   MR. FEIN: Yeah. The agencies that we have  
8 contacted were given to us by various individuals and groups.  
9 OHA. We've --

10                  AUDIENCE SPEAKER: I saw somebody blowing  
11 smoke outside and we don't need more other kinds of smoke  
12 coming over here. The only thing that's left is bend down  
13 and grab our ankles. There's no more smoke around here.

14                  MR. FEIN: Okay. Well, in any case, the  
15 agencies and groups will be posted on the final website.

16                  MR. HOKOANA: Aloha. My name is Lui Hokoana  
17 and I am the president of the Central Maui Hawaiian Civic  
18 Club. The civic club is a grass roots organization comprised  
19 of about 60 members. In addition this evening I am  
20 representing the Maui District Council of the Association of  
21 Hawaiian Civic Clubs. The council is comprised of members  
22 from the Central Maui Hawaiian Civic Club, the Lahaina  
23 Hawaiian Civic Club, and the Hoolehua Hawaiian Civic Club of  
24 Molokai. Collectively the council has 150 members, primarily  
25 of Native Hawaiian ancestry.

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1                   On Saturday at the Association of Hawaiian  
2 Civic Club board meeting the board voted unanimously to  
3 support the position of its local civic club and council.  
4 The association represents 51 clubs from throughout Hawaii  
5 and in the states of Alaska, California, Colorado, Nevada,  
6 Utah, Virginia and Illinois. It has a membership of about  
7 3,000 members, and they are primarily comprised of Native  
8 Hawaiians.

9                   I am here this evening to strongly urge that  
10 this telescope not be built at Haleakala. We believe that  
11 the telescope will interfere with the natural beauty of the  
12 mountain, has the potential to impact on our economy  
13 negatively and intrudes on the manao or spirituality of the  
14 Native Hawaiian.

15                   The beauty of Haleakala has been recorded in  
16 chant and song. It can be seen from almost every part of  
17 Maui. The intrusion of a 14-story size building will destroy  
18 the pristine nature of the mountain. We need not look far to  
19 see how telescopes have polluted the natural beauty of our  
20 mountains. On a recent trip to Waimea on the Big Island it's  
21 easy to see 45 structures on the very top of Mauna Kea. It  
22 is hard to appreciate the beauty of the snow capped mountain  
23 in the glistening sun.

24                   I thought to myself, How sad for the future  
25 generations that they will not be able to see the pristine,

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1 the majestic nature of Mauna Kea. The mountain they will  
2 know is one polluted with buildings.

3 In a recent survey conducted by the Hawaii  
4 Tourism Authority 58 percent of the Maui residents cited loss  
5 of nature and open space as a big problem. This leads me to  
6 wonder how tourists will react to this monstrosity. We all  
7 know that our number one economic driver is tourism.  
8 Recently the Haleakala National Park had to adopt policies to  
9 control the overcrowding during peak periods.

10 My members who work in the hotel industry  
11 wonder how the tourists that they depend on will have to look  
12 at that and interfere with the pristineness of seeing that  
13 sunrise. This accompanied by the perception that Maui is  
14 overdeveloped, has too much traffic and is overcrowded could  
15 lead them to look someplace else for their next vacation.

16 Lastly and most importantly we object to the  
17 building of this telescope because it impedes on the  
18 sacredness of our mountain. As a youngster I was told about  
19 how Maui matches the sun to slow it down so his mother could  
20 drive her kapa. The kupuna told me that Haleakala means  
21 house of the sun and that is where the sun lives. I was  
22 taught to revere the mountain because it is a place where  
23 gods dwell.

24 In the '90s I went to the mountain to  
25 participate in a ceremony in preparation for the year of the

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1 Hawaiian. I have taken our cousins from as far as New  
2 Zealand and Tahiti and gave homage to the kupuna that dwell  
3 at Haleakala. Native Hawaiians share this reverence for  
4 Haleakala. This is why this is an issue not only for us here  
5 on Maui, but it's an issue for all Native Hawaiians  
6 throughout the world.

7                   This telescope is an affront to all Native  
8 Hawaiians because it tries to prioritize science ahead of our  
9 spirituality and manao. All Native Hawaiians are concerned  
10 about making sure that future generations can experience the  
11 manao of this mountain without intrusion from man.

12                   Our club members from the Big Island shared  
13 with me their disgust at what has happened at Mauna Kea. One  
14 kupuna said she thought the telescope would be good for her  
15 community. She says it has not. It is just an eyesore that  
16 she can see every day from her home at Waimea.

17                   On my recent trip to the Big Island I visited  
18 the Imiloa Astronomy Center at the University Park. It is a  
19 wonderful exhibit. When I left the center I thought to  
20 myself, Is this how we will teach children about the mountain  
21 once we have destroyed the mountain?

22                   The Central Maui Hawaiian Civic Club, the  
23 Lahaina Hawaiian Civic Club, the Hoolehua Hawaiian Civic  
24 Club in conjunction with the Association of Hawaiian Civic  
25 Clubs strongly urges that this telescope not be built at

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1 Haleakala. The telescope will interfere with the beauty of  
2 our Haleakala, may impact our economy negatively, and is an  
3 intrusion to the Native Hawaiian spirituality.

4 My aunt, who is now deceased, Monalao  
5 co-wrote the song "Haleakala." The chorus says, "Haleakala,  
6 the beautiful mountain, it stands all alone so peacefully."

7 Please preserve Haleakala. Please build the  
8 telescope someplace else. Mahalo.

9 (Applause.)

10 MS. LANANDA: My name is Nikhi Lananda and I  
11 have been raised here on the island of Maui. And I am here  
12 because I object to what this process is doing and will do.  
13 I understand you have context that you want to share because  
14 you are consulting. I personally feel that you're insulting  
15 as you continue with the presentation because I think the key  
16 feeling here is we don't want it. So would it not be just  
17 easier for you to wrap up with the consensus that we don't  
18 want it here? Go back to whoever you consult there and say,  
19 They don't want it. How hard is it to just go, Nah, let's go  
20 back to not the six on the list, go back to your 72. And the  
21 next time you all want to build somewhere, don't include  
22 Hawaii in that list because you will forever be greeting  
23 people like us. That's all I have to say.

24 (Applause.)

25 AUDIENCE SPEAKER: (Statement in Hawaiian.)

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1                   How many of you here had tutus? You ever saw  
2 your tutu cry? Ever see your tutu cry? How many of you have  
3 ever saw your kupuna, ever saw him cry? I saw mine cry.  
4 When my grandfather first took me up to Haleakala, took me  
5 to (inaudible), he cry.

6                   When I was a young kid in Kapalakua and they  
7 bought me to Kahoolawe, my tutu would say, Pelo, come in the  
8 house. All the kids got to go inside and I watched them cry.  
9 They're not alive anymore, they're dead, but I cry now. I'm  
10 crying because I'm a kupuna now, I've got grandkids, and I  
11 got to explain to them what's happening to the land. Shit,  
12 no. My kupuna dead. I'm not. This is serious.

13                   My wife's not here so I can talk. She  
14 doesn't like me talking like this, because it come from the  
15 naau. Yeah? And what is that? Way down. Not here. Not  
16 here. Down deep inside, that's why, that's where this all  
17 come from.

18                   And on paper it can be approved by congress,  
19 it can be approved -- Dan Inouye can approve it, but we're  
20 not going to have another Kahoolawe. We're not. Mahalo.

21                   (Applause.)

22                   AUDIENCE SPEAKER: Are you taking testimony  
23 yet?

24                   MS. CARNEY-NUNES: We're taking testimony now  
25 because we're going with it.

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1                   One thing I can say, since we have a little  
2 break here, is -- I didn't stress this earlier on because I  
3 thought I was going to go through the entire presentation,  
4 but I understand where we are now. But I do ask we go  
5 forward with testimony. I do want to make clear what those  
6 of you who were here last month or in March already know, is  
7 that we are here about resolving the adverse effect. And I  
8 do understand that many of -- all of whom have spoken thus  
9 far have -- think that the adverse effect cannot be resolved  
10 and are offering what we would call under the law as  
11 avoidance. That's no action.

12                   But I do want to just make clear that under  
13 the law when we talk about resolving the adverse effect, we  
14 look at three things: Avoidance, what we call minimizing,  
15 and what we call mitigation. Okay? And avoidance is what we  
16 have been talking about here this evening thus far.  
17 Minimize, we have talked about it a little bit when we talked  
18 about changes in the technology that we could -- the project  
19 could undertake like with the sound. That would be -- that  
20 would be a strategy under minimization. And then mitigation  
21 strategies, that would be like the education proposal,  
22 strategies that would lead to a memorandum of agreement that  
23 NSF could be held to. So just wanted to provide that  
24 context.

25                   But please go ahead.

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1                   AUDIENCE SPEAKER: I came up here thinking  
2 that you were going to listen and you immediately started  
3 talking. I wanted to tell you, Charisse, that I really  
4 appreciate all the work you've done and all your colleagues  
5 have done. It's really nice science. And as my ohana --  
6 everybody here has been trying to make the point to you:  
7 Good science. Wrong place.

8                   But I want to just -- I can't really add  
9 anything more than what everybody has already said. I came  
10 here to show my manao. And if it's repetitive, well, I don't  
11 know how many times we're going to have to say it before you  
12 do get it. So I'm going to add my little piece, wherever  
13 that goes.

14                   My cousin Oliver said there's a real basic  
15 issue of jurisdiction here. We are not under US law. We are  
16 an independent nation. We have never relinquished our  
17 nationhood. There is someone sitting in our seat of  
18 government. His name is Sam. We would like to ask him to  
19 leave so that we can fill our own seat with our own people.

20                   And so there's this basic issue that you need  
21 to take back to Washington or wherever you have to take this  
22 to and say, The sleeping giant is beginning to wake up and is  
23 stirring and we need to listen. Because there are some big  
24 issues coming up in terms of nationhood that you folks are  
25 going to be forced to respond to either in court or out of

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1 court. We'd like to do it peacefully however we can because  
2 we -- our people have aloha. But that's a real basic issue.  
3 You have no jurisdiction here. It doesn't matter what the  
4 congress does, it doesn't matter what Akaka does; it just  
5 does not apply. We are an independent nation. We are all  
6 citizens here of our nation, which happens to be Hawaii, not  
7 United States. So that's one point.

8 I don't know how you're going to be able to  
9 mitigate that issue because we just do not -- we are separate  
10 nations. And if NSF -- I'm not really sure how the Canary  
11 Islands was eligible as a potential site because it's not  
12 part of the US. Maybe there would be some sort of  
13 international treaty between our government and Spain or  
14 whoever, but that's none of our business. Just as what  
15 you're doing is really none of our business. You need to do  
16 a really nice project someplace else. It's really great  
17 science, but it just doesn't fit here.

18 The other thing I wanted to say really simply  
19 is to basically reiterate and summarize what people have been  
20 trying to get you folks to listen to, hear us, is that when  
21 you're talking about, Well, you know, we're here to consult,  
22 but concurrence is not required, but we're going to go ahead  
23 anyway. Well, you're not listening because it's not going to  
24 happen. Because we have had it up to here with these kinds  
25 of projects that come and basically rip us off and really

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1 minimize.

2                   What you really need to understand is that  
3 we're not talking about really legal issues or mitigation  
4 issues. We're not even talking about scientific issues.  
5 We're talking about our my deep spirituality. My brother  
6 right over here just laid it all out to you. He just said  
7 it. And you got back to your little dog-and-pony show here,  
8 with all due respect. It's a very nice PowerPoint  
9 presentation. I'm impressed with all your technology. It's  
10 really great. It's somewhat entertaining. But I cannot  
11 forget the impression that we're being entertained, but we're  
12 really not being listened to.

13                   But I think you need to really hear this:  
14 That project will not go through. Because as we here in our  
15 physical bodies communicate with our kupuna who have gone  
16 before us, we are a much larger force than the United States  
17 Congress, United States corporation, United States anything.  
18 And events are happening other than this project here that  
19 are leading us to our independence. It's inexorable. It's  
20 inevitable. And it will happen in our lifetime. It will  
21 happen soon, sooner than you think.

22                   So the last thing I want to say is that if we  
23 can stall you long enough so that the other events can take  
24 place, then our government may negotiate with your government  
25 to get the rest of the stuff up there off our mountain. We

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1 would like to see America go away. Thank you.

2 (Applause.)

3 AUDIENCE SPEAKER: (Hawaiian statement.)

4 Aloha. As my brother said, history is the  
5 people's memory. And without a memory, mad is the motive to  
6 the lower animals. And I here to tell you and the NSF and  
7 everybody else here, we are a real people with a real memory.  
8 It will not be erased. We will not stand here and act as if  
9 that mountain is not important to our people, because it is.  
10 And no matter what kind of projects they propose, it's  
11 important to us. We are people.

12 Just going to run real quickly through, as  
13 you all know the (Hawaiian). And we don't have time to run  
14 through it all, but it's very clear through our traditions  
15 and our memory and history that's a very important mountain  
16 from the shores of Pali to Namakokai to Maui to Liinoi. How  
17 many stories do we have to provide? How much evidence does  
18 it take? A hundred pages? 200 pages? When is enough  
19 enough?

20 Understanding history, you also understand  
21 1843 what happens in Hawaiian history. We, Hawaiian king was  
22 recognized an independent state, part of the family of  
23 nations. But, of course, you understand 1893 what occurs.  
24 An act of war occurs in Hawaii, and that's the words of  
25 President Cleveland of that time. He also talks about an

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1 illegal occupation that occurs in Hawaii at that time.  
2 That's the word of President Cleveland. The occupation has  
3 never left these islands. And it's because of these islands,  
4 we just -- because of this occupation, that's why we're here  
5 today.

6                   The question of title to land, we know this  
7 area, Papaanui, part of Kolekole, which also extends over to  
8 Kahoolawe, that's the same ahupua'a, same moku, same kalana.  
9 That land in the mahale was given as part of the government  
10 lands of the Hawaiian Kingdom. Check the title yourself.  
11 1893 you have the invasion. US military lands, occupies  
12 Hawaii.

13                   1897 this occupies -- purport to try to annex  
14 Hawaii into a treaty of annexation. The treaty of annexation  
15 fails in the senate, fails. There is no treaty of annexation  
16 of the Hawaiian islands. Check your history. Anyone knows  
17 in US history. Section 2, Clause 2, "For a treaty of  
18 annexation to occur, you must have Senate ratification." It  
19 never occurs in the Hawaiian Islands. There is no treaty of  
20 annexation.

21                   There is a New Lands Resolution that occurs  
22 in 1898 which purportedly passes the citizenship of those of  
23 the Republic of Hawaii. How many citizens in 1898 in  
24 Republic of Hawaii? Less than 4,000. It also talks about  
25 passing of the lands owned by Republic of Hawaii now passes

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1 to the United States of America, but which lands do the  
2 Republic of Hawaii own? When did they gain title to these  
3 lands? This, of course, directly affects the title of  
4 Haleakala. Haleakala is part of that lands, the Hawaiian  
5 Kingdom.

6 In 1961 Governor Quinn, the State of Hawaii  
7 then passes Executive Order 1987 to the University of Hawaii  
8 to manage. Where did Quinn and the State of Hawaii gain  
9 title to that land? Just because they claim to manage the  
10 land don't mean that they own the land. Hawaiian people have  
11 never, never, ever given up control of that mountain. We  
12 never done. Have never done so. That's the history.

13 Just because we're occupied nation does not  
14 mean that we've given up our title to that land or the  
15 management of that land. Did we have a say when the air  
16 force built their space observatory there? We have no say in  
17 the process, nothing to talk about, just shove it down our  
18 throat. And we smell the same kind of stench coming out of  
19 this process, also. That's clear. Unlawful control, that's  
20 what's going on up there. Unlawful. No piece is sacred,  
21 kapu.

22 This whole process, in fact, is based upon a  
23 supremacist belief that particular people's rights supercedes  
24 us, the native people of this land. It's the same sickness  
25 that has been going for too long in these islands and other

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1 parts of the world. But it defecates and urinates and spit  
2 upon native peoples as if we're secondary peoples of the  
3 earth. And I'm here to say no way, that's over, we're not.  
4 We will fight this project. We will organize against this  
5 project. I will be there. And I make this a promise. I  
6 will be there to organize against this project, using our  
7 bodies to organize against this project. Take that home to  
8 NSF.

9                   The great Mahatma Gandhi said -- A hero of  
10 mine. One of the greatest books, "Satyagraha" -- Read that  
11 book you never read that before -- Gandhi talked about the  
12 seven sins: Wealth without work, pleasure without  
13 conscience, knowledge without character, congress without  
14 morality, science without humanity, worship without  
15 sacrifice, and politics without principle. The last thing  
16 that I want to leave you is, as Gandhi said, also, "First  
17 they ignore you, then they laugh at you, then they fight you,  
18 but then you win."

19                   (Applause.)

20                   MR. LINDSAY: Aloha, my name is Ed Lindsay.

21                   AUDIENCE: Aloha.

22                   MR. LINDSAY: And I would like to speak  
23 against this project. First of all, to our counsel, I notice  
24 you have your cultural displays on: The hair in which you  
25 wear is fabulous, the colors you have matches your character

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1 and your principles and your culture. I would like to  
2 implore you under the -- for the Hawaiian people to fight  
3 this. And all we can pay you is a dollar and love. You, who  
4 come from a race that have been oppressed, are witnessing  
5 from the people here who are also oppressed. So I would like  
6 for you, if you are willing, to use your knowledge and your  
7 education to stop the oppression. And, you know, in rape  
8 there's no concurrence. And take this back to the people who  
9 are funding it.

10                   You know, usually you cut the funding off,  
11 the thing dies. And along this -- the line of rape, that  
12 14-story thing over there, that's not going to look like a  
13 middle finger. It's going to look like a phallic. And it  
14 will stand as a monument to the oppression of all oppressed  
15 peoples of this world by a government who feels that, Huh, we  
16 don't care.

17                   So I implore you to please use your  
18 knowledge, your wit, your heart and your cultural heritage to  
19 help fight the oppression. Please tell the NSF to take their  
20 toys home and don't bring it over here. Aloha.

21                   (Applause.)

22                   AUDIENCE SPEAKER: Hi again. You know, I was  
23 reading your fact sheet here and I wanted to talk about some  
24 of the utilities that's mentioned in your fact sheet and  
25 about the possible environmental degradation because of the

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1 fact there is waste water collected in onsite underground  
2 septic tank. Now, that's one thing. Also, the  
3 communications part: Underground fiber optics and copper  
4 lines for telephone, which means there's going to be wires  
5 all over underground. Right? Underground lines, electric  
6 service extended from existing MECO substation on observatory  
7 property. Underground environmental degradation.

8                   And, also, the part of education and public  
9 outreach, this particular segment was manipulating to me.  
10 The goals of this partnership are to advance local students  
11 particularly Native Hawaiians and women into Maui's technical  
12 and scientific work force, to develop courses and program to  
13 prepare students, dah, dah, dah, to open opportunities for  
14 underrepresented groups particularly Native Hawaiians.  
15 Opposition. We're all opposing it. How is this supporting  
16 us at all? To me it's a manipulation because it's using us,  
17 our name, who we are to say, Hey, this is what we're giving  
18 you. Just like that Olowalu project. It's called tourism  
19 grammar.

20                   Why Haleakala? The clean, dry air at the  
21 summit of Haleakala provides some of the best astronomical  
22 seeing conditions in the world, seeing conditions. Now, you  
23 have other 72 potential sites. Well, would it be possible  
24 for the examinations that you have done for those other 72 or  
25 all the other sites that you have examined to be given to us

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1 so that we can evaluate, we as a scientist?

2 (Applause.)

3 MS. CARNEY-NUNES: Actually, I wanted to  
4 address what you said earlier about the Environmental Impact  
5 Statement and that whole process. And it is not that we're  
6 trying to leave anything out of the process and, in fact, we  
7 will have public meetings on the Environmental Impact  
8 Statement. As soon as the draft document is prepared, it  
9 will be published. You'll be able to comment on all of the  
10 those issues that you brought up the first time you spoke as  
11 well as the issues that you brought up just now.

12 The scientists can probably speak to this  
13 better than I can, but I do know that environmentally that  
14 astronomy is one of the cleanest, cleanest kinds of science,  
15 technology that, in fact, there is.

16 And I don't know if (pause) --

17 MR. BAR: Yeah. Let me just talk briefly  
18 about -- because you brought up the utilities. And you're  
19 right, there's going to be a lot of stuff underground. And  
20 one of the big reasons that it will be underground is because  
21 that's the way -- the Long-Range Development Plan that IFA  
22 developed in consultation with the community and others  
23 dictates that utilities be put underground. All of the  
24 electric -- We certainly wouldn't be putting it up on power  
25 poles where it can be seen and be even more of a visual

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1 problem.

2 I understand that putting these underground  
3 is in some way intrusive, but, you're right, I mean, you  
4 don't build an observatory without a certain amount of  
5 utilities and there will be that kind of stuff there. And  
6 the underground septic tank will be -- it's a containment  
7 tank that will treat water, treat the waste and will be  
8 pumped and removed regularly. But, again, that's an element  
9 that will be underground and will require a certain amount of  
10 excavation and kind of, you know, disturbance of the earth  
11 that you're concerned about.

12 AUDIENCE SPEAKER: But not on our mountain.

13 MS. CARNEY-NUNES: But, again, those -- we're  
14 at the beginning of that. And as soon as the document comes  
15 out, it will be available in all of the public libraries. It  
16 will be available on the Internet. If you left your name and  
17 your e-mail address at the door, it can -- a link to it can  
18 be e-mailed directly to you so that you'll be able to see it  
19 and comment on it. And there will be another opportunity for  
20 us to meet again and to specifically discuss those issues.

21 Does anybody else have anything?

22 MS. BURNS: Hi. I'm Suzanne Burns. I spoke  
23 earlier. I'm a student in the ESET program at MCC. I love  
24 science. I'm very excited about it. This whole thing is so  
25 neat to me, I'm really excited about it, but I'm Hawaiian.

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1 This is my family here.

2                   You had said that you spoke to 50 groups of  
3 Hawaiians. Did any single group support this? Did anybody  
4 support this? I'm asking.

5                   MS. CARNEY-NUNES: Oh. We're actually going  
6 through the consultation process right now. We're actually  
7 going through the process as we speak.

8                   MS. BURNS: So up until this point no one has  
9 supported this project that I think is really fun and I'm  
10 excited about personally, but I don't want it here.

11                   Has anyone supported it being here, Hawaiian  
12 groups?

13                   MS. CARNEY-NUNES: Well, nobody has supported  
14 or -- Well, actually, tonight -- Where's the gentleman who  
15 spoke with the resolution? Right. That's actually -- I'm  
16 sorry, I don't remember your name, but that was actually the  
17 first official resolution that I have heard of a group  
18 actually not supporting it.

19                   We're -- Again, as I said, honestly, we're  
20 actually in the thick of the consultation process right now.  
21 And so it is our hope, our optimistic hope that we will get  
22 support of Native Hawaiian organizations, of local  
23 organizations, but we are moving along in the process right  
24 now.

25                   MS. BURNS: And that was 50 groups; correct?

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1 51, okay.

2                               When I first came here, the first person I  
3 talked to was Jeremy, the manager of the program. Correct?  
4 And I wasn't trying to trick you or anything. I didn't know  
5 anything about this. I'm still learning about my heritage  
6 and about my own culture. But what I found tonight is it  
7 means so much to my family here. And I know that you have  
8 dreams and when you got that telescope when you were eight,  
9 it was so exciting. I know what it feels like a dream, but  
10 would your dream die if you couldn't build it here? Could  
11 you still build it somewhere else? Because our dreams are  
12 going to die. Thank you.

13                               (Applause.)

14                               MR. MABERRY: Please forgive me, I don't mean  
15 any disrespect, but just to share with you that it was King  
16 Kalakaua who brought the first telescope to Hawaii.

17                               AUDIENCE SPEAKER: But he didn't put it on  
18 Haleakala. He put it upstairs.

19                               AUDIENCE SPEAKER: He was a well-educated  
20 man.

21                               MS. CARNEY-NUNES: Well, I think -- I don't  
22 want to silence anyone, so -- If there is nothing further, we  
23 can wrap up, but -- Mickey.

24                               AUDIENCE SPEAKER: Aloha kaua.

25                               AUDIENCE: Aloha.

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1                   AUDIENCE SPEAKER: Aloha. I have already  
2 given my testimony in prior meetings. Again, with this ATS  
3 telescope my concern now is with so many of our people  
4 voicing their concentration on avoidance to just prevent this  
5 whole ATST from coming to Maui, my concern is that you're  
6 going to have another meeting after this. And I would like  
7 before we close for the people here to know what is the next  
8 step so that we don't have to be hunting around for the  
9 information.

10                   And, you know, I know Charlie said it's going  
11 to be on the website, but not everybody has computers to  
12 check. And, you know, I know that millions were spent, if  
13 I'm not mistaken, on funding this work up to this point for  
14 this ATST project. And my concern is that, you know, how  
15 much has been spent on letting our people know what is  
16 happening? You know, I understand that -- I don't know.  
17 It's something that came up now, this Section 106 wasn't here  
18 before, but our people need to know.

19                   "The Maui News" article that was in the  
20 paper -- I'm not blaming anyone, but it was in the paper this  
21 week letting people know on Wednesday, if I'm not mistaken,  
22 that we're having the meeting this evening and -- Wasn't that  
23 it, Charlie? The meeting -- the Wednesday article in "The  
24 Maui News" talked about this meeting tonight and then it  
25 talked about where to send your comments by mail to Charlie,

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1 where to send the e-mail comments. And then on Thursday I  
2 found a small little article that was a correction that  
3 somehow there was a mistake on the e-mail address and there  
4 was a mistake on the address.

5                   So my concern is that if you're going to  
6 spend millions -- And I'm not blaming you. This thing has  
7 had too much impetus already, but millions are being spent on  
8 planning this project and we need to have some money set  
9 aside to let our people know not only here in Maui, Maui Nui,  
10 all over the place, like you were saying, all over, and let  
11 them know so that they can -- Because I was told that people  
12 can give their testimony in person at these meetings, they  
13 can send it e-mail which will be recorded in your records,  
14 they can send a letter. But the thing is our people have to  
15 know and I think some money should be spent on that process  
16 and not have people have to go hunting around.

17                   Everybody is so busy just trying to live, but  
18 they care so much about our own aina here, that's why they're  
19 here this evening. And so we would like to see some money  
20 put aside and not say that there's too much expense to print  
21 out something. And we want to see -- you know, like that, we  
22 don't want to waste a lot of paper and whatnot, but we want  
23 our people to know. And so that's what we -- I would like to  
24 see. Thank you.

25                   (Applause.)

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1 MS. CARNEY-NUNES: I couldn't agree with you  
2 more. And we'll make sure that that does happen. I can't  
3 speak to the typo about the e-mail, but I can apologize to  
4 you on behalf of NSF for that.

5 In terms of the next steps, we will take all  
6 the comments that we heard here, the comments that we heard  
7 at the March meeting, we'll take all of the e-mails that  
8 we've received, the written comments that we've received, the  
9 letters -- I think some of you submitted letters here tonight  
10 and brought that; we'll take all of those into consideration.  
11 And probably the next step that will happen will be the  
12 publication of the draft Environmental Impact Statement.  
13 That will probably happen in about a month.

14 When that happens, it will be published in  
15 the newspaper. It will be published in -- it will be placed  
16 in all of the libraries in Maui. It will be posted on the  
17 website. If you leave your contact information here with us,  
18 it will be mailed or e-mailed to you if that's what you  
19 request. It will be.

20 I'm open to other suggestions. If you -- We  
21 did -- I know we did a post card campaign for this meeting.  
22 So if we had your addresses from previous contacts or lists  
23 that we got through either the State Historic Preservation  
24 Office or OHA, then we did, in fact, send post cards out to  
25 people whose addresses that we did have and organizations'

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1 addresses that we did have. But we're open to suggestions  
2 because consultation actually means consultation on every  
3 piece including if we're not doing our job in terms of  
4 notifying the community.

5 AUDIENCE SPEAKER: I just wanted to ask  
6 that -- Because tonight is too soon and our people need more  
7 time to get there to meetings. To get the information out  
8 and to get the comments to you folks. And so I -- You know,  
9 Charlie told me tonight is not the last night, that we can  
10 still -- people can still submit their comments.

11 MS. CARNEY-NUNES: Yeah. Let me clarify.  
12 Under the law, like I said at the beginning, there is two  
13 things that is going on here. We have the environmental side  
14 of things and we have the cultural and historic side of  
15 things, the 106 process. We were asking for comments either  
16 before or to be brought in at the meeting just so that we  
17 could have a productive discussion with everyone here  
18 tonight. That does not mean that you cannot comment any  
19 further. It doesn't mean that you can't give us a comment  
20 tomorrow. It doesn't mean you can't give us a comment next  
21 week.

22 The environmental piece of this is actually  
23 broader, it encompasses all of those issues that we talked  
24 about before; the visual impacts, the specific environmental  
25 impacts. But it also does encompass the cultural and the

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1 historic impacts and that as well. When -- And when you see  
2 the draft document when it appears in about a month, you will  
3 see reference to this whole Section 106 process right in  
4 there. You will be given from the point that it was -- it's  
5 published, you will be given 45 days to give us comments on  
6 the Environmental Impact Statement, the Draft Environmental  
7 Impact Statement.

8                   During that 45-day period, probably toward  
9 the end of the 45-day period, we will have another public  
10 meeting. That's the public meeting that I was talking about  
11 before where we will -- it will be a broad public meeting.  
12 It will encompass not only the issues that are of specific  
13 emphasis and importance to Native Hawaiians, but all of the  
14 environmental issues including those that are the traditional  
15 cultural property issues. Okay? That meeting will happen  
16 towards the end of that 45-day period. If I had to project  
17 from here, it probably would be near the end of June or the  
18 beginning of July, but sometime in that time frame over the  
19 summer.

20                   We will accept comments at that meeting. We  
21 will accept comments after that meeting through the 45-day  
22 period, through the end of that. After that we will have to  
23 go into a decision-making mode that will happen at the end of  
24 that 45-day period. During that time we will be consulting  
25 with -- we'll be consulting with other federal agencies. We

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1 are required to consult with the Environmental Protection  
2 Agency. We will be required -- probably particularly after  
3 what has happened here this evening, we will be consulting  
4 with the -- She left -- with the Advisory Council on Historic  
5 Preservation about all of these issues. So that's a federal  
6 process, a federal decision-making process that will happen  
7 after that.

8 But we'll make sure that you do get the  
9 notice.

10 Charlie, I think we're done.

11 MR. FEIN: Okay. Are there any other final  
12 or other comments that you wish to make at this time?

13 If not, as Charisse said, there will be a  
14 public meeting for consideration, comments on the Draft  
15 Environmental Impact Statement. We anticipate publishing  
16 that -- We're trying to get that out by the end of May, but  
17 it's a large document and there are lots of logistics that go  
18 into publication of that.

19 And so that would be for that purpose. And  
20 then, of course, for the National Historic Preservation Act,  
21 for this Section 106 process, a separate meeting. I think  
22 Charisse explained it very well.

23 So are there any final comments or anything  
24 else anybody would like to say?

25 If not, we're going to close the meeting. We

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1 do have to be out of here by 10:00. And I apologize if  
2 anybody has something they would like to say, but we do have  
3 to close the place up.

4 MS. CARNEY-NUNES: I actually have another  
5 comment. And this is something, forgive me, that comes from  
6 my cultural, but often we'll end a meeting, particularly  
7 difficult ones, with a prayer. And so I would ask again,  
8 Kahu, if you could bless this process just to close us out  
9 and set us a positive note, at least.

10 MR. MAXWELL: Bow heads.  
11 Heavenly Father, we ask that you look down on  
12 us as Hawaiian people that believed in the word that was  
13 brought us to by the first missionaries. And our kupuna had  
14 told us that they left the pearls with us, which is all what  
15 we have, the power to pray. The power to pray to the Lord  
16 for help. And every time that things are hard, we ask for  
17 help and guidance from you, dear Lord. We ask and pray that  
18 you bless everyone here that spoke, that came to listen, that  
19 submitted their testimonies. Protect them as they go home to  
20 their individual homes and to wherever they're staying and  
21 back to their homes in the mainland for the people that came  
22 from there.

23 We ask and pray that you touch the souls of  
24 all the people involved in congress, in the ATST and touch  
25 them and let them feel our plight. There's so much that has

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1    been done to us, dear Lord, and we have suffered as natives,  
2    as Kanaka Maoli of this land. We ask this, that you bless us  
3    all and give us this hope and inspiration. We ask this in  
4    your name.

5                               (Hawaiian.) Amen.

6                               AUDIENCE: Amen.

7                               (The proceedings were adjourned at 10:02 p.m.)

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**Appendix C(3): Transcripts**  
**Section 106 Meeting, UH IfA, Maikalani Facility, June 16, 2008**

Held at University of Hawaii Institute for Astronomy,  
Maikalani Facility, 34 Ohia Ku Street, Pukalani, Maui,  
Hawaii, commencing at 9:10 A.M., on JUNE 16, 2008.

REPORTED BY: TONYA MCDADE, RPR, CRR, CBC, CSR #447

<p style="text-align: right;">2</p> <p>1 ATTENDANCE  2 NATIONAL SCIENCE FOUNDATION  Dr. Craig Foltz, ATST Program Officer  3 Ms. Caroline Blanco, Assistant General Counsel  4 NATIONAL SOLAR OBSERVATORY  Mr. Jeremy Wagner, ATST Project Manager  5  6 NATIONAL OPTICAL ASTRONOMY OBSERVATORY  Mr. Jeff Barr, ATST Project Architect  7 UNIVERSITY OF HAWAII INSTITUTE FOR ASTRONOMY  Mr. Mike Maberry, Assistant Director  8  9 KC ENVIRONMENTAL, INC.  Dr. Charlie Fein, Vice President  Ms. Sharon Loando-Monro, Planning Projects Manager  10  11 MEETING FACILITATOR  Ms. Annelie Amaral  12 OTHER ATTENDEES:  Ms. Mikahala Helm  13 Ms. Camille Kalama  Mr. Kiopie Raymond  14 Mr. Sol Kaho'ohalahala  Ms. Pua Aiu  15 Ms. Nancy McMahan  Ms. Verna Kaiulani Nahulu  16 Mr. Warren Shibuya  17  18  19  20  21  22  23  24  25</p>	<p style="text-align: right;">4</p> <p>1 generous, keep your hearts open. It's a time to learn, a  2 time to grow, a time to bring what is pono to this  3 discussion. And I will try to see what I can do to help  4 assist in that way.  5 I think we need to sort of set some context to  6 today's discussion, today's consultation, because we have  7 been accustomed to three years of public hearing. Today  8 is a shift. We are not doing that. We are moving into  9 consultation.  10 So as we move forward in consultation, we are  11 talking about mitigation, how to minimize, or to mitigate,  12 to soften, any adverse impact that this construction may  13 have. That is what we are here to discuss.  14 And some things cannot be mitigated. So what we  15 need to do is to set that in context first and then to  16 move beyond that.  17 To do so, then, I am going to ask Craig --  18 DR. CRAIG FOLTZ: I can talk briefly about that,  19 or Jeff can.  20 Annelie, if possible, could I ask Caroline to  21 discuss this sort of being an overview of the Section 106  22 process before I --  23 MS. ANNELLE AMARAL: Yes. Let's do that.  24 Let me ask. Are you three here to be involved  25 as part of the consultation?</p>
<p style="text-align: right;">3</p> <p>1 NATIONAL SCIENCE FOUNDATION  2 SECTION 106 MEMORANDUM OF AGREEMENT MEETING  3 JUNE 16, 2008  4 TRANSCRIPT OF PROCEEDINGS  5 MS. ANNELLE AMARAL: Let me start by introducing  6 myself again. My name is Annelie Amaral. I will be the  7 facilitator for this process today and tomorrow.  8 The intention of the facilitator is, quite  9 frankly, to assist in moving the conversation forward. I  10 take no position on what is being discussed today. I  11 simply move the conversation through.  12 And in an attempt to do that, all I ask of  13 everyone that is involved in this is that we be attentive  14 to one another, that we hear what is being said, that we  15 quiet our own voices and open ourselves so that we can  16 hear what is being said. And that we do not interrupt one  17 another as we are trying to finish the thought.  18 This is not a public hearing process. This is a  19 consultation. This is a discussion with one another.  20 So contrary to what you are used to, where it's  21 one way, today is a conversation, a dialogue. And  22 sometimes we do step on one another's toes when we are  23 having a dialogue. I will see what I can do to assist the  24 flow of information.  25 I ask that we all be kind to one another, be</p>	<p style="text-align: right;">5</p> <p>1 Come. Let's come closer. Come to the table.  2 Let's all sit around as consulting people. Yes. You want  3 this one at the table, too? Okay. One, two, three.  4 In an effort to give some context, Caroline, we  5 will let you begin.  6 MS. CAROLINE BLANCO: Sure. Thank you so much  7 for coming. We really appreciate it.  8 This is sort of toward the tail end of the  9 process that began in 2005. And it's been a process  10 involving both National Historic Preservation Act, and the  11 National Environmental Policy Act, NEPA, and the National  12 Historic Preservation Act, the NHPA. And these processes  13 have gone on together.  14 And since we have recognized the significance of  15 where the site is proposed to be that we have expanded  16 that process and focused even more on cultural resources  17 and provided opportunities for input.  18 As you may recall -- some of you may know --  19 there were requests back in 2005, 2006, for information on  20 avoidance, minimization, mitigation of adverse effects. I  21 think the National Science Foundation came out pretty  22 early on saying we acknowledge that there will be adverse  23 effects. And so whereas in many situations that often is  24 an area of dispute, that doesn't seem to be an area of  25 dispute here. We are all on the same page, so to speak,</p>

<p style="text-align: right;">6</p> <p>1 with that.</p> <p>2 So we had requested information on avoidance,</p> <p>3 minimization, mitigation years ago. And that process</p> <p>4 continued on. And, also, opportunities were allowed in</p> <p>5 the Draft Environmental Impact Statement process. And we</p> <p>6 received nothing, frankly. No information.</p> <p>7 And we did receive a couple of mitigation</p> <p>8 proposals. And those mitigation proposals are in the back</p> <p>9 of the room as well in handouts.</p> <p>10 And so the National Science Foundation reached</p> <p>11 the process where we looked at, is there a viable</p> <p>12 alternative site that is reasonable. And it is</p> <p>13 interesting, in this particular process, this is a</p> <p>14 science-driven process, and the question is really will it</p> <p>15 go forward or will it not. And if it is to go forward,</p> <p>16 that this is the place where it would be. And so we are</p> <p>17 looking at ways in which to mitigate adverse effects</p> <p>18 onsite.</p> <p>19 But, also, we've opened up recently -- in</p> <p>20 response to requests that have been received, we're</p> <p>21 interested in looking at ways to avoid, minimize or</p> <p>22 mitigate park resources, the road in particular.</p> <p>23 And, unfortunately, Ms. Parris was not able to</p> <p>24 be here from the Haleakala National Park, nor was she able</p> <p>25 to provide staff here today. We will be meeting with her</p>	<p style="text-align: right;">8</p> <p>1 meeting is it is an open house style format to allow</p> <p>2 people to come in at their convenience. If people are</p> <p>3 working, there are evening hours and so forth. So we are</p> <p>4 trying to be as accommodating as we can, to talk about any</p> <p>5 sort of mitigation ideas that people have. We are</p> <p>6 certainly more than open to whatever people have in terms</p> <p>7 of ideas.</p> <p>8 We requested those ideas in the November 8th</p> <p>9 letter I had written to the Advisory Counsel. We received</p> <p>10 nothing then.</p> <p>11 In May, again, we requested that additional</p> <p>12 mitigation proposals be forwarded to us. Again, we</p> <p>13 received nothing.</p> <p>14 So our hope is to, once again, provide another</p> <p>15 opportunity for consulting parties, interested parties, to</p> <p>16 come on in and provide any ideas they may have.</p> <p>17 We received a letter today from the National</p> <p>18 Trust for Historic Preservation requesting to be a</p> <p>19 consulting party. We are allowing them in as a consulting</p> <p>20 party. And we have allowed additional groups in over the</p> <p>21 last week.</p> <p>22 So at this point we are trying to move the</p> <p>23 process forward with the hope that tomorrow, between 10:00</p> <p>24 and 2:00, we can look at the ideas that have been</p> <p>25 generated today and throughout the process, and start to</p>
<p style="text-align: right;">7</p> <p>1 on August 22nd. So we look forward to that conversation</p> <p>2 then.</p> <p>3 So we have put up a white board. I've written</p> <p>4 out sort of the topics here.</p> <p>5 And for the proposed site, mitigation is what we</p> <p>6 are requesting input on at this meeting today.</p> <p>7 And park resources, we're looking at the whole</p> <p>8 scheme of these things, since that wasn't included before.</p> <p>9 Avoidance, minimization and mitigation, we are</p> <p>10 requesting input there.</p> <p>11 And we are allowing it on all three of those</p> <p>12 factors because that was not before the consulting parties</p> <p>13 in 2005, 2006, 2007. Whereas the onsite impacts were</p> <p>14 before the consulting parties back then.</p> <p>15 And there is a need to move the process forward.</p> <p>16 We are very cognizant that people have sincere and</p> <p>17 significant concerns about the location.</p> <p>18 Since this meeting is not designed to really</p> <p>19 discuss that, there is another opportunity that we are</p> <p>20 providing for people up in the second floor conference</p> <p>21 room. If there are other issues that you would like to</p> <p>22 have National Science Foundation consider, we ask that you</p> <p>23 feel free to go up there and videotape your concerns or</p> <p>24 comments. And those will be considered in the process.</p> <p>25 So the way that we are looking at today's</p>	<p style="text-align: right;">9</p> <p>1 begin the work of drafting a memorandum of agreement.</p> <p>2 So that's where we are at this stage of the</p> <p>3 process.</p> <p>4 MS. ANNELLE AMARAL: Did you want to ask any</p> <p>5 questions?</p> <p>6 MS. MIKAHALA HELM: I have a question about --</p> <p>7 when you say nothing was received early on, when you were</p> <p>8 explaining things, are you meaning nothing was received --</p> <p>9 what were you meaning by nothing was received?</p> <p>10 MS. ANNELLE AMARAL: In terms of we sent</p> <p>11 postcards out to all the consulting parties, requesting</p> <p>12 ideas on avoidance, minimization, mitigation. In response</p> <p>13 to those requests, we did not receive a response.</p> <p>14 There were comments that were received in</p> <p>15 response to the Draft Environmental Impact Statement.</p> <p>16 There had been two, I believe -- and resource folks can</p> <p>17 help me out here -- there were supplemental cultural</p> <p>18 resources studies that were done, interviews that were</p> <p>19 made, and, you know, for that particular study to try to</p> <p>20 reach out and find out what are the issues, what are the</p> <p>21 concerns.</p> <p>22 Some of the concerns were even that people did</p> <p>23 not want us to even raise the issue again because they</p> <p>24 thought it would be disrespectful. So we found ourselves</p> <p>25 in a little bit difficult situation, trying to solicit</p>

<p style="text-align: right;">10</p> <p>1 ideas, trying to be respectful, and, yet, trying to also  2 respect the wishes of not asking again.  3 But nevertheless, in terms of the federal  4 process, we did feel we had an obligation to continue  5 consultation. So we did.  6 And that is what I meant in response to that.  7 Were there other ideas that you had as far as  8 comments that have been submitted that perhaps --  9 MS. MIKAHALA HELM: You just mentioned a lot of  10 things that were received. So I was confused when you  11 said nothing was received. Because there was a lot that  12 was submitted in that time period that may not have been  13 supporting mitigation, but it was supporting avoidance.  14 So I just wanted a clarification of that.  15 MS. CAROLINE BLANCO: Right. Thank you.  16 And the other was, you know, in terms of  17 minimization. I don't believe we've had any comments that  18 have addressed minimization.  19 The main source of comments have been not at  20 this site, pretty much where, you know, a different,  21 alternative site needs to be picked. So we acknowledge  22 that has been forwarded to us and considered. And that's  23 why, you know, because this is a science-driven project,  24 it's a question of does the science move forward. And, if  25 it does, this is where it will be. And, if not, then it</p>	<p style="text-align: right;">12</p> <p>1 because we did not feel that we wanted to finalize that  2 until we've been able to resolve what we can through the  3 106 process.  4 MS. MIKAHALA HELM: Okay. So things that were  5 mailed out were not only to Section 106 consulting party  6 people, is that correct? It's beyond Section 106?  7 MS. SHARON LOANDO-MONRO: Section 106 had the  8 most mail-outs, yeah. Then the DEIS, of course, had  9 everybody.  10 MS. MIKAHALA HELM: On the latest letters that  11 we received -- I'm sorry, but I have these questions.  12 MS. CAROLINE BLANCO: No. That's fine.  13 MS. MIKAHALA HELM: So I just want  14 clarification.  15 On the latest letters that we just received  16 about these meetings here today, was that the Section 106  17 list in totality?  18 MS. CAROLINE BLANCO: Yes.  19 MS. MIKAHALA HELM: Because I know of people  20 that had requested to be consultants in the Section 106  21 process in 2006, and I don't see their names on these  22 letters or know that they have received any information  23 about this particular process now. So I have concerns  24 about that.  25 MS. CAROLINE BLANCO: I think, since I came to</p>
<p style="text-align: right;">11</p> <p>1 won't move forward at all.  2 MS. MIKAHALA HELM: Okay. And I had another  3 question.  4 MS. CAROLINE BLANCO: Sure.  5 MS. MIKAHALA HELM: That was, when you said that  6 you asked for input or -- I forgot the exact words you  7 said, but requested with the postcard and whatever. Who  8 were -- what people were sent these postcards? And, you  9 know, what kind of people were consulted?  10 MS. CAROLINE BLANCO: I think, Charlie, did you  11 want to -- we have a whole list of people.  12 MS. SHARON LOANDO-MONRO: It was people that  13 came to the meetings, that signed up, people that had made  14 requests. Remember I had all those handout sheets if you  15 want to be on the list? I had lists of people. So it was  16 everybody that was on the list, everybody that ever showed  17 up. And then we kind of, over the years, never got  18 anything else, you know.  19 You were always on the list because you had  20 requested to be a consulting party. And there was a lot  21 of people.  22 MS. MIKAHALA HELM: You know, is the EIS out?  23 MS. CAROLINE BLANCO: The final?  24 MS. MIKAHALA HELM: Yes.  25 MS. CAROLINE BLANCO: No. The reason why is</p>	<p style="text-align: right;">13</p> <p>1 NSF last fall, I am not as familiar with the particulars  2 of them.  3 Charlie or Sharon, do you have ideas?  4 DR. CHARLIE FEIN: I think anybody who ever  5 requested to be a consulting party was sent the  6 information. Anybody who was willing to give us an  7 address to mail to has been a consulting party.  8 MS. SHARON LOANDO-MONRO: Then everything that  9 we sent, when Bijan was counsel then, we sent everybody  10 that was on the list, no matter what, and we were asking  11 for things. And it got to the point where only a very few  12 people would ever respond with anything or kept coming to  13 the meetings. And so the list got narrowed because it  14 didn't appear that, you know, there was that much  15 interest.  16 Like you were constantly coming to the meetings,  17 you know, you gave input.  18 So that's how those got narrowed down.  19 MS. ANNELLE AMARAL: So it sounds like some  20 people were dropped from the list.  21 MS. SHARON LOANDO-MONRO: Some didn't give  22 legitimate addresses.  23 MS. ANNELLE AMARAL: Wrong addresses or no  24 addresses.  25 MS. SHARON LOANDO-MONRO: We asked over and over</p>

14

1 and got nothing.

2 MS. ANNELLE AMARAL: I'm sorry. Sharon, I am

3 wondering if you can come up here just so people don't

4 have to turn around to look at you as we talk.

5 MS. SHARON LOANDO-MONRO: I was going to check

6 the door, too.

7 MS. ANNELLE AMARAL: You can walk out. But it

8 makes it easier to hear you, to see you, talk to you.

9 MS. CAROLINE BLANCO: Sharon, there weren't

10 people who maybe had been originally included in the

11 broader list that had then requested again that were

12 refused, right?

13 MS. SHARON LOANDO-MONRO: Well, everybody that

14 ever signed up for anything at any meeting was sent

15 information, the postcards, letters. And we asked for,

16 you know, proposals, asked for suggestions. And then at

17 some point, that list got narrowed because, like I said,

18 only very few people would come to meetings or respond to

19 anything.

20 Like you guys would always write letters. And,

21 you know, you kind of kept on participating, put it that

22 way.

23 MS. ANNELLE AMARAL: So the response, I guess,

24 to your question about people who may have asked to be

25 consulted in '06 would have not received the '08

15

1 notification, is the short of it, it sounds like. The

2 list -- people were dropped from the list if they didn't

3 continue to communicate.

4 MS. MIKAHALA HELM: Or provide available

5 addresses, contact information.

6 MS. SHARON LOANDO-MONRO: That seemed

7 nonparticipatory.

8 MS. MIKAHALA HELM: My question is, I think

9 there are almost 60 of them who sent in individual form --

10 I mean, individual notice that they wanted to be

11 considered to be consultants in this Section 106 process.

12 And I didn't see their name on these things ever. So I am

13 just curious if they were ever on the Section 106 list.

14 MS. ANNELLE AMARAL: It sounds like initially

15 they were. And if they didn't respond, they were dropped.

16 That's what I am hearing.

17 MS. CAROLINE BLANCO: Maybe some of them. Do

18 you remember that large of a number?

19 MS. SHARON LOANDO-MONRO: I do. There was quite

20 a few.

21 It was a form that somebody made up. It wasn't

22 us, but somebody else made up. There were two forms, they

23 looked similar, but one had a sentence that said, "I wish

24 to be a Section 106 consultant." And I did include them.

25 MS. MIKAHALA HELM: You did?

16

1 MS. SHARON LOANDO-MONRO: Yeah, way back when

2 that form first came out. Because I remember seeing the

3 difference between the two forms.

4 MS. MIKAHALA HELM: Great. Great.

5 I just never saw their names on any inclusion as

6 far as correspondence.

7 MS. SHARON LOANDO-MONRO: Well, the most recent

8 kind of correspondence that was going out, I think maybe

9 when you came on board, was to include the people. And

10 that was the list. That was the short list that Bijan

11 made.

12 MS. CAROLINE BLANCO: And even in summer 2007, I

13 think it was a request from the Advisory Counsel asking

14 for the list.

15 MS. SHARON LOANDO-MONRO: Right. That's when

16 the list got narrowed.

17 MS. CAROLINE BLANCO: Bijan narrowed it down to

18 who have we heard from, who can we contact, and narrowed

19 it down to the list of 25 or something like that. And

20 then we've added these others as they have come to us and

21 requested to be consulting parties.

22 MS. MIKAHALA HELM: My last request is if I

23 could just see copies of the list after maybe the

24 beginning of 2007, and just see the difference. Because I

25 would like to know if these people were ever -- what you

17

1 are talking about is what I am talking about, that

2 request. And I just wanted to make sure that they were on

3 because, for a few of them, I can't imagine that they

4 would give no response.

5 MS. SHARON LOANDO-MONRO: I kept track of who

6 responded a lot.

7 MS. MIKAHALA HELM: I am just asking for that

8 list.

9 MS. SHARON LOANDO-MONRO: I don't have a list

10 right now. I can make a note.

11 MS. MIKAHALA HELM: Like 2007 -- end of 2006,

12 then through 2007, I think that would just be helpful for

13 me to be sure. Because when people make the effort, it's

14 something that took time and that they were sincere about.

15 And so I just want to be sure that they are included in

16 this process.

17 MS. CAROLINE BLANCO: Sure. And just to sort of

18 provide some feedback as well, in 2007, after that list

19 was paired down, we had not received any notification from

20 anybody that "we were on the list before, we are no longer

21 on the list, why is that not the case, we haven't heard

22 from you." So, to my knowledge, we haven't heard from

23 anybody else other than the three recent ones, including

24 the National Trust, to be put on the active list. So for

25 whatever that's worth.

<p style="text-align: right;">18</p> <p>1 MS. ANNELLE AMARAL: Let me ask. There were  2 certain things that, before we start the consultation, we  3 wanted to list as cannot be mitigated, that went out, I  4 believe, in your letter.  5 Did we want to redescribe those where no  6 mitigation is available?  7 DR. CRAIG FOLTZ: I can answer.  8 MS. CAMILLE KALAMA: Sorry. Can I go back real  9 quick, just as far as the narrowing down process?  10 MS. ANNELLE AMARAL: Sure.  11 MS. CAMILLE KALAMA: Where no responses were  12 received, do you know if the requests were comments  13 related specifically to mitigation at the time?  14 MS. SHARON LOANDO-MONRO: It was open.  15 MS. ANNELLE AMARAL: You mean if the comments  16 were limited to consultation, part of consultation?  17 MS. CAMILLE KALAMA: No.  18 MS. ANNELLE AMARAL: Or limited to mitigation is  19 the intent.  20 MS. CAROLINE BLANCO: Sharon, the postcards that  21 were sent out, were those sent out to the bigger list?  22 MR. MIKE MABERRY: Which postcards, what date,  23 what year?  24 MS. CAROLINE BLANCO: This was June 5th of 2006.  25 MS. SHARON LOANDO-MONRO: I would have to check.</p>	<p style="text-align: right;">20</p> <p>1 postcard. They were done September '06, to the end of  2 that year.  3 MS. CAROLINE BLANCO: At the public hearings  4 that sign-up sheet was?  5 MS. MIKAHALA HELM: No, they were mail-ins.  6 MS. SHARON LOANDO-MONRO: I don't remember  7 offhand.  8 MS. MIKAHALA HELM: Individual mail-ins.  9 MS. SHARON LOANDO-MONRO: But we've always  10 extended. I mean, Kiope was on that. At one point, he  11 wanted an extension, and we said okay. We always left  12 everything open.  13 MS. MIKAHALA HELM: Right. Thank you.  14 MS. ANNELLE AMARAL: So that's 6-05-06. I am  15 noting when that postcard went out -- just for my own,  16 naturally -- then the list being narrowed down summer of  17 '07.  18 Then I wanted to sort of get clear with respect  19 to mitigation certain things that you have described in  20 the letter that went out that cannot be mitigated. And  21 then we can move from there on comments regarding  22 mitigation. Okay.  23 DR. CRAIG FOLTZ: I've talked to several of you  24 in the past about -- or Jeff has or Jeremy has -- about  25 the design of the telescope. And I want to remind you</p>
<p style="text-align: right;">19</p> <p>1 I think it was. Because I think that list got narrowed  2 only like last year.  3 MS. CAROLINE BLANCO: Right. It seems to me  4 that that list went out -- or the postcard must have gone  5 out to the bigger list because the list was not narrowed  6 until last summer, in 2007.  7 And the postcard had said that the National  8 Science Foundation is continuing to accept resolution  9 proposals pursuant to the National Historic Preservation  10 Act and the National Environmental Policy Act for the  11 Proposed Advanced Technology Solar Telescope, ATST  12 Project. You are encouraged to submit resolution  13 proposals to KC Environmental, providing the address, that  14 would assist NSF in directing appropriate consideration to  15 Native Hawaiian cultural and historic interests in  16 connection with this project. And then it provides some  17 logistics about when the DEIS will be published, in the  18 summer. And that it's announcing that we will hold public  19 meetings.  20 MS. MIKAHALA HELM: You know what happened?  21 What is the date of that postcard?  22 MS. CAROLINE BLANCO: June 5th, 2006.  23 MS. MIKAHALA HELM: So the requests were made  24 something like September until the end of the year. So  25 the request to be consulting parties were done after this</p>	<p style="text-align: right;">21</p> <p>1 that the telescope is designed to carry out specific and  2 very well-defined scientific observation of the sun. And  3 the design allows that in the context of the site on which  4 the telescope would be put.  5 I remind you that the process of site selection  6 started with over 70 sites. And one was found to meet the  7 science objectives of the telescope. And I won't go  8 through that again. That has been well documented in the  9 Draft EIS and it's also accessible on the National Solar  10 Observatory's website, if one was to look in detail at the  11 data and the way the data were processed.  12 MS. CAROLINE BLANCO: I think it's also  13 summarized in this letter --  14 DR. CRAIG FOLTZ: Summarized in November.  15 MS. CAROLINE BLANCO: Which is a handout as  16 well.  17 DR. CRAIG FOLTZ: So you build a telescope to do  18 certain things. You try to find a place to site that  19 telescope. And the characteristics of the site fold back  20 into the design. And so you need to do that design and in  21 an iterative way.  22 It would not be prudent to build a telescope  23 that is taller than it need be. In fact, the design of  24 the ATST, as you've seen it, with its 143 feet height, is  25 the smallest height that we can make it and meet the</p>

<p style="text-align: right;">22</p> <p>1 science goals. So it's quite large.  2 It is not profligately large. We did not design  3 it to be 50 percent or 100 percent larger than it needed  4 to be just so we had margin. Because that would have  5 increased the cost by 30 or 40 percent. And it is already  6 a very expensive project.  7 The other issue that has been brought up -- and  8 I realize that it is a sensitive issue -- and that is the  9 color of the facility, that it would be white. The reason  10 it would be white is that the sun, of course, heats  11 darker-colored rock, it heats darker-colored buildings  12 during the day. And that drives turbulence in the air  13 above that object that has been heated by the sun.  14 That turbulence, of course, as we all know when  15 you look over a campfire, or down a road that has been  16 heated in the summer, blurs the image behind it. That is  17 unacceptable.  18 And so you can either choose to minimize the  19 amount of heating by painting the telescope and, in this  20 case, the skirt around the telescope, a white color, or  21 you can attempt to cool it actively, which you would do by  22 refrigeration. And you can do the calculation fairly  23 straightforwardly. If you just find out how much input in  24 watts per square meter the sun puts on the ground, then  25 you have other factors like what the color is and what its</p>	<p style="text-align: right;">24</p> <p>1 construction, like the foundations. And, to the extent  2 possible, we've minimized that kind of construction and  3 the amount of displaced natural material and the amount of  4 leveling. And so there is kind of a subcategory of also  5 unmitigable construction consequences.  6 DR. CRAIG FOLTZ: Although there has been some  7 -- there are some issues with respect to the foundation  8 that, Jeff, you may want to talk about at some point if we  9 would like to talk about that. And that is with respect  10 to the depth of the foundation.  11 Kiope, I know that in the past you have said it  12 would be five stories.  13 MR. KIOPE RAYMOND: I haven't said it.  14 DR. CRAIG FOLTZ: It would not.  15 MR. MIKE MABERRY: It's on your website, so  16 whoever --  17 MR. KIOPE RAYMOND: Whoever did, but I didn't  18 say it.  19 MS. ANNELLE AMARAL: So those are sort of the  20 things.  21 DR. CRAIG FOLTZ: I didn't mean to attribute  22 that to you by mistake.  23 MR. KIOPE RAYMOND: That's okay.  24 MS. ANNELLE AMARAL: At this point we're open to  25 taking comments that you may have. You can proceed in</p>
<p style="text-align: right;">23</p> <p>1 reflectance is, then you can then understand what the  2 cooling requirements would be to cool the telescope.  3 And those cooling requirements, it's my  4 understanding -- Jeff can correct me if I am wrong --  5 essentially exceed the electric power delivered to the top  6 of the mountain.  7 MR. JEFF BARR: If it were painted brown.  8 DR. CRAIG FOLTZ: If it were painted brown.  9 So I mean, one could consider increasing that,  10 increase the carbon footprint, you increase the amount of  11 energy that is needed and so on. But we don't consider  12 painting it another color to be a mitigable -- what was  13 the word you used?  14 MS. ANNELLE AMARAL: I just made that up.  15 DR. CRAIG FOLTZ: Characteristic. So it's big  16 and it's white. And the site is within the 18.116 acres  17 of Haleakala.  18 Those are constraints on the project that we  19 really can't change. I mean, other than putting it at  20 some other site, which essentially, in this case, means we  21 don't do the project.  22 MS. ANNELLE AMARAL: Maybe it's already given,  23 but what I thought I read, too, was construction was the  24 thing that cannot be mitigated. You must dig, you --  25 MR. JEFF BARR: There are aspects of the</p>	<p style="text-align: right;">25</p> <p>1 whatever way you are comfortable. And I will make notes,  2 and, you know, you will talk back and forth, and we will  3 see how it flows.  4 MR. KIOPE RAYMOND: My name is Kiope Raymond.  5 On Section 106, does the law say about who can  6 submit mitigation? Does it have to be Hawaiian? Does it  7 have to be an organization? Can it be anyone? What --  8 who is covered?  9 MS. CAROLINE BLANCO: It basically refers to  10 consulting parties, interested parties that would provide  11 -- you know, it's a process for allowing something to be  12 produced at the end, a memorandum of agreement. And so my  13 interpretation of the law is that it would take to  14 identify interested parties, and those people would be  15 invited to be consulting parties, and then they would be  16 requested to submit mitigation proposals.  17 MR. KIOPE RAYMOND: Okay.  18 MS. CAROLINE BLANCO: So that's pretty much how  19 it works.  20 MR. KIOPE RAYMOND: So it can be anyone, anyone  21 in the community? It's open?  22 MS. CAROLINE BLANCO: It can be, if they are a  23 consulting party. If they are a consulting party.  24 MR. KIOPE RAYMOND: I am just asking about  25 ethnic background or race.</p>

<p style="text-align: right;">26</p> <p>1 MS. CAROLINE BLANCO: No. No, it's not limited</p> <p>2 to that at all.</p> <p>3 MR. KIOPE RAYMOND: Just wondering. Okay.</p> <p>4 MS. CAROLINE BLANCO: Right. Right.</p> <p>5 MR. KIOPE RAYMOND: And so you have received --</p> <p>6 my question to the National Science Foundation -- one of</p> <p>7 the questions -- is you've received three?</p> <p>8 MS. CAROLINE BLANCO: That's correct.</p> <p>9 MR. KIOPE RAYMOND: Are you entertaining</p> <p>10 combinations or are you thinking to pick one or be</p> <p>11 eclectic?</p> <p>12 MS. CAROLINE BLANCO: There is no rule as to</p> <p>13 picking one over the other over the other. You could take</p> <p>14 pieces of each, if you thought that it would be a good</p> <p>15 idea to do that.</p> <p>16 MR. KIOPE RAYMOND: I'm sorry to interject.</p> <p>17 MS. CAROLINE BLANCO: Sure.</p> <p>18 MR. KIOPE RAYMOND: But that might be tomorrow,</p> <p>19 if they wanted to sit down with you and hammer out a</p> <p>20 memorandum. Each person might have their --</p> <p>21 MS. CAROLINE BLANCO: Right. And our goal is,</p> <p>22 once we start to take shape, have that process take shape,</p> <p>23 it certainly wouldn't be finalized tomorrow. I don't want</p> <p>24 to leave that impression.</p> <p>25 It would begin to take shape because, of course,</p>	<p style="text-align: right;">28</p> <p>1 Otherwise, they wouldn't have the same rights if they</p> <p>2 didn't sign it.</p> <p>3 DR. CRAIG FOLTZ: Could I ask you a question?</p> <p>4 MS. CAROLINE BLANCO: Yeah.</p> <p>5 DR. CRAIG FOLTZ: Is it the case that if you are</p> <p>6 a signatory, then you do have legal standing should the</p> <p>7 MOA be --</p> <p>8 MS. CAROLINE BLANCO: Correct. Correct. Let's</p> <p>9 say it's not carried out for one reason or another -- and</p> <p>10 I should clarify that it would not go into effect unless</p> <p>11 there were a decision made to go forward with the proposed</p> <p>12 ATST project. It doesn't become finalized until that</p> <p>13 point. And the language would be drafted to say, if it's</p> <p>14 approved, this is, you know, when it would take effect.</p> <p>15 So that is basically how it would work. And</p> <p>16 they would -- any signatory to it would have rights to be</p> <p>17 able to enforce implementation of it.</p> <p>18 MR. KIOPE RAYMOND: Okay. Thank you.</p> <p>19 Appreciate the explanation.</p> <p>20 As an individual, I would want to share with the</p> <p>21 NSF that I have already made it clear that -- for the</p> <p>22 record, that I do not believe desecration can be</p> <p>23 mitigated. But we are not here to talk about that today.</p> <p>24 So what I would like to be able to do is to</p> <p>25 comment on the three that have already been submitted.</p>
<p style="text-align: right;">27</p> <p>1 this process does have to move forward. It can't continue</p> <p>2 on indefinitely.</p> <p>3 So what our goal is, is once we have a draft, it</p> <p>4 would be -- and I think this was in some of the</p> <p>5 correspondence -- it would be distributed for comment</p> <p>6 among all the consulting parties. Then that would be</p> <p>7 considered.</p> <p>8 MR. KIOPE RAYMOND: Then the consulting parties</p> <p>9 would choose whether they wanted to become signatories to</p> <p>10 the memorandum.</p> <p>11 MS. CAROLINE BLANCO: They can be invited to be</p> <p>12 signatories, yeah, if they wish to. And in particular,</p> <p>13 usually the way it works is if, let's say, one particular</p> <p>14 group is responsible for implementing mitigation, then it</p> <p>15 makes sense to have them be a signatory to the MOA. Not</p> <p>16 all consulting parties sign MOAs, some do not. Some</p> <p>17 concur. Some decide they don't want to sign it. So it's</p> <p>18 pretty open.</p> <p>19 At a minimum, though, there needs to be, of</p> <p>20 course, National Science Foundation, the SHPO, State</p> <p>21 Historic Preservation Office, and the Advisory Counsel</p> <p>22 here. So those are the three main parties.</p> <p>23 And then if we accept the mitigation proposal as</p> <p>24 I mentioned, you know, from somebody else, and that was a</p> <p>25 consulting party, we would recommend that they sign it.</p>	<p style="text-align: right;">29</p> <p>1 MS. CAROLINE BLANCO: Terrific.</p> <p>2 MR. KIOPE RAYMOND: I see merit in Mr. Warren</p> <p>3 Shibuya's presentation. Because, in some sense, it goes a</p> <p>4 long way to help with the harm, the hurt that has gone on.</p> <p>5 He speaks in his mitigation plan to cleaning up the</p> <p>6 rubbish, the years of stuff that has been left around --</p> <p>7 DR. CRAIG FOLTZ: We understand.</p> <p>8 MR. KIOPE RAYMOND: -- within the 18 acres. I</p> <p>9 applaud that. I think that's really helpful.</p> <p>10 A case in point, and with all due respect,</p> <p>11 Jeremy has approached in the past and said, well, what if</p> <p>12 we were to say that we have to take things down. Well, I</p> <p>13 understand -- and as Jeremy knows from the get go, I've</p> <p>14 tried to follow online what is going on. And I understand</p> <p>15 that that is now part of the planning, is that you have to</p> <p>16 see closure. And I can't remember what it's called, but I</p> <p>17 understand that the new cycle for this, if it's 50 years</p> <p>18 or whatever, is \$400 million for this particular project,</p> <p>19 as I understand it, to bring it to life and then to take</p> <p>20 it down.</p> <p>21 And I really appreciate that because there is a</p> <p>22 lot of tooting of horns right now from Reber Circle. And</p> <p>23 I understand that it is the alternate site, but it has</p> <p>24 always, just for the record, been something that I find</p> <p>25 just so strange that -- as I understand, Grote Reber,</p>

30

1 father of radio astronomy, was not very successful on top  
2 of the Haleakala. It was about pure science. And he  
3 failed. Then he made himself famous by going to other  
4 countries.  
5 But we hold a little cement ring in his honor  
6 rather than taking it out and cleaning up the place and  
7 respecting the aina that's there. We haven't done that  
8 for 50 years. And that is just one little cement ring.  
9 And here you want to take a \$250 million building and  
10 bring it down in 50 years. Well, that's interesting.  
11 DR. CRAIG FOLTZ: Could I ask you -- I'm sorry  
12 to interrupt you --  
13 MR. KIOPE RAYMOND: Sure.  
14 DR. CRAIG FOLTZ: -- if I might. You said a lot  
15 of tooting of horns about Reber Circle. I have not heard  
16 that.  
17 MR. KIOPE RAYMOND: Let me clarify that it's not  
18 tooting of horn for the proposed ATST. It's tooting of  
19 horns on the part of the Institute for Astronomy.  
20 DR. CRAIG FOLTZ: For the preservation?  
21 MR. KIOPE RAYMOND: Yes. Of how proud they are  
22 that Grote Reber once did some work at the top of that  
23 mountain. And that is what I meant.  
24 DR. CRAIG FOLTZ: Our IFA representative is not  
25 in the room. That is certainly subject to discussion.

31

1 MR. KIOPE RAYMOND: It is. Yeah. It's online.  
2 I've heard that there are people that want to make the  
3 place and have a little plaque.  
4 Well, get rid of that little -- anyway.  
5 DR. CRAIG FOLTZ: As you know, there have been  
6 suggestions to restore Reber Circle back to its original  
7 profile.  
8 MR. JEFF BARR: Right. And move the concrete  
9 ring and the rest of it.  
10 And then I agree with you wholly that remnant of  
11 that project is significant as a historical artifact, and  
12 not removing it is --  
13 MR. KIOPE RAYMOND: It's one example of --  
14 MS. ANNELLE AMARAL: Cleaning up.  
15 MR. KIOPE RAYMOND: -- cleaning up.  
16 MS. ANNELLE AMARAL: This is within the  
17 footprint, this is one of the things to mitigate, cleaning  
18 up Reber --  
19 MR. KIOPE RAYMOND: I am referring specifically  
20 even farther back in that, in Mr. Shibuya's  
21 generalization, that things need to be cleaned up, up  
22 there to -- if mitigation is to happen, to mitigate some  
23 of the harm, to leave the aina as you found it.  
24 The other mitigation that I would comment on --  
25 it comes from Kahu Charles Kauluwehi Maxwell, Sr. -- and I

32

1 don't see -- neither of these have -- have figures or  
2 cost-outs. Is that available to share?  
3 DR. CRAIG FOLTZ: Yes, they are. I can share a  
4 copy with you. I have a copy of Mr. Maxwell's proposal.  
5 MR. KIOPE RAYMOND: Is that something you could  
6 share today?  
7 DR. CRAIG FOLTZ: Yeah, absolutely. Let me see  
8 if I can get a copy made. I will root in my briefcase  
9 right now.  
10 MR. KIOPE RAYMOND: And then I will just  
11 continue.  
12 DR. CRAIG FOLTZ: Just a question for my counsel  
13 and consultants, is that a public --  
14 DR. CHARLIE FEIN: Yes.  
15 MR. KIOPE RAYMOND: I would go on to the MCC  
16 proposal, Maui Community College proposal, which --  
17 MS. ANNELLE AMARAL: So with respect to --  
18 MR. KIOPE RAYMOND: -- Mr. Maxwell --  
19 MS. ANNELLE AMARAL: You just wanted to just  
20 note the request for --  
21 MR. KIOPE RAYMOND: I've not seen Mr. Maxwell's  
22 other than this one sheet. The entire mitigation proposal  
23 has never, to my knowledge, been made as public as the  
24 Maui Community College proposal which was addendum to the  
25 November 8 letter from Ms. Blanco.

33

1 MS. ANNELLE AMARAL: Is there additional --  
2 MR. KIOPE RAYMOND: What are we talking about?  
3 MS. ANNELLE AMARAL: Is there additional  
4 information from Charlie Maxwell's proposal?  
5 MS. CAROLINE BLANCO: I think, Craig, did you  
6 just give him copies?  
7 MS. ANNELLE AMARAL: He is getting a copy of the  
8 numbers.  
9 DR. CRAIG FOLTZ: I am giving him a copy of the  
10 full proposal.  
11 MS. CAROLINE BLANCO: The full proposal.  
12 MS. ANNELLE AMARAL: Good. Then let's move on  
13 to MCC.  
14 MR. KIOPE RAYMOND: Mr. Shibuya speaks to  
15 mitigating harm in a sense. And that is -- and I don't  
16 honestly see that in Mr. Maxwell's. I see that this is a  
17 -- it's about, with no disrespect to Uncle Charlie  
18 Maxwell, getting a lot of money in mitigating desecration.  
19 But the Maui Community College, I would speak to  
20 the NSF, and from an employee of the State of Hawaii, a  
21 tenured senior faculty member at Maui Community College,  
22 find it disgraceful that our chancellor would ask a junior  
23 faculty member to create and help author a mitigation plan  
24 for the college.  
25 It's a power structure kind of thing. Where if

<p style="text-align: right;">34</p> <p>1 you are junior faculty, you are not going to say, no, I am  2 not going to create a plan when the chancellor tells you,  3 why don't you work on this.</p> <p>4 And that I would also let the NSF know, if they  5 were not aware -- they might be -- that no other Hawaiian  6 faculty member at Maui Community College wanted to be a  7 part of this plan.</p> <p>8 In fact, we have a group on Maui Community  9 campus specifically created to support programs, Native  10 Hawaiian programs, Native Hawaiian students. And spoke at  11 length about the merits of doing this and how we all felt.  12 And unanimously agreed, very open, that this was not  13 something that we could support, including author Kaleikoa  14 Ka'eo. He would not put his name to it, as we understand.</p> <p>15 And I want the NSF to know that I personally  16 find it -- after the fact, but within the process, so I  17 guess it's okay, a token is hired, Mr. Sol Kaho'ohalahala,  18 to say, well, I will be the Hawaiian hired by MCC and I  19 see some merit to it. But he has never been -- I mean, he  20 is a -- he has been casual hire specifically for this.  21 And I want the NSF to know that I do not agree.</p> <p>22 He also misspelled his name. It's halahala  23 instead of holoholo on your -- just for Sol's benefit.</p> <p>24 So about mitigation proposals, I know that once  25 it's been created, it moves along, you -- it's maybe not</p>	<p style="text-align: right;">36</p> <p>1 MR. KIOPE RAYMOND: I am wondering about  2 mitigation, if the same thing would occur. I would speak  3 to the NSF to say please be real careful. If we are going  4 to be serving Native Hawaiians, let's somehow make sure  5 Native Hawaiians are served, not just someone who is from  6 Hawaii.</p> <p>7 MS. CAROLINE BLANCO: Is there an aspect of the  8 plan, the MCC proposal, that whether -- you know, maybe  9 you perhaps do not support the way they have drafted it,  10 but, conceptually, are there some components of it that  11 you think would be a good idea?</p> <p>12 MR. KIOPE RAYMOND: I wouldn't answer that  13 question in terms of -- I don't have the -- for that  14 particular plan, I've looked at it. And in my --  15 honestly, I will just be candid, in my disgust of what  16 I've just covered, the way that the plan was created, I  17 just dismissed it. So I won't say I hope that there's  18 some --</p> <p>19 DR. CRAIG FOLTZ: Could I ask you a question,  20 just a clarification?</p> <p>21 I'm sorry about that. I will shut it down.</p> <p>22 MR. KIOPE RAYMOND: No problem.</p> <p>23 DR. CRAIG FOLTZ: And this gets back to the  24 limited lifetime issue, which really it is a bit  25 different. Because on the one hand, it is a response to</p>
<p style="text-align: right;">35</p> <p>1 something I can do anything about, but I think it's a  2 matter of conscience, that a junior faculty in fact ended  3 up doing it, and the person who has authored it won't even  4 sign their name to it. And someone from outside, Native  5 Hawaiian, is hired to kind of be a point person. And I  6 just find that of great concern.</p> <p>7 For all three, so far -- and for the MCC, I will  8 try to stay with my point. For me personally, I don't see  9 in Maui Community College's mitigation plan something that  10 mitigates the harm. I see, again, we want to hire some  11 faculty, we want to get some Hawaiian students through.</p> <p>12 And the staff is doing a wonderful job with  13 adaptive optics. We do summer programs. I could question  14 whether or not -- I mean, I have gone through and looked  15 at the different summer programs. And if NSF is amenable,  16 there are 60 or so students who have actually gone through  17 the programs over the various summers, there is about  18 three who are Native Hawaiian. Everyone is saying that  19 these Hawaiians have come into the summer programs. So  20 the actual percentages of Hawaiians who have been served  21 is minuscule.</p> <p>22 DR. CRAIG FOLTZ: Let me just say that those  23 programs were not designed specifically --</p> <p>24 MR. KIOPE RAYMOND: I concur.</p> <p>25 DR. CRAIG FOLTZ: I just want to be fair.</p>	<p style="text-align: right;">37</p> <p>1 Mr. Shibuya's suggestion. It is also an issue that the  2 NSF grapples with as some of its facilities get older. So  3 we are encouraged to think about the full life cycle of  4 the project.</p> <p>5 And so when seeing the suggestion that could  6 have a fundamental lifetime, and that in fact depends on  7 how you look at it, mitigates or minimizes, and also  8 depending how you restore the site.</p> <p>9 When you talked about the ATST and the \$400  10 million project, in comparison to Reber Circle, were you  11 implying that you did not think that we would remove it?</p> <p>12 MR. KIOPE RAYMOND: I wanted NSF to -- twofold.  13 Again, schizophrenia. One is, I don't trust that you  14 would, honestly. The other is, why would we collectively,  15 as citizens of the United States, spend this much money,  16 not help humanity and then destroy it in 50 years?</p> <p>17 DR. CRAIG FOLTZ: Well, let me answer the  18 question. If that were specifically called out in a  19 memorandum of agreement, and if an organization -- Kiope,  20 I don't know whether you or I would be here.</p> <p>21 MR. KIOPE RAYMOND: That's why I interject --  22 that's why I asked Kilakila to be a consultant. I thought  23 I could be hit by a car on the way over here.</p> <p>24 DR. CRAIG FOLTZ: Certainly so.</p> <p>25 MR. KIOPE RAYMOND: And thanks for allowing</p>

<p style="text-align: right;">38</p> <p>1 Kilakila to be a consulting party.</p> <p>2 DR. CRAIG FOLTZ: Certainly said.</p> <p>3 But that MOA still has standing. And if it is</p> <p>4 not removed, legal action can be taken.</p> <p>5 Will it be successful? I can't say what the</p> <p>6 climate will be like in 40 years.</p> <p>7 Why would we invest that? Because in 45 years</p> <p>8 or 50 years, we will have been through two sunspot cycles</p> <p>9 and we will have better ways to study the sun.</p> <p>10 And the maintenance costs -- what kills us, as a</p> <p>11 funding agency, is we have lots and lots of historical</p> <p>12 sites. I mean that from the point of view of the history</p> <p>13 of astronomy. We have Kitt Peak, we have Cerro Tololo.</p> <p>14 Telescopes cost a lot to run. And at some point one has</p> <p>15 to make the agonizing decision that the marginal return,</p> <p>16 scientific return on these old telescopes, is it worth the</p> <p>17 operations funds.</p> <p>18 And we have gone through a very agonizing</p> <p>19 process in the Astronomy Division, which you have probably</p> <p>20 seen, since you are such a careful reader, or seen the</p> <p>21 review, which is the first time that we have asked for</p> <p>22 advice as to how we should close telescopes down. And we</p> <p>23 will close them down. And why will they close them down?</p> <p>24 Because they are simply too expensive to keep running.</p> <p>25 And, you know, there actually have been</p>	<p style="text-align: right;">40</p> <p>1 DR. CHARLIE FEIN: One solar cycle, yes.</p> <p>2 DR. CRAIG FOLTZ: Again, it would be, if we were</p> <p>3 to write an MOA and specify, say, two solar cycles. And</p> <p>4 give yourself a little head room, let's say 50 years as</p> <p>5 opposed to 40.</p> <p>6 DR. CHARLIE FEIN: Originally, I think it was a</p> <p>7 lease issue with the University of Hawaii.</p> <p>8 MR. MIKE MABERRY: No.</p> <p>9 DR. CRAIG FOLTZ: In any event, if we wrote that</p> <p>10 into the MOA -- the reason we haven't published the final</p> <p>11 EIS is we would like to be able to include the mitigation</p> <p>12 steps like that in the EIS as well so it would appear.</p> <p>13 DR. CHARLIE FEIN: I would like to make a</p> <p>14 comment about Reber Circle, because it's illustrative of</p> <p>15 the way the state system works.</p> <p>16 In 2002, that became a historic site, regardless</p> <p>17 of whether the university had removed it before then or</p> <p>18 not. Not the issue. But once it becomes a historic site,</p> <p>19 it then has to be listed, which it is, and there is a</p> <p>20 restoration plan which has been approved by the State</p> <p>21 Historic Preservation Office for removal of it whenever</p> <p>22 funding is available to do that. So there is an approved</p> <p>23 plan to restore that.</p> <p>24 DR. CRAIG FOLTZ: To remove --</p> <p>25 DR. CHARLIE FEIN: The ring of Reber Circle.</p>
<p style="text-align: right;">39</p> <p>1 telescopes that have been closed down. A number of radio</p> <p>2 astronomy facilities have been shut down, including</p> <p>3 national facilities. It just costs too much to maintain</p> <p>4 them.</p> <p>5 So the answer is, a signatory can help with</p> <p>6 enforcement.</p> <p>7 And we also believe that, in 45 to 50 years, we</p> <p>8 will have better techniques. And those techniques may be,</p> <p>9 for example, a solar telescope on the moon or a very, very</p> <p>10 large solar telescope in space. Which is beyond our</p> <p>11 ability to do in the foreseeable future, but, looking at</p> <p>12 50 years, it's not beyond the question.</p> <p>13 MS. ANNELLE AMARAL: So let me ask the question.</p> <p>14 In your Draft EIS, does it say there's an intention to</p> <p>15 close this site down and remove everything, and you are</p> <p>16 saying that possibly in the MOA you could affirmatively</p> <p>17 request that time or request that closing down?</p> <p>18 DR. CHARLIE FEIN: Yes.</p> <p>19 I'm sorry. I am Charlie Fein, the environmental</p> <p>20 consultant.</p> <p>21 We do, in fact, give a lifespan in the Draft</p> <p>22 Environmental Impact Statement. I believe it was 2039,</p> <p>23 was the first end point. That was original end point in</p> <p>24 the DEIS.</p> <p>25 DR. CRAIG FOLTZ: That's one solar cycle.</p>	<p style="text-align: right;">41</p> <p>1 DR. CRAIG FOLTZ: That could be included in a</p> <p>2 general plan.</p> <p>3 MS. ANNELLE AMARAL: Could be included in the --</p> <p>4 DR. CRAIG FOLTZ: In terms of specifically in</p> <p>5 the issue of restoration of other parts of the site.</p> <p>6 MR. KIOPE RAYMOND: I have one other question,</p> <p>7 but would reserve, if this is the ongoing discussion, the</p> <p>8 right to ask in the future.</p> <p>9 MS. ANNELLE AMARAL: Yes.</p> <p>10 MR. KIOPE RAYMOND: Well, it is maybe a little</p> <p>11 long, but it is -- has to do with the study of the sun</p> <p>12 itself and the solar physics that people want to</p> <p>13 undertake. And I appreciate that. It is very interesting</p> <p>14 science.</p> <p>15 I could perhaps be directed to this in the</p> <p>16 future. I did not see in any of the documentation any</p> <p>17 reference to whether or not actual magnetic -- the things</p> <p>18 that are going to affect satellites can -- by studying</p> <p>19 this, can we stop them?</p> <p>20 DR. CRAIG FOLTZ: No. But in order to predict,</p> <p>21 to prepare and to mitigate against them, we need to</p> <p>22 understand them. And we don't understand them. And we</p> <p>23 don't understand the impact of solar activity on climate.</p> <p>24 Of course, climate -- now, it's interesting to me that,</p> <p>25 you know, the historical records show that the lack of</p>

<p style="text-align: right;">42</p> <p>1 solar activity leads to a general cooling. The track  2 we're on, in other ways, leads to a general warming.  3 Obviously, climate is an enormously complex system.  4 No, it will not stop it. But what you don't  5 know can hurt you.  6 It is a far more practical application of  7 science than most of the astronomy that we study. And,  8 you know, the probabilities of a significant impact in our  9 lifetime are significant. Not overwhelming, but  10 significant.  11 MR. KIOPE RAYMOND: Thank you.  12 MS. ANNELLE AMARAL: Thank you, Kiope.  13 MS. CAMILLE KALAMA: I am actually going to ask  14 Mikahala if she wants to go first, because both these  15 individuals have been involved a lot longer. And I am  16 actually representing their interests. So I will let her  17 go.  18 MS. MIKAHALA HELM: I just had a question.  19 MS. ANNELLE AMARAL: Mikahala --  20 MS. MIKAHALA HELM: I'm sorry. My name is  21 Mikahala Helm, M-I-K-A-H-A-L-A, last name H-E-L-M.  22 Well, first of all, Annelle, I wanted to ask you  23 if, on that first page, where they say, first bullet,  24 parties as consulted, mailing to them, and have the date,  25 underneath that, could you be able to add that in -- as a</p>	<p style="text-align: right;">44</p> <p>1 DR. CRAIG FOLTZ: Or to compensate.  2 MS. CAROLINE BLANCO: To compensate is a good  3 word. Yes.  4 DR. CRAIG FOLTZ: Because the difficulty I have  5 is between mitigation and minimization. And I even look  6 at a situation like a finite lifetime, in some sense, that  7 minimizes, right, integrated over time. But we call it  8 mitigation. So I think that one of the things that is  9 allowed by the definition of mitigation is to compensate  10 for harm.  11 MS. CAROLINE BLANCO: And it can be onsite and  12 it can be offsite as well. So that may help you.  13 And I think at some point I would be interested  14 to also hear from you and Kiope about any other ideas that  15 have not been proposed. But if there is anything else  16 that you think might be of value for us to consider, it  17 would be most welcome.  18 MS. MIKAHALA HELM: Thank you.  19 And, you know, in working together on this over  20 the past few years, an overwhelming response from not only  21 people from our own island, people from all of Hawaii, and  22 mainland and other countries, are, you know, waiting to  23 see the EIS. But the response that I know of at all the  24 hearings or the meetings that you have held has been  25 overwhelmingly in support of avoidance of this ATST.</p>
<p style="text-align: right;">43</p> <p>1 second bullet perhaps that from September 2006 to the end  2 of 2006, additional, you know, approximately 59  3 individuals requested to be Section 106 consultants. And  4 that I am really wanting -- asking for more information on  5 if they were officially added to the list and then  6 eliminated from the list. I just want to be sure that  7 they were included in the list.  8 MS. ANNELLE AMARAL: Okay.  9 MS. MIKAHALA HELM: Thank you.  10 And my question was, the definition of mitigate.  11 We have been at this for a while, all of us here, yeah.  12 And I just wanted to ask about the definition of  13 mitigation, since this meeting is focusing on mitigation  14 consultation. I just have some conflict about what  15 mitigation is. I want to make sure I have the correct  16 understanding. And then I can ask you something else.  17 MS. CAROLINE BLANCO: What is your understanding  18 of how it works? Regulations specifically define it, as  19 far as the term mitigation. But I will double-check here.  20 It's not in the official -- in the regulations  21 themselves, it's not a defined term. But, I mean,  22 basically, we've looked at this as ways in which you can  23 try to reduce the impacts, the adverse impacts, try to  24 make them more manageable or reduce them as much as  25 possible.</p>	<p style="text-align: right;">45</p> <p>1 MS. CAROLINE BLANCO: Right.  2 MS. MIKAHALA HELM: And so when we are here  3 today, and you say that the purpose is for consultation on  4 mitigation, I ask what is mitigation? Because unless you  5 have a full view of the adverse effects, how can we  6 possibly discuss mitigating those effects?  7 So that's my mana'o.  8 MS. CAROLINE BLANCO: I think that's a very  9 helpful comment. I have noticed in the various pieces of  10 correspondence coming from the Advisory Counsel, the SHPO,  11 it's a bit concerning to me -- and, also, the park --  12 because I am not sure we all see these issues, even the  13 definitions, regardless of point of view in position. I  14 am not sure we see these definitions in the same way.  15 We've interpreted avoidance as we can't avoid adverse  16 effects because if the project is going to go forward,  17 it's going to have adverse effects. So we are trying to  18 be honest about it, in saying there are going to be  19 adverse effects that can't be avoided if the project is to  20 be approved.  21 Minimization. I personally have interpreted  22 that as, well, for scientific reasons, it has to be this  23 tall. We can't minimize the project and the impacts to  24 reduce it. But what we can do is mitigate, we can  25 compensate, we can look at different ideas, is there some</p>

<p style="text-align: right;">46</p> <p>1 way to, you know, to clean up the site, to make it better,  2 is there a way to limit the lifespan, is there a way to,  3 you know, perhaps engage in some programs with Native  4 Hawaiians that would be helpful to the community, some  5 ways in which we could, as Craig said, compensate for the  6 harm that is being done.</p> <p>7 And so we want to express the point that we are  8 very open to different and creative ideas that might be  9 able to be helpful here. If that's at all instructive to  10 your question.</p> <p>11 MS. MIKAHALA HELM: Thank you.</p> <p>12 MS. CAROLINE BLANCO: It is sort of a unique  13 situation in that, in many 106 processes -- for example, a  14 federal highway, you can change the alignment and still  15 accomplish the same goals. So alternatives, that makes a  16 lot of sense in that context. You can go through this  17 neighborhood, that neighborhood, or this area, or that  18 area, and still accomplish the needs of the project.</p> <p>19 Here, it's very different. There are certain  20 scientific criteria that need to be met. And so the  21 alternatives become much more limited because they fail to  22 meet the objectives. And that has been a different  23 situation than many other agencies face.</p> <p>24 So, often, we are faced with a situation of  25 either we go forward with the project as it's proposed or</p>	<p style="text-align: right;">48</p> <p>1 obviously aware that it's been expressed by different  2 groups and different agencies that, as you've said, this  3 is -- this site is the only alternative, according to the  4 studies that you folks have done. And so that this --  5 it's been a foregone conclusion, you know, that avoidance  6 and minimization is just not an option.</p> <p>7 And, to me, it's really concerning that the  8 consulting parties may not feel like this is real  9 consultation. You know, as the law requires, we need to  10 have meaningful consultation prior to any approval. Or,  11 actually, prior to the expenditure of any federal funds.</p> <p>12 And that these different agency directors have said they  13 feel as though there hasn't been opportunity for  14 meaningful consultation, because of this limiting to the  15 discussion to mitigation and what has been called  16 mitigation.</p> <p>17 And I am not sure at this point that can really  18 happen because, you know, as you've said over and over,  19 this is the only alternative.</p> <p>20 And I find that troubling, too, because, you  21 know, I know that you have said other projects have  22 alternatives and this is a different kind of thing. But  23 there are many projects that have been proposed in Hawaii,  24 and have been said, you know, Hawaii, this is the only  25 place, this is the only site that this can possibly</p>
<p style="text-align: right;">47</p> <p>1 we don't go forward with it at all. And that's very  2 different.</p> <p>3 I think you can see that point from different  4 alignments of a highway.</p> <p>5 MS. MIKAHALA HELM: Okay.</p> <p>6 MS. ANNELLE AMARAL: Thank you.</p> <p>7 MS. CAMILLE KALAMA: Camille Kalama, I am an  8 attorney with the Native Hawaiian Legal Corporation. I am  9 here on behalf of Kilakila o Haleakala.</p> <p>10 And as you know from Kiope's involvement from  11 the beginning, I believe, the group has the same concerns.  12 And it is focused, you know, on avoidance. And, really,  13 not -- mitigation really isn't an option. But I am still  14 here today to, you know, express some concern for the  15 record on behalf of their group.</p> <p>16 And one of the things --</p> <p>17 MS. ANNELLE AMARAL: Express concerns on  18 avoidance?</p> <p>19 MS. CAMILLE KALAMA: About the process.</p> <p>20 MS. ANNELLE AMARAL: About the consultation  21 process?</p> <p>22 MS. CAMILLE KALAMA: Yes.</p> <p>23 MS. ANNELLE AMARAL: Oh, please.</p> <p>24 MS. CAMILLE KALAMA: All right. And I am little  25 concerned, you know, in reading the letters. You are</p>	<p style="text-align: right;">49</p> <p>1 happen. But as we've seen, and one of the directors  2 notified in a letter, you know, the same thing happened in  3 another telescope issue and they did find an alternative  4 site.</p> <p>5 And so what I am saying is I find it hard to  6 believe sometimes that there really is one site. I think  7 it may be the best site, it may meet the goals, you know,  8 to the best of the ability, that there may be other sites  9 that may not be quite as good, but I don't believe that  10 that means there is no alternatives.</p> <p>11 MS. CAROLINE BLANCO: If I could ask you a  12 question. If you think the process has been flawed  13 because there are limited alternatives and that there are  14 two alternatives on top Mount Haleakala and no action  15 alternative, how would you propose it be changed?</p> <p>16 What would be the correct process based on your  17 position?</p> <p>18 MS. CAMILLE KALAMA: At this point, I think it  19 would be difficult to go back because the consulting  20 parties are aware that's the position of the NSF.</p> <p>21 But to me, at the beginning, you know, that at  22 least alternatives be considered and be open to the  23 parties for consultation. Or just -- you know, I am not  24 exactly sure how to talk about it at this point because  25 we're so far down the road, if you know what I mean.</p>

<p style="text-align: right;">50</p> <p>1 MS. CAROLINE BLANCO: Well, I think maybe the 2 question might be said, if it's a science-driven project, 3 whether it be ATST or another project, and that the 4 alternatives selected are to be considered based on 5 whether or not they meet certain scientific criteria, how 6 would you suggest you manage that with 106? 7 MS. CAMILLE KALAMA: I think it's, you know, a 8 difficult goal. But I don't -- I understand that it's 9 science-driven, I understand that there's goals. But you 10 know what I am saying is that there may be a site that 11 maybe the best possible site, but what I am still saying 12 is it may not be the only site. Once the funding is put 13 towards a specific site, I think it's already limiting the 14 choices in that direction. 15 MS. CAROLINE BLANCO: And the other piece of it 16 is you have the scientific community with the expertise in 17 this particular area going through a peer review process, 18 that is, has gone through all of the sites, and it has 19 taken, you know, years to accomplish and looked at 72 20 sites, whittled it down to six, continued to do studies. 21 And the scientific community, not the federal agency per 22 se, but the independent scientific community, has 23 determined this is where it is, if it's going to happen. 24 How do you take that? Perhaps it's helpful to know that 25 these proposals are given to NSF and that's the proposal</p>	<p style="text-align: right;">52</p> <p>1 gathered at the meetings and there was a lot of community 2 testimony, it came to a certain point, and I requested 3 that oral testimony be included in the documentation about 4 this project. And that did not start at the very 5 beginning. They did it afterwards. But this was after 6 the fact. 7 And, you know, for Hawaiian people, oral -- you 8 know, being able to present things orally is important. 9 It's not all going to be written. 10 And so if you really wanted to document the 11 feedback of the community and people who love Haleakala 12 and have reasons about what it means to them and to our 13 culture, then including those documentation would have 14 given a full -- I mean, if you are asking us to 15 backtrack -- I mean, this is backtracking, but that would 16 have been something that I hope in all processes, when you 17 ask for this kind of feedback, is included. 18 MS. CAROLINE BLANCO: If I could ask Charlie to 19 just comment on what has transpired with regard to oral 20 comments. 21 DR. CHARLIE FEIN: All oral testimony has been 22 recorded from the very beginning by a stenographer. And 23 all of the transcripts were made public and available to 24 anybody who wanted them. Also, in the DEIS. 25 So I am not quite sure what you mean by oral</p>
<p style="text-align: right;">51</p> <p>1 that is being considered. 2 I mean, do you think it's practical to 3 completely reopen it to another peer review, peer-reviewed 4 study of locations, when the very group with the expertise 5 has already conducted that? 6 I am trying to understand your position on that 7 and how you think it could have been done better. 8 MS. CAMILLE KALAMA: You know, I don't know that 9 I can -- that I would be able to say exactly. I mean, I 10 understand that a lot of study has gone into this site and 11 that a lot of other sites have been considered. And in 12 other cases, maybe that's not always happened. And that 13 they may have done a lot of careful study, but, you know, 14 still, at some point, if you are really consulting with 15 the communities, there has to be an openness to 16 considering avoidance, considering minimization. 17 You know, I know it's either it goes forward or 18 not, but, as you said, the other alternative is a no 19 action alternative, and serious consideration of that 20 alternative. 21 MS. MIKAHALA HELM: I have something that could 22 support how it could have been better. 23 MS. CAROLINE BLANCO: Yeah. 24 MS. MIKAHALA HELM: I mean, and in learning 25 about this process. And what I learned is when we had</p>	<p style="text-align: right;">53</p> <p>1 testimony was not available. 2 MS. MIKAHALA HELM: I'm sorry. My 3 understanding -- and correct me if I am wrong -- was that 4 you may have a stenographer taking record, but when you 5 had the printed material -- 6 DR. CHARLIE FEIN: Yes. 7 MS. MIKAHALA HELM: -- only those that were 8 submitted in writing were initially documented. The 9 others may have been on this kind of stuff and available 10 if you asked for it. 11 But I purposely asked for it at one time. And 12 then I know -- and I think Bijan was there, I am not too 13 sure. I am getting the dates mixed up. But my 14 understanding is that then it was available. My concern 15 is that it's available in the printed documentation, not 16 available for request, but printed in there. 17 DR. CHARLIE FEIN: Yes. And it certainly would 18 be in the final environmental impact statement, every word 19 that's ever been spoken will appear as part of the 20 appendix of the EIS. 21 MR. KIOPE RAYMOND: Every word the stenographer 22 caught. 23 DR. CHARLIE FEIN: Every word the stenographer 24 caught, right. 25 MS. MIKAHALA HELM: Was that available in the</p>

<p style="text-align: right;">54</p> <p>1 DEIS? I know at one point it was not available.</p> <p>2 MS. SHARON LOANDO-MONRO: It wasn't available in</p> <p>3 the DEIS because we didn't know that was something that</p> <p>4 would be requested.</p> <p>5 MS. MIKAHALA HELM: Yes.</p> <p>6 MS. SHARON LOANDO-MONRO: Typically, we do that</p> <p>7 because it's for our administrative record. But since you</p> <p>8 requested it, we honored that and gave you the copies and</p> <p>9 decided to put it in the final. So it will be included,</p> <p>10 all of them that we have.</p> <p>11 MS. MIKAHALA HELM: I appreciate that.</p> <p>12 And I am just clarifying for her because what</p> <p>13 she is asking, you know, backtracking, what would we have</p> <p>14 done differently. And my suggestion is if we are going to</p> <p>15 think back like that, then that would have been</p> <p>16 something -- that if you wanted the full picture that</p> <p>17 would have been something that we started from when the</p> <p>18 initial meetings began. I mean, I --</p> <p>19 MS. CAROLINE BLANCO: I guess my question was</p> <p>20 targeted in particular at this issue of scientific</p> <p>21 alternatives and how to deal with that.</p> <p>22 I appreciate your comments on that and on other</p> <p>23 aspects of it.</p> <p>24 But the alternatives issue is of concern to, you</p> <p>25 know, several comments or several consulting parties. And</p>	<p style="text-align: right;">56</p> <p>1 to the table as well.</p> <p>2 Did you want to make some, Camille, last</p> <p>3 comments for Kilakila o Haleakala?</p> <p>4 MS. CAMILLE KALAMA: Sure. Yeah, just two quick</p> <p>5 comments.</p> <p>6 But, you know, as far as the consultation</p> <p>7 process, I was kind of surprised at this open-ended open</p> <p>8 house forum because it seems to me, you know, consultation</p> <p>9 with all the consulting parties should have everybody</p> <p>10 present together so that, you know, there can be a real</p> <p>11 discussion and a dialogue. I understand you are trying to</p> <p>12 accommodate, but, you know, for the more meaningful</p> <p>13 discussion.</p> <p>14 MS. CAROLINE BLANCO: If I can respond to that.</p> <p>15 I had the same sort of thoughts as well. And there was a</p> <p>16 lot of discussion that we had.</p> <p>17 And we opted on this format with a more</p> <p>18 open-ended, you know, opportunity for people to make it.</p> <p>19 We were concerned people may have to take off of work,</p> <p>20 people may have to, you know, travel and so forth. So we</p> <p>21 wanted to be able to allow a large amount of time during</p> <p>22 which people could come in and voice their opinions.</p> <p>23 But tomorrow is a much more structured</p> <p>24 traditional type of meeting. This is more of an</p> <p>25 opportunity to receive ideas from the consulting parties.</p>
<p style="text-align: right;">55</p> <p>1 when you are faced with scientifically-driven</p> <p>2 alternatives, and trying to include consulting parties,</p> <p>3 you can't say, just move this road this way and move this</p> <p>4 one this way, and still be able to meet the objectives in</p> <p>5 this situation. And, of course, there is still a no</p> <p>6 action alternative.</p> <p>7 It may be that, you know, the input that we've</p> <p>8 received that, you know, this alternative is not okay, we</p> <p>9 don't believe this is all right because there were too</p> <p>10 many adverse impacts that can't be avoided or minimized,</p> <p>11 even with mitigation it's not enough, that is going to</p> <p>12 factor into the decision. So from that standpoint, it is</p> <p>13 still a very open process. And it is a meaningful one as</p> <p>14 well in that those comments are being considered and taken</p> <p>15 into consideration.</p> <p>16 Kiope, I saw you indicate.</p> <p>17 MS. ANNELLE AMARAL: I wonder if I can sort of</p> <p>18 interrupt this. And that is I've noted that three other</p> <p>19 people have come into the room. I want to give them an</p> <p>20 opportunity, also, to speak.</p> <p>21 And so I am wondering, if you have some last</p> <p>22 comments you need to make -- and these are not last</p> <p>23 because you can continue to speak, but I wanted to give</p> <p>24 other people an opportunity to speak as well. So I am</p> <p>25 inviting you to remain in the room and to bring the others</p>	<p style="text-align: right;">57</p> <p>1 And I think I left that on the voicemail message</p> <p>2 that I left for you.</p> <p>3 Tomorrow, from 10:00 until 2:00, there will be</p> <p>4 actual discussion, negotiation in the beginnings of the</p> <p>5 drafting of the MOA. So that will be an opportunity that</p> <p>6 is more of a traditional meeting in a sense.</p> <p>7 We tried to do both.</p> <p>8 MS. CAMILLE KALAMA: And the last, just on</p> <p>9 behalf of Kilakila o Haleakala, that mitigation, in our</p> <p>10 view, really should be directly related to the harm that</p> <p>11 has been caused. And I understand, you know, the</p> <p>12 difficulties trying to differentiate between minimization</p> <p>13 and mitigation, but, to me, offsite mitigation doesn't</p> <p>14 really make sense, you know, that it really -- I mean, I</p> <p>15 guess it's compensation in a way, but, to me, that's not</p> <p>16 necessarily mitigation. And that, you know, even though</p> <p>17 the group isn't really considering mitigation, that if</p> <p>18 there is any mitigation planned that it address the harm</p> <p>19 directly.</p> <p>20 DR. CRAIG FOLTZ: Could I just ask whether any</p> <p>21 of you have any other suggestions for onsite mitigation?</p> <p>22 I mean, are there other steps that could be taken?</p> <p>23 We are open to hearing that.</p> <p>24 MR. KIOPE RAYMOND: Miki, because I do.</p> <p>25 MS. MIKAHALA HELM: Go ahead.</p>

<p style="text-align: right;">58</p> <p>1 MR. KIOPE RAYMOND: I have pointed out some. I  2 know Mike has seen my powerpoint presentation, that it's  3 -- it would be nice to begin to get a better feel for the  4 amount of Hawaiians who could be educated about the  5 ability to access the 18 acres.  6 DR. CRAIG FOLTZ: Right.  7 MR. KIOPE RAYMOND: Should these mitigation  8 plans -- should the NSF decide to move forward with  9 memoranda with the Hawaiian community, then inserted would  10 be an enabling process for Hawaiians to know more about a  11 respectful way, respecting the needs of the IFA, but the  12 IFA also respecting their needs. Fully appreciating that  13 the IFA has worked with Charles Maxwell to create two  14 shrines. In the future, that may or may not be the best  15 place. The 28,000 square feet that has been given in  16 perpetuity. Perpetuity means for as long as the IFA has  17 their executive order.  18 MR. MIKE MABERRY: Yes.  19 MR. KIOPE RAYMOND: It does not include the  20 east-facing tower which is 80 feet away from -- or  21 east-facing shrine which is 80 feet away from the proposed  22 ATST. Looking toward some way to enable Hawaiians.  23 The signage I have made a point. Due to  24 circumstances beyond their control, most Hawaiians cannot  25 read Hawaiian, but the sign is in Hawaiian. I respect the</p>	<p style="text-align: right;">60</p> <p>1 DR. CRAIG FOLTZ: We remember.  2 MR. KIOPE RAYMOND: You remember, okay.  3 So the tenor of the meeting was very clear. The  4 Hawaiian community was upset. Remains upset.  5 But, again, we are talking about something. And  6 I just wanted that clarification because that doesn't  7 appear on the record. There is no way to, what did people  8 feel that night, if you just got it in black and white and  9 you don't get everything. Because I've seen the -- what  10 Charlie and Sharon have kindly sent on the CDs, the  11 actual -- the copies. A lot wasn't captured. And I  12 remember distinctly, wait a minute, there was lots more  13 that was said. But you just can't capture it all, much  14 less the feeling of the evening.  15 MS. ANNELLE AMARAL: What would make it better  16 would be some audio-visual record as well. But, of  17 course, that --  18 MR. KIOPE RAYMOND: That's --  19 MS. ANNELLE AMARAL: Once you put it in writing,  20 it's, you know, lost again.  21 MR. KIOPE RAYMOND: The other thing goes back to  22 that point that was originally brought up, science-driven.  23 And I'm sorry, as far as I can see from the letters of  24 November 8, subsequent letters from you, Craig, that no  25 one really tried to address that. I informally did. I</p>
<p style="text-align: right;">59</p> <p>1 fact that it was put in Hawaiian, but it doesn't educate  2 Hawaiians that they are invited to come in to pay respects  3 to their ancestors or to engage in ceremony. If there is  4 some way that the IFA, NSF, Hawaiian community could work  5 out a plan so that halau might be able to access it, all  6 those kinds of things.  7 Then in addition to that, the -- I would like to  8 switch back. I would like to go off of what could we do  9 to mitigate the harm, otherwise I will lose my train of  10 thought on what had just been brought up by Caroline's  11 question to Camille that kind of shifted away to  12 Mikahala's. And I wanted the NSF -- and I know, Craig,  13 you were there, everyone, Jeremy, everyone was there that  14 night.  15 And when we are talking about what was captured  16 on the record, that's why I interjected, with all due  17 respect to court stenographers, what they were able to  18 capture. They can't capture the tenor of the meeting.  19 And when Camille -- I'm sorry, Charisse  20 Carney-Nunes made it clear to the audience that they would  21 be -- that we were there to listen, but does not mean we  22 are going to concur. I think the tenor of the meeting  23 changed and everyone understood, what the heck are we  24 doing here. And I am using nice words because I could  25 hear from the back of the room a lot of --</p>	<p style="text-align: right;">61</p> <p>1 know I did. I tried to address the fact that the  2 theoretical solar physics, it's up here, and everyone  3 vetted that process. We created something and everyone  4 said, let's discuss that.  5 Most of us, by the same way that I hope that  6 people are respecting, that you don't know as much about  7 Hawaiian culture or feeling as Hawaiians, we don't know as  8 much about the science. But there wasn't that kind of a  9 lot of dialogue, because the scientists did their thing  10 and they did the vetting process. And it took a long time  11 and there were lots of meetings.  12 MS. CAROLINE BLANCO: Are you saying that it  13 would have been helpful to have more of an explanation of  14 the science for most people so that they could gain a  15 better understanding --  16 MR. KIOPE RAYMOND: I think so.  17 MS. CAROLINE BLANCO: -- of the whole process of  18 site selection?  19 MR. KIOPE RAYMOND: Yeah. But I understand that  20 they are not driven to do that. This is just all after  21 the fact, gee, I wish.  22 MS. CAROLINE BLANCO: It's helpful to know,  23 though. Because I suspect that -- I mean, NSF really  24 wants to do this right.  25 MR. KIOPE RAYMOND: I understand.</p>

<p style="text-align: right;">62</p> <p>1 MS. CAROLINE BLANCO: And wants to be open and  2 follow a process that is meaningful. And my concern is  3 that, you know, having seen many, many other agencies in a  4 long federal career before coming to NSF, NSF is unique in  5 this science-driven, you know, alternative situation. And  6 your feedback is very helpful to me to try to understand  7 that.  8 MR. KIOPE RAYMOND: Also, though --  9 DR. CRAIG FOLTZ: Go ahead, please.  10 MR. KIOPE RAYMOND: -- is that -- again, I am  11 glad Annelle is here because it could be the stepping on  12 toes that we referred to earlier.  13 It is just my perspective that some of this with  14 the proposed ATST is less science-driven than  15 economic-driven. And that is just my perspective on it,  16 on all the reading that as --  17 MR. JEFF BARR: Why would you say  18 economic-driven?  19 MR. KIOPE RAYMOND: When I am looking where  20 Wayne Van Citters has now moved over, I think you -- the  21 science and the big things that scientists want to build,  22 astronomers want to build, are driven by a different set  23 of rules, if you will. If you want to do something of a  24 certain magnitude, you have to follow a whole new kind of  25 a process. And it's just my perspective on it. I am just</p>	<p style="text-align: right;">64</p> <p>1 MR. KIOPE RAYMOND: My brother-in-law is going.  2 Remember, I told you my brother-in-law is an  3 astrophysicist at MIT. And he is going to be in  4 Marseille. And I saw that and I thought I wonder if --  5 oh, Jeremy's name --  6 MR. JEREMY WAGNER: I am not, but ATST will be  7 represented.  8 MR. KIOPE RAYMOND: All of that is about the  9 machinery. That's a science of its own. It's wonderful.  10 But it just starts to consume.  11 Annelle, the point I am making is that it's --  12 it consumes more than I am getting on my return as a  13 Hawaiian.  14 MS. ANNELLE AMARAL: Yes.  15 MR. MIKE MABERRY: If I may, I am Mike Maberry,  16 I am Assistant Director for the Institute for Astronomy.  17 I will wait until he comes back. I am waiting  18 for Kiope.  19 MS. ANNELLE AMARAL: You do that. Because you  20 started to speak, I am sure that's the reason why.  21 MR. KIOPE RAYMOND: Sorry about that.  22 MR. MIKE MABERRY: I want to quickly address  23 some very important things that he said earlier on with  24 regards to onsite mitigation. I think it's something that  25 we need, but something I also want to -- but if you would</p>
<p style="text-align: right;">63</p> <p>1 sharing my personal perspective. That it seems that, for  2 the last three or four years, in reading the reports out  3 of the NSF, there is this understanding. Everyone has  4 come to an understanding that the facilities are not  5 lasting maybe as long. I am just grabbing for words here.  6 And people are saying, well, how are we going to solve the  7 science we want to do in the future. Well, let's go big,  8 let's super size, super size me. And that's just --  9 again, I am allowed --  10 DR. CRAIG FOLTZ: Sure.  11 MR. KIOPE RAYMOND: -- I think, to share my  12 personal perspective --  13 DR. CRAIG FOLTZ: Sure. Sure.  14 MR. KIOPE RAYMOND: -- on how a taxpaying person  15 sees how some of this might have gone.  16 And, yet, I also understand that there has  17 been -- and I want to make it clear for the record that I  18 respect the vetting process. It's all online. It's all  19 available, it is quite fabulous, with the fabrication of  20 what is going to happen.  21 You are going to Marseille, France, aren't you?  22 MR. JEREMY WAGNER: No. No. I canceled that to  23 come here.  24 DR. CRAIG FOLTZ: We can't afford it. Too much  25 time.</p>	<p style="text-align: right;">65</p> <p>1 like me to take a break, I will take a break.  2 MS. ANNELLE AMARAL: I want to be sensitive  3 to -- there's at least one person that has to leave, is  4 that correct? People are motioning to me in the back of  5 the room.  6 MS. NANCY McMAHON: No. We are here for a short  7 time. We are here for a little while.  8 MS. ANNELLE AMARAL: Are you having to leave  9 shortly?  10 MS. CAROLINE BLANCO: Maybe a quick break and go  11 say hello.  12 MS. ANNELLE AMARAL: We can take a bit of a  13 break and let you come to the table, the person that needs  14 to leave come to the table.  15 (Recess.)  16 MS. ANNELLE AMARAL: What we are going to do now  17 is just sort of finish off this set.  18 Kiope, just as you left the room, Mike was  19 saying that he wanted to make some comments. And so we  20 will let Mike make those comments. We will see if you  21 have any further comments, not too long.  22 MR. KIOPE RAYMOND: Oh, I would appreciate  23 hearing them. I had to take a call from my daughter.  24 Thank you.  25 MS. ANNELLE AMARAL: I noted that Sol came into</p>

<p style="text-align: right;">66</p> <p>1 the room next. So he will be the next speaker I will  2 bring up. Then DLNR came into the room next, so they will  3 be the next. Then looks like I have another speaker back  4 there, too.  5 Mike.  6 MR. MIKE MABERRY: Thank you very much for your  7 suggestions for consideration for onsite mitigation.  8 I felt that it would be important just to share  9 some information with regards to the history that would  10 possibly help, if there is some more formal process and  11 vetting out those possibilities of onsite mitigation.  12 The west-facing ahu was a way of asking for  13 forgiveness. And to try to address the fact that there  14 was a loss of a viewplain site from where the AEOS  15 facility was built -- as you are aware, that was developed  16 by Billy Fields and his people. And they chose the site  17 within that area.  18 That area that Kiope referenced as being set  19 aside was set aside because it had the largest  20 concentration of archeological features within the 18  21 acres that is temporarily under the stewardship of the  22 University of Hawaii.  23 While at the summit and while working on that  24 west-facing ahu, we were asked by Billy Fields and his  25 people, his crew, what we were looking at for the future,</p>	<p style="text-align: right;">68</p> <p>1 small, just a little larger than a one-lane, road that  2 goes in and out of the area. And very little area to turn  3 around in.  4 And because the park attracts some 1.7 million  5 tourists a year, without any signage to reduce or restrict  6 the flow of vehicles into the area, it would create a  7 considerable problem and congestion. And that's why, when  8 you enter the site, you will notice that it says that no  9 private vehicles are allowed.  10 And just to take a step back, because DLNR is  11 here, if they are not familiar with it, under the  12 executive order, the identified use of the Haleakala High  13 Altitude Observatory Site is for observatory purposes. So  14 there is no recreational or commercial component usage to  15 that site. Therefore, there is signage at the entrance to  16 the site restricting private vehicles into the area.  17 And it was suggested by Native Hawaiians that  18 signage be put up inviting the Native Hawaiians into the  19 site in their own language. Again, to help target those  20 who are receiving the invitation, and to help, again, keep  21 us from running into a problem with too many vehicles in  22 the area.  23 So we are very open to looking at all those  24 things that Kiope addressed. Again, I just thought this  25 background from my information might be helpful as we look</p>
<p style="text-align: right;">67</p> <p>1 possibly looking at for the future. And when we discussed  2 with them that there might be a possibility of the ATST,  3 they asked us to show them where it would be.  4 So we took them over to the site and showed them  5 where the two proposed sites were. The preferred site and  6 the alternative site.  7 And it was suggested that we be proactive and  8 that we give something as a gift as part of asking  9 permission. And so they chose the spot off on the side  10 where it would have the unobstructed viewplain to tie  11 Haleakala, Mauna Kea together as well as facing east to be  12 a good spot. And it was their suggestion to take stones  13 from the -- they, the Native Hawaiians -- took stones from  14 the proposed project area and built the ahu.  15 So that is the background.  16 The reason that area has not been addressed and  17 any set aside or anything to protect that site is that it  18 just hasn't been looked at yet at this point.  19 With regards to the signage, we've had shared  20 with us mixed feelings about signage and concern about  21 signage, both onsite as well as the entrance. Because  22 there are --  23 First off, for those who aren't familiar with  24 the area, it is just a little -- like Craig mentioned  25 earlier, it is just a little over 18 acres. And there's a</p>	<p style="text-align: right;">69</p> <p>1 how to approach this.  2 DR. CRAIG FOLTZ: You would be willing to accede  3 that we have not thought of all possibilities?  4 MR. MIKE MABERRY: Absolutely.  5 DR. CRAIG FOLTZ: There might be better ways,  6 too. And I think Kiope put it well, an enabling process,  7 to enable visits to the site.  8 MR. MIKE MABERRY: Yes.  9 MS. ANNELLE AMARAL: Thank you.  10 Are we pau?  11 MR. KIOPE RAYMOND: So I thank everyone for the  12 opportunity to address you and share.  13 I am leaving you with the clarification that I,  14 as an individual, continue to feel that avoidance is the  15 way that my heart now tells me that this needs to be. And  16 I feel that the National Science Foundation should not  17 fund this particular program.  18 Other than that, thank you for letting me speak  19 today.  20 MS. CAROLINE BLANCO: Thank you.  21 MS. ANNELLE AMARAL: Thank you.  22 We invite you to remain with us as we continue  23 this discussion. And having given people an opportunity  24 to speak, we can return back to you, should you like, and  25 to anyone who remains. But we want to sort of give</p>

<p style="text-align: right;">70</p> <p>1 everyone an opportunity to speak at least once before we  2 return back to people who have already spoken.  3 So thank you very much.  4 MS. CAROLINE BLANCO: And, also, probably to  5 reiterate that tomorrow, between 10:00 and 2:00, we would  6 also welcome your participation.  7 MS. MIKAHALA HELM: You know -- my name is  8 Mikahala Helm -- I am sorry I am not able to attend  9 tomorrow, tomorrow's meeting.  10 And due to the cumulative and adverse effects of  11 this proposed ATST, I remain in support of avoidance of  12 this project.  13 And I would like to ask Annelle, that I know, up  14 there, there is something about that all testimony be  15 allowed. And, actually, you know, on the bottom of that  16 second one -- and, actually, it's all testimony be allowed  17 and documented in printed materials. I'm sorry. You  18 know, the last sentence. Not just "allowed," but "and  19 documented."  20 MS. CAROLINE BLANCO: It's up at the top of the  21 next one, "Request that all testimony be" --  22 MS. ANNELLE AMARAL: "Be available in print."  23 MS. CAROLINE BLANCO: "Available in print."  24 MS. MIKAHALA HELM: Beautiful. Thank you very  25 much.</p>	<p style="text-align: right;">72</p> <p>1 beginning of writing a memorandum of agreement tomorrow.  2 So we are taking comments.  3 And because we are moving throughout the day  4 with different audiences, we are writing down the  5 comments. So as people come in, they can see what others  6 have already said, just to give them some context.  7 In part, as we were discussing today's  8 consultation, it's acknowledged that what we are talking  9 about is, quite frankly, mitigation of the proposed site.  10 There have been questions about what exactly do we mean by  11 mitigation. And quite broadly, we speak of it, as ways to  12 reduce adverse impact or compensate for adverse impact or  13 effects or harm that can be done both onsite and offsite.  14 It's been acknowledged that certain things  15 cannot be mitigated. The site itself, for reasons that  16 have already been articulated in the Draft EIS plan, the  17 height, the color, and certain subcategories of  18 construction, of digging, for the purpose of laying  19 foundation and building the structure. Again, as  20 articulated already in the Draft EIS.  21 But at this point, Sol, I invite you to come to  22 the table. There are different resource people in the  23 room, Sol.  24 And from time to time -- and this is really  25 intended to be a conversation in the main. And as you ask</p>
<p style="text-align: right;">71</p> <p>1 MS. CAROLINE BLANCO: Thanks so much for coming.  2 MS. CAMILLE KALAMA: I would just like to thank  3 you for letting Kilakila o Haleakala be a consulting  4 party. I know there's a concern for a finality of the  5 process, but, as a group, you need to know that the  6 position is that of, it echoes Kiope's position,  7 avoidance. And, you know, I just to continue to make that  8 clear.  9 MS. CAROLINE BLANCO: Thank you very much.  10 MS. ANNELLE AMARAL: Thank you very much.  11 MR. KIOPE RAYMOND: Thanks, Annelle.  12 MS. ANNELLE AMARAL: Thank you, Kiope. Good  13 seeing you.  14 At this point, having noticed, Sol, that you  15 were the next person to have arrived, I would like to  16 invite you to come and to make any comments that you may  17 want to make.  18 Are you intending to do that?  19 MR. SOL KAHO'OHALAHALA: I can.  20 MS. ANNELLE AMARAL: Then just by way of people  21 who have arrived, as you are making your way to the table,  22 I just want to note that this process is different from a  23 public hearing process. This first day is an open house.  24 It is for the purpose of hearing your comments, your  25 thoughts, as prelude to the consultation and, we hope, the</p>	<p style="text-align: right;">73</p> <p>1 questions, you will see different people leap up to try to  2 answer. If it gets really distracting because the  3 majority of them who are answering are behind you, we will  4 make them come to the front so that you can see who they  5 are that are answering the questions. But it really is a  6 discussion.  7 And I try not to be intrusive with my making  8 notes, but my writing is bad and sometimes it is  9 intrusive. And I'm sorry about that. I apologize in  10 advance. Aloha.  11 We need you, Sol, to say your name for the  12 purpose of the court stenographer.  13 MR. SOL KAHO'OHALAHALA: Sol Kaho'ohalahala.  14 I am glad that you had some clarification on the  15 process, like Mikahala asked. Because even I, too, was  16 trying to understand how this was going to occur and  17 whether or not you were going to consult with individuals.  18 And then you are also saying that tomorrow will be an  19 opportunity.  20 Because I think I agree with the process in  21 which there will be discussions that are going to be  22 confined -- not confined, but open to all the people who  23 are interested. So that we can have a broader exchange.  24 So it's not just a one-way kind of a presentation. And  25 that's what I would like to also look forward to.</p>

74

1 MS. ANNELLE AMARAL: And we were hoping, I  
 2 think, that tomorrow that will take place, that all  
 3 concerned parties would then be in the room and there  
 4 would be consultation with all parties involved as much as  
 5 we can.  
 6 Having heard, however, that Mikahala is not  
 7 going to be able to be here tomorrow --  
 8 MR. KIOPE RAYMOND: I am not going to be here.  
 9 MS. ANNELLE AMARAL: And Kiope.  
 10 MS. PUA AIU: And we are not going to be here.  
 11 MR. SOL KAHO'OHALAHALA: So is today the day,  
 12 then?  
 13 MS. PUA AIU: It's kind of difficult, so -- I  
 14 think especially if we are not going to be here.  
 15 MS. ANNELLE AMARAL: Yes. Perhaps we should  
 16 then take full advantage of you all being in the room as  
 17 much as we can today to do as close to the pencil and  
 18 paper exercise we were headed for tomorrow, and to get  
 19 comments back and forth. That certainly tests my skill as  
 20 a facilitator, but this is why I get the big bucks.  
 21 MR. SOL KAHO'OHALAHALA: Are you going to make  
 22 sure you allow for all of the things to happen while we  
 23 are still --  
 24 MS. ANNELLE AMARAL: Absolutely. Absolutely.  
 25 Then let us keep -- it is going to drive the

75

1 court stenographer crazy, so let us keep this process in  
 2 mind, then. As people are speaking, and if you have  
 3 comment, raise your hand. We're going to take it slower.  
 4 We're going to slow this down. Because before you speak,  
 5 then, we would ask you identify yourself for the court  
 6 stenographer, and then you can make your comment, she can  
 7 get this down.  
 8 So we will try to do the consultation with  
 9 everyone that is in the room right now given that the  
 10 majority of you will not return tomorrow.  
 11 MR. SOL KAHO'OHALAHALA: Okay. Let me then just  
 12 clarify my current position. Because it was brought in  
 13 the discussion earlier. I am currently part-time with  
 14 Maui Community College. And one of the reasons why I kind  
 15 of pursued this participation with Maui Community College  
 16 is because of a program that's termed STEM, that's  
 17 Science, Technology, Engineering and Math, pathway that  
 18 the community college is seeking to implement and  
 19 encourage Native Hawaiian participation. So I thought  
 20 that I might be supportive in trying to help in that  
 21 program, where Native Hawaiians could be encouraged to  
 22 participate.  
 23 I have to say that after having looked at what  
 24 STEM represents is that STEM was now tied to, in part, an  
 25 ongoing program that IFA has. And that's your akamai

76

1 program of science, technology, engineering, math students  
 2 that are at the college level. And that there would be a  
 3 path, perhaps, from the community college to move it up,  
 4 and, also, to bridge, I think, the K to 12 within the  
 5 public schools and private schools, charter schools, as an  
 6 opportunity to encourage, especially Native Hawaiians who  
 7 are underrepresented in these fields, to participate in  
 8 STEM program. So, to me, that was, I think, an area that  
 9 I thought was necessary and beneficial. And I wanted to  
 10 be able to support that.  
 11 What became clear to me is, when I looked at the  
 12 STEM program itself, that there was a mitigation proposal  
 13 that was submitted by Maui Community College as part of  
 14 the result of these ongoing proceedings. And I had not  
 15 been a part of those proceedings at all. But having now  
 16 looking -- having now to look at the STEM program itself,  
 17 see how it would be connected now to the mitigation  
 18 proposal, now really brings me to this juncture where now  
 19 we are looking at the ATST proposed project.  
 20 So I've sort of tried to make sure that I was  
 21 informed about what took place along the way so that I  
 22 wasn't just getting involved into something that I wasn't  
 23 really clear about.  
 24 So having said that, I can only say that I have  
 25 gone back, and, thanks to the availability of that

77

1 information online, have been able to look at all of the  
 2 proceedings and looked at most of the information that is  
 3 available to understand what had occurred in the past  
 4 couple years in this process. So trying to get myself  
 5 into understanding so that it's clear to me where I am now  
 6 at versus what has already occurred.  
 7 So I want to at least make just a comment.  
 8 Because when I walked in, my friend here was -- had also  
 9 made comments about myself. And I would like to be able  
 10 to speak to that for myself.  
 11 And I respect Kiope, and anyone else here that  
 12 is part of this, but I am not a token Hawaiian, you know.  
 13 And I did not come into this process because I was  
 14 ignorant of these proceedings. And I want to be here  
 15 participating as a Hawaiian.  
 16 But I think that, having said that, I would like  
 17 to be able to contribute in this process in a manner that  
 18 I think is part of my inheritance as a Hawaiian, as a  
 19 Native Hawaiian, part of what I consider to be some of the  
 20 cultural practices that have been built within us,  
 21 throughout our families' lives. And then be able to draw  
 22 on some of the strengths, I think, that are really  
 23 culturally-based, to understand, at this juncture in time,  
 24 when we have been called upon to look at critical issues  
 25 that involve cultural resources, that we participate at

<p style="text-align: right;">78</p> <p>1 those junctures and be able to do so as Hawaiians and to  2 be able to do so respecting one another as Hawaiians.  3 And so with that, Kiope, that's who I am, and, I  4 think, why I am here.  5 And knowing that now this has become an issue  6 that is important, I want to just share, I think, a little  7 bit of my perspective and why I think it would be  8 incumbent on us to participate as Hawaiians. So I agree  9 that all of these positions are based on, I think, the  10 best that we can understand given the best information  11 that we have at the moment, and, in part, trying to  12 understand and anticipate what are going to be some of the  13 outcomes here.  14 And in looking at ATST and the proposed  15 construction of a telescope at Haleakala, I agree with all  16 of the reports that have been put out by the archeological  17 review that these are significant places. And all of the  18 input that you have had from Native Hawaiians about the  19 sacredness of this place, I agree with them all. And I  20 think that is why the Native Hawaiians have a stake in  21 these discussions and have to come and participate.  22 As a Hawaiian, while I agree that these are  23 important components, you have to also acknowledge the  24 fact that we have a history now that compounds these  25 issues before us today, that really bring out in all of us</p>	<p style="text-align: right;">80</p> <p>1 entity, that this is not just a scientific initiation of a  2 project, but it is one that has to somehow integrate the  3 Hawaiian part of it.  4 And if, I think, we can have that kind of  5 discussion, that you acknowledge that these things are a  6 part of the process, then I think we can, hopefully, agree  7 to continue these discussions and move forward.  8 So it's that part of me that makes it important  9 to be here.  10 Now, as a Hawaiian, I have been supportive in  11 organizations. And one of the olelo no'eau that we use is  12 (Hawaiian). Just so you understand, it is that we have a  13 value that talks about Hawaiians being able to move  14 forward but mindful of their past. So they want to be  15 able to not make gaps in that past, or carry on the  16 knowledge or the practice of your history and your kupuna  17 and your culture, so that your presence will allow you to  18 decide what is your future.  19 And with that concept, it means that in the  20 Hawaiian -- and I accept this as part of my  21 responsibility -- is to acknowledge that our kupuna have  22 given us a tremendous amount of knowledge and experience.  23 And for those who are fortunate enough to have been with  24 kupuna and who have actually learned these things -- in  25 all facets I am talking, not just one, but in all facets</p>
<p style="text-align: right;">79</p> <p>1 the hurt, really, that's been a part of how we see things  2 that are impacting Hawaiian cultural places, Hawaiian  3 cultural sites and Hawaiian cultural resources.  4 And if you add a history that has, you know,  5 many documented kinds of processes and procedures that  6 have bypassed Native Hawaiian input, even to the fact that  7 the overthrow is still another component of this that adds  8 to that hurt, that Hawaiians carry all of those examples  9 of past practices and experiences. So that when we look  10 today at what is happening before us in a proposed  11 construction of a telescope at Haleakala, which is, in our  12 view, a sacred place, we can only see this as one more  13 example of that kind hurt that's being, I guess, generated  14 again.  15 So you have to allow us that opportunity to have  16 those feelings and to have an opportunity to say that we  17 view this as just another example and a continuation of  18 that history of hurt.  19 The thing that I think that we need now to  20 have -- and that's why I would like to be a part of those  21 discussions -- is be able to say and acknowledge that  22 these things are in fact a part of our own cultural and  23 historical experience as Hawaiians. And then look at the  24 presentation of NSF, and try to understand and make clear  25 that this is not a process that's driven only by one</p>	<p style="text-align: right;">81</p> <p>1 of Hawaiian -- that we are probably the last generation  2 that is here today that have had those kinds of  3 connections with kupuna that have been living.  4 So I was privileged to have had time spent with  5 my tutus, tutus, on the island of Lana'i. They lived to  6 be in their mid-nineties. And it is that part, I think,  7 that I hold some responsibility to ensure that their hopes  8 and their knowledge and their practices is the malama  9 hope, the things of the past. So in capturing and being  10 responsible to malama, to care for that, then the real  11 next question is then how do we move that forward, okay,  12 into the next part.  13 I think we are being challenged right now with  14 those kinds of responsibilities.  15 And I want to acknowledge that the kupuna have  16 been awesome in their accomplishments of our past. And  17 you need only look back into everything from the  18 recitation of the kumulipo, and then look at all of the  19 awesome accomplishments, whether they are in olelo,  20 whether they are in navigation, whether they are in  21 construction and engineering, whether they are in botany  22 and biology, whether they are in engineering for  23 construction of auwai systems as well as massive  24 structures like Piilanihale, as an example. That  25 Hawaiians were innovative and they were critical in their</p>

<p style="text-align: right;">82</p> <p>1 thinking in trying to find solutions.</p> <p>2 And had it not been for that kind of ability</p> <p>3 that we have embraced as Hawaiians through our kupuna's</p> <p>4 actual practices and accomplishments, I think many of us,</p> <p>5 we wouldn't be here today. We would not exist in Hawaii</p> <p>6 today without those kinds of practices.</p> <p>7 But I want to give acknowledgment to these</p> <p>8 practices as not just relegated to kahiko, that these</p> <p>9 practices may have begun in the time of kahiko, but they</p> <p>10 are the -- they are the examples that we have to hold and</p> <p>11 they are the examples that we have to carry and project</p> <p>12 where we want to be, where we want to go. So I want to</p> <p>13 give credence to that as a Hawaiian and say that we have</p> <p>14 an inheritance of these kinds of abilities. And whether</p> <p>15 it's within our own genes today, I think we have to</p> <p>16 consider that where we go is as important as where we have</p> <p>17 come from.</p> <p>18 So the where-we-go part now is going to involve</p> <p>19 these times when I think, before us today, are innovations</p> <p>20 and developments and research and technology that were not</p> <p>21 available when my kupuna lived in their time. But</p> <p>22 nonetheless, their accomplishments still speak to these</p> <p>23 innovations. And that their accomplishments are many.</p> <p>24 We don't talk about the fact that they were</p> <p>25 engineers and had built auwai systems that were able to</p>	<p style="text-align: right;">84</p> <p>1 of navigation that is as innovative in its time as that of</p> <p>2 the space shuttle in its navigation into these new times.</p> <p>3 So there is a link here in who we are in terms</p> <p>4 of being creative, being innovative, and being the kind of</p> <p>5 critical thinkers that I think Polynesians and Native</p> <p>6 Hawaiians are, that allow us to continue to still find</p> <p>7 ways.</p> <p>8 So if these tools were available then to my</p> <p>9 kupuna, I would ask the question as to whether or not they</p> <p>10 would have excelled in their own way, having to come to</p> <p>11 understand what these modern innovations and technologies</p> <p>12 are, what their uses are for. And could they be as</p> <p>13 innovative as to decide how best to use these kinds of</p> <p>14 technologies to continuously refine and improve and</p> <p>15 advance, I think, who we are as Hawaiians.</p> <p>16 And so I come into this process not because I</p> <p>17 think there is a right way and a wrong way. And I come</p> <p>18 into this process not because I want to side with one who</p> <p>19 is for or one who is against. But I come into this</p> <p>20 process because I think, as a Native Hawaiian, I should be</p> <p>21 involved in these processes and I should be given that</p> <p>22 kind of acknowledgment, by all parties that are seated at</p> <p>23 the table, to not diminish the value and the quality of</p> <p>24 the Native Hawaiian in all aspects and in all regard.</p> <p>25 It's that I have a history that speaks to these things.</p>
<p style="text-align: right;">83</p> <p>1 distribute water to every single lo'i and still allow for</p> <p>2 that same water to go back into the stream and into the</p> <p>3 loko i'a. Who creates or thinks about that?</p> <p>4 We don't talk about innovations like creating</p> <p>5 aquaculture in Hawaii, which is found nowhere else in the</p> <p>6 Pacific except here in the Hawaiian Islands, and who took</p> <p>7 the time to develop these systems that would produce food</p> <p>8 to sustain the people in Hawaii, and to understand the</p> <p>9 microcosms of this system so that the fingerlings could be</p> <p>10 fed properly as well as the adult ae'o, so we could have</p> <p>11 food.</p> <p>12 We are happy of the accomplishments of Hokulea's</p> <p>13 sails, of which I am proud to have been a crew member of.</p> <p>14 But it has helped me to understand that we can still today</p> <p>15 carry on those practices of celestial navigation or</p> <p>16 non-instrument navigation in these modern times.</p> <p>17 Even so much so that we were innovative enough</p> <p>18 to do sails on Hokule'a that linked the canoe to the space</p> <p>19 shuttle, to the classrooms, in a continuous loop, to allow</p> <p>20 the children in the classroom to understand that voyaging</p> <p>21 and navigation, in what is perceived as ancient for</p> <p>22 Hawaiian accomplishments, is no different than the</p> <p>23 voyaging of the space shuttle, of which L.C. Veitch</p> <p>24 happened to be a part of at the same time. And bring the</p> <p>25 children to some realization that here is an ancient mode</p>	<p style="text-align: right;">85</p> <p>1 And I want to be able to now, as a Hawaiian today,</p> <p>2 anticipate how best to utilize the technologies that are</p> <p>3 available to us for the benefit of finding the (Hawaiian),</p> <p>4 finding now what are the innovations that we need to be a</p> <p>5 participant in as a Hawaiian so that we can partner and we</p> <p>6 can move forward.</p> <p>7 Because I think we are dynamic. We are not a</p> <p>8 stagnant people. We never have been. Because had we been</p> <p>9 stagnant, I don't think we would have accomplished any of</p> <p>10 these things in our past to be able to speak of today.</p> <p>11 So it's with that passion that I have as a</p> <p>12 Hawaiian. And I wanted to consider what is -- you know,</p> <p>13 what is, I think, my responsibility as a Hawaiian.</p> <p>14 And when I saw that this was an issue, I thought</p> <p>15 that what in this lends Hawaiian its voice, what in this</p> <p>16 lends to science. Some of the directions that I think</p> <p>17 Hawaiians could contribute, and what in this now comes to</p> <p>18 the point that we can look at Hawaiians as not only being</p> <p>19 examples of its past, but Hawaiians that continue to be</p> <p>20 contributors of its future, of our future.</p> <p>21 So I don't know if I am making sense to you, but</p> <p>22 that is how -- I mean, I began simply by looking at trying</p> <p>23 to be supportive with the STEM program that I thought</p> <p>24 would encourage Hawaiian students to participate in</p> <p>25 science, technology, engineering and math. And lo and</p>

<p style="text-align: right;">86</p> <p>1 behold, it brings me now to this juncture. And then I had  2 to really take a moment to consider what is it that is  3 happening at this juncture.  4 As I said, having spent time going back and  5 understanding the process, I think simply what I want to  6 say is that here is an opportunity, I believe, that the  7 National Science Foundation, with the development of a  8 telescope, could perhaps consider taking a closer look at  9 the cultural components that are important in moving  10 forward. And that is, is there a way for us to sit down  11 as science and as Hawaiians, understanding that we have  12 something to contribute here, and be able to now integrate  13 and bring these ideas together that would lend support to  14 the Hawaiians and to lend support to the idea of science  15 and advancement in science.  16 Because I think we are the same, we are the  17 people who have -- who have that in our history, to be  18 participants and to be -- at least to acknowledge that.  19 And if there is a way to integrate and a way to bring this  20 together, to me that would be important. And that would  21 be the reason why I would sit at this table.  22 I think, you know, we could find many, many  23 examples of what might be wrong about this process or this  24 project. And, at the same time, I would like to think  25 that while we are looking at those challenges might we not</p>	<p style="text-align: right;">88</p> <p>1 MS. CAROLINE BLANCO: I would like to start.  2 DR. CRAIG FOLTZ: Please.  3 MS. CAROLINE BLANCO: I really appreciate your  4 comments.  5 And I think that NSF would view mitigation as a  6 way to move forward in the direction that you have just  7 described. And if there are, I guess, some specifics,  8 some ideas, either concepts or specifics, that you had in  9 mind to try to bridge this gap, if there is one, to try to  10 move forward, that would be consistent with the concerns  11 of Native Hawaiians, that would be extremely valuable.  12 MR. SOL KAHO'OHALAHALA: Well, you know, I have  13 been involved with Hokule'a for over 30 years. I was very  14 fortunate to have been introduced to the canoe in 1975.  15 And the canoe has actually opened up, for me, new  16 horizons, if you want to call it that. And it's also  17 challenged, I think, me personally to consider what  18 voyaging really meant.  19 Because if you take that same concept of the  20 canoe and looking at horizons as not places to be fearful  21 of, but places to discover, that, to me, is what the canoe  22 represents. And in that, had the Hawaiians or Polynesians  23 not considered horizons as new places with potentially new  24 discoveries, we would not have advanced Polynesia to being  25 the largest nation of islands in the largest ocean on</p>
<p style="text-align: right;">87</p> <p>1 -- might we not consider how we might internalize that and  2 look at them from a Hawaiian cultural perspective and find  3 ways to bridge, to build, to make better what are  4 perceived challenges, and allow that to be placed before  5 this body, before this group, and to be given true  6 consideration.  7 Because if not, then we have made no headway in  8 terms of allowing the Hawaiians to truly participate in a  9 project that is of this scale and is a project that is  10 involving such an important place for Hawaiian people.  11 So it's with that, that I come forward to be  12 able to participate. And I am able to tell you that's who  13 I am.  14 But I thank you for this opportunity.  15 And I am looking forward to having those  16 discussions where we could talk really nitty gritty about  17 what those challenges are, whether they are perceived  18 challenges or whether or not they are real challenges, and  19 then be able to now have a broader discussion that will  20 help to figure out how we can resolve those kinds of  21 challenges. And then lend Hawaiians an opportunity to  22 have input on that so that it's one that is inclusive.  23 MS. ANNELLE AMARAL: Sol, are you open to some  24 questions and dialogue?  25 MR. SOL KAHO'OHALAHALA: Yeah.</p>	<p style="text-align: right;">89</p> <p>1 earth.  2 But it is that part of it, to me, that opened up  3 areas that I had never thought about as a Hawaiian. One  4 was to finally acknowledge that the canoe is the most  5 efficient design of a seafaring vessel, even in these  6 modern times. That the double-hull canoe has already been  7 demonstrated, even by computer-generated models, of what  8 is the most efficient design of a vessel on the open seas.  9 And it came out with a double hull. So that innovation,  10 to me, is partly the kind of innovation, and I am critical  11 thinking and planning, that I think Polynesians should be  12 agreed with and that Hawaiians should be acknowledged for  13 that dynamics.  14 But in having participated on this, I was  15 allowed an opportunity to now sail throughout Polynesia.  16 So I have been on several voyages through the Society  17 Islands, to the Cook Islands. And even have now been able  18 to be a part of these islands in Polynesia to now  19 recognize that culturally, even by our language and by our  20 practices, we are definitely the same group of people.  21 Now, having been on the canoe, I was now going  22 to be introduced to the idea of seafaring. So here is  23 where we have an opportunity now on the canoe as the  24 perceived ancient vessel to try and teach navigation. And  25 here is where, I think, we all learned how to put back</p>

<p style="text-align: right;">90</p> <p>1 into some order and understanding how we will navigate our 2 canoe, north, south, east or west.</p> <p>3 When I look at Haleakala, and I look and read 4 about some of the cultural sites that have been part of 5 Haleakala, it's clear to me -- and I am sure all Hawaiians 6 would agree -- that it is of such significance that the 7 Hawaiians themselves went to the summit of Haleakala to 8 have built their sites. And whether or not the practice 9 is recorded or known, nonetheless, the sites speak to the 10 fact that Polynesians and Hawaiians understood that these 11 are important places and perhaps one of the best places to 12 have learned or taught navigation -- you know, taught 13 navigation.</p> <p>14 If we had to consider some of the future uses of 15 a place like Haleakala, can that future also include those 16 things that are cultural? So is there a place at 17 Haleakala where we might once again allow for the teaching 18 of navigation?</p> <p>19 So I am looking at, well, you are looking at 20 innovations of studying the sun and, at the same time, 21 would we not consider the importance of Hawaiians using 22 the same place to study their own skills at celestial 23 navigation, you know? I am not sure. But I would think 24 that we have a responsibility as Hawaiians to ensure that 25 our cultural practices are going to be left intact for the</p>	<p style="text-align: right;">92</p> <p>1 know.</p> <p>2 Is there an opportunity that science and culture 3 can come together, considering these kinds of ideas that I 4 think are not old ideas?</p> <p>5 You know, I just want to add just a little bit. 6 When I said that we are a dynamic people, I want to 7 embrace the idea the dynamics is that, as a Hawaiian, I 8 think I am still able to create. No different than me 9 having to write a song about what occurred at this time 10 and place, I should be able to allow some of the cultural 11 practices to also be created in this time and this place. 12 And that we should be responsible for the creation of 13 these things because we are dynamic.</p> <p>14 To say that everything ends and we can only 15 refer to them as kahiko, to me doesn't speak to who I am 16 as a Hawaiian. I want to be able to say I have my task in 17 which I want to embrace and acknowledge and understand so 18 that I can discern the conditions of these times. But I 19 also, as a Hawaiian, accept the fact that I am also 20 creative and I have the ability as a Hawaiian to be as 21 innovative as my kupuna have been, and that I should be 22 able to create and move forward with the idea that we are 23 continuously dynamic and we are still a living people. So 24 we don't just end at one place.</p> <p>25 So what is our future?</p>
<p style="text-align: right;">91</p> <p>1 future. And even though they might be relegated as 2 ancient ways of teaching and of acquiring celestial 3 understanding, it is still at the place that it probably 4 may have been located in our times of kahiko.</p> <p>5 So does the future allow us now the same 6 opportunity to continue this practice?</p> <p>7 And so when you are asking me is there a way to 8 bridge, well, one of my thoughts is that, well, allow 9 perhaps the sites at Haleakala to embrace once more 10 cultural practitioners so that they, too, can continue the 11 teaching of ancient practices.</p> <p>12 Our star compass that we use for navigating 13 Hokule'a, and what we have all learned is understanding 14 the movement of the sun from its position, from the 15 equinox to the solstice, and the degree of movement that 16 the sun goes. And we have created our star compass to 17 allow for the degree of change and movement of the sun 18 across the year. Even to the point that we understand the 19 houses in which constellations will rise and how they set. 20 We do this to help us understand that these are the tools 21 that we would utilize to move our vessel in all 22 directions.</p> <p>23 Is that conducive, you know, to Haleakala as a 24 future site? You know, I am not sure. But I would like 25 to put those kinds of considerations on the table, you</p>	<p style="text-align: right;">93</p> <p>1 And I think that we need to encourage Hawaiians 2 to participate in the future and allow them those 3 practices. So it's not just looking at innovations of a 4 project that is scientific that is looking toward the 5 future, but it's also one that is going to embrace the 6 idea that Hawaiians are as innovative and creative in 7 their future, too. So they should be allowed the same 8 practice or exercise as Hawaiians to continuously move 9 forward.</p> <p>10 So in that, and given these conditions, given 11 these ideas, is there room for this kind of dialogue to 12 allow for both?</p> <p>13 MS. CAROLINE BLANCO: I think the short answer 14 is, yes, there is an opportunity. And that is how we've 15 looked at mitigation, as an opportunity, both for onsite, 16 offsite. If there is some sort of educational program you 17 had in mind, or if there is access to the mountain that 18 would allow practitioners to participate, exercise some of 19 their cultural traditions, any of those types of things. 20 I think it's more appropriate coming from you as far as 21 some specific ideas that might help to fulfill those 22 goals.</p> <p>23 MR. SOL KAHO'OHALAHALA: I don't want to -- 24 MR. KIOPE RAYMOND: I have a point of 25 clarification, so that it doesn't -- and I don't mean to</p>

<p style="text-align: right;">94</p> <p>1 interrupt your train of thought.</p> <p>2 But, Annelle, this is a separate issue, if</p> <p>3 that's all right. I would like to ask it to Caroline.</p> <p>4 It's specifically to terminology that is used.</p> <p>5 I may or may not have heard you correctly speak,</p> <p>6 addressing Sol as representing all Hawaiians. And I am</p> <p>7 here as a consulting party, just for myself. There are</p> <p>8 organizations who are represented here. Sol is here as a</p> <p>9 consulting party. But none of us as consulting parties</p> <p>10 are speaking for all Hawaiians.</p> <p>11 Is that correct?</p> <p>12 MS. ANNELLE AMARAL: That is correct.</p> <p>13 MR. KIOPE RAYMOND: And I am not sure if you</p> <p>14 heard yourself addressing what would all Native Hawaiians</p> <p>15 want up there. And I would just be real careful about</p> <p>16 that. Because I've just expressed that, as far as I know,</p> <p>17 there is -- I won't speak for all Native Hawaiians in the</p> <p>18 room. I am not speaking for Sol. But many Native</p> <p>19 Hawaiians, the preponderance, the majority of Native</p> <p>20 Hawaiians, but not all, have already expressed that they</p> <p>21 don't want this up there.</p> <p>22 We are just here in the capacity of consulting</p> <p>23 parties. We are not speaking for all Hawaiians. Both</p> <p>24 sides need to understand that.</p> <p>25 MS. CAROLINE BLANCO: And I accept that comment.</p>	<p style="text-align: right;">96</p> <p>1 finish my question. Sorry. That's because my mind</p> <p>2 lapses.</p> <p>3 But in the context, then, of what you are saying</p> <p>4 here, building the bridge, moving forward, with the</p> <p>5 dynamic thing that the culture is, do you see the Maui</p> <p>6 Community College proposal as that effort, or are you in</p> <p>7 fact putting something else on the table here? Is this</p> <p>8 speaking to something else?</p> <p>9 MR. SOL KAHO'OHALAHALA: Let me just say this</p> <p>10 much. I do believe that what we are talking about is the</p> <p>11 ATST project. And that the mitigation proposal that I am</p> <p>12 aware of that was submitted by Maui Community College is</p> <p>13 really a mitigation process that occurs after you've</p> <p>14 resolved the ATST. That's how I understand it.</p> <p>15 I am asking for whether or not we can allow</p> <p>16 these discussions to occur. That when you have resolution</p> <p>17 to it. Does a mitigation proposal now that's being</p> <p>18 proposed now fit into this, you know?</p> <p>19 Does that make sense?</p> <p>20 MS. CAROLINE BLANCO: I think perhaps it would</p> <p>21 be helpful to clarify how we perceive this.</p> <p>22 If we are able to find ideas for mitigation and</p> <p>23 we are able to offer onsite mitigation, offsite</p> <p>24 mitigation, different ideas that would be memorialized in</p> <p>25 a memorandum of agreement. That is our hope, that we</p>
<p style="text-align: right;">95</p> <p>1 I appreciate that comment.</p> <p>2 What I was trying to do was just be responsive</p> <p>3 to his perspective.</p> <p>4 MR. KIOPE RAYMOND: Okay.</p> <p>5 MS. CAROLINE BLANCO: Within that context.</p> <p>6 MR. SOL KAHO'OHALAHALA: All I was going to say</p> <p>7 before, Kiope, was that my hope is that we can allow for</p> <p>8 this to occur. Because, you are right, I am not here to</p> <p>9 speak for all Hawaiians. But if we are able to allow for</p> <p>10 these kinds of discussions to occur, it is my hope that is</p> <p>11 what my contribution is.</p> <p>12 MS. ANNELLE AMARAL: So I need to back up a</p> <p>13 little bit. Because I think we are talking about sort of</p> <p>14 the beginning of the pencil and paper exercise of the</p> <p>15 memorandum of agreement, with some specific suggestions to</p> <p>16 mitigate. And I know that it was represented that you are</p> <p>17 the signatory of the Maui Community College proposal that</p> <p>18 has been put as a mitigating proposal, is that correct?</p> <p>19 MR. SOL KAHO'OHALAHALA: I don't know if I am</p> <p>20 the signatory to that, but I do know that was a document</p> <p>21 that had already been submitted. I am aware of it and I</p> <p>22 know what it is seeking to do as a mitigation proposal.</p> <p>23 And -- yeah.</p> <p>24 So am I answering your question?</p> <p>25 MS. ANNELLE AMARAL: Well, I didn't get to</p>	<p style="text-align: right;">97</p> <p>1 would be able to find something that is acceptable for the</p> <p>2 Advisory Counsel, State Historic Preservation Office, the</p> <p>3 National Science Foundation, and any other consulting</p> <p>4 parties that would wish to participate in this way. That</p> <p>5 would be memorialized in the agreement, the memorandum of</p> <p>6 agreement. That may potentially include adoption of a</p> <p>7 part, all of, any of the mitigation proposals that have</p> <p>8 been submitted.</p> <p>9 They wouldn't actually go into effect unless the</p> <p>10 National Science Foundation decided to approve funding for</p> <p>11 the ATST. And then construction would go forward.</p> <p>12 If that decision happened, the memorandum of</p> <p>13 agreement would be combining and would be implemented at</p> <p>14 that point. So the way it would be drafted is, the</p> <p>15 memorandum of agreement that is to say, would be if the</p> <p>16 proposed funding is approved, these are the steps we would</p> <p>17 agree to, this is the mitigation we would all agree to</p> <p>18 undertake.</p> <p>19 So this is the opportunity to put forward some</p> <p>20 of these specific ideas. This is part of the purpose of</p> <p>21 this meeting today, also tomorrow. As I've said several</p> <p>22 times before, there will be opportunities, if we are able</p> <p>23 to come up with a draft memorandum of agreement, or get</p> <p>24 the ball rolling along those lines, whatever we have would</p> <p>25 be, of course, provided to all of the consulting parties</p>

<p style="text-align: right;">98</p> <p>1 for their review and comment. And then it would be a  2 process where everybody would be engaged in that and try  3 to, you know, work with that and come up with perhaps  4 another innovation. And depending what the outcome is, of  5 course. But this is the opportunity to provide specific  6 mitigation measures that could be considered.</p> <p>7 MR. SOL KAHO'OHALAHALA: Okay. I guess my only  8 other comment is that the MCC Mitigation Proposal is not  9 the proposal or the document that should take precedence  10 over this process. It is something that is supportive of  11 this should the outcome be that they would allow for these  12 kinds of programs to be initiated. But it's not the  13 document that precedes these processes is what I wanted to  14 share.</p> <p>15 MS. CAROLINE BLANCO: I am not sure I am  16 following that.</p> <p>17 Because the way I see it is -- let's say, for  18 example, if NSF were to decide that the MCC proposal would  19 be sufficient mitigation for this, and the consulting  20 parties, or some of them, agreed, and the SHPO agreed, the  21 Advisory Counsel agreed, we memorialized that in a  22 memorandum of agreement, that is how it would play out.  23 Then if there were a decision to go ahead and fund, that  24 memorandum of agreement would be part of that decision.  25 It would have to be included in a decision. So any</p>	<p style="text-align: right;">100</p> <p>1 resolves those issues.</p> <p>2 MS. CAROLINE BLANCO: If I can just --</p> <p>3 MR. SOL KAHO'OHALAHALA: It could be one of the  4 documents, should you resolve all of those other layers,  5 that now comes about with an opportunity that says that  6 there is a program that could help support the community  7 in terms of education, K to 12, that allows for these  8 kinds of studies to occur within the schools and the  9 community colleges, that lead to perhaps work in the field  10 of astronomy. That's what I see the mitigation proposal  11 as.</p> <p>12 So it's one component that at least tries to set  13 in place a track that would allow Native Hawaiians at  14 least to participate here. And it could become a part of  15 the entirety of this, but it's not the document that  16 resolves all those things.</p> <p>17 MS. CAROLINE BLANCO: Is it fair to characterize  18 it as a mechanism through which these other ideas can be  19 realized?</p> <p>20 MR. SOL KAHO'OHALAHALA: It would cover a part  21 of it. But I think, in what I am hearing from the earlier  22 discussions, that there are several other layers that need  23 to be resolved.</p> <p>24 MS. CAROLINE BLANCO: Okay.</p> <p>25 MR. SOL KAHO'OHALAHALA: So I don't want to say</p>
<p style="text-align: right;">99</p> <p>1 decision to fund would have to incorporate that memorandum  2 of agreement and become enforceable.</p> <p>3 MS. ANNELLE AMARAL: There is another comment.</p> <p>4 DR. CRAIG FOLTZ: I think I understood Sol's  5 comment different.</p> <p>6 MS. CAROLINE BLANCO: Okay.</p> <p>7 DR. CRAIG FOLTZ: That was in terms of  8 precedence, in terms of trying to mitigate the harm, that  9 what you are proposing take precedence over the MCC  10 proposal, not necessarily supplant it.</p> <p>11 MR. SOL KAHO'OHALAHALA: Correct.</p> <p>12 DR. CRAIG FOLTZ: And it could be part of it,  13 that the traditional Hawaiian astronomical practices could  14 be incorporated in a curriculum that would be developed,  15 for example, but that doesn't supplant or replace the  16 suggestion that you made.</p> <p>17 Am I closer to it?</p> <p>18 MR. SOL KAHO'OHALAHALA: Closer.</p> <p>19 I don't see that the MCC Mitigation Proposal is  20 the document that says that this project has resolved  21 these issues through this proposal.</p> <p>22 MS. CAROLINE BLANCO: Okay.</p> <p>23 MR. SOL KAHO'OHALAHALA: There are several other  24 layers of issues that have yet to be discussed or  25 resolved. But it's not the MCC Mitigation Proposal that</p>	<p style="text-align: right;">101</p> <p>1 this is going to take care of all of those.</p> <p>2 MS. CAROLINE BLANCO: Right.</p> <p>3 MR. SOL KAHO'OHALAHALA: It's not.</p> <p>4 MS. CAROLINE BLANCO: Right.</p> <p>5 MR. SOL KAHO'OHALAHALA: But it would be a  6 component. But there still needs to be all of these other  7 levels of --</p> <p>8 MS. ANNELLE AMARAL: I wonder if I can clarify.  9 As I came into this, which was just this morning, what I  10 heard was there are some things that cannot be changed.  11 By virtue of the project that is being brought forward and  12 that has been discussed for the past three years, there  13 are certain things that are immutable, that cannot change,  14 the site, the height, the color, the construction. Little  15 subcategories of construction, depth, foundation, things  16 like that. In an acknowledgment that this has adverse  17 impact or effect on Native Hawaiians, Native Hawaiian  18 culture, there is an attempt to minimize that impact or  19 effect, or mitigate that impact or effect. And today's  20 discussion is about minimizing or mitigating that adverse  21 impact or effect.</p> <p>22 That is not to say that this is a trade-off for,  23 you know, if you fund this, then we will give up our  24 saying no to this project. The difficulty of today's and  25 tomorrow's discussion is about these are to mute, to</p>

<p style="text-align: right;">102</p> <p>1 muffle, to try to work out the hard thing about this  2 project coming up and its effect on the Native Hawaiians.  3 MR. KIOPE RAYMOND: I think you have -- may I?  4 I think you've recapped it, but the November 8th letter, I  5 would just clarify, that avoidance and minimization are  6 not part of it. It's only mitigation, although semantics  7 of minimization.  8 MS. CAROLINE BLANCO: Other than the park.  9 MR. KIOPE RAYMOND: Other than the park. Thank  10 you.  11 MS. ANNELLE AMARAL: Right, other than the park.  12 MS. CAROLINE BLANCO: Are there some specific  13 ideas you had that we ought to consider maybe including in  14 an MOA?  15 MR. SOL KAHO'OHALAHALA: Well, I think I used  16 the example of the star compass as an idea.  17 And as I said, that may be one of many other  18 ideas that have not yet been placed on the table for  19 consideration or discussion.  20 But is NSF open to allowing these kinds of -- at  21 this juncture --  22 MS. CAROLINE BLANCO: Absolutely.  23 MR. SOL KAHO'OHALAHALA: -- to allow for these  24 kinds of discussions or ideas to emerge and come forth?  25 That is my point, is allowing for so I can say I am trying</p>	<p style="text-align: right;">104</p> <p>1 process would allow for.  2 MS. CAROLINE BLANCO: Yes. The answer is, yes,  3 we are open to those ideas.  4 I guess I am, in all candor, trying to translate  5 that into something concrete to be included in a  6 memorandum of agreement. I would defer to you and others  7 in the room who have some ideas about how those goals  8 could be accomplished.  9 MR. KIOPE RAYMOND: I have a question for Sol.  10 Have you seen Uncle Charlie's proposal?  11 MR. SOL KAHO'OHALAHALA: Yeah, I saw Uncle  12 Charlie's proposal.  13 MR. KIOPE RAYMOND: I just wondered.  14 MR. SOL KAHO'OHALAHALA: And I guess the way I  15 want to answer your question is that because I do not want  16 to be perceived as speaking for all Hawaiians, that what I  17 am hoping is that there will be discussions with Native  18 Hawaiians and organizations who are interested, where we  19 can put these ideas before each other and begin to talk  20 about how they view these ideas as part of, you know,  21 mitigation. And is that something that collectively they  22 could come to any kind of agreement about, then that would  23 allow -- see, I could go down a whole list of things that  24 I think, you know. But that is not going to do you any  25 justice. It's not going to do the Hawaiian community any</p>
<p style="text-align: right;">103</p> <p>1 to open an opportunity here where there might be  2 consideration by NSF to take look at how cultural concerns  3 might be integrated in trying to resolve and move forward.  4 Okay.  5 It's clear to me that if you just look at some  6 of the sites that are at Haleakala, by the reports, they  7 have already been destroyed. They have already been  8 dismantled. And some of them don't exist any longer. But  9 how do you resolve those kinds of issues, you know?  10 I am not proposing that we go back and  11 reconstruct them, you know, but I am open to the idea of  12 considering what Hawaiians might want to propose in terms  13 of, I guess, mitigation, you know.  14 Are you open to those ideas that would allow  15 Native Hawaiians to have that kind of input, you know?  16 Because when we get back to some of the cultural  17 concerns, those hurts are already there. They have been  18 done.  19 The question is, can you allow for Native  20 Hawaiians to find ways to mitigate or find remedy or ideas  21 that help to rebuild or -- and I am not talking rebuild  22 the site, but I am talking an opportunity to allow for  23 rebuilding from a Hawaiian perspective.  24 If you are open to those ideas, then I think  25 those are the kinds of things that I would hope that this</p>	<p style="text-align: right;">105</p> <p>1 justice by me just going down the list.  2 What I am saying is that the ideas that I hope  3 will emerge is ideas that I think would come about from  4 those discussions within the Hawaiian community. And the  5 timeframe is what I am not very clear about.  6 MS. CAROLINE BLANCO: Right. I think therein  7 lies part of the issue. I think that there are always  8 opportunities that may exist.  9 For purposes of the 106 consultation process,  10 our hope was to include certain mitigation measures in a  11 memorandum of agreement. And our hope is that this stage  12 of our process will begin to put those things in a  13 memorandum of agreement.  14 MR. SOL KAHO'OHALAHALA: Then let me ask a real  15 quick question.  16 Given what you just said now, is it the  17 expectation that the participants that are here, that are  18 participating in these consultation processes, is where  19 you expect those ideas for the MOA are going to be  20 rendered from?  21 MS. CAROLINE BLANCO: The list of all of the  22 consulting parties. I mean, only a small number are  23 represented here today.  24 But, again, as I've said, I mean, the outreach  25 efforts would include -- you know, anything we would all</p>

<p style="text-align: right;">106</p> <p>1 come up with here would be sent out for review and comment  2 by the whole list of 26, 28 -- I forget the number now --  3 consulting parties in the process.  4 MR. SOL KAHO'OHALAHALA: Okay. Then the only  5 thing I can say is, for me, personally, is if you can come  6 about with some of those suggestions today from those  7 people who are participating, within this day or two,  8 then, hopefully, it comes about because there is -- at  9 least there's been discussions about it and there is some  10 consensus about any one idea that might be offered to be  11 included in an MOA.  12 Short of that -- and I think there may be other  13 ideas that are still sort of out there. And those won't  14 be identified unless there are more opportunities for  15 discussions within the community.  16 DR. CRAIG FOLTZ: I think we can allow for some  17 openness. The difficulty is we can't establish a sense  18 that we can do everything.  19 But we could, for example, think about trying to  20 undertake a study as to what other types of mitigation  21 might be possible arising from the Native Hawaiian  22 community and have those included for planning purposes  23 later on in the project.  24 You know, by putting something in an MOA that we  25 will do the following, we will close down the telescope</p>	<p style="text-align: right;">108</p> <p>1 MR. KIOPE RAYMOND: I will.  2 MS. ANNELLE AMARAL: Yes, then.  3 MR. KIOPE RAYMOND: One of the things that I  4 noticed -- and I can only -- I can anecdotally share -- is  5 there was a public scoping process. Someone in the room  6 remembered the former director, Wayne Van Citters, came  7 and there was a meeting at the Haiku Community Center.  8 And a microphone was set up as if it were going to be an  9 official public scoping meeting. And people from the  10 community went to that and offered heartfelt testimony  11 that night.  12 And I remember the night very clearly because  13 Former Director Van Citters -- I had read a letter from  14 him and I was referring to him -- and somebody from the  15 back of the room said, well, that's him right there,  16 that's Wayne. And he said, "Hey, glad to meet you." So  17 that is how come I remembered the night.  18 The point I am making is that the process needs  19 to be a little bit more clear about which nights were  20 official, which nights were public scoping, official,  21 which nights were just, hey, let's share some thoughts.  22 And that very first night, there was some very  23 compelling testimony that I recall -- and it would have to  24 be anecdotal -- against the telescope, but it was never  25 official. Therefore, it was never part of the record,</p>
<p style="text-align: right;">107</p> <p>1 after 45 years, the signatory can hold us responsible for  2 that.  3 If we say we will establish a group that will  4 investigate other cultural mitigation, onsite and offsite,  5 such as your proposal for the star compass -- which I  6 think is absolutely excellent -- NSF is not going to sign  7 off on something that says, and then we will do what we  8 are told to do, because that might include something that  9 is completely out of our ability to fund.  10 So you see where the tension is?  11 And I would defer to counsel here as to whether  12 there is some way that we can include reference to an  13 activity that will be supported to develop.  14 MS. CAROLINE BLANCO: I think that there can be  15 some instruction.  16 Also, I would defer -- the SHPO is here. And  17 they have a lot of experience with helping agencies to try  18 to develop probably very similar things. And I think  19 their guidance would be incredibly welcome on this point.  20 MS. ANNELLE AMARAL: Kiope.  21 MR. KIOPE RAYMOND: Caroline, before they start,  22 could I bring up something that I forgot to share when I  23 was sharing about what might help NSF in the future when  24 they take testimony from people?  25 MS. ANNELLE AMARAL: Will you be brief?</p>	<p style="text-align: right;">109</p> <p>1 never going to be something that KC Environmental  2 publishes. And I think, in the future, that needs to be  3 much more clear.  4 MS. CAROLINE BLANCO: Charlie, if you want to  5 respond to that, I am not sure that --  6 MR. KIOPE RAYMOND: I saw him eat something. I  7 saw him put it in his mouth. That's why I brought it up.  8 MS. CAROLINE BLANCO: I am not sure this is  9 viewed the same way by everybody. Maybe Charlie could add  10 input after he is done.  11 DR. CHARLIE FEIN: I'm sorry. I am eating one  12 of those --  13 DR. CRAIG FOLTZ: All his dental work is done.  14 MR. KIOPE RAYMOND: I saw him put it in his  15 mouth, too. That's why.  16 DR. CHARLIE FEIN: Thanks a lot.  17 The meeting to which Kiope is referring was an  18 informal meeting that was requested. We had a lot of  19 comments that said we need more information. So even  20 though it wasn't part of the official NHPA process, we set  21 up a meeting, an additional meeting, to inform the public.  22 And that meeting did produce a number of comments.  23 Every comment we've ever gotten has or will be  24 addressed in the final environmental. There is nothing --  25 MR. KIOPE RAYMOND: That's heartening to hear</p>

110	<p>1 because there has been no record heretofore of anyone</p> <p>2 having said anything that night. So if it's going to be</p> <p>3 addressed, that's all I need.</p> <p>4 MS. CAROLINE BLANCO: I think part of it is we</p> <p>5 are still in the middle of the process, or toward the end</p> <p>6 of it, but it's --</p> <p>7 MR. KIOPE RAYMOND: I think some people -- all I</p> <p>8 was saying is some people were coming that night,</p> <p>9 believing it was part of the public scoping, they were</p> <p>10 standing at the microphone, giving testimony.</p> <p>11 DR. CHARLIE FEIN: We did say, right at the</p> <p>12 outset, that this is not a formal meeting. We made sure</p> <p>13 we said that, because we knew it wasn't.</p> <p>14 MS. SHARON LOANDO-MONRO: If I could just add</p> <p>15 something. I am Sharon. The informal meetings were not</p> <p>16 recorded because they were not formal. All formal</p> <p>17 meetings that we had planned to do --</p> <p>18 MR. KIOPE RAYMOND: That's the confusion I am</p> <p>19 addressing and sharing with the NSF. That at some point,</p> <p>20 when you -- when the contractors are hired, with no</p> <p>21 disrespect to Sharon and Charlie, that the public -- what</p> <p>22 the public hears, what they know that they said to the</p> <p>23 public, maybe needs to be a little bit more clear.</p> <p>24 Because I have two or three people saying, whatever</p> <p>25 happened to what I said that night. And I think it's just</p>	112	<p>1 scope is relatively narrow.</p> <p>2 MS. ANNELLE AMARAL: Pua, what I need --</p> <p>3 MS. PUA AIU: Pua Aiu, Administrator of the</p> <p>4 State Historic Preservation Division. And with me is</p> <p>5 Nancy McMahon, she's a deputy.</p> <p>6 So our scope is relatively narrow. And we're</p> <p>7 going to try and stay within our scope.</p> <p>8 We are concerned that we cannot mitigate the</p> <p>9 site, the height, the color or the construction. It's</p> <p>10 very problematic for us. We are joined in this by the</p> <p>11 National Park Service and the ACHP.</p> <p>12 We have the letter from the ACHP here in case</p> <p>13 other people didn't get it. We also have our letter.</p> <p>14 We have concerns about the timing issues as had</p> <p>15 been raised by some other people, in that the consultation</p> <p>16 took place so far after the site was chosen, without</p> <p>17 regard to the impact on the cultural properties of</p> <p>18 Haleakala.</p> <p>19 And it's a little late to be talking about it</p> <p>20 now if you have already decided that you can't change the</p> <p>21 height, the color, the construction. And our letter</p> <p>22 details our concerns to that.</p> <p>23 And we have copies of that letter here as well.</p> <p>24 I think today's discussion highlights the fact</p> <p>25 that there isn't enough consultation. It's your choice</p>
111	<p>1 really important.</p> <p>2 Charlie has just clarified it will be addressed,</p> <p>3 everything that was ever said, even in informal.</p> <p>4 MS. CAROLINE BLANCO: It's all helpful lessons</p> <p>5 learned. But any information we try to be clear. We</p> <p>6 thought we were being clear.</p> <p>7 MR. KIOPE RAYMOND: Thanks.</p> <p>8 MS. ANNELLE AMARAL: Thank you.</p> <p>9 MS. CAROLINE BLANCO: I am just concerned, I</p> <p>10 know the folks here have a flight in a few hours.</p> <p>11 MR. KIOPE RAYMOND: This one, too.</p> <p>12 DR. CHARLIE FEIN: So let me just clarify that.</p> <p>13 From what Sharon tells me, the informal meetings were not</p> <p>14 recorded.</p> <p>15 MR. KIOPE RAYMOND: So if they didn't turn in</p> <p>16 written testimony --</p> <p>17 DR. CHARLIE FEIN: Right. If they didn't turn</p> <p>18 in written testimony, it wasn't recorded. But we took</p> <p>19 notes on the comments. So if there was a comment, we</p> <p>20 intended to respond to it in the DEIS and certainly in the</p> <p>21 FEIS.</p> <p>22 MS. ANNELLE AMARAL: I will stick these up</p> <p>23 later, just allowing them time.</p> <p>24 MS. CAROLINE BLANCO: Thank you.</p> <p>25 MS. PUA AIU: We only have a few comments. Our</p>	113	<p>1 how you want to go about it, either with an MOA in hand,</p> <p>2 and you discuss that, or without an MOA. But there seems</p> <p>3 -- there's significant concern and significant effect,</p> <p>4 which you have agreed to, on the traditional cultural</p> <p>5 property of Haleakala should you build this. And there</p> <p>6 are several Hawaiian groups who don't want it built at</p> <p>7 all, and there are some who are looking for other ways to</p> <p>8 address a win-win situation perhaps.</p> <p>9 And I think when I was listening to Sol -- this</p> <p>10 is a little bit outside of where our scope goes. But if</p> <p>11 you could look at those things that you can't mitigate and</p> <p>12 talk to Hawaiians about how you might be able to address</p> <p>13 your science and mitigate it, you might be able to get</p> <p>14 someplace.</p> <p>15 The other thing that we have -- our concern</p> <p>16 about this meeting being only for, basically, offsite</p> <p>17 mitigation, or not mitigating those things. Again, that's</p> <p>18 our biggest concern, is we can't mitigate those four</p> <p>19 things which we believe there needs to be a discussion on.</p> <p>20 And we were told we couldn't come here and have a</p> <p>21 discussion on it.</p> <p>22 And several of our partners thought, well, if we</p> <p>23 can't discuss it, we are not coming. Therefore, they are</p> <p>24 not here today. They may come tomorrow, though. So you</p> <p>25 will have part of them here tomorrow.</p>

<p style="text-align: right;">114</p> <p>1 I think for our scope of what we can do, that's</p> <p>2 about all we have to say, that we think that the 106</p> <p>3 process has not been followed in terms of timing,</p> <p>4 basically.</p> <p>5 And I will let Nancy go.</p> <p>6 MS. NANCY McMAHON: We have a lot of other</p> <p>7 partners that are concerned, Historic Hawaii, ACPH, the</p> <p>8 National Park Service and their concerns. And part of</p> <p>9 their concerns are, I guess, when this -- even this</p> <p>10 meeting. And it goes back to what Kiope said about your</p> <p>11 scoping meetings and your informal consultations.</p> <p>12 When I saw the open house -- and this is exactly</p> <p>13 how the partners saw that -- the open house is typically</p> <p>14 what the military do here. And they have stations set</p> <p>15 around in an area, and people walk around them. And I</p> <p>16 think I heard this when I first walked in. It doesn't</p> <p>17 give any of the consultant parties a time to hear each</p> <p>18 other out.</p> <p>19 I think if they knew we could sit here and talk</p> <p>20 at a table like this today, I think they would have been</p> <p>21 here.</p> <p>22 I didn't know that, either. We thought we were</p> <p>23 going to have to walk around and pull you guys to the side</p> <p>24 and talk to you informally, on the side, and raise our</p> <p>25 concerns. And that kind of confuses things.</p>	<p style="text-align: right;">116</p> <p>1 And I guess, lastly, you know, my thought is all</p> <p>2 the consulting parties, even though if you provided</p> <p>3 documentation like an EIS, they still need to be brought</p> <p>4 together to hear each other out.</p> <p>5 And, perhaps, the western concept of these open</p> <p>6 houses or scoping meetings isn't what is needed, it needs</p> <p>7 to be more looked at. Because the impacts are Hawaiian in</p> <p>8 nature. And having a session, honopono session, with</p> <p>9 the Hawaiians together is another process, another way to</p> <p>10 maybe look at having another type of setting that these</p> <p>11 people can get together. And we can hear everybody out.</p> <p>12 Because, as I said, there will be some Hawaiians</p> <p>13 very much for it, there will be some Hawaiians with</p> <p>14 different perspectives of it, there will be some Hawaiians</p> <p>15 trying to mitigate things. I think everybody needs to</p> <p>16 hear everybody's perspective.</p> <p>17 MS. CAROLINE BLANCO: If I can respond to some</p> <p>18 of this.</p> <p>19 What happened is I joined NSF in September. And</p> <p>20 I spoke with Martha Catlin of the Advisory Counsel in</p> <p>21 October of 2007. And I said -- you know, given my strong</p> <p>22 background in historic preservation, I teach law school</p> <p>23 classes in it, written books on it, very dedicated to this</p> <p>24 field, I want to be sure that we do this right. This is</p> <p>25 the reason I was hired. I am very committed to this. And</p>
<p style="text-align: right;">115</p> <p>1 The other issue is that we got told we cannot</p> <p>2 mitigate this. And it seems like we are going and we</p> <p>3 still haven't looked at the avoidance perspective, we</p> <p>4 haven't looked at other mitigation. And looking at other</p> <p>5 proposed sites that should be looked at versus the lengthy</p> <p>6 timeframe it's going to take to do this project.</p> <p>7 And we are, also, in the bigger picture of</p> <p>8 NSF -- and I talked to Caroline about this -- NSF does not</p> <p>9 usually do very good 106 consultations, to begin with, on</p> <p>10 projects they have had in Hawaii. So we are really glad</p> <p>11 that you've tried to do it in this situation and brought</p> <p>12 you on board to help them out through this process. And</p> <p>13 that is a good idea.</p> <p>14 I would recommend that we further with this</p> <p>15 further -- tomorrow we are not going to be here. We don't</p> <p>16 know if our partners are going to be able to come. That</p> <p>17 meeting is really about an MOA. And we are not ready for</p> <p>18 the MOA yet. We want to make sure you have looked at the</p> <p>19 proposals and that you have made a decision where we are</p> <p>20 going to go, and that we have all agreed.</p> <p>21 Then you have to look at the issue of who is</p> <p>22 going to be signatories to the MOA. You can have</p> <p>23 consulting parties, but who are going to be the</p> <p>24 signatories to the MOA? And we don't know that yet</p> <p>25 because you haven't told us that part.</p>	<p style="text-align: right;">117</p> <p>1 I said to her, we would like to meet with you to find out</p> <p>2 what you think as the federal agency charged with</p> <p>3 providing guidance to other federal agencies and dedicated</p> <p>4 to the 106 process, what you think we need to do.</p> <p>5 And after a long discussion, in which I outlined</p> <p>6 to her this concern about alternatives, and said this is a</p> <p>7 science-driven project and it's unique from other federal</p> <p>8 activities in that either you go forward with the science</p> <p>9 or you don't. And the reason why the structure is set up</p> <p>10 the way it is, the specifications, are for scientific</p> <p>11 reasons, this makes it a very big challenge. I was</p> <p>12 looking for guidance from her. And she said, what you</p> <p>13 need to do is write a letter to us that speaks about NSF's</p> <p>14 position on avoidance, minimization and mitigation, and,</p> <p>15 at the close of that, request a meeting, and I promise you</p> <p>16 I will give it my full attention and we can set up a</p> <p>17 meeting within the next couple of weeks.</p> <p>18 I did just that, and provided all the supporting</p> <p>19 documentation. That is my November 8th letter to Martha.</p> <p>20 It was, in my opinion, not given immediate</p> <p>21 consideration. I sent a follow-up email in late December</p> <p>22 requesting further feedback, and, again, requesting a</p> <p>23 meeting. And they said, you know, we haven't gotten to it</p> <p>24 or -- I am not even sure if she did respond to that. I</p> <p>25 think she may have by email.</p>

<p style="text-align: right;">118</p> <p>1 We didn't receive anything from the Advisory  2 Counsel until their January 17th letter. Their January  3 17th letter said, we are trying to find out who from the  4 SHPD's office would be our contact, we have been  5 investigating this issue with the park and some other  6 organizations, and we understand you will be getting some  7 letters in the next couple of weeks, and we don't think it  8 would be advisable, basically, to meet until then.  9 We got letters from your office and from the  10 park around February 11th.  11 Dr. Foltz had an injury and was unable to  12 schedule a time to come out here. We wanted to meet in  13 person here and meet with folks. And, unfortunately, that  14 had to be delayed because the injury.  15 And we had heard nothing from the Advisory  16 Counsel.  17 We sent out a letter in May, explaining our  18 position on this, again seeking a meeting with them to  19 find out how to do this in the way they perceived was the  20 correct way. No meeting. And, instead, they sent their  21 letter of June 12th, I believe it was, telling us that  22 they didn't think we did it correctly.  23 If an agency is trying to do the right thing, is  24 making several trips over the course of three years to try  25 to do things right, to try to work with the community, in</p>	<p style="text-align: right;">120</p> <p>1 go through a turnaround, with losing our administrator.  2 At that point in time, a transition team took over.  3 I think the Advisory Counsel, for the last three  4 years, has tried to pick up for us because we weren't  5 responding to a lot of projects.  6 So I think part of it also, as you recall, when  7 the Advisory got -- we lost the Western Regional Office  8 from the Advisory Counsel --  9 MS. CAROLINE BLANCO: Right.  10 MS. NANCY McMAHON: -- it greatly affected  11 Hawaii, particularly the western states, because most of  12 those people that worked in that office were people, like  13 Tom King, Claudia Leslie, who had experience in the  14 Pacific. Their dissertation work were done on the Pacific  15 Islands. So they were very familiar with the cultures of  16 the Pacific Islands. And I think when it switched to  17 Washington, D.C., we lost that connection. We lost that  18 connection with them. They started responding for us.  19 And maybe were waiting for us to come on board  20 and get our act together in the transition period. And we  21 did didn't get the administrator on board until May.  22 So I don't know if that's the lag time. I  23 cannot answer to the Advisory Counsel why they didn't  24 answer you directly.  25 I got involved because the Park Service was very</p>
<p style="text-align: right;">119</p> <p>1 dealing with a challenging project from the standpoint of  2 alternatives -- and they wouldn't be, let's redirect the  3 road this way or this way or let's do something different,  4 but it's either go forward with the science or not, and  5 onsite mitigation can include things other than the  6 project itself but could include providing access to  7 people. And there is already mitigation set forth in the  8 Draft EIS, which is articulated in my November 8th letter.  9 My question to you and your partners, which we  10 hope would be our partners as well, is how does a federal  11 agency move forward in this if there is no response back  12 about here is how we need you to go forward?  13 And this is now June. That was November.  14 This is highly problematic. And I am trying to  15 find out a direction, a way forward, to concluding this  16 process and trying to do it right. And I am asking your  17 help.  18 MS. NANCY McMAHON: If I can speak to November  19 8th. Like you, I came into this process rather late. I  20 have been with the Department of Land and Natural  21 Resources Historic Preservation Division for 20 years, but  22 I was on Kauai. I usually get brought into very tense  23 situations, very late in the game, and don't have all the  24 facts before me, either.  25 At a time in November, our office was going to</p>	<p style="text-align: right;">121</p> <p>1 concerned and had talked to me to find out some of the  2 letters that were in the file at the time and respond to  3 that, which is the February letter that I wrote at that  4 point. So that is kind of where we are at with it.  5 I don't know other than I might -- my advice to  6 you and my advice to the Advisory Counsel is I still think  7 we need to go -- don't go the step of an MOA yet and tell  8 me that's where you are at. Yet, I think you can look at  9 alternatives and get some opinions of them. But I don't  10 think we should be pressured into making that we are ready  11 to go there. I am not saying that -- we don't want to  12 drag out the timeframe. I don't know what your tame  13 timeframe is. I don't know where we are at.  14 MS. CAROLINE BLANCO: I think at this point  15 there is some confusion about what the steps are, the  16 specific steps that need to be taken. Especially when we  17 are sort of at a wall on the alternatives issue. You  18 know, I think we want to be honest about alternatives. It  19 would be disingenuous for us to say, oh, let's consider  20 another one over whatever when that inquiry has already  21 been made by the scientists and determined that, for  22 scientific reasons, if you are going to build this  23 particular telescope, it needs to meet certain criteria.  24 And there are only a few places where that could happen.  25 And the reasonable place is Mount Haleakala.</p>

<p style="text-align: right;">122</p> <p>1 And if that's the case, how would we do an 2 alternatives analysis there in that sense? 3 It would really be either, you know, seriously 4 consider an action and seriously consider no action 5 alternative. 6 And so, you know, I sort of view the MOA process 7 as, you know, this is in the event that the action 8 alternative were adopted. This is what the package would 9 look like. 10 It doesn't necessarily mean, even with an MOA, 11 that the agency is committed to funding it. It could 12 still decide, no, it's not going to go forward. And that 13 is the perspective that we bring here. 14 MS. PUA AIU: Concerning the timing of this 15 thing is a very difficult thing, especially because we 16 don't know who the signatories are. If you are 17 negotiating a MOA, you normally are under the impression 18 that you are going to move forward, that your EIS is done, 19 that you are going to move forward on it. So you are 20 mitigating because you are going to move forward. 21 In this case, you have a lot of people who, one, 22 feel like they haven't been properly consulted, and, two, 23 still think that the no action alternative is the better 24 thing. 25 And this has happened before, where you then</p>	<p style="text-align: right;">124</p> <p>1 to have their input and they need to be on the record, 2 especially if they are not in agreement. 3 MS. CAROLINE BLANCO: But if the Royal Order 4 is -- I mean, they are a consulting party. And I am just 5 concerned that if we send out these letters and nobody 6 responds or they decide not to show up, what in your mind 7 is the federal agency's obligation? 8 MS. PUA AIU: Part of the problem with this is 9 the format. Because we are all used to the Army saying, 10 oh, we're having an open house. And believe me, those are 11 the most bogus things. They are a waste of time. You 12 don't go there to consult, so why waste your time going 13 there. We're all busy people. We don't really want to 14 walk around and be shown this is the site location, this 15 is what we are going to do, blah, blah, blah. 16 We have -- in the past, when we did the 17 consultation, they brought us all into a room, it was 18 pretty miserable negotiations, but we did it for several 19 days and several times. And it wasn't happy. But we were 20 able to pound out some things in those negotiations 21 because everybody could sit there and talk about where 22 they could go. You could get movement on some people. 23 But they were in a different place, you know. They had 24 gotten their right and they were going to proceed, so I 25 think they were in a different place.</p>
<p style="text-align: right;">123</p> <p>1 take the MOA and say, look, everybody agrees. But, 2 actually, half, or more than half, of the parties who are 3 consulted don't agree. 4 And so maybe, Sol, I will use you as an example. 5 You have Sol and you have Uncle Charlie, and 6 they agree, and you let them be signatories, whatever, but 7 you haven't actually completed the very difficult process 8 of consultation. Which our concern is that that process 9 isn't near complete yet. And we are not -- the SHPD is 10 not ready to say the no action alternative, we prefer the 11 no action alternative, or we don't prefer the no action 12 alternative. We do not believe that consultation is 13 complete. And that if you were to put forward an MOA that 14 the timing is correct. 15 MS. CAROLINE BLANCO: And how would you, in your 16 opinion, what would complete look like from this 17 standpoint? 18 MS. PUA AIU: I think you need to consult with 19 the people behind me, the Native Hawaiian groups. I think 20 a lot of them aren't here. OHA is not here. I think Kirk 21 should be added because when they do ceremonies on 22 Kaho'olawe, seeing the sun come up over Haleakala is very 23 important to those ceremonies. You might need to consult 24 with hula groups who are not here. The Royal Order is not 25 here. All of those groups need to be consulted and need</p>	<p style="text-align: right;">125</p> <p>1 MS. CAROLINE BLANCO: And I had a conversation 2 with Betsy Merritt of the Trust, several of them, 3 conversations, about this. And she asked me, are you done 4 with your NEPA work. I said no, because we were looking 5 at this as sort of a combined process, trying to do things 6 hand in hand. She said, oh, good, one of the biggest 7 concerns is that people finish their NEPA process before 8 they are done with an NHPA, and this is great. 9 MS. PUA AIU: True. 10 MS. CAROLINE BLANCO: So we have been continuing 11 along based on that. So that's why, I am not sure -- I 12 suspect there needs to be more guidance from the Advisory 13 Counsel in carrying out processes in this regard. But 14 nevertheless, we have what we have. And that is why we 15 chose this way of moving forward. In other words, not 16 completing the Final EIS until we were able to -- I mean, 17 my thought was if we were able to negotiate an MOA, for 18 example, that would be weaved into the Final Environmental 19 Impact Statement, it would be included in the discussion 20 on cultural resources impacts, and mitigation and so 21 forth. Then it would be all consistent. And then the 22 record of decision would reflect that. 23 MS. PUA AIU: But you would still have the 24 problem of more than half of your consultants disagree. 25 And that needs to go into the record.</p>

<p style="text-align: right;">126</p> <p>1 MS. CAROLINE BLANCO: Oh, it would go into the</p> <p>2 final. For example, if 75 percent of the consulting</p> <p>3 parties disagreed, the whole process would be outlined in</p> <p>4 the final, and it would say, you know, 75 percent of the</p> <p>5 consulting parties thought an alternative site ought to</p> <p>6 have been chosen and the project shouldn't have gone</p> <p>7 forward. And that would be articulated there.</p> <p>8 I mean, I am not sure what else we would be able</p> <p>9 to say about that. But it certainly would be honestly</p> <p>10 reflected. The record is the record. And certainly we</p> <p>11 wouldn't run away from it in that sense, or in any sense.</p> <p>12 So I am trying to put some structure on this. I</p> <p>13 am trying to figure out how to -- from your perspective,</p> <p>14 how to move forward. Are you thinking that another</p> <p>15 meeting with all of the consulting parties -- or at least</p> <p>16 tomorrow is an attempt to do that, maybe if we are not at</p> <p>17 MOA stage exactly, but it certainly is a meeting of which</p> <p>18 we have set times, 10:00 to 2:00, to meet with everybody</p> <p>19 to try to see where we are at.</p> <p>20 MS. PUA AIU: That was unclear, too, because it</p> <p>21 said the 17th, if needed.</p> <p>22 MS. CAROLINE BLANCO: But then the follow-up</p> <p>23 letter made that more clear. And we put some structure on</p> <p>24 that.</p> <p>25 We hadn't received any mitigation proposals from</p>	<p style="text-align: right;">128</p> <p>1 all the consulting parties in addition to tomorrow?</p> <p>2 MS. PUA AIU: At least one more. I think one is</p> <p>3 probably not enough.</p> <p>4 MS. CAROLINE BLANCO: I'm sorry?</p> <p>5 MS. PUA AIU: I think you will need more than</p> <p>6 one.</p> <p>7 MS. CAROLINE BLANCO: So tomorrow plus --</p> <p>8 MS. PUA AIU: Well, I think you have tomorrow</p> <p>9 and, you know, you will see who is able to come tomorrow.</p> <p>10 But then you might need up to three more because I am</p> <p>11 hearing today -- and there is only, what, two groups</p> <p>12 here -- nobody can come tomorrow. And that there is --</p> <p>13 MS. VERNA KAIULANI NAHULU: I am coming</p> <p>14 tomorrow. I am not a nobody.</p> <p>15 MS. PUA AIU: Auntie is coming tomorrow.</p> <p>16 You haven't been up yet.</p> <p>17 Especially among the Hawaiians, if you are going</p> <p>18 to have to mitigate for the effect on Hawaiian practices.</p> <p>19 And there is not -- there is not even close to a meeting</p> <p>20 of minds on that. And you might be sitting there,</p> <p>21 thinking, that's not my issue, but it is.</p> <p>22 MS. CAROLINE BLANCO: Oh, I am sure it is. This</p> <p>23 is all part of it. We have to try to reach agreement if</p> <p>24 we can.</p> <p>25 MS. PUA AIU: So I think you need more than one</p>
<p style="text-align: right;">127</p> <p>1 anybody. And so we said we will meet here in an open</p> <p>2 house forum.</p> <p>3 Again, it's hard because I wasn't aware of the</p> <p>4 military format. In candor, we were just trying to be</p> <p>5 accommodating. So it's unfortunate that some people</p> <p>6 misunderstood that. You know, it's unfortunate they</p> <p>7 didn't ask us questions if they thought otherwise. But</p> <p>8 nevertheless, today is as it is. And tomorrow, we decided</p> <p>9 to put some structure, 10:00 to 2:00, to begin discussion</p> <p>10 about how to deal with some of these adverse effects.</p> <p>11 MS. NANCY McMAHON: And we do appreciate the</p> <p>12 fact that you have opened it up to let Historic Hawaii and</p> <p>13 some other organizations come back into the process and be</p> <p>14 consulting parties. So we appreciate that part.</p> <p>15 MS. CAROLINE BLANCO: Sure. And I called Betsy</p> <p>16 this morning -- she is out, I guess, until the 20th -- and</p> <p>17 told her we would let the Trust in as well.</p> <p>18 But I am sure you understand, too, there is a</p> <p>19 need for finality in any process. This one has been going</p> <p>20 on for so long. And, unfortunately, there have been</p> <p>21 changes made in the Office of General Counsel and the</p> <p>22 guidance of the process has, you know, been longer because</p> <p>23 of that and not quite as compact.</p> <p>24 But am I hearing you correctly in thinking that</p> <p>25 we should have, from your perspective, another meeting of</p>	<p style="text-align: right;">129</p> <p>1 meeting. I think that you need more meetings that is</p> <p>2 really helpful, maybe three.</p> <p>3 MS. NANCY McMAHON: I have one question. Are</p> <p>4 you recording this? Are you going to send the minutes of</p> <p>5 this out?</p> <p>6 MS. CAROLINE BLANCO: Sharon, are we going to</p> <p>7 post the meeting minutes?</p> <p>8 MS. SHARON LOANDO-MONRO: Oh, yeah. We will put</p> <p>9 it on the --</p> <p>10 MS. CAROLINE BLANCO: That's what they typically</p> <p>11 do.</p> <p>12 MS. PUA AIU: Then you need to be moving</p> <p>13 documents back and forth in between those meetings. So</p> <p>14 that every time you have a meeting, hopefully you are</p> <p>15 getting closer to where --</p> <p>16 MS. NANCY McMAHON: Consensus on where --</p> <p>17 MS. PUA AIU: You can get a consensus. And you</p> <p>18 are not going to get a consensus with everybody, but at</p> <p>19 least show good faith consultation.</p> <p>20 MS. SHARON LOANDO-MONRO: If I can say</p> <p>21 something. I believe that we did put the transcripts on</p> <p>22 the NSO website of all the meetings we've had in the last</p> <p>23 three years, with Section 106, DEIS, scoping meetings.</p> <p>24 MS. PUA AIU: Even the informal ones?</p> <p>25 MS. SHARON LOANDO-MONRO: No. The informal ones</p>

<p style="text-align: right;">130</p> <p>1 we didn't do that because they were informal meetings. It  2 was just something that people wanted, you know, said,  3 hey, can we have another meeting, so we scrambled and go  4 get another meeting for everybody. I took notes at those  5 meetings, to listen if there was something different from  6 what we've heard.</p> <p>7 MS. PUA AIU: The thing is, is it just open like  8 meetings or are you moving toward a negotiation? Because  9 those are two different things. People just come up and  10 say what they say, that's one thing. If you are sitting  11 there, saying, okay, look, we are looking at mitigation,  12 we are looking at what we are going to do, we are trying  13 to move towards something. That's two different things.</p> <p>14 MS. CAROLINE BLANCO: Right. I think, at this  15 stage, we are moving towards something, toward finality.  16 We have adverse effects.</p> <p>17 One big concern about the direction of documents  18 is that we are routinely copying all of the consulting  19 parties. Your office has not, the Advisory Counsel has  20 not, the park has not. And, you know, those three  21 partners have also included people who were not consulting  22 parties. And it doesn't help, I think, to establish a  23 very good cooperative, trusting relationship with  24 everybody.</p> <p>25 And I would like to see from this point forward</p>	<p style="text-align: right;">132</p> <p>1 that's what it is, you can't -- you know, it's either  2 going to be action or no action. And that is an  3 understandable position, if you have gone through, you  4 know, the consideration of various alternatives and you've  5 whittled them down based on whether or not they meet  6 scientific objectives. That is a legitimate position to  7 take. And so based on that information and advice, that's  8 how we moved forward.</p> <p>9 And so assuming that we continue along that path  10 and we do try to work with our consulting parties to find  11 out how do we deal with adverse effects, what can we do,  12 what can we do at the site itself without changing the  13 telescope structure, what can we do on the site to make  14 things better, what can we do offsite to make things  15 better, that is something we want to have. We want to  16 have that discussion. We want to move forward and see  17 what can be accomplished there.</p> <p>18 And if we are able to do that in these  19 consultation meetings, do you foresee an MOA signed by, at  20 a minimum, the Advisory Counsel, NSF, the SHPD? Do you  21 think that is possible?</p> <p>22 MS. PUA AIU: You want odds or do you want a yes  23 or no?</p> <p>24 MS. CAROLINE BLANCO: I want feedback.</p> <p>25 MS. PUA AIU: I think it's going to be difficult</p>
<p style="text-align: right;">131</p> <p>1 that we do that so that we are all on the same page and we  2 move forward in a way that is honest and open and working  3 together. If there are concerns, let's vet those concerns  4 and move forward. Because at this point it's not really  5 taking shape. It hasn't really taken shape. It needs to  6 take shape. We need to move forward and we need to  7 conclude a process.</p> <p>8 It's not right to taxpayers to drag a process  9 out for over three years. We need to move forward on  10 this.</p> <p>11 And I think if what you are saying is, in  12 addition to tomorrow, we need possibly up to two more  13 additional meetings with the consulting parties -- I know  14 we are meeting with the Park Service on August 22nd -- you  15 know, perhaps we could combine that with another meeting.  16 I am not sure. I will have to talk with some of my  17 colleagues here. And maybe two days of meetings or so  18 there, or, you know, fit in whatever you think makes some  19 sense.</p> <p>20 Do you foresee that, in theory, provided we have  21 those meetings, that it is still possible, even though we  22 have this alternatives issue -- that I am not sure how to  23 work around that unless you have ideas. I mean, I am  24 certainly open to hearing ideas about this.</p> <p>25 Martha had said, well, if that's what it is,</p>	<p style="text-align: right;">133</p> <p>1 because the things that matter we are not allowed -- you  2 are saying we can't mitigate.</p> <p>3 DR. CRAIG FOLTZ: It's not that you are not  4 allowed to.</p> <p>5 MS. PUA AIU: It says, "Cannot mitigate."</p> <p>6 DR. CRAIG FOLTZ: There is a difference between  7 being allowed to and can, being able to or being allowed  8 to.</p> <p>9 MR. JEREMY WAGNER: I think we may be missing  10 something here. We looked at over 70 sites.</p> <p>11 MS. PUA AIU: Yeah. But you didn't look at them  12 in terms of the effect on traditional cultural properties.</p> <p>13 MR. JEREMY WAGNER: Let me finish for a second.  14 We looked at them.</p> <p>15 The height, we made it as short as we could and  16 meet the science requirements.</p> <p>17 The color, the way we mitigated that was the two  18 sides.</p> <p>19 If you put it on the Mees side, it's essentially  20 not seen for most of the areas on the island. If you put  21 it at Reber Circle, it's much more visible. So that's why  22 we preferred the Mees side.</p> <p>23 You can't change the color, but you can hide it  24 behind the AEOS telescope, behind the topography.</p> <p>25 The construction, the subcategories like the</p>

<p style="text-align: right;">134</p> <p>1 foundation, we tried to put in as a little of a hole as we  2 had to, to make the foundation as small as possible.  3 So those minimizations have already been done.  4 Those were based on what we needed to do, what we wanted  5 to do, which drives cost and such. We don't want to make  6 the structure any bigger than we have to. And the public  7 said the same thing, they don't want to see it and they  8 want it to be small. So we tried to do that.  9 The Mees site, for example, isn't visible from  10 any trail inside the crater. Because that was a comment  11 we got from the park. So we prefer that site because it  12 addresses that issue.  13 The sites, we did a study of impact for all of  14 the final six sites, looking at cultural impact, visitor  15 impact, all of those things.  16 MR. JEFF BARR: That statement has been made  17 before. I would like to actually clarify just a little  18 bit for the record.  19 My name is Jeff Barr. I am the project  20 architect for ATST.  21 And I kind of was in charge of, but certainly  22 was not the only participant, an extensive set of  23 feasibility studies for the six final sites. It did take  24 into account, at least as much as we could on an initial  25 basis -- certainly not to NEPA standards or to NHPA</p>	<p style="text-align: right;">136</p> <p>1 better site for solar astronomy than Mauna Kea is. So  2 this was an extremely refined objective process that  3 involved a number of scientists, both interested in the  4 project and not interested in the project. People who are  5 expert on telescope siting, both for daytime telescopes  6 and nighttime telescopes. It went on for approximately  7 four years.  8 MR. JEFF BARR: Something like that.  9 DR. CRAIG FOLTZ: It involved innumerable  10 meetings and trips. And it narrowed down to one.  11 And let me be perfectly honest. If there were  12 another, it would go there.  13 There is one.  14 So what Caroline has said before -- and you have  15 all discussed -- that there is a go, no go option. That  16 is what the NSF would face.  17 I want to say one more thing. We are funding  18 this project. This is not our project. We do not work in  19 a proactive way. We are not like the Department of  20 Defense. We are not like the Department of Energy. We do  21 not sit down together and say, what is the direction that  22 we are going to take science and what are the projects  23 that we want to do. Everything that the NSF does is  24 reactive. That is, it reacts to the community.  25 That is not in response to anything that has</p>
<p style="text-align: right;">135</p> <p>1 standards -- a full cultural assessment of what the  2 impacts were. But it was not a non-issue in terms of the  3 feasibility studies.  4 MR. JEREMY WAGNER: When we took on looking for  5 an environmental contractor to help advise us and push  6 this process forward, we considered that. Are they  7 sensitive to cultural issues, do they have experience,  8 local experience, are they cognizant of the kinds of  9 issues that Native Hawaiians and the locals on Maui would  10 be concerned about. That drove that process as well, when  11 we went out looking for those kinds of consultants.  12 So it was considered. As soon as Haleakala was  13 on the list, it started to be considered by us.  14 MS. PUA AIU: Okay. I still think it's going to  15 be difficult.  16 DR. CRAIG FOLTZ: Let me finish my sentence.  17 When I said you can't mitigate, if you make this  18 smaller, it will not work. If you paint it brown, it will  19 not work. If you put it on any one of the other 71 sites  20 that were considered, it will not work. That is how  21 special this site is with respect to the purpose and need  22 for such a telescope.  23 We did not capriciously say, we like Maui, we  24 think it will be easier to put it on Haleakala than it  25 would be to put it on Mauna Kea. In fact, Haleakala is a</p>	<p style="text-align: right;">137</p> <p>1 been said, but I want to make it clear that the NSF --  2 this project is the project of the U.S. and international  3 solar and space physics community. If it moves forward,  4 the NSF will fund it and the NSF will fund its operation.  5 But in a very real sense, this is not an NSF project.  6 MS. PUA AIU: So I think the important thing for  7 us is that -- it's a very special site for you, it's a  8 very special site for us -- we want the same consideration  9 for the history and the culture, and particularly the  10 culture, that you give to science. And that's our bottom  11 line.  12 MS. CAROLINE BLANCO: And I completely  13 understand that. I am trying to sort of weave back a bit  14 to given what has been said about the height, color,  15 construction, site, et cetera, how would you anticipate  16 being able to -- if you were to redo this process  17 entirely, if you were to direct it, what would you say we  18 do that?  19 MS. PUA AIU: Well, thank God I am not in your  20 seat, first of all. I understand you have a hotter seat  21 than I do.  22 But I think that, you know, the issue is going  23 to be looking at our practitioners and having them tell  24 you, this is how it affects what I do. So you need to  25 talk to the people on Kaho'olawe, how is it going to</p>

138	<p>1 affect what they do, how is it going to affect the people</p> <p>2 behind them, how is it going to affect the other people</p> <p>3 who are practitioners. Because that's -- you say, okay,</p> <p>4 well, you make it shorter, you can't practice your</p> <p>5 astronomy. Well, I don't know, maybe you put this up, and</p> <p>6 they can't practice whatever they practice. So that's the</p> <p>7 question and that's what you have to answer. And whether</p> <p>8 you can mitigate that or not is the question on the table.</p> <p>9 MS. CAROLINE BLANCO: I think we have at least</p> <p>10 made efforts along those lines in that we already have set</p> <p>11 out what adverse effects there are and acknowledged there</p> <p>12 are adverse effects. So going through the first initial</p> <p>13 one of it's either go or no go with regard to building</p> <p>14 this, what I am concerned about is I think I am hearing</p> <p>15 from you is that you think that we have not followed the</p> <p>16 process because we can't figure out alternative sites.</p> <p>17 MS. PUA AIU: I haven't seen the documentation</p> <p>18 saying, okay, this is going to affect these practitioners</p> <p>19 in this way. I haven't. I mean, maybe it's there, I just</p> <p>20 haven't seen it.</p> <p>21 MS. CAROLINE BLANCO: I don't think those</p> <p>22 particulars are in the letters. They are more in the</p> <p>23 cultural resources studies.</p> <p>24 Correct, Charlie?</p> <p>25 DR. CHARLIE FEIN: That's right.</p>	140	<p>1 those, what can we do about those. And there is an honest</p> <p>2 openness with the NSF with regard to what can we do to try</p> <p>3 to mitigate those effects as best as possible. And our</p> <p>4 hope was to have some concrete suggestions come to the</p> <p>5 table today, and before today. Well, before today. When</p> <p>6 those postcards were sent out in 2006, the hope was that,</p> <p>7 you know, we would hear some concrete suggestions.</p> <p>8 MS. ANNELLE AMARAL: I need to give the</p> <p>9 stenographer a break. She's been going for two hours</p> <p>10 without a break. So is that okay, if we take ten minutes?</p> <p>11 Are you ready to take your lunch break now? Are</p> <p>12 we going to lose these guys?</p> <p>13 MS. CAROLINE BLANCO: I think --</p> <p>14 MS. PUA AIU: If we go to lunch, you will lose</p> <p>15 us.</p> <p>16 MS. ANNELLE AMARAL: Then we won't let you go to</p> <p>17 lunch. Let's take ten to give the stenographer a break.</p> <p>18 (Recess.)</p> <p>19 MS. CAROLINE BLANCO: First of all, I just want</p> <p>20 to say I really appreciate the frank conversation. I</p> <p>21 think this is the way we actually can work forward toward</p> <p>22 resolving some things.</p> <p>23 There is one point of clarification I want to</p> <p>24 make about past meetings that have happened, because I</p> <p>25 think the history is not known. There have been a lot of</p>
139	<p>1 MS. CAROLINE BLANCO: And articulated in the</p> <p>2 Draft Environmental Impact Statement, which is all part of</p> <p>3 the same thing. There were two separate studies that were</p> <p>4 done. And with, again, an effort to try to --</p> <p>5 MS. PUA AIU: No, not together.</p> <p>6 MS. CAROLINE BLANCO: -- with an effort to try</p> <p>7 to really make this as comprehensive as possible.</p> <p>8 So I am asking, I guess, a fairly direct</p> <p>9 question in that if -- I mean, do you see a way in which</p> <p>10 we can have a discussion about alternatives if, in</p> <p>11 reality, from a scientific perspective, there is no other</p> <p>12 place to carry this project forward?</p> <p>13 MS. PUA AIU: You may or you may not. Because</p> <p>14 what you are doing and what you guys and the Army and</p> <p>15 Mauna Kea does all the time is say, well, we can't</p> <p>16 practice what we do unless you give up what you do. And</p> <p>17 that is where the rub is.</p> <p>18 So I can't answer your question until I read</p> <p>19 your cultural facts. And I'm sorry, I haven't read it, so</p> <p>20 I can't answer the question.</p> <p>21 MS. CAROLINE BLANCO: To me, where I see the</p> <p>22 valuable discussion coming into play is on mitigation.</p> <p>23 Because at this point we've acknowledged there are adverse</p> <p>24 effects. I think everybody has concurred there are</p> <p>25 adverse effects. So the question is what do we do about</p>	141	<p>1 players that have changed. So it's probably helpful for</p> <p>2 the whole group to understand what happened.</p> <p>3 Charlie, I will ask him to speak in a moment.</p> <p>4 Then the other thing is to just say that, in</p> <p>5 light of your suggestion, I think we can all arrange our</p> <p>6 schedules so that around the time of the meeting with the</p> <p>7 park, on August 22nd, we can have a meeting, another</p> <p>8 consulting party meeting. And maybe do it over two days</p> <p>9 or so.</p> <p>10 MS. PUA AIU: Okay.</p> <p>11 MS. CAROLINE BLANCO: Then, at that point,</p> <p>12 really sit down, have a solid negotiation over what could</p> <p>13 be in an MOA to mitigate adverse effects.</p> <p>14 And with regard to the question of who the</p> <p>15 signatories are, I think other than the Advisory Counsel</p> <p>16 and the SHPD and NSF, it's uncertain to me right now</p> <p>17 because I don't know who is interested in doing that, in</p> <p>18 being a signatory. I know the park has expressed an</p> <p>19 interest. But a lot will depend on, you know, what the</p> <p>20 nature is of it. So it's sort of almost a cart before the</p> <p>21 horse question at this juncture.</p> <p>22 I did want to take a moment out and have Charlie</p> <p>23 talk about what has transpired to date in terms of</p> <p>24 consultation meetings.</p> <p>25 I don't want to mislead folks into thinking we</p>

<p style="text-align: right;">142</p> <p>1 have only had, you know, two hearings in the past and that  2 is the end of it and now, suddenly, we're pushing  3 everybody into an MOA. Because that's really not where  4 things are at.  5 Charlie.  6 DR. CHARLIE FEIN: Right. So, of course,  7 beginning in 2005, in July of 2005, we had our scoping  8 meetings, which identified historic and cultural issues  9 right off the bat. And during the DEIS process, we held  10 meetings of all kinds, 13 altogether, in small venues,  11 large venues, in private offices. We held meetings  12 sometimes with only two or three people, sometimes with as  13 many as 50 or 60, all designed to discuss Section 106  14 issues.  15 For example, we met with OHA twice that I am  16 aware of. We met with the public. A public invitation  17 was issued for three formal meetings right after the  18 scoping process. And then three more formal meetings to  19 discuss Section 106 issues after the DEIS was published.  20 And so there have been meetings in which certain  21 individuals have participated over and over again --  22 Kiope, for example -- from day one. Then there have been  23 other individuals that have come in and out of the  24 process. There have been some who never responded. There  25 have been some who have given written testimony, some who</p>	<p style="text-align: right;">144</p> <p>1 correspondence that's out there, you folks haven't been  2 doing anything, why haven't you been doing anything, or  3 when are you going to start having these meetings. And  4 these meetings have been going on all along.  5 MS. CAROLINE BLANCO: And that's part of the  6 concern that NSF has, is that we have been having many,  7 many meetings, lots of formal, informal consultation  8 meetings, or meetings with consulting parties, in trying  9 to get a real feel for what the effects are. And the  10 supplemental -- first, the cultural resources study, then  11 the supplemental one.  12 Could you explain what that process was, the  13 supplemental one?  14 DR. CHARLIE FEIN: Yes. Sure.  15 MS. CAROLINE BLANCO: That would be helpful,  16 too, for folks to know.  17 DR. CHARLIE FEIN: The original cultural  18 resource evaluation, which was done by Kahu Maxwell, was  19 very specific about certain impacts, cultural historic  20 impacts, that this project might have on the site.  21 However, Kahu Maxwell did not elaborate insofar as having  22 discussed this with many other people in the community.  23 He has very strong personal opinions about the site and so  24 on.  25 But the comments that we received from Kiope and</p>
<p style="text-align: right;">143</p> <p>1 gave only written testimony, and others who gave written  2 and oral testimony.  3 Everything that was given to us was incorporated  4 into the process so that, in the Final Environmental  5 Impact Statement, anything that anybody said up until this  6 point about the Section 106 process that is unique and not  7 the same has to be addressed. It must be addressed in  8 accordance with the federal law. And we intend to do  9 that.  10 In that regard, for example, we received very  11 detailed comments from Kiope concerning the history and  12 cultural legacy of Haleakala along with comments about  13 lack of detailed information concerning the site. We  14 commissioned a study which includes what I would consider  15 the equivalent of at least a bachelor's thesis on  16 Haleakala. It's 15 pages of history and so on,  17 incorporated along with the study that was done to further  18 identify issues and to get people to speak about their  19 feelings concerning the summit and the use of the summit  20 and what this project would mean with respect to their  21 practice.  22 So we have been doing this. We have been doing  23 this for three years now. And I know it's always  24 difficult when you come in for the first time to say,  25 well, it looks like you haven't -- based on some of the</p>	<p style="text-align: right;">145</p> <p>1 others concerning potential cultural impacts to Native  2 Hawaiians, from this project, was sufficient for us to  3 seek additional research.  4 So we engaged Cultural Surveys Hawaii. And  5 those folks went out into the community and spent weeks  6 talking to people. And they prepared a cultural resource  7 evaluation, a supplemental cultural resource evaluation.  8 And to be frank with you, the conclusion was not  9 terribly different from the first, that there would be  10 impacts to the cultural resources at the site and those  11 impacts would be significant. This is not different from  12 what we concluded in the DEIS. This is not different from  13 what we concluded early in the process when there was  14 communication between NSF and SHPD.  15 So the supplemental cultural resource evaluation  16 is part of the FEIS process, but was released to the  17 public so that anybody could read it. Sort of an unusual  18 situation. There is no law that says we had to do that,  19 but we did want other people to read that evaluation. So  20 we released it shortly after it was completed.  21 MS. CAROLINE BLANCO: Thank you.  22 DR. CHARLIE FEIN: Thank you.  23 MS. CAROLINE BLANCO: Other thoughts about the  24 process from here on out?  25 MS. PUA AIU: No. I think the meeting -- I mean</p>

<p style="text-align: right;">146</p> <p>1 -- do you have a thought?</p> <p>2 MS. NANCY McMAHON: No. No. I was just going</p> <p>3 to get into specifics a little bit. We've run into lately</p> <p>4 a lot of -- a number of federal agencies that try to tell</p> <p>5 us they cannot mitigate and their only alternative is</p> <p>6 offsite mitigation. And we don't think that is an answer.</p> <p>7 MS. CAROLINE BLANCO: And what types of site</p> <p>8 mitigation could you see here?</p> <p>9 MS. NANCY McMAHON: Without hearing what the</p> <p>10 concerns are from the cultural practitioners, I couldn't</p> <p>11 tell you. But perhaps providing them resources that might</p> <p>12 be available other places, I am not sure, and seeing what</p> <p>13 some of those people have. I don't think -- offsite is</p> <p>14 fine. I just don't think it should be the only thing that</p> <p>15 should be looked at.</p> <p>16 MS. CAROLINE BLANCO: Right. And I don't think</p> <p>17 we're saying offsite is not the only option. We are open</p> <p>18 to suggestions for onsite mitigation as well, provided, of</p> <p>19 course, the scientific objectives will still be met.</p> <p>20 So if I understand this correctly, then as far</p> <p>21 as the process goes, in addition to tomorrow, we will have</p> <p>22 two more days of meetings in addition to the meeting with</p> <p>23 the park in late August. And during those meetings, we</p> <p>24 will try to continue to draft an MOA to address adverse</p> <p>25 impacts.</p>	<p style="text-align: right;">148</p> <p>1 were held and were noticed. And they made a special</p> <p>2 effort to have one of the meetings at Waiehu, which is in</p> <p>3 the Hawaiian Homes area, specifically to get Hawaiian</p> <p>4 peoples inputs. And these are meetings that, actually, I</p> <p>5 testified in two of them. And so these are things that</p> <p>6 have happened.</p> <p>7 How much more do we need? How many more do we</p> <p>8 need? Thirteen have happened.</p> <p>9 That's my comment.</p> <p>10 MS. PUA AIU: Go ahead.</p> <p>11 MR. KIOPE RAYMOND: No. Go ahead.</p> <p>12 MS. PUA AIU: No. I think there is a difference</p> <p>13 when you sit down to negotiate an MOA versus just hearing</p> <p>14 feedback.</p> <p>15 I would take a wild guess here, but most of the</p> <p>16 feedback was negative.</p> <p>17 MS. CAROLINE BLANCO: I think you raise a very</p> <p>18 good point. I think that there is often confusion about</p> <p>19 what does consultation mean. I think certainly, from my</p> <p>20 perspective, consultation has to include feedback from the</p> <p>21 community to find out what the concerns are. I mean, you</p> <p>22 can't negotiate over how to address those concerns until</p> <p>23 you know what the concerns are, in the first instance.</p> <p>24 So it strikes me that it was appropriate to go</p> <p>25 through this effort. And from my look at the history of</p>
<p style="text-align: right;">147</p> <p>1 I am also going to make an effort to try to -- I</p> <p>2 left a message with Betsy Merritt of the National Trust</p> <p>3 Historic Preservation, and said that we would be</p> <p>4 interested in meeting with her in Washington. So we will</p> <p>5 try to make that effort as well, reach out to her.</p> <p>6 We will renew our request for a meeting with the</p> <p>7 Advisory Counsel. Hopefully, they will see fit to meet</p> <p>8 with us as well and recognize the efforts we are trying to</p> <p>9 make here.</p> <p>10 So that is the outline. If that sounds like a</p> <p>11 good plan to you, it would be helpful to know that.</p> <p>12 MS. PUA AIU: Yeah.</p> <p>13 MS. NANCY McMAHON: I think we're fine with</p> <p>14 that.</p> <p>15 MS. PUA AIU: We're fine.</p> <p>16 MS. CAROLINE BLANCO: We really appreciate that.</p> <p>17 Anything anybody else would like to ask the</p> <p>18 folks here?</p> <p>19 I am sensitive to the fact that you have a plane</p> <p>20 to catch. And I don't want to keep you beyond what you</p> <p>21 need to be here for time-wise.</p> <p>22 Yes.</p> <p>23 MR. WARREN SHIBUYA: I just want to make a</p> <p>24 comment and say that I did attend four of the meetings.</p> <p>25 And I just want to tell them that, yes, these meetings</p>	<p style="text-align: right;">149</p> <p>1 it, it seemed like it was a pretty significant effort that</p> <p>2 was undertaken for a long period of time.</p> <p>3 But we are at this stage now where we've</p> <p>4 acknowledged the adverse effects. And we're trying to</p> <p>5 move forward and address those.</p> <p>6 Yes.</p> <p>7 MS. MIKAHALA HELM: I just wanted a</p> <p>8 clarification, Charlie, because you mentioned 13 meetings</p> <p>9 that you said were Section 106. And I wanted a</p> <p>10 clarification if you are meaning that the 13 meetings</p> <p>11 included general meetings. Because I wasn't aware that</p> <p>12 there were 13 specific Section 106 meetings. I think</p> <p>13 maybe if you included general meetings and public</p> <p>14 community meetings, it might be 13.</p> <p>15 DR. CHARLIE FEIN: No. There were --</p> <p>16 MR. KIOPE RAYMOND: But not Section 106.</p> <p>17 DR. CHARLIE FEIN: Section 106 meetings weren't</p> <p>18 always public meetings. For example, when we got together</p> <p>19 with OHA, there was a limited attendance. That was a</p> <p>20 Section 106 meeting, but it didn't include the invitation</p> <p>21 to the general public.</p> <p>22 In our outreach, we went out to various places.</p> <p>23 Because this is a suggestion --</p> <p>24 MR. KIOPE RAYMOND: Your very first one was a</p> <p>25 Section 106.</p>

<p style="text-align: right;">150</p> <p>1 MR. MIKE MABERRY: Yes.</p> <p>2 DR. CHARLIE FEIN: We had gotten a suggestion</p> <p>3 that we actually go knock on doors and talk to people one</p> <p>4 on one or twos and threes. So we did that. So I include</p> <p>5 all of those as Section 106.</p> <p>6 MR. KIOPE RAYMOND: The one in the library was</p> <p>7 not a Section 106.</p> <p>8 MS. CAROLINE BLANCO: But, again, these two</p> <p>9 processes are joined together, so it has informed it.</p> <p>10 But I think there was another comment. Do you</p> <p>11 want to make a comment before -- you, yes, before they</p> <p>12 took off?</p> <p>13 MS. VERNA KAIULANI NAHULU: No. I will speak</p> <p>14 after.</p> <p>15 MS. ANNELLE AMARAL: If there are no further</p> <p>16 comments, are we ready to release DLNR, since this is the</p> <p>17 last call?</p> <p>18 Thank you very much for coming. Appreciate it.</p> <p>19 Just a reminder, before you speak, we need you</p> <p>20 to -- oh, Warren needs to sign, too -- identify yourself</p> <p>21 for the court stenographer so she knows your name. And</p> <p>22 then, you know, you get to make your comments.</p> <p>23 This is a different structure than a public</p> <p>24 hearing. This is, as you can see, more of a conversation.</p> <p>25 And lots of people get involved in this conversation. So</p>	<p style="text-align: right;">152</p> <p>1 I really appreciate Sol's input here. He spoke</p> <p>2 for a lot of us. But I appreciate that he talked about</p> <p>3 the hurt of the Hawaiians. And I acknowledge that, but I</p> <p>4 also feel that we have to go beyond the hurt in order to</p> <p>5 come to some kind of conclusion and not be hurting all</p> <p>6 over the place and causing delays a lot.</p> <p>7 I would like to go beyond the hurt and realize</p> <p>8 the educational value of what we are talking about. And I</p> <p>9 would also like to speak for some of the children that are</p> <p>10 not here, for their generation.</p> <p>11 I am a teacher who can see a scientific future</p> <p>12 for our children in their own future. That they own their</p> <p>13 future. And they are not -- they are not at any of our</p> <p>14 meetings. So here all the old people are talking and we</p> <p>15 are so into our past and we're into everything that has</p> <p>16 gone on before, and sometimes we don't want to move past</p> <p>17 that.</p> <p>18 So I want to move past that and, yet, know that</p> <p>19 our cultural lives are partly based on the fact that all</p> <p>20 of our ancestors traveled by canoes. And the skies were</p> <p>21 extremely important to them, extremely important. In</p> <p>22 fact, they showed the way forward, for our canoes to go to</p> <p>23 where we wanted to go. So the skies are still extremely</p> <p>24 important. We still are traveling by canoes, some of us.</p> <p>25 And our children have to know the past</p>
<p style="text-align: right;">151</p> <p>1 if there are any people who want to speak that are behind</p> <p>2 the speakers, we ask that you wave at me so that I will</p> <p>3 acknowledge somebody wants to ask a question, we will call</p> <p>4 on them. Otherwise, you know, it will be pretty free</p> <p>5 flowing.</p> <p>6 And we ask that, once you are recognized and you</p> <p>7 are going to speak, beyond the person who has just</p> <p>8 identified themselves, you've got to identify yourself for</p> <p>9 the court stenographer. So before you speak, give your</p> <p>10 name.</p> <p>11 I am monitoring to make sure everybody is kind</p> <p>12 to one another and behaving.</p> <p>13 DR. CRAIG FOLTZ: So far so good.</p> <p>14 MS. ANNELLE AMARAL: Yes. We have had a very</p> <p>15 kind group.</p> <p>16 Please, you were here first, so I am going to</p> <p>17 let you begin.</p> <p>18 MS. VERNA KAIULANI NAHULU: Thank you.</p> <p>19 My name is Verna Kaiulani Nahulu. I am a Native</p> <p>20 Hawaiian kupuna, retired teacher, resident of Keokea</p> <p>21 Hawaiian Homestead.</p> <p>22 And I would like to take another slant. I see</p> <p>23 us going horizontal all the time in all these meetings.</p> <p>24 And there is nothing vertical happening. So I would like</p> <p>25 to inject a more vertical point of view.</p>	<p style="text-align: right;">153</p> <p>1 information of our skies, they have to know our present</p> <p>2 and our future information about the skies. And these</p> <p>3 people are here to contribute something towards the future</p> <p>4 of the education of our skies for the future generations,</p> <p>5 for the present generations who are here and their</p> <p>6 children and their grandchildren.</p> <p>7 And so I want to move forward. And still</p> <p>8 appreciating our ancestors, but moving forward, to be with</p> <p>9 the children who are steeped in technologies, steeped in</p> <p>10 technologies of their own present and future. And moving</p> <p>11 towards the help that we can give them to advance, to</p> <p>12 advance into the world they are going to live in.</p> <p>13 And so it's very important for me as a teacher</p> <p>14 to consider that our future generations of children have</p> <p>15 to be part of the equation. And since they are not, there</p> <p>16 are teachers like me who understand the feelings of our</p> <p>17 children. And we can probably go forward in that.</p> <p>18 I think science and the culture of our Hawaiians</p> <p>19 can come to a harmonial and reuniting of feeling among the</p> <p>20 people and go forward in our lives as Hawaiians, but as</p> <p>21 Hawaiians with a future. As the children that we have</p> <p>22 and -- the children that we have in our islands, we have</p> <p>23 to help them to go forward into the future that they own.</p> <p>24 We will not be here forever, but our children are coming,</p> <p>25 our grandchildren are coming, our great grandchildren are</p>

<p style="text-align: right;">154</p> <p>1 coming. And they need the possibility of growing in their 2 future.</p> <p>3 And the fact that we have come from someplace in 4 our past should not negate our children's future. And 5 this is what I am here for, to help to see that we can 6 have a structural situation where our children can grow 7 and our children can learn, and their children, too.</p> <p>8 And so it is very important for me to see some 9 kind of vertical point that we can come to, to come to 10 some kind of conclusion, instead of wandering 11 horizontally. Maybe if we can take a few baby steps and 12 then bigger steps to go forward.</p> <p>13 So that is what I have to say today.</p> <p>14 And so are there any questions?</p> <p>15 DR. CRAIG FOLTZ: I have a question. Verna, do 16 you think that we can actually -- and I ask this question 17 of Sol, too, and Warren, and anyone else -- do you believe 18 that we can integrate modern technology and respect for 19 historical practices and culture?</p> <p>20 MS. VERNA KAIULANI NAHULU: It has always 21 happened. And it needs to happen now, again and again. 22 You know, you look at Europe, you know, and they come from 23 a very, very big past. But they go forward, too.</p> <p>24 DR. CRAIG FOLTZ: I agree with that. It's not 25 the articulation I would put it, but in the realization --</p>	<p style="text-align: right;">156</p> <p>1 about -- pardon me if I just prod along here -- but I 2 thought about this when you were talking about going up 3 and experiencing the sky. Because, you know, I've taught 4 astronomy and been an astronomer for 30 years. The thing 5 that I like best -- I used to take guest to our 6 observatories in Arizona. The thing that I liked best is 7 explaining the sky, standing out as the sun goes down and 8 explaining the sky. There is where the planets are, 9 that's where the sun goes. You know, that's the sort of 10 thing that you can do from my heritage or from your 11 heritage. And in the end, you end up with somebody who 12 has an understanding of the way the sky works.</p> <p>13 It's not simple. It's not something you just 14 learn in an hour and-a-half. You know, you need to sit 15 under it, you need to watch it. Whether you watch it from 16 the dome of a telescope or whether you watch it with an 17 elder who is teaching in a different perspective, that's 18 what you need to learn in order to be equipped to work at 19 an observatory. Even if you are working at an observatory 20 as a programmer or as an engineer or technician or 21 telescope operator or an astronomer. That's the sort of 22 thing that I see.</p> <p>23 You know, if we want to tap into the economic -- 24 and I am talking economic because that's -- in many ways 25 that's what you are talking about, too.</p>
<p style="text-align: right;">155</p> <p>1 MS. VERNA KAIULANI NAHULU: Exactly.</p> <p>2 DR. CRAIG FOLTZ: -- that I have trouble. I 3 look at these islands -- and, you know, we've asked, been 4 asked many times about the economic impact of ATST, how 5 many jobs will you bring. And that's an important 6 question. And, really, my sense is that the important 7 thing is to fill those jobs with people who live here. 8 Because people who live here like to live here. People 9 who come here from the mainland don't stay very long for a 10 variety of reasons.</p> <p>11 And if you look at that opportunity in the 12 context of all of the astronomy of Hawaii, and not just 13 the ATST -- I mean, you have how many telescopes on your 14 mountain, how many employees work on Haleakala right now?</p> <p>15 MR. MIKE MABERRY: About 100.</p> <p>16 DR. CRAIG FOLTZ: If you ask how many work in 17 Hilo and Waimea, on the Big Island, and the top of Mauna 18 Kea, it must be another 300.</p> <p>19 MR. MIKE MABERRY: Easy.</p> <p>20 DR. CRAIG FOLTZ: And when I look at a 21 possibility for going forward -- and there are certain 22 types of talents that are needed at observatories. And 23 they are not necessarily just astronomy, but they include 24 astronomy.</p> <p>25 Sol, I thought about this when you were talking</p>	<p style="text-align: right;">157</p> <p>1 MS. VERNA KAIULANI NAHULU: Exactly.</p> <p>2 DR. CRAIG FOLTZ: The economic potentials of the 3 resources that you have here, does this mitigate the hurt? 4 I don't think it does. I think we have to do that another 5 way. I think we have to work on other things. But that 6 is what allows people to live a good life, maintain the 7 connection to the past.</p> <p>8 MS. VERNA KAIULANI NAHULU: Right.</p> <p>9 DR. CRAIG FOLTZ: Maintain a connection to their 10 culture and their practices, and still live where they 11 were planted.</p> <p>12 MS. VERNA KAIULANI NAHULU: Yes.</p> <p>13 DR. CRAIG FOLTZ: That's the sort of mitigation 14 that I see that's a real mitigation. In addition to the 15 onsite stuff, and in addition to a commitment to take it 16 all away when we are done with it.</p> <p>17 But I still have that problem. I still have 18 that problem of how do we do that, how do we make that 19 linkage. And I think that's the work that we would have 20 ahead of us.</p> <p>21 MS. VERNA KAIULANI NAHULU: I totally agree. 22 And I think it will come to pass, you know, if we keep 23 trying to go forward instead of wandering in circles.</p> <p>24 But I would like to go on record as saying that 25 I am completely for the ATST to be constructed at</p>

<p style="text-align: right;">158</p> <p>1 Haleakala, at the point where it would be the best place.  2 And you have already said which point is the very best  3 place. And I think it is very intelligent, considering  4 all the possibilities -- I mean, it's behind the Mees,  5 it's not like -- it's not like a blue, brown structure and  6 -- everything has been so delicately put together. And I  7 completely am in favor of it.  8 And I think if 1,000 children were with me, I  9 think they would be in favor of it, too. Because we  10 oldsters, we like to stay with our past, you know. And  11 it's the children who want to go forward with their  12 future.  13 And I think we should allow the children their  14 future and not stick with the past that is like so, so --  15 we've already lived the past, you know. In the present, I  16 think we have to provide for our children's future. And  17 it is not being discussed.  18 DR. CRAIG FOLTZ: Thank you.  19 MS. ANNELLE AMARAL: Thank you.  20 Warren.  21 MR. WARREN SHIBUYA: Thank you. I am Warren  22 Shibuya. I am a private resident.  23 And this is my fifth time, I believe, that I am  24 meeting with you people. So in comment in retrospect to  25 the couple previous -- Dr. Aiu, with all due respect to</p>	<p style="text-align: right;">160</p> <p>1 And this is a great opportunity, as my previous  2 colleague mentioned. Here is a chance to provide for an  3 opportunity to grow, not only internationally, not only  4 for national, not only for Hawaii, but for Maui, too.  5 Here is that chance. Let's do it.  6 I also want to mention that, yes, this is a  7 delicate and very touchy situation. We are trying to  8 restore and build the cultural heritages of the Hawaiians.  9 Respectfully, we're trying to do this.  10 Maui's Haleakala was the home -- and I say  11 was -- was the home of Pele. Pele has since moved to  12 Kilauea.  13 However, that doesn't mean that Haleakala is  14 less than Kilauea. It's still revered. The sacred wahi  15 pana, this area is a sacred area of the demigod Maui, as  16 you know.  17 And there are other gods and goddesses, 40,000  18 of them, all in this area floating above this area called  19 Wao Akua where the gods reside. And, yes, you will be  20 looking through this area.  21 It's sensitive, yes, because, if you apply it to  22 our today's culture, we're peeping through a neighbor's  23 house, we're invading their privacy. But we are not  24 really looking at them, we are looking at the sun.  25 So, yes, there is going to be this conflict</p>
<p style="text-align: right;">159</p> <p>1 her -- that there was inadequate opportunity to express,  2 to provide comments, to provide mitigation, I think there  3 was more than enough opportunity to do that.  4 But here I am. I am retired from the Space &amp;  5 Missile Systems Center in El Segundo, California. I have  6 been passionate for 32 years in science. And we did lots  7 of satellites. And I am very proud of that.  8 And I hope this pride can be brought over and  9 shared with the people of Maui, even to Hawaii. And this  10 opportunity does not come every day. This is one of a  11 kind, one-time shot, folks.  12 MS. VERNA KAIULANI NAHULU: Right.  13 MR. WARREN SHIBUYA: And we're going to do it.  14 Let's do it right. And I think we can do it because you,  15 NSF, the astronomy people at UH, worked with this and  16 tried to work issues to make it as acceptable as possible.  17 Yes, Craig, I believe the hurt is always going  18 to be there.  19 Looking back at the 18th Century culture where  20 you have Kolekole, which is the summit area, which is  21 where the Kahuna Po'o, the high priest, consulted with the  22 gods and goddesses to answer questions and delve into  23 tough questions and issues. Yes, this is the same  24 Kolekole that today we are now considering building a  25 project that will be a promise for our youth.</p>	<p style="text-align: right;">161</p> <p>1 here. Today, it's misdemeanor, called peeping into your  2 neighbor's privacy. But we are not looking at the  3 neighbors' privacies.  4 So here is an opportunity for both the National  5 Science Foundation, perhaps -- and, Craig, we talked about  6 this in one of our meetings. That I ask that the National  7 Science Foundation consider, and the Institute of UH  8 Astronomy, and the State contribute to a workforce  9 development type program on Maui, and hire residents, Maui  10 as well as Hawaii, to work on the ATST project. Not only  11 the OJT, on-the-job, type training, but programming,  12 educational funding, supporting the studies of  13 mathematics, physical and gaseous sciences, solar physics,  14 thermal and plasma dynamics, engineering, and Hawaiian  15 culture.  16 This proposal needs the joint community, State  17 and business support.  18 The State to provide the land, facilities and  19 faculty. And create a four-year university college of  20 sciences, technology, engineering on Maui. And I believe  21 that is the Maui Community College that is making that  22 proposal, or will be making that proposal.  23 The second would be the ATST is to employ Maui  24 residents as much as possible and develop the ATST  25 workforce through a close working relationship among the</p>

<p style="text-align: right;">162</p> <p>1 NSF, NSO, UH, State, Maui County and the Council.  2 And the contributions of the private and  3 business partners, this would be in terms of having the  4 funds to construct and staff a long-term commitment that  5 is a mentoring program, like a bootstrap, to bring the  6 people from today's level of expertise or knowledge to a  7 higher level.  8 The third would be to initiate and suggest, as  9 Uncle Charlie Maxwell mentioned, that ATST establish a  10 Maui Solar and Hawaiian Culture Center. I believe the  11 land has been acquired through a private donor. And that  12 this center would be a cultural center to show the people  13 of the United States as well as internationally that the  14 Hawaiian culture has pride. They have programs in which  15 they can explain and provide more information on, as well  16 as explain the online solar images and solar disturbance  17 impacts on earth and satellite communications.  18 Making these connections is the most important  19 aspect. And here is that center that will help bring lots  20 of data points together and bring pride to Maui, bring  21 pride to Hawaii.  22 MS. VERNA KAIULANI NAHULU: Absolutely.  23 MR. WARREN SHIBUYA: Thank you.  24 So this is very important. Our astronauts in  25 space need this type of information because if you had</p>	<p style="text-align: right;">164</p> <p>1 I am also asking that the UH Institute of  2 Astronomy remove most of the remaining historical radio  3 telescope structures that were used in the 1950s by the UH  4 professor, Dr. Grote Reber.  5 It's not being used today. So why have it  6 there? Start cleaning it up.  7 This helps mitigate some of the problems that we  8 have and allow for less scientific, so to speak, or  9 technical junk up there, to allow for more space for  10 worshipping and to appreciating the sacredness of this  11 summit area.  12 The site number 5443 would be restored to its  13 original pu'u, that's a heiau, 24-foot height, from  14 required ATST excavation surcharge. That's when you  15 excavate for the ATST, you would restore that pu'u to 24  16 feet height.  17 And I think that would help the people, make  18 this a little bit more acceptable. We are trying to  19 restore, we are trying to bring back. And this sunset  20 clause not only apply to ATST, but set the precedent for  21 UH, as well as the Mees Observatory, as well as for the  22 Air Force Space Surveillance Programs, all of these have  23 specific time limits in which they will be restored. That  24 you would not add to any more that you already have.  25 Thank you.</p>
<p style="text-align: right;">163</p> <p>1 solar storms coming out, there's tremendous amount of  2 radiation. And I think people on Maui as well as the rest  3 of the world are not fully aware of this. What types of  4 rays hit us?  5 And we start talking in terms of global warming.  6 Well, is it really global warming or is the sun getting  7 hotter, or is it radiating more? We need to study it,  8 folks. That's what we need to know.  9 The fourth would be ATST adopt and enter a  10 written contract -- and I call this a sunset clause -- for  11 the ATST structure and program -- and I realize that this  12 may not be very friendly and proactive, but I would say  13 that here is an opportunity to return the land to the  14 Hawaiians for their sacred worshipping. And it will not  15 happen in my lifetime or the next generation, but at least  16 for four cycles of the sun, which is 22.5 years each  17 cycle, I believe.  18 DR. CRAIG FOLTZ: It's either eleven and-a-half  19 or 22, depends on whether you count it once or twice.  20 MR. WARREN SHIBUYA: Yes. And then they will be  21 for approximately 90 years, is that okay? That sort of  22 thing.  23 After the 90 years, the sunset clause strikes in  24 and says that ATST is to remove the structures and restore  25 used summit grounds to original sacred configuration.</p>	<p style="text-align: right;">165</p> <p>1 DR. CRAIG FOLTZ: Thank you, Warren.  2 MS. ANNELLE AMARAL: Thank you very much.  3 MS. CAROLINE BLANCO: Thank you.  4 MS. ANNELLE AMARAL: Does anyone wish to  5 inquire?  6 DR. CRAIG FOLTZ: I would just like to say I  7 appreciate it that you have a number of very specific well  8 thought out points. And I think that, in many ways, they  9 mesh with other -- part of what we have ahead of us is  10 taking suggestions such as yours and merging them with  11 suggestions such as we heard from Sol earlier.  12 MR. WARREN SHIBUYA: Sure.  13 DR. CRAIG FOLTZ: I think that's kind of the  14 challenge ahead. And to take issues of like science,  15 technology, education, workforce development programs and  16 merge them with Maui Community College sorts of proposals,  17 I think you have given us the nub of a lot of really good  18 ideas. And I appreciate that.  19 MR. WARREN SHIBUYA: Thank you. Thank you for  20 this chance.  21 MS. ANNELLE AMARAL: Thank you.  22 MR. WARREN SHIBUYA: I will be listening to  23 others.  24 MS. VERNA KAIULANI NAHULU: Warren has been a  25 very eloquent person in our discussions. And I really</p>

166	168
<p>1 appreciate his input because he is a forward moving  2 person.  3 I would like to say, what I didn't include in my  4 presentation, is that a lot of us teachers and people like  5 Warren who want to go forward -- because we haven't been  6 able to and we are going around in circles, people like me  7 have just begun writing books for the children. And I  8 have written a book introducing physics to  9 three-year-olds. And in the next ten years, I will be  10 writing textbooks for grade one physics, grade two  11 physics, like it should have been from the very beginning.  12 And I was inspired to do this when Mike took me  13 to the summit and showed me around, what facilities we  14 have up there. And it just struck me that each of us has  15 to do something. And writing is where I am coming from.  16 And I am contributing on that part.  17 Because all the way up, from three years old all  18 the way up, our children need to be -- they need to have  19 something. And I have grown up in Hawaii where, you know,  20 the children have said, go out and play, go, go out and  21 play, where there is no structure for them to get a hold  22 of and learn from. And so I depend on my books to do it.  23 And I am going to be doing some film work just  24 to be able to share with children the possibility of the  25 future they should own.</p>	<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p>
167	169
<p>1 Thank you so much.  2 MS. ANNELLE AMARAL: Nice. Thank you. Thank  3 you very much.  4 Do you think we could take a bit of a break?  5 DR. CHARLIE FEIN: Yes. Take a bit of a break.  6 We have some pizzas coming.  7 MS. ANNELLE AMARAL: I think we get to take at  8 least an hour's rest. No, not an hour?  9 DR. CHARLIE FEIN: Well, we have --  10 MS. ANNELLE AMARAL: Keeping an eye open for  11 people coming in, so don't go far. But at least the  12 stenographer knows she can stop for a little while.  13 (Recess.)  14 MS. CAROLINE BLANCO: The remaining consulting  15 parties, and NSF, the ATST project team remained in the  16 room to summarize the events of the morning and developed  17 a list of potential MOA issues. And we can say Warren  18 Shibuya, Verna Nahulu, and Sol Kaho'ohalahala left the  19 room.  20 And, after which, the remaining parties, NSF and  21 the ATST project team and the facilitator, awaited the  22 arrival of any additional consulting parties until 8:00  23 PM.  24 And no consulting parties arrived or attended.  25 (Adjourned at 8:01 PM)</p>	<p>1 CERTIFICATE 2 3 4 5 6 7 I, TONYA MCDADE, a Court Reporter of the State 8 of Hawaii, do hereby certify that the proceedings 9 contained herein were taken by me in machine shorthand and 10 thereafter was reduced to print by means of computer-aided 11 transcription; that the foregoing represents, to the best 12 of my ability, a true and accurate transcript of the 13 proceedings had in the foregoing matter. 14 I further certify that I am not an attorney for 15 any of the parties hereto, nor in any way concerned with 16 the cause. 17 18 DATED this ___ day of _____, 2008. 19 20 <i>Signature on File</i> 21 _____ 22 Tonya McDade, RPR, CRR, CBC 23 Hawaii CSR #447 24 25</p>

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**Appendix C(4): Transcripts**  
**Section 106 Meeting, UH IfA, Maikalani Facility, June 17, 2008**

Held at University of Hawaii Institute for Astronomy,  
Maikalani Facility, 34 Ohia Ku Street, Pukalani, Maui,  
Hawaii, commencing at 10:01 A.M., on JUNE 17, 2008.

REPORTED BY: TONYA MCDADE, RPR, CRR, CBC, CSR #447

2	<p>1 ATTENDANCE</p> <p>2 NATIONAL SCIENCE FOUNDATION</p> <p>3 Dr. Craig Foltz, ATST Program Officer</p> <p>4 Ms. Caroline Blanco, Assistant General Counsel</p> <p>5 NATIONAL SOLAR OBSERVATORY</p> <p>6 Mr. Jeremy Wagner, ATST Project Manager</p> <p>7 NATIONAL OPTICAL ASTRONOMY OBSERVATORY</p> <p>8 Mr. Jeff Barr, ATST Project Architect</p> <p>9 UNIVERSITY OF HAWAII INSTITUTE FOR ASTRONOMY</p> <p>10 Mr. Mike Maberry, Assistant Director</p> <p>11 KC ENVIRONMENTAL, INC.</p> <p>12 Dr. Charlie Fein, Vice President</p> <p>13 Ms. Sharon Loando-Monro, Planning Projects Manager</p> <p>14 MEETING FACILITATOR</p> <p>15 Ms. Annelle Amaral</p> <p>16 OTHER ATTENDEES:</p> <p>17 Mr. Sol Kaho'ohalahala</p> <p>18 Mr. Hinano Rodrigues</p> <p>19 Ms. Tonia Moy</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	4
3	<p>1 NATIONAL SCIENCE FOUNDATION</p> <p>2 SECTION 106 MEMORANDUM OF AGREEMENT MEETING</p> <p>3 JUNE 17, 2008</p> <p>4 TRANSCRIPT OF PROCEEDINGS</p> <p>5 MS. ANNELLE AMARAL: I think, at least with</p> <p>6 respect to my watch, it's close to 10:00. So if the</p> <p>7 notice was that we would begin at 10:00, we will try to</p> <p>8 end at 2:00. So we would like to see if we can't begin on</p> <p>9 time.</p> <p>10 We note that Sol Kaho'ohalahala is in the</p> <p>11 building taking a phone call. So he will join us when he</p> <p>12 can. And is one of the consulting parties.</p> <p>13 Before we begin, aloha, my name is Annelle</p> <p>14 Amaral. I will be facilitating today.</p> <p>15 And as people speak -- you know, of course,</p> <p>16 there is a court reporter here. So as you are about to</p> <p>17 speak, we would ask you to say your name clearly. She's</p> <p>18 asked you to sign in, those of you that are going to be</p> <p>19 speaking. That way, she can note who the speaker is as</p> <p>20 she is taking notes.</p> <p>21 This is very much a conversation. It's very</p> <p>22 different from public hearings where there is no</p> <p>23 discussion, it's sort of one-way communication. Today's</p> <p>24 effort is in fact two-way communication. It is a</p> <p>25 dialogue. So it tests the skill of the facilitator.</p>	5
2	<p>1 I would note some things. And that is, because</p> <p>2 it is a dialogue, we need to sort of respect when one</p> <p>3 person is speaking. We will let them finish what it is</p> <p>4 they have to say. You have a thought, you want to say</p> <p>5 something, raise your hand. Soon as they are done, we</p> <p>6 will recognize you, identify yourself, then you can speak.</p> <p>7 Because it is a dialogue, we expect that we are</p> <p>8 all going to listen closely to one another, respect one</p> <p>9 another, treat one another with respect. There is no need</p> <p>10 for us to be hostile or to be negative with each other.</p> <p>11 However, sometimes there are difficult things to</p> <p>12 say. And that being said, if you have something difficult</p> <p>13 to say, I would offer that you could address that</p> <p>14 difficult thing to the facilitator. And we can note it,</p> <p>15 we can process it that way, rather than saying hostile</p> <p>16 things to one another. Which often causes things to</p> <p>17 escalate and makes communication difficult.</p> <p>18 This is the second day of discussion. And so</p> <p>19 these notations that you see all over the wall are as a</p> <p>20 result of the first day of discussion. However, before we</p> <p>21 get into what it is you see on the wall, we would like to</p> <p>22 give some context to what it is we are discussing.</p> <p>23 And I would like to have it opened up by</p> <p>24 Caroline first, I think, to provide us with some context.</p> <p>25 Caroline, you want to introduce yourself, too?</p>	4
2	<p>1 MS. CAROLINE BLANCO: Sure. Thanks, Annelle.</p> <p>2 I am Caroline Blanco. I am Assistant General</p> <p>3 Counsel for the National Science Foundation, responsible</p> <p>4 for environmental matters, including cultural property law</p> <p>5 issues.</p> <p>6 And just by means of background, I came to NSF</p> <p>7 in September. And I am very dedicated to the field of</p> <p>8 cultural resources law, I teach law school, written some</p> <p>9 books on it. And been involved when I was at the</p> <p>10 Department of Justice for many years before this. So I am</p> <p>11 very, very much looking forward to trying to see what we</p> <p>12 can accomplish here and try to make sure we follow the</p> <p>13 process in the best way possible.</p> <p>14 To also provide some context as far as the</p> <p>15 process goes, even though I wasn't involved in it, based</p> <p>16 on my understanding in reading the correspondence,</p> <p>17 yesterday was probably the 14th consultation meeting that</p> <p>18 took place, or Section 106 meeting, shall we say. There</p> <p>19 were some public hearings involved. They started in June</p> <p>20 of 2005. The process between the NHPA compliance,</p> <p>21 National Historic Preservation Act compliance, and the</p> <p>22 National Environmental Policy Act, NEPA, sort of went</p> <p>23 hand-in-hand.</p> <p>24 The agency, NSF, had expanded the cultural</p> <p>25 resources space of 106 because of the significant cultural</p>	5

<p style="text-align: right;">6</p> <p>1 resources involved here. And so even though it's a  2 process that has been joined, it also has been expanded  3 upon on the 106 side. So that's why you will see in the  4 whole process, if you look at it historically, there were  5 additional meetings on 106 that weren't necessarily part  6 of NEPA.</p> <p>7 So that being said, what happened back in 2005,  8 2006, letters went out to the consulting parties at that  9 time who were people who were identified as having an  10 interest. Since NSF had acknowledged -- this doesn't  11 always happen with federal agencies, but NSF acknowledged  12 that there were cultural resources that would be impacted,  13 and the impact would be that it would have an adverse  14 effect. And so rather than focus on or dispute that  15 issue, we just move forward to how can we resolve them,  16 can we resolve them.</p> <p>17 And so questions were asked of people who were  18 interested in the process, how can these impacts be  19 resolved, these effects be resolved. There was not much  20 of a response. There had been some responses throughout  21 the process, including as of late, that focused on  22 alternative sites.</p> <p>23 And the problem here -- and we are sort of in a  24 unique situation, I think, compared to most other federal  25 agencies, certainly based on my experience and what I have</p>	<p style="text-align: right;">8</p> <p>1 So that is why we have moved beyond avoidance in  2 terms of what other alternatives are there to consider.</p> <p>3 You can see up at the white board there, for the  4 proposed site, we are really focused on mitigation. We  5 are completely open to ideas about ways in which things  6 can be mitigated both at the site -- not in terms of the  7 height of the telescope or the color of it, because those  8 things are certain requirements to meet the science  9 objectives for this proposed project. If you lowered it,  10 it wouldn't work.</p> <p>11 And we have folks here who can help describe  12 that a little bit better than I can.</p> <p>13 And so that's the reason why we have moved  14 forward to mitigation. We are also very interested in  15 offsite mitigation. And we can go through some of the  16 things that were identified yesterday as possibilities and  17 ways in which to try to work this through.</p> <p>18 Because, also -- moving to the process again --  19 yesterday, when the SHPD folks were here, there seemed to  20 be, I think, some confusion where they did recognize that  21 they were -- there has been a lot of -- I am sure you can  22 speak to it -- a lot of changeover of personnel and  23 continuity. So there was some misunderstanding about what  24 had transpired early on.</p> <p>25 And, also, they were unfamiliar with the Draft</p>
<p style="text-align: right;">7</p> <p>1 seen -- NSF deals with cutting-edge science. And so when  2 we look at this project, this proposed project, for  3 funding, it's an interesting situation. It's not as  4 though you are building a highway and you could move the  5 highway this way or this way or this way to avoid impacts  6 on cultural resources or minimize the impact.</p> <p>7 This is very unique in that in order to meet the  8 objective of the project, the science objectives of the  9 project, alternatives need to be identified that can meet  10 that criteria. And so this is problematic.</p> <p>11 And as I said, in other 106 situations, you  12 might say, well, can't we just move it over here. If we  13 did that in this situation, the project wouldn't be built.  14 Because the way that Haleakala was identified, Mount  15 Haleakala, was because it met certain science objectives.</p> <p>16 There are two sites that are under  17 consideration. Nothing has been decided at this point.  18 But if the telescope is to be built, it would be built at  19 one of those two sites.</p> <p>20 And we also have a no action alternative, which  21 is also a viable alternative.</p> <p>22 So even though it may appear that the  23 alternatives are limited, I want to be sure that it's  24 understood that it's not a matter of unwillingness; it's a  25 matter of will this meet the science objectives.</p>	<p style="text-align: right;">9</p> <p>1 Environmental Impact Statement and all of the work that  2 has been done this far.</p> <p>3 And their position was, as you know, that there  4 should be more alternatives looked at. But I think,  5 hopefully, we explained that. The same situation about  6 the science-driven reasons for choosing the sites as being  7 alternative sites. And, also, the no action alternative.</p> <p>8 And, hopefully, that was better understood  9 yesterday.</p> <p>10 So we made a copy of the entire correspondence  11 file for them, left it with them yesterday. And, also, we  12 will be happy to provide them, or you, with any  13 documentation you might need to help you understand it  14 more fully.</p> <p>15 I would point you to my November 8th letter to  16 the Advisory Counsel for a real summary of how the science  17 objectives were set up and how the alternatives stemmed  18 from that.</p> <p>19 There were -- correct me, folks, resource folks,  20 if I am wrong -- I think 72 sites originally were selected  21 throughout the world as potential sites for locating the  22 telescope. That was whittled down, based on whether or  23 not they really were viable sites, to six. And then  24 different experiments took place, measurements and so  25 forth were taken at each of these six sites.</p>

<p style="text-align: right;">10</p> <p>1 Then I think it might have gone down to three, 2 even. 3 DR. CRAIG FOLTZ: That's correct. 4 MS. CAROLINE BLANCO: And this took place over 5 the course of many years, to try to determine whether or 6 not certain sites were identifiable or could be identified 7 as potential viable sites from a scientific perspective. 8 That was what was presented to the National 9 Science Foundation. And so it really is a unique agency 10 from the standpoint that it's either an action or no 11 action alternative if it's going to be built. And the 12 action alternative, there are two sites that are under 13 consideration. 14 MR. JEFF BARR: Both on Haleakala. 15 MS. CAROLINE BLANCO: Both on Haleakala, yeah. 16 So, hopefully, that will help to answer some of 17 the questions you may have had about the process. And we 18 hope to have a continual dialogue. 19 Because of some of the concerns yesterday about, 20 I think, quite honestly, some confusion about the efforts 21 that had been made to try to reach out to different 22 consulting parties, and more process and so forth. There 23 have been a lot of correspondence over the course of the 24 years. And we haven't received a whole lot back. We have 25 only received three written proposals that all the</p>	<p style="text-align: right;">12</p> <p>1 resources we are still looking at. Since that was 2 identified as something in the February letters from the 3 SHPD and, also, the park as a request to broaden the scope 4 of the area potential effects, we responded and said we 5 would accept that and we would go forward and look at 6 impacts to the road. 7 So we are looking at avoidance, minimization and 8 mitigation, the whole suite of options there, because 9 there may be some way to avoid some impacts. There may be 10 some ways to mitigate. 11 It's not the same analysis as would be done with 12 this science-driven project in terms of location. So it 13 is a bit difficult. 14 When I asked the question yesterday to the SHPD, 15 how would you do this in terms of choosing alternatives -- 16 I mean, we wouldn't want to be disingenuous and say, well, 17 we will pick something else out, even though we know it's 18 not viable. It just wouldn't be honest and that would not 19 be right. 20 So in terms of looking at scientifically viable 21 sites, that has been done by the scientific community. 22 Not NSF, but, you know, the world community in terms of 23 astronomy. And they were the ones who picked that out, 24 those site selections out. So there has been a 25 peer-reviewed analysis that had been done to identify</p>
<p style="text-align: right;">11</p> <p>1 consulting parties have had. 2 And I know you came to the process a little late 3 in the game. 4 And there are the proposals out there as 5 handouts in the back of the room, if you are interested in 6 looking at those. 7 But because the SHPD thought that it would be 8 helpful to have more consultation meetings, we asked them 9 what they thought would be advisable, you know, what would 10 be a good way of doing this. And they said at least two 11 more consultation meetings in addition to today, making a 12 total of three more. And so we agreed to that since they 13 said that would be sufficient for them. 14 They thought that would be a good idea and 15 satisfy the process. 16 So we are looking at August 27th and 28th. 17 Because we have a meeting with the National Park Service 18 Superintendent, Marilyn Parris, on August 22nd, to discuss 19 impacts on the road. So we thought that we would time it 20 around that time we would be coming back out, some of us 21 from Washington, and try to combine it with that trip. 22 And those would be the final consultation meetings we 23 would have in terms of all getting together and trying to, 24 hopefully, negotiate a memorandum of agreement. 25 Pointing back to the white board, the park</p>	<p style="text-align: right;">13</p> <p>1 sites. 2 So yesterday, we had a long meeting, 9:00 in the 3 morning until 8:00 at night. Most of the discussion 4 happened the first half of the day. And Annelle had so 5 kindly written many, many notes on the discussion. 6 Once there was a break, rather than doing 7 nothing, we decided we would try to summarize the events 8 of the morning and try to figure out what types of 9 concrete identifiable proposals for mitigation could we 10 take from these notes. And as you see up there, MOA 11 issues in the black and red, there were several proposals 12 that were put forth that we started discussing. 13 And we could take a moment out to take a look at 14 some of those. 15 One was site cleanup at the site, removal of 16 Reber Circle and all remnants of it. And, you know, some 17 thoughts were by other consulting parties, I think the 18 IFA -- 19 Right, Mike? You had thought that maybe it 20 might be an opportunity to urge the partners to also clean 21 it up as well. Was that part of it? 22 And, also, promote proper and respectful access 23 to the site. We talked about maybe having a konohiki 24 identified and maybe some way to go ahead and have that 25 person develop an educational program or access to the</p>

<p style="text-align: right;">14</p> <p>1 community, a way of accessing the site and so forth.</p> <p>2 There was also a suggestion about building a</p> <p>3 star compass at the site. And having the navigators</p> <p>4 design it, not NSF. Having the Native Hawaiian community,</p> <p>5 the navigation community, try to -- go up there, after</p> <p>6 being given a proposed design of the site, to try to</p> <p>7 identify a place that might satisfy the requirements for a</p> <p>8 star compass.</p> <p>9 Also, there was discussion about a finite</p> <p>10 lifetime for the telescope. Interestingly enough,</p> <p>11 depending how you define the terms avoidance,</p> <p>12 minimization, mitigation, and, to some extent, there was</p> <p>13 some overlap there, this could be looked at maybe a</p> <p>14 minimization for the actual telescope. Instead of having</p> <p>15 it up there indefinitely, one idea was to maybe limit it</p> <p>16 to 50 years. That was a possibility.</p> <p>17 I think one of our consulting parties, Warren</p> <p>18 Shibuya had -- that will be interesting for the court</p> <p>19 reporter, to try to put what everybody said, you know --</p> <p>20 anyway, he had suggested maybe a lifetime of 90 years.</p> <p>21 And NSF, Dr. Foltz, had responded perhaps we could even</p> <p>22 look at 50 years, so reduce that, with a commitment to</p> <p>23 deconstructing man-made objects.</p> <p>24 And another one was -- let's see. And use --</p> <p>25 MS. ANNELLE AMARAL: And create a new Hawaiian</p>	<p style="text-align: right;">16</p> <p>1 So a lot of productive ideas came out of</p> <p>2 yesterday. And we look forward to hearing your thoughts</p> <p>3 on those ideas and any additional ideas you might have.</p> <p>4 MS. ANNELLE AMARAL: I wanted to also find out</p> <p>5 if Craig wanted to speak a bit more about the science</p> <p>6 objectives or give more context before we --</p> <p>7 DR. CRAIG FOLTZ: Sure. I can do that. Or I</p> <p>8 could ask Jeff to do it.</p> <p>9 My name is Craig Foltz. I am the Acting</p> <p>10 Director for the Division of Astronomical Sciences at the</p> <p>11 National Science Foundation. I have been in that position</p> <p>12 for roughly two months, and, hopefully, not too many more,</p> <p>13 as they find a replacement.</p> <p>14 But before that, I was the so-called program</p> <p>15 manager for this project. And so I have been the NSF</p> <p>16 responsible party for the oversight of the proposal and</p> <p>17 the review of the proposal and the interactions with the</p> <p>18 proposers, the PIs.</p> <p>19 And I just want to start out by saying that, to</p> <p>20 just make it clear what NSF's role is, we are not a</p> <p>21 proactive agency. We are not like NASA, we are not like</p> <p>22 DOE or DOD. We don't sit in a dark room and decide what</p> <p>23 the direction of science should be. And we don't decide,</p> <p>24 for example, this would be a really good time to build a</p> <p>25 telescope or to build an accelerator or to build an ocean</p>
<p style="text-align: right;">15</p> <p>1 usage as appropriate.</p> <p>2 MS. CAROLINE BLANCO: Right.</p> <p>3 MS. ANNELLE AMARAL: Onsite.</p> <p>4 MS. CAROLINE BLANCO: Right. There also is --</p> <p>5 moving to the second -- or the third, I guess, piece of</p> <p>6 paper there. There was the Maui Community College</p> <p>7 proposal that looked at integrating the Hawaiian culture</p> <p>8 with science into a curriculum.</p> <p>9 And I think this was Sol's. You can probably --</p> <p>10 where is Sol? He can speak a little bit more about that.</p> <p>11 And there also would be possibly the idea of</p> <p>12 providing appropriate names for the roads on Mount</p> <p>13 Haleakala. So changing some of the names, and subject to</p> <p>14 the approval of appropriate agencies.</p> <p>15 Looking at maybe workforce development,</p> <p>16 preferential hiring practices. There already is a</p> <p>17 commitment in the Draft EIS. And this is also set forth</p> <p>18 in the November 8th letter, mitigation measures that have</p> <p>19 been proposed. So this discussion should be looked at as</p> <p>20 in addition to what has already been proposed.</p> <p>21 And cultural monitor certainly is one of those.</p> <p>22 And a sense of place training, that's already</p> <p>23 included in there.</p> <p>24 And, also, including practices in long-range</p> <p>25 development planning.</p>	<p style="text-align: right;">17</p> <p>1 observatory. What we do is to react to the community, to</p> <p>2 be responsive to the scientific community.</p> <p>3 And they express their priorities and their</p> <p>4 desires in a number of ways. National academy studies,</p> <p>5 other independent studies, and eventually through</p> <p>6 proposals to us. Because, essentially, what we do is</p> <p>7 we're a funding agency.</p> <p>8 So I want to make it clear that although we are</p> <p>9 the federal party, the federal agency --</p> <p>10 MS. CAROLINE BLANCO: Funding agency.</p> <p>11 DR. CRAIG FOLTZ: Funding agency for this, we</p> <p>12 are a bit agnostic. We are not the proponents of the</p> <p>13 project. We are the funding agency that, if a decision is</p> <p>14 made, would fund it and would oversee its construction and</p> <p>15 oversee its operation.</p> <p>16 The proponents in this case is essentially the</p> <p>17 world's solar physics community, people who study the sun,</p> <p>18 the interactions of the sun with solar system's magnetic</p> <p>19 field, the earth's magnetic field, so on.</p> <p>20 The lead investigator on this, the lead party,</p> <p>21 is the National Solar Observatory, which is a part of a</p> <p>22 federally-funded research and development center. And an</p> <p>23 observatory that we have funded for decades with</p> <p>24 headquarters in Tucson, Arizona, and Sunspot, New Mexico,</p> <p>25 which is near Alamogordo. But they represent a large</p>

<p style="text-align: right;">18</p> <p>1 collaboration, who we went through.</p> <p>2 And we have funded the design of this telescope</p> <p>3 for at least the last seven years. The telescope is</p> <p>4 designed to study the sun in exquisite detail.</p> <p>5 We understand a lot about the sun. We know how</p> <p>6 old it is. We know how it creates its energy. We know</p> <p>7 more or less how that energy gets out.</p> <p>8 What we don't understand is solar activity, the</p> <p>9 existence of sunspots, why do we have sunspots. And those</p> <p>10 sunspots are clearly tied to very energetic phenomena, the</p> <p>11 sun.</p> <p>12 Let me say I am not a solar physicist. I am an</p> <p>13 observation cosmologist, my training. Now I am a</p> <p>14 bureaucrat.</p> <p>15 So we need to understand the solar activity</p> <p>16 which is magnetic -- I don't want to go into a long</p> <p>17 lecture. It's magnetic in origin and it can lead to very</p> <p>18 explosive phenomena on the sun which affect the life on</p> <p>19 earth, things like solar flares, coronal mass ejections,</p> <p>20 which are truly impressive events which spew billions of</p> <p>21 tons of material out from the sun at very high speeds.</p> <p>22 We also believe that there is an intrinsic</p> <p>23 connection between solar activity, the level of solar</p> <p>24 activity, and the climate on earth. We have historical</p> <p>25 records that date back well before 1600, in the case of</p>	<p style="text-align: right;">20</p> <p>1 to work.</p> <p>2 So, you know, a perfect example, I could build a</p> <p>3 ten-meter nighttime telescope. It would be a wonderful</p> <p>4 thing. If I located it in Central Park, it wouldn't work</p> <p>5 because of the sky is too bright.</p> <p>6 So in the case of this solar telescope, what you</p> <p>7 need is a site that has low water vapor above it, all</p> <p>8 right, so it's dry -- it's called precipitable water</p> <p>9 vapor. That's actually an easy criterion to meet for most</p> <p>10 mountain sites.</p> <p>11 It needs to have a very stable atmosphere above</p> <p>12 it. If you think about driving down the road in the</p> <p>13 afternoon when the road has been heated, or looking over a</p> <p>14 campfire, the image that you see, it's distorted. And</p> <p>15 that is caused by turbulence in the earth's atmosphere.</p> <p>16 Different cells of air with different temperature rising</p> <p>17 through your field of view. So you need to have a very</p> <p>18 stable air condition.</p> <p>19 And you also need to have -- and this needs a</p> <p>20 bit of explanation. You need a dark daytime sky. Now,</p> <p>21 what I mean by that -- yeah, I know. What I mean by that</p> <p>22 is you need to have very low dust and sort of haze</p> <p>23 conditions.</p> <p>24 So if you were to go out -- Mike can show us</p> <p>25 some pictures, then, if you really want to see it. If you</p>
<p style="text-align: right;">19</p> <p>1 the Chinese who actually did see sunspots before Galileo</p> <p>2 discovered them.</p> <p>3 And from associated tree ring data that the sun</p> <p>4 has periods of inactivity where there isn't -- sometimes</p> <p>5 they are quite long. Sometimes they are hundreds of years</p> <p>6 long. And these are correlated -- this is a bit</p> <p>7 circumstantial because we don't know the connection.</p> <p>8 These are correlated with extreme climate changes on</p> <p>9 earth.</p> <p>10 So, for example, the little ice age which</p> <p>11 occurred in the beginning of the 17th Century and extended</p> <p>12 out for about 150 years was a time of extreme cold and</p> <p>13 extreme famine, and, I think, Black Death. That was also</p> <p>14 a time when the sun showed no activity. And we don't</p> <p>15 understand why that is the case.</p> <p>16 Okay. Long story.</p> <p>17 What do you need to study solar activity? And</p> <p>18 that's what this telescope is for, to try to understand</p> <p>19 the root causes of solar activity. Not to prevent them,</p> <p>20 not to stop it, but what we don't know can hurt us. And</p> <p>21 the first steps in understanding how we might predict</p> <p>22 solar activity is to understand its root cause.</p> <p>23 This telescope is designed for that purpose. In</p> <p>24 order to do that, it needs to be of a certain design. And</p> <p>25 it also needs to be on the site that can allow that design</p>	<p style="text-align: right;">21</p> <p>1 were to go outside from ground level in Maui, in fact this</p> <p>2 morning, sort of hold your hand up over the sun. Don't</p> <p>3 look at the sun, it's not wise. Galileo did and he went</p> <p>4 blind. So, you know, hold your fingers up over the sun.</p> <p>5 You can see that the sky around your finger is bright and</p> <p>6 it's bright because there's scattering in the atmosphere.</p> <p>7 It's due to dust, it's due to water vapor and so on.</p> <p>8 What you really need to study the outer layers</p> <p>9 of the sun, which are very tenuous and very low contrast,</p> <p>10 is you need to have not much of that haze.</p> <p>11 In fact, if you go on many days to the top of</p> <p>12 Haleakala, as well as some other sites, and hold your</p> <p>13 fingers up over the sun, you will see that the sky right</p> <p>14 around your fingers is as dark as it is anywhere else.</p> <p>15 That's very important. And that means the low dust</p> <p>16 content in the air.</p> <p>17 So, essentially, the 72 sites which were</p> <p>18 whittled down to six based on a number of site</p> <p>19 characteristics -- some of them were quantitative, some of</p> <p>20 them were a bit more qualitative. The quantitative ones</p> <p>21 were the average clear sky fraction, the amount of</p> <p>22 rainfall, strong seasonal trends and climate. Also, the</p> <p>23 presence of infrastructure, the ability to get to the site</p> <p>24 and so on factored into that.</p> <p>25 Six sites were then instrumented. So identical</p>

<p style="text-align: right;">22</p> <p>1 instruments were put at each site to measure the</p> <p>2 precipitable water vapor, the turbulence in the atmosphere</p> <p>3 and the sky brightness.</p> <p>4 Those measurements were taken for a year, am I</p> <p>5 right?</p> <p>6 MR. JEFF BARR: That's about right. Sorry.</p> <p>7 MR. JEREMY WAGNER: A little over that.</p> <p>8 DR. CRAIG FOLTZ: And they were compared against</p> <p>9 objective criteria that were established. That is, the</p> <p>10 scientific community said if this telescope is going to</p> <p>11 work, it has to have a certain design, furthermore it has</p> <p>12 to have a site that has good conditions for a certain</p> <p>13 fraction of a time. So of those six, three were thrown</p> <p>14 out.</p> <p>15 And the remaining three were Big Bear Lake in</p> <p>16 California, La Palma in the Canary Islands, and Haleakala.</p> <p>17 Those were then -- they continued to be measured for at</p> <p>18 least another year.</p> <p>19 MR. JEFF BARR: Another year.</p> <p>20 DR. CRAIG FOLTZ: Then, again, all the data were</p> <p>21 analyzed and the data were compared against objective</p> <p>22 criteria that were established before the sites began.</p> <p>23 And I think that's an important issue. This was not a</p> <p>24 capricious choice. Of the three sites, Big Bear Lake --</p> <p>25 they all passed precipitable water vapor. They all had</p>	<p style="text-align: right;">24</p> <p>1 the telescope. And so that is where we get the height.</p> <p>2 If we could build it shorter, we would build it</p> <p>3 shorter because it would be cheaper.</p> <p>4 The color of the dome is established by the fact</p> <p>5 that the sun not only heats the ground, but it would heat</p> <p>6 the building. If the building were black or if it were</p> <p>7 painted brown, it would get hotter. It would transfer</p> <p>8 that heat to the air around it. It would drive</p> <p>9 turbulence. And it would render the telescope unusable at</p> <p>10 the limit at which we need to use it.</p> <p>11 So somewhere over here, we said we cannot</p> <p>12 mitigate the site, the height, the color, what we meant by</p> <p>13 that was, if we put it on a different site, it won't work.</p> <p>14 If we build it lower, it won't work. If we paint it</p> <p>15 brown, it won't work.</p> <p>16 And so that is really where we are. I mean, we</p> <p>17 are, in some sense, in a very small box. If we are unable</p> <p>18 to go with the telescope on this site with this design, we</p> <p>19 would not spend federal money on the construction of it.</p> <p>20 That was probably more than you wanted to hear.</p> <p>21 MS. CAROLINE BLANCO: No. I think that's really</p> <p>22 helpful. I mean, it should be understood. It's not an</p> <p>23 unwillingness. It's just whether or not it would work.</p> <p>24 And that is, hopefully, something that folks will</p> <p>25 understand and work with us on.</p>
<p style="text-align: right;">23</p> <p>1 dry air above them.</p> <p>2 Big Bear Lake was too turbulent. And because</p> <p>3 it's located east of LA, the sky was too bright. There is</p> <p>4 just too much haze.</p> <p>5 La Palma has decent turbulence. It passed the</p> <p>6 objective criterion. But since it's located to the west</p> <p>7 of Africa, the prevailing winds blow the Saharan dust over</p> <p>8 it. And that dust is very high altitude and, also, it</p> <p>9 precipitates out. Sometimes you go out -- I observed air,</p> <p>10 you go out and it's covered your car, you know, you got</p> <p>11 dust all over your car. So that caused it to fail on the</p> <p>12 sky brightness criteria.</p> <p>13 The only site of the 72 that were initially</p> <p>14 surveyed that met all three criteria was Haleakala.</p> <p>15 Now, you can then take the data that are</p> <p>16 collected for Haleakala, specifically how does the</p> <p>17 turbulence vary with the height above the ground --</p> <p>18 because the sun heats the ground -- I know this is good.</p> <p>19 I am going to give you a quiz. The sun heats the ground</p> <p>20 during the day and that drives turbulence. You want to</p> <p>21 have the telescope above that turbulence.</p> <p>22 The site was measured for two years. We</p> <p>23 understand the characteristics of what is called the</p> <p>24 ground layer, which is what it sounds like, the layer of</p> <p>25 air near the ground. And that establishes a height for</p>	<p style="text-align: right;">25</p> <p>1 Because if we can't do anything about that, what</p> <p>2 can we do? What are we able to do? And that is where</p> <p>3 mitigation comes into play. And that's where we can look</p> <p>4 at and see, is there something that we can do that can</p> <p>5 really benefit the Native Hawaiian community, is there</p> <p>6 something we can do that can benefit other interested</p> <p>7 parties, benefit the site itself, what can we do. And we</p> <p>8 are completely open to ideas.</p> <p>9 MR. MIKE MABERRY: Real quick. Everyone else</p> <p>10 has seen this except you two.</p> <p>11 You may have to tilt that so it's at the right</p> <p>12 angle.</p> <p>13 Can you see this big circle? Those two photos</p> <p>14 were taken an hour apart. One was taken at sea level and</p> <p>15 one was taken at the top of Haleakala. There's Haleakala.</p> <p>16 See how dark it is all the way up to the edge? One hour</p> <p>17 apart, just the two different spots.</p> <p>18 MR. HINANO RODRIGUES: Thank you.</p> <p>19 MS. ANNELLE AMARAL: I would like to see if you</p> <p>20 want to ask questions or --</p> <p>21 MS. TONIA MOY: Being that I am not a scientist,</p> <p>22 I just -- does it not work at all any place else or just</p> <p>23 does not work as well?</p> <p>24 DR. CRAIG FOLTZ: It was actually -- you asked a</p> <p>25 very good question. And it's a complicated answer.</p>

<p style="text-align: right;">26</p> <p>1 MS. TONIA MOY: Okay.</p> <p>2 DR. CRAIG FOLTZ: What you need to do with this</p> <p>3 telescope for its principal science-driver is you need to</p> <p>4 be able to resolve features on the sun that have the size</p> <p>5 of about 20 miles. We could go there with a ruler and</p> <p>6 measure it. No. The sun is 93 million miles away. So</p> <p>7 that requires exquisite detail.</p> <p>8 If you put it somewhere else -- and what you</p> <p>9 need to do is you need to watch those -- that feature,</p> <p>10 which is a little magnetic feature. It's a little bundle</p> <p>11 of magnetism which will interact with other bundles of</p> <p>12 magnetism. Sometimes they grow into sunspots -- this is</p> <p>13 what we think -- sometimes they nullify each other. You</p> <p>14 need to watch that evolve.</p> <p>15 So what the designers of this telescope did is</p> <p>16 they literally sat down and said, let's set up a bunch of</p> <p>17 use cases. We want to observe the development of the</p> <p>18 field and the photosphere, or we want to watch the field</p> <p>19 on a fibril -- which this is solar physics talk. And I</p> <p>20 know just strut my stuff and I don't really know what it</p> <p>21 means. No, I do. So you can look at that and say, well,</p> <p>22 what does that mean. Over how many hours do I expect</p> <p>23 something to change. You know, if I have a flare, how</p> <p>24 long does it take for that flare to evolve, how frequent</p> <p>25 are the flares.</p>	<p style="text-align: right;">28</p> <p>1 Now you might put a telescope somewhere else and</p> <p>2 get lucky. And you might make an individual measurement.</p> <p>3 But an individual measurement -- and you might get really</p> <p>4 lucky and you might be able to do a few measurements in a</p> <p>5 row and try to get some evolution. But in order to really</p> <p>6 make the telescope work, it needs to have conditions that</p> <p>7 are stable in time relative to the use cases.</p> <p>8 It would work less well.</p> <p>9 Let me make one more point.</p> <p>10 I know. I mean, I apologize. I am lapsing in</p> <p>11 my native tongue.</p> <p>12 The detail that an optic can see -- and this</p> <p>13 includes your eye or it includes a telescope or</p> <p>14 binoculars -- is a function of its size. It's linear, the</p> <p>15 size of its lens or the sizes of its mirror. This</p> <p>16 telescope has a four-meter diameter, 154-inch diameter</p> <p>17 mirror, which is not a big mirror. I mean, it would sort</p> <p>18 of fit in this room. It's small compared to some of the</p> <p>19 nighttime telescopes. You need that to be just able to</p> <p>20 observe details of 20 miles, seen from a distance of 93</p> <p>21 million miles. That's what you got to get to. So we</p> <p>22 design right to the margin. We don't over-design things</p> <p>23 because we're trying to minimize costs, we're trying to</p> <p>24 minimize size. We have very good reason, we know that,</p> <p>25 from physical principles, that is the size. We don't need</p>
<p style="text-align: right;">27</p> <p>1 Suppose I have a telescope that I want to see a</p> <p>2 flare, and a flare goes off, hope it doesn't happen at</p> <p>3 night. Okay. I mean, that's a real fundamental</p> <p>4 limitation. It works when the sun is up.</p> <p>5 So you can ask yourself what is the probability</p> <p>6 of a flare. And let me compare that against the number of</p> <p>7 clear hours that you have in a year. And you can do the</p> <p>8 probability. You know, they just sort of multiply. And</p> <p>9 you say what's the probability we will have a flare during</p> <p>10 good conditions if I had my telescope in New Orleans. And</p> <p>11 the answer would be zero, essentially.</p> <p>12 You can also say, suppose I want to watch a</p> <p>13 feature evolve. And I know how long it takes for those</p> <p>14 features to evolve. I just can't see them in the detail</p> <p>15 that I need. And you might say, I need to be able to</p> <p>16 observe that thing for a period of four or five hours,</p> <p>17 say. So that's a use case. I want to study the</p> <p>18 development of the magnetic field in a certain kind of</p> <p>19 feature in the solar photosphere, and I need to do that</p> <p>20 for four hours. And so that factors in to the conditions</p> <p>21 for the site.</p> <p>22 So if you look at the detailed condition for the</p> <p>23 site, they are very detailed. So many periods with the</p> <p>24 atmospheric turbulence less than a certain amount, for</p> <p>25 more than, and hours.</p>	<p style="text-align: right;">29</p> <p>1 to worry about sizes smaller than that.</p> <p>2 If it doesn't work at its limit, then it won't</p> <p>3 answer the questions that it would be put to.</p> <p>4 I make that statement unequivocally. And I</p> <p>5 don't mean it to be completely unequivocal. But, you</p> <p>6 know, we are basing our funding decision on the ability of</p> <p>7 the telescope to solve the problems that are laid out in</p> <p>8 the use cases. So, therefore, it is sort of a convolution</p> <p>9 of the design of the telescope, the properties of the</p> <p>10 telescope, the properties of the site.</p> <p>11 So if the site could not deliver that -- again,</p> <p>12 if the site can't deliver it, we wouldn't build it.</p> <p>13 Because this is expensive, \$250 million. We are not the</p> <p>14 Department of Defense, nor are we NASA. NSF has roughly a</p> <p>15 \$6 billion a year budget that supports all sciences except</p> <p>16 the life sciences -- the health sciences. We support life</p> <p>17 sciences. So this would be a substantial investment.</p> <p>18 MS. ANNELLE AMARAL: Did you want to ask any</p> <p>19 other questions with respect to what has been said so far?</p> <p>20 MS. TONIA MOY: I guess I had one more, though.</p> <p>21 MS. ANNELLE AMARAL: Please, yes.</p> <p>22 MS. TONIA MOY: Because, I mean, I am just</p> <p>23 getting all of this --</p> <p>24 DR. CRAIG FOLTZ: Right.</p> <p>25 MS. TONIA MOY: -- yesterday. I read through</p>

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1 most of it on the plane over.

2 So National Trust has -- I guess I want that

3 consultation issue clarified for me. And you guys might

4 have clarified it yesterday, but, you know, I still don't

5 quite get it. Like National Trust has been asked to be a

6 consulting party, and then I read, you know, that it was

7 sort of like there's this cutoff date of not allowing any

8 more consulting parties. And so I want all that -- I

9 think I would like that part clarified.

10 MS. CAROLINE BLANCO: Sure. We've allowed the

11 Trust to come in as a consulting party. I know Betsy

12 Merritt at the Trust. And I have talked to her about this

13 project and this situation, oh, since last fall, on and

14 off. And I know she doesn't have the entire record of

15 things.

16 I suspect you may not, either. I am not sure

17 what correspondence you looked at, but my guess is you

18 didn't look at 2005-2006.

19 MS. TONIA MOY: I just got something from 2006.

20 MS. CAROLINE BLANCO: And the Draft EIS. There

21 are many things that may be helpful to you as you consider

22 ideas for mitigation or consider your position with regard

23 to this process.

24 So the reason why NSF was trying to limit

25 consulting parties is because this process has been going

31

1 on for so long. And from our perspective, we asked for

2 proposals three years ago, we asked for proposals two

3 years ago, we asked for proposals a year ago, we asked for

4 proposals last November, again in May, again. And there

5 hasn't been a lot forthcoming other than people saying we

6 don't want you to build it on Mount Haleakala.

7 And for the reasons Dr. Foltz outlined,

8 hopefully there is a better understanding of NSF's reason

9 for saying, if it's to be built, then we can't avoid the

10 impacts. And so that is why we thought if we continue

11 this process on indefinitely, it won't have an end. If we

12 keep adding new parties to it, it will take on a life of

13 its own. And it's not a responsible federal process in

14 that sense.

15 Since you all agreed to respect that process in

16 that, you know, we are in the final stages of this at this

17 point, that is fine, you know, to allow the Historic

18 Hawaii Foundation in. And, also, the National Trust is

19 aware of that situation, and, also, Kiope and his group.

20 I am trying to remember the name of it.

21 MS. ANNELLE AMARAL: Kilakila o Haleakala.

22 MS. CAROLINE BLANCO: We let them in as well.

23 Thank you.

24 And so, you know, that's the position on that.

25 So the Trust is involved in it. And hopefully -- I've had

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1 some back and forth emails, voicemail exchanges with

2 Betsy. And, hopefully, when we get back to Washington, we

3 will have a chance to meet with her and brief her on this

4 and in a more full way.

5 MS. ANNELLE AMARAL: The thought was to use

6 today to be able to go through some of the specific

7 proposals for an MOA and to get your input, the input from

8 consulting parties.

9 To add to it, and as you have already been told,

10 there will be two more days of seeking information from

11 consulting parties towards the creation of an MOA.

12 Before we do that, what I need to know from the

13 two of you that have just arrived, and you weren't here

14 yesterday, because Sol was here all day with us yesterday,

15 would you like me to go through these poorly-written

16 notes? They pay me a great deal of money to write this

17 poorly, by the way.

18 DR. CRAIG FOLTZ: We don't pay you much to read

19 it.

20 MS. ANNELLE AMARAL: No. They don't pay me

21 anything to read it then.

22 So let me try to go through it as quickly as I

23 can. And it sort of flows with the way people spoke

24 yesterday.

25 So allowing that Kiope Raymond was here

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1 representing himself, as Kiope speaks, his comments go to

2 some of the proposals that were made. He notes that he

3 appreciated Warren Shibuya's notation of trying to repair

4 the harm that has been done to native peoples and the hurt

5 that has been done to native peoples.

6 He acknowledges that he supports the cleaning up

7 of the debris, the rubbish up at Haleakala.

8 He acknowledges, too, that he has some

9 information missing from Uncle Charlie Maxwell's proposal.

10 He needed more information with respect to that proposal.

11 And that was then provided to him.

12 He made some comments about the Maui Community

13 College proposal, alleging that it was a proposal that was

14 written at the request of the chancellor rather than

15 really coming from native peoples. That then ends up

16 being something in contention later, as we move through

17 it.

18 He, apparently, does not support and says that

19 the Native Hawaiian staff do not support the Maui

20 Community College proposal.

21 He objects to the content of the Draft EIS.

22 He notes that there should be a lifespan for the

23 life of the telescope and it should be removed.

24 Then there is some discussion about Reber Circle

25 and a plan on removing the debris or the ring itself.

<p style="text-align: right;">34</p> <p>1 When he is pau talking, then Mikahala Helm then 2 speaks.</p> <p>3 MS. CAROLINE BLANCO: Was it up there? 4 MS. ANNELLE AMARAL: This comes from SHPO. 5 Yeah, at least I can read my notes.</p> <p>6 Mikahala Helm speaks, quite frankly, wanting a 7 definition of mitigation.</p> <p>8 It's answered by saying that mitigation refers 9 to ways to reduce adverse effects, adverse impacts, or 10 compensate for adverse effects or impact or harm. It can 11 be onsite or offsite.</p> <p>12 Her comment in response, then, is not knowing 13 the full effect of adverse impacts, she is then reluctant 14 to share comments on mitigation of those.</p> <p>15 What is offered to her is then, perhaps, that we 16 would be open to creative ideas, any creative ideas she 17 may have. She declines.</p> <p>18 Camille is here, then, from Kilakila o 19 Haleakala, and offers comments with respect to the 20 consultation process. Asserting that it is in fact not 21 real consultation, that there are no alternative sites 22 being proposed, that the project is flawed.</p> <p>23 A question is asked, if that were true, do you 24 have some suggestions on how to change the process. Her 25 response is that she does not, that we should simply</p>	<p style="text-align: right;">36</p> <p>1 Haleakala, the sacredness of the place, but also asserts 2 the need to integrate science and Hawaiian cultural 3 knowledge. And that although often Hawaiian cultural 4 practice is seen as something in the past, that, quite 5 frankly, the knowledge of Hawaiians, inherited knowledge, 6 is also something that can be looked towards the future. 7 And that perhaps the partnership in this endeavor could 8 utilize Hawaiian cultural knowledge in a forward-looking 9 manner, preparing us and using Hawaiian knowledge to 10 advance cultural values and cultural practices.</p> <p>11 There is discussion, also, from Verna, Verna 12 Nahulu. Substantially, her comments go to the need to 13 support the children and the education of the children. 14 That truly this project is about preparing for the future 15 generation, providing them with opportunities that, in her 16 assertion, have not been addressed by comments in public 17 hearings heretofore.</p> <p>18 Warren Shibuya has a list of proposals that he 19 gives, including workforce development, including 20 partnerships with businesses to enhance the work that's 21 taking place up at Haleakala, including the removal of 22 debris that is not being utilized and the setting 23 precedent for other users in the future.</p> <p>24 So I think like that, that sort of the summary. 25 Then Department of Land and Natural Resources</p>
<p style="text-align: right;">35</p> <p>1 consider alternative sites.</p> <p>2 So, quite frankly, the substance of her remarks 3 go to having other sites be taken into consideration 4 rather than -- and if there are some mitigation measures, 5 it should go directly to the harm that is caused, the harm 6 that is created.</p> <p>7 And she acknowledges that if there is offsite 8 mitigation, then we should consider things like the number 9 of Hawaiians that would benefit from this offsite 10 mitigation, the proposals perhaps from Maui Community 11 College.</p> <p>12 And we should create a process that assures that 13 Hawaiians are enabled by the considerations given to them.</p> <p>14 Sol Kaho'ohalahala then speaks, in part giving 15 background about his involvement with the Maui Community 16 College and the proposal and the Science, Technology, 17 Economic and Math, STEM.</p> <p>18 MR. SOL KAHO'OHALAHALA: Engineering. 19 MS. ANNELLE AMARAL: Engineering and math 20 cohort, as it were, that helps Native Hawaiians then to 21 participate in the effort, as well as the Akamai program. 22 And so it is an initiative that perhaps prepares Native 23 Hawaiians to be competitive or to be part of the workforce 24 in the future.</p> <p>25 Sol speaks at great length about the history of</p>	<p style="text-align: right;">37</p> <p>1 arrived. And that was Pua and Nancy that were here.</p> <p>2 They had concerns about the timing of the 3 consultation that is taking place. They felt that there 4 was not significant consultation to bring us to this point 5 of now being to discuss the MOA.</p> <p>6 And so, you know, you have heard Caroline begin 7 to address this.</p> <p>8 There was some criticism about the publicity or 9 the letters that went out with respect to yesterday's 10 meeting in that open house, they felt, was sort of a term 11 that designated a certain type of behavior. They said the 12 military has used the term "open house" to designate that 13 they would have displays up and there usually is not a lot 14 of conversation and discussion. And so people are put off 15 by the term open house and, therefore, choose not to 16 participate.</p> <p>17 They didn't realize that in fact yesterday's 18 open house meant that we would all be talking to one 19 another. So there was some criticism of that.</p> <p>20 Aside from the criticism of the process and some 21 question as to what actually has been done -- and there 22 has been a lot of catching up, this is how many public 23 meetings we've had, this is how many documents that have 24 been prepared, and we're happy to give you those 25 documents. Aside from all of that, there was the request,</p>

38

1 as Caroline has indicated, that the proponents in fact  
2 allow for more MOA discussions.

3 And so the agreement was made -- when asked how  
4 many more do we need, the suggestion was at least two  
5 more, bringing this to a total of three. And it was  
6 agreed that around or after August 22nd, there would be at  
7 least two additional consultation meetings.

8 You see here the discussion, the litany of how  
9 many meetings there were. And I don't think we need to go  
10 into that.

11 Sometimes I am making note of things here that  
12 make no sense to me whatsoever.

13 DR. CRAIG FOLTZ: I am just impressed you can  
14 find your direction.

15 MS. ANNELLE AMARAL: Going around here.

16 And then you see, I guess, there were some  
17 comments from Warren Shibuya. This seems to bring to an  
18 end the discussion of DLNR.

19 So that is a quick summary of what -- my  
20 goodness. Oh, no, I didn't lose you. It wasn't that  
21 boring.

22 DR. CRAIG FOLTZ: Could I make one observation?  
23 MS. ANNELLE AMARAL: Yes.

24 DR. CRAIG FOLTZ: There was essentially no  
25 discussion of the park resources.

39

1 MS. ANNELLE AMARAL: Yes.

2 DR. CRAIG FOLTZ: Just so that's clear. There  
3 is nothing being hidden here. This was concentrated on  
4 the issue of whether this could be mitigated.

5 MS. ANNELLE AMARAL: Yeah.

6 MS. CAROLINE BLANCO: Even though the option  
7 certainly was there for people to -- we outlined as well  
8 that those were the two basic topics of discussion. And  
9 the only focus really was on the proposed site.

10 MS. TONIA MOY: Parks wasn't here, were they?  
11 MS. CAROLINE BLANCO: They were not. They said  
12 they would not be available to meet with us.

13 DR. CRAIG FOLTZ: We have arranged for a meeting  
14 on August 22nd.

15 MS. TONIA MOY: Oh, okay.

16 DR. CRAIG FOLTZ: Which was really almost the  
17 earliest time the superintendent was available.

18 MS. CAROLINE BLANCO: They had also indicated to  
19 us in some -- I believe email traffic it was -- that they  
20 would be sending us some sort of document for discussion.  
21 And we should have received it by now, but we have not.

22 DR. CRAIG FOLTZ: As of yesterday, we have not  
23 received it.

24 MS. TONIA MOY: So I guess as far as my paper  
25 trail is concerned, which isn't extensive, I know -- so I

40

1 mean maybe you can fill me in before, you know, we get any  
2 further. But according -- from this -- from the paper  
3 trail I got, there was a Draft EIS, right, in 2005 or  
4 2006?

5 MS. CAROLINE BLANCO: 2006. Charlie, it was  
6 2006?

7 DR. CHARLIE FEIN: I'm sorry?

8 MS. CAROLINE BLANCO: The Draft EIS.

9 DR. CHARLIE FEIN: The Draft EIS was issued in  
10 September of 2006.

11 MS. TONIA MOY: Okay.

12 MS. CAROLINE BLANCO: Public comments were  
13 received on it.

14 MS. TONIA MOY: There is a letter from the SHPO,  
15 right? There was a letter. So they did see it and they  
16 did respond.

17 MS. CAROLINE BLANCO: I think different people  
18 there. I think it was Melissa Kirkendale and, also, David  
19 Brown before. So the continuity has not quite been there.

20 DR. CHARLIE FEIN: I am Charlie Fein, the  
21 environmental consultant.

22 MS. TONIA MOY: The one that did this?

23 DR. CHARLIE FEIN: Yeah. And in talking to Pua  
24 yesterday, I was showing her some things in the DEIS. She  
25 said, "I guess I should read it." She had not read it as

41

1 of yesterday.

2 MS. TONIA MOY: So did it ever get into final?

3 MS. CAROLINE BLANCO: No. What we have done --  
4 and, in fact, this was an interesting point of discussion  
5 with Betsy Merritt of the Trust. You know, the advice I  
6 have been given is to not conclude the FEIS process.  
7 Because it is a joint process.

8 MS. TONIA MOY: To include all this in it.

9 MS. CAROLINE BLANCO: It seems to me to make  
10 sense to resolve the Section 106 issue so that that could  
11 be put into the final EIS. And then, ultimately, a record  
12 of decision, whatever direction that decision goes. So it  
13 would be wrapped in. To me, it seems like it would be  
14 premature to issue the final before we've concluded this.

15 MS. TONIA MOY: Okay.

16 MS. CAROLINE BLANCO: And Betsy had said, back  
17 then, that's a great thing. Most agencies don't do that,  
18 which is fine.

19 MS. TONIA MOY: I guess, you know, there are a  
20 lot of issues from the EPA as well as SHPO that -- is that  
21 being addressed through this? So that's trying to be  
22 addressed now, before --

23 MS. CAROLINE BLANCO: Through the --

24 MS. TONIA MOY: Through this consultation  
25 process is when --

42	<p>1 MS. CAROLINE BLANCO: Those were, I think, in 2 response to the Draft EIS, correct, comments on the NEPA 3 process? 4 DR. CHARLIE FEIN: Right. The EPA comments were 5 on the NEPA process. Those will be responded to in the 6 FEIS. 7 MS. TONIA MOY: Then the comments from the SHPO 8 is trying to be resolved now at this consultation? 9 MS. CAROLINE BLANCO: We're trying to. And I 10 think that there may have been with perhaps the Advisory 11 Counsel. 12 One thing I also mentioned to Nancy and Pua 13 yesterday was that we have made several requests of the 14 Advisory Counsel to meet with us. They are in Washington. 15 It's easy for us to go over the river and meet with them. 16 And they have not agreed to meet with us. 17 We requested it in the November 8th letter, 18 which followed a conversation I had with Martha Catlin, 19 the program analyst. And I had said, what do you need us 20 to do at this point, we want to do this right. 21 MS. TONIA MOY: Yeah. 22 MS. CAROLINE BLANCO: She said, write this 23 letter. She said, in the letter, request the meeting. I 24 asked her, you know, would she give us quick attention on 25 it. She said, yes.</p>	44	<p>1 other agencies in my past where they didn't think they 2 should follow the process or wanted to follow the process. 3 And I won't mention those agencies now. But I will say 4 NSF has really, really tried to do this right. 5 And we can't force people to show up for 6 meetings. We can't force people to respond to letters and 7 requests for proposals. 8 There were outreach efforts made to the Royal 9 Order. Mike had even made an effort last week to try to 10 invite them to these meetings. And they didn't decide to 11 come. 12 So there are certain limitations in that 13 respect. It has to be a two-way interaction. 14 So all of that being said, our hope is that the 15 Advisory Counsel will meet with us when we get back to 16 Washington. And we do hope to meet with the Trust and see 17 how that goes before the August meetings. 18 MS. TONIA MOY: Okay. Then I guess I just have 19 one other comment. 20 MS. ANNELLE AMARAL: Yes, please. 21 MS. TONIA MOY: So, you know, talking about the 22 alternatives and stuff, when you explain it, it's great. 23 But I guess for the general public maybe -- and this is 24 just a suggestion for the final EIS. 25 MS. CAROLINE BLANCO: Please, yeah.</p>
43	<p>1 And so I wrote the letter. We did not hear a 2 response back. 3 I flagged it again toward the end of December. 4 She said sorry for the delay, we're still working on it. 5 We didn't get a response until January 17th. 6 And that letter said that they didn't think it was 7 advisable to meet at that time, they were trying to find 8 out who their contact was at the SHPD. They were trying 9 to gather information from the park and other people, and 10 that letters would be forthcoming. And that after that, 11 you know, they might be in a better position to talk about 12 it. 13 The letters came in February, mid-February. We 14 still did not hear from the Advisory Counsel. We wrote 15 them again in mid-May, again requesting the meeting, and 16 telling them about this meeting. They did not agree to 17 meet with us. 18 They sent us another letter June 12th, basically 19 saying that the project needed more alternatives and we 20 hadn't followed the process. 21 It's a bit frustrating as an agency when we are 22 trying to do things right and really, really trying to do 23 things right, and not getting the response from the 24 agencies charged with making sure the process works 25 correctly. And so it's difficult. I mean, I have seen</p>	45	<p>1 MS. TONIA MOY: You know, you have the 72 sites, 2 you list them all out, you list out the criteria and how 3 it scored. I mean, I am sure you guys kept data. Or is 4 it in there? 5 DR. CRAIG FOLTZ: It's in the draft. 6 MS. TONIA MOY: It's in the draft? 7 DR. CRAIG FOLTZ: Color-coded. 8 DR. CHARLIE FEIN: Very large section. 9 MS. CAROLINE BLANCO: Do you have a copy? 10 MR. MIKE MABERRY: Only of the last six. But I 11 do have the last six here, if you just wanted to see it. 12 But, yeah, the 72 sites is in the final. 13 DR. CHARLIE FEIN: There's a very detailed 14 discussion of each and how the selection process occurred 15 and what the results were and comparisons between sites. 16 And ultimately -- 17 MS. TONIA MOY: And the criteria and why the 18 criteria was chosen? 19 DR. CHARLIE FEIN: Yes. 20 DR. CRAIG FOLTZ: We realize that's a complex 21 argument. And it's not one you want to address in normal 22 life. We tried to discuss the turbulence, the sky 23 brightness and -- 24 MS. TONIA MOY: The scientific -- 25 DR. CRAIG FOLTZ: The science drivers.</p>

<p style="text-align: right;">46</p> <p>1 MS. TONIA MOY: Practical issues.</p> <p>2 MS. CAROLINE BLANCO: That's, frankly, one of</p> <p>3 the reasons why we wanted to meet with the Advisory</p> <p>4 Counsel, to help them understand that.</p> <p>5 I do think NSF is a unique federal agency in</p> <p>6 that regard. Because the whole reason to do it is to</p> <p>7 accomplish, you know, cutting-edge science, to fund</p> <p>8 cutting-edge science. And it's not as though you have</p> <p>9 choices to accomplish the goal as you might in another</p> <p>10 situation.</p> <p>11 Did you need further documentation or the</p> <p>12 website?</p> <p>13 I think, Sharon and Charlie, maybe you can point</p> <p>14 her to the website where there is additional information.</p> <p>15 DR. CHARLIE FEIN: Yes. The DEIS is on the</p> <p>16 website.</p> <p>17 MS. TONIA MOY: Okay.</p> <p>18 DR. CHARLIE FEIN: It can be found at</p> <p>19 atst.nso.edu. And you will find Draft Environmental</p> <p>20 Impact Statement and all of the appendices, supporting</p> <p>21 documentation that goes with it.</p> <p>22 MS. CAROLINE BLANCO: Aren't, also, the</p> <p>23 transcripts of all the hearings on that website?</p> <p>24 DR. CHARLIE FEIN: No.</p> <p>25 MS. SHARON LOANDO-MONRO: The transcripts, it</p>	<p style="text-align: right;">48</p> <p>1 Advisory Counsel that you made me. Maybe we should make</p> <p>2 another one for our records. I can hand this to you now.</p> <p>3 This is some of the 106 correspondence. This is what I</p> <p>4 gave to Nancy yesterday.</p> <p>5 That might be helpful for you to look at. You</p> <p>6 can have that copy.</p> <p>7 MS. ANNELLE AMARAL: I think some of the</p> <p>8 frustration, at least I heard yesterday as the</p> <p>9 facilitator, was Pua and Nancy asserting that it wasn't</p> <p>10 sufficient understanding of cultural impact or cultural</p> <p>11 significance. And then, I guess, because of transitions</p> <p>12 of people coming in and going out, they were not aware</p> <p>13 that there was cultural impact study and then a</p> <p>14 supplemental cultural impact study to deal with the</p> <p>15 concerns that were written about the original cultural</p> <p>16 impact study.</p> <p>17 So I hear challenges to issues. And then what I</p> <p>18 hear, also, is that there are documents that can be</p> <p>19 referred to that perhaps explain the positions that are</p> <p>20 taken now.</p> <p>21 So we are all sort of catching up on</p> <p>22 information. But that's fine, we're happy to play</p> <p>23 catch-up.</p> <p>24 In the meantime, let me ask sort of a process</p> <p>25 question. Understanding that we would like to see if we</p>
<p style="text-align: right;">47</p> <p>1 was requested by some of the public, comments that we have</p> <p>2 had, they will be in the FEIS. But if you would like, I</p> <p>3 can have that put on the website now. I checked it this</p> <p>4 morning, because I wasn't certain yesterday.</p> <p>5 MS. CAROLINE BLANCO: I think in response to</p> <p>6 some of the --</p> <p>7 MS. SHARON LOANDO-MONRO: Let's put them on</p> <p>8 there?</p> <p>9 MS. CAROLINE BLANCO: Let's put them on so</p> <p>10 people have access to that.</p> <p>11 MS. ANNELLE AMARAL: Certainly some of the</p> <p>12 testimony is on because I read it before I came here.</p> <p>13 MS. SHARON LOANDO-MONRO: It was on the website?</p> <p>14 MS. ANNELLE AMARAL: Testimony, written</p> <p>15 testimony was on. Also, even those form letters, I</p> <p>16 support or I oppose, with the signatures, written comments</p> <p>17 of people were on the website because I read them.</p> <p>18 MS. SHARON LOANDO-MONRO: That might have been</p> <p>19 in the DEIS.</p> <p>20 MR. JEREMY WAGNER: In the appendix.</p> <p>21 MS. SHARON LOANDO-MONRO: I am talking about</p> <p>22 transcripts from meetings.</p> <p>23 MS. CAROLINE BLANCO: Sharon, I wonder if we can</p> <p>24 get another copy. I mean, this is an extra. I could give</p> <p>25 this to her. Then I think you have one here for the</p>	<p style="text-align: right;">49</p> <p>1 can move forward a bit with respect to at least some MOA</p> <p>2 issues, are the consulting parties comfortable,</p> <p>3 sufficiently comfortable, for me to walk through some of</p> <p>4 the points that have been raised to date for consideration</p> <p>5 in a memorandum of agreement? And can we have a</p> <p>6 discussion of, yes, this makes sense, no, this doesn't</p> <p>7 make sense, and, if it doesn't make sense, this is why,</p> <p>8 then I can make note? Are you comfortable with us using</p> <p>9 the next couple of hours to do that? Yes?</p> <p>10 And you all are comfortable with it? Okay.</p> <p>11 Then let's proceed.</p> <p>12 Starting with perhaps one of the easiest issues</p> <p>13 in the MOA, and that is a memorandum of agreement, should</p> <p>14 contain some provision for site cleanup or general cleanup</p> <p>15 of the area. Do we have any disagreement with that, any</p> <p>16 reservations about that?</p> <p>17 DR. CRAIG FOLTZ: Since the IFA is a consulting</p> <p>18 party, they may want to speak to that.</p> <p>19 Mike, sorry to put you on the spot.</p> <p>20 MR. MIKE MABERRY: Hi, I am Mike Maberry. I am</p> <p>21 Assistant Director for the University of Hawaii Institute</p> <p>22 for Astronomy. So I will be representing the IFA as a</p> <p>23 consulting party.</p> <p>24 And the Institute for Astronomy, as the entity</p> <p>25 that has stewardship under the executive order for the</p>

<p style="text-align: right;">50</p> <p>1 site, first off, definitely believes that the impacts can 2 and should be mitigated. And that site cleanup issues 3 related -- a little background on this probably would be 4 useful specifically. 5 The first telescope experiment that was ever 6 undertaken up on Pu'u Kolekole -- there were experiments 7 done before that time on Ulaula, Red Hill and the national 8 park. But the first observations really undertaken at 9 Pu'u Kolekole were done by a gentleman named Grote Reber. 10 It was a radio telescope. There are remnants of that 11 telescope mount still at the site. And they have been 12 identified. 13 DR. CHARLIE FEIN: Because they are more than 50 14 years old, they are historic resources. It has been given 15 a state number. And a removal plan has been approved by 16 SHPO in the event that it needs to be removed. 17 MR. MIKE MABERRY: It hasn't, obviously, been 18 implemented. And it hadn't really been discussed up until 19 yesterday. 20 MR. JEFF BARR: Just to add a little bit. It's 21 not quite just because they were 50 years old. Also, they 22 have some contributing cultural and scientific merit as 23 artifacts of an experiment. 24 MR. MIKE MABERRY: He is considered the father 25 of radio astronomy worldwide.</p>	<p style="text-align: right;">52</p> <p>1 MR. MIKE MABERRY: It was not specific. And, 2 therefore, I am not prepared to address anything that's 3 not specific. 4 This was the only thing that was identified 5 specifically. 6 MS. ANNELLE AMARAL: Yeah. 7 MR. MIKE MABERRY: We're more than happy to -- 8 well, it kind of goes beyond this, on to the konohiki. If 9 we actually have someone to consult with at some point in 10 time that is accepted in the community as a kupuna with 11 kuleana for Haleakala, and we work together and look at 12 other things. I mean, we would certainly be willing to 13 entertain it. 14 MS. ANNELLE AMARAL: These two seem to be 15 connected. There is also some recommendation that not 16 only are we talking about the immediate area, but a larger 17 area where partners sited up at Haleakala could be engaged 18 in larger cleanup projects. Yes? 19 DR. CRAIG FOLTZ: I think that was a bit of some 20 cross signals there. I think the March date related to 21 the transmission towers. 22 MS. CAROLINE BLANCO: Encourage the removal of 23 five broadcast towers, and ancillary junk is what we 24 called it. 25 DR. CRAIG FOLTZ: Ancillary junk.</p>
<p style="text-align: right;">51</p> <p>1 So yesterday was the first time we had heard a 2 suggestion of removing that. And it's something we 3 definitely can entertain. 4 MS. CAROLINE BLANCO: I think that was made by 5 Kiope and others. 6 MR. MIKE MABERRY: Warren, too, I believe. 7 DR. CHARLIE FEIN: Yeah. I think it was in the 8 context of, well, you say you are going to remove ATST 9 after 50 or 90 years, or whatever the number is, but, yet, 10 you have this remnant up there for 50-plus years that has 11 no real use, and you haven't removed that. So as a 12 gesture of good faith, remove that which is no longer 13 useful and give yourselves some credibility with respect 14 to removal of debris from the site, unsightly or useless 15 material. 16 MS. ANNELLE AMARAL: So you have an issue with 17 respect to the removal because it has cultural or 18 scientific merit? 19 MR. MIKE MABERRY: No. No. It simply means 20 there's a process that would have to be followed. And we 21 are willing to entertain that. 22 MR. JEFF BARR: Right. 23 DR. CRAIG FOLTZ: There was also discussion of 24 other issues, towers that were up there. 25 MR. JEFF BARR: Yes.</p>	<p style="text-align: right;">53</p> <p>1 MR. MIKE MABERRY: That's not really on property 2 that is under our stewardship. It's on DLNR property. 3 Without bringing up video, there is a group of 4 television and what was a radio broadcast tower that is 5 adjacent to the site that we have stewardship of. And it 6 has been expressed as having a visual impact from Ulaula 7 from within the national park. So there was suggestions 8 made that we seek to relocate and then clean up that area. 9 And that is something we would be very interested in. 10 DR. CRAIG FOLTZ: I think somehow we got crossed 11 with partners, but I think that encapsulated the cleanup 12 discussion. 13 MS. ANNELLE AMARAL: I see. 14 Any further comments, concerns or issues around 15 site cleanup? Okay. 16 We move then to the promotion -- it comes up 17 often, acknowledgment of Native Hawaiians, acknowledgment 18 of proper respectful access to sites. And so what comes 19 out of this broad category of proper protocols and 20 respectful access is the more important discussion, at 21 least to Native Hawaiians, of culturally appropriate 22 conduct. 23 And Native Hawaiians understanding fully then 24 the role of konohiki, if we truly are intending to be 25 properly respectful, then can we then go back to some</p>

54

1 cultural practices. And that is for Hawaiians to come  
2 together to identify, by genealogy and lineal descendants  
3 and practice, proper konohiki and develop protocols. And  
4 would all the parties involved be willing to then yield to  
5 that cultural practice?  
6 We think it's simple enough, don't we, Sol?  
7 MR. SOL KAHO'OHALAHALA: Well, I think it comes  
8 about because our discussions were focused on the fact  
9 that the signage was in 'olelo, Hawaii, and that there are  
10 Hawaiians that may not understand 'olelo themselves. So  
11 that was a proper problem.  
12 And the other was a concern for signage. You  
13 keep adding signs to clarify. And then you keep it in  
14 'olelo, Hawaii, do you put it in English.  
15 So I think from that I think the idea of maybe  
16 what we should be doing is reconsidering the signages is  
17 the way we want to prepare and help people to understand.  
18 Would it now be appropriate to consider someone  
19 like a konohiki who is responsible for the sites that are  
20 there, that are considered to be special, and that they  
21 would be the ones to impart what protocol might be?  
22 So leaving a lot of that kind of decisions to  
23 the Hawaiian community to determine so that we are not  
24 here trying to decide which sign is more appropriate.  
25 And, you know, so that's how I think that idea or

55

1 suggestion has come about.  
2 MS. CAROLINE BLANCO: If I could add to that.  
3 So I could envision a provision in an MOA that would say  
4 that the Native Hawaiian community would work together to  
5 try to identify a konohiki and work with the IFA to try to  
6 work out an arrangement for that person being there to  
7 carry out the goals.  
8 MR. SOL KAHO'OHALAHALA: Yeah. I think in the  
9 Hawaiian community, that is going to be an important  
10 discussion, because just the idea of a konohiki itself,  
11 you know. But nonetheless, I think the practice is what  
12 we are trying to establish and perhaps allow for, so that  
13 would be a way of managing, you know, managing the area,  
14 managing access and in helping to educate.  
15 So that I don't think we are necessarily saying  
16 that there needs to be someone there 24/7, but that  
17 authority is available for community and organizational  
18 meetings that help to impart education about what is  
19 expected of anyone who seeks to access the sites. And if  
20 there are events that come about that there will be some  
21 manner in which that would be organized. I think those  
22 are beneficial things that the community would want to  
23 have discussions about.  
24 MR. HINANO RODRIGUES: It's going to be a sore  
25 point with respect to determining who the konohiki is

56

1 going to be.  
2 If we apply true ancient Hawaiian standards,  
3 well, the answer is really simple. It's not the Native  
4 Hawaiian community that is going to decide who the  
5 konohiki is. The question is going to be in which moku is  
6 this property located, in which ahupua'a is this property  
7 located, in which ili is this property located. So you  
8 narrow it down from the Native Hawaiian community to the  
9 lineal descendants of this specific parcel of property.  
10 And then it gets a little bit easier there because then --  
11 you know like how you went from 72 to six, we might go  
12 from 200,000 Native Hawaiians down to five.  
13 MS. CAROLINE BLANCO: Well, okay. That's  
14 helpful.  
15 MR. HINANO RODRIGUES: Just getting through that  
16 process itself is going to be --  
17 MR. SOL KAHO'OHALAHALA: But that, like Hinano  
18 says, refines it so that --  
19 MS. CAROLINE BLANCO: Is it manageable, though?  
20 Is this a realistic idea?  
21 MR. HINANO RODRIGUES: Yes. And I like it. We  
22 are really going out on a limb here, but I think that, in  
23 Hawaii, we are making changes that take us back to our  
24 ancient practices rather than utilizing western law. The  
25 perfect example is the ahumoku process. We decided

57

1 that -- we are the preliminary stage at this point. We  
2 decided that our natural resources shall be managed in the  
3 ancient way. And for all intents and purposes, if you  
4 just take this island itself, this island is basically  
5 composed of 12 mokus, 12 divisions. So within each moku,  
6 you would have -- it wouldn't even be a konohiki. It  
7 would probably be an ali'i. Because the konohikis are  
8 actually for the ahupua'a land division itself.  
9 So, yeah, we're moving in that direction. We  
10 are way ahead of the game right now. But we are moving  
11 there.  
12 And maybe this might serve as the prototype for  
13 the rest of the Hawaiian community to see, well, you know,  
14 we got something really important, Haleakala is so  
15 important to our religion, and let's try to apply this old  
16 concept in the year 2008 and see what happens by utilizing  
17 the konohiki.  
18 DR. CRAIG FOLTZ: Why is it controversial,  
19 because it's different? Why would this be -- you know,  
20 you said we're out on a limb here.  
21 MR. HINANO RODRIGUES: Yeah. Because we spent  
22 the last 200 years adopting western law. And western law  
23 is contrary to Hawaiian law. And that is the problem.  
24 So in the old days, the ali'i dictated what  
25 happened in that area. Or, in this case, the konohiki

<p style="text-align: right;">58</p> <p>1 decides who gets to go into this area.</p> <p>2 We are not accustomed -- unless you are truly</p> <p>3 Hawaiian on the inside, you are not accustomed to one</p> <p>4 person making a decision for you.</p> <p>5 DR. CRAIG FOLTZ: Right.</p> <p>6 MR. HINANO RODRIGUES: You want to go and open</p> <p>7 up Hawaii Revised Statutes, and say, wait a minute, I am a</p> <p>8 citizen of this state, I am one of the 1.2 million, I have</p> <p>9 a right. But then if you applied the Hawaiian law, well,</p> <p>10 no, you really don't because you are not from my island,</p> <p>11 you are not from my moku, you are not from my ahupua'a,</p> <p>12 you are not from my ili, you stay on your side and let me,</p> <p>13 on my side, decide what happens in my back yard.</p> <p>14 DR. CRAIG FOLTZ: Thank you.</p> <p>15 MS. CAROLINE BLANCO: So this could be a way in</p> <p>16 which to create a model working with the ancient way, and</p> <p>17 then, in addition, in bringing it into 2008 with regards</p> <p>18 to --</p> <p>19 MR. SOL KAHO'OHALAHALA: You are not recreating.</p> <p>20 You are just reimplementing a past practice.</p> <p>21 MS. CAROLINE BLANCO: A past practice in a</p> <p>22 modern context, is that sort of the --</p> <p>23 MR. SOL KAHO'OHALAHALA: Yeah.</p> <p>24 The other part, Hinano, that I thought would be</p> <p>25 important, is, in a small measure, sort of empowerment.</p>	<p style="text-align: right;">60</p> <p>1 level, what Craig is saying is not understanding the</p> <p>2 process in the konohiki, and how that would operate, is</p> <p>3 that there is this idea that science and astronomy and the</p> <p>4 workers would be now restricted from carrying on their own</p> <p>5 responsibility within the facility. And I don't see that</p> <p>6 necessarily as a problem.</p> <p>7 But the other part is that I see that there</p> <p>8 would be a need for an exchange or familiarization so</p> <p>9 astronomy has a sense and understanding of what the</p> <p>10 responsibilities of the Hawaiian people, through a</p> <p>11 konohiki, are and how that operates, as well as vice</p> <p>12 versa, they understand what the parameters of the</p> <p>13 astronomy's needs are. And then in that will be how you</p> <p>14 manage to work with both.</p> <p>15 DR. CRAIG FOLTZ: I've talked to Sol about this</p> <p>16 before. I think this is important. And we haven't</p> <p>17 actually captured it.</p> <p>18 We have other observatories that are in special</p> <p>19 places. And one of them is Kitt Peak National</p> <p>20 Observatory, which is on a sacred mountain, a mountain</p> <p>21 that is sacred to the Tohono O'odham Tribe, who are in</p> <p>22 Southern Arizona and Northern New Mexico. It is one</p> <p>23 tribe, one, the Tohono Nation's land.</p> <p>24 And there are hundreds and hundreds of</p> <p>25 astronomers who visit every year, and there are 28</p>
<p style="text-align: right;">59</p> <p>1 Instead of the Hawaiian community having gone through this</p> <p>2 process, understanding that this would be the process in</p> <p>3 which they would be managers of the property, it's an</p> <p>4 empowerment to that, that they feel that there is</p> <p>5 ownership in doing this. And then give them the authority</p> <p>6 to make those choices, but based on practice that we</p> <p>7 already understand, you know.</p> <p>8 So it's not something that is unknown. It's not</p> <p>9 something that is going to be recreated. It's a practice</p> <p>10 that has been established over time, just not used.</p> <p>11 DR. CRAIG FOLTZ: Where I see we would be out on</p> <p>12 a limb is that there are other activities up there. There</p> <p>13 is the day-to-day activity of astronomy. And I think</p> <p>14 that, you know, most observatory managers and employees</p> <p>15 are very, very respectful. But we need to at least go</p> <p>16 into this knowing that at some point there could be</p> <p>17 conflict -- I don't mean conflict in terms of</p> <p>18 fistfights -- there may be conflict in terms of usage, you</p> <p>19 know, and how do we negotiate.</p> <p>20 MR. SOL KAHO'OHALAHALA: See, Craig, the</p> <p>21 konohiki would be the astronomer.</p> <p>22 MS. CAROLINE BLANCO: I would imagine that this</p> <p>23 would have to be worked out through some sort of written</p> <p>24 arrangement.</p> <p>25 MR. SOL KAHO'OHALAHALA: I think on a practical</p>	<p style="text-align: right;">61</p> <p>1 telescopes and so on. And I was a frequent user before I</p> <p>2 came to the NSF.</p> <p>3 And as an observer there, you were not -- an</p> <p>4 observer who goes there doesn't understand that land is</p> <p>5 sacred. It's a beautiful mountaintop, there's trails all</p> <p>6 over it, there are caves, you know. And so you wake up in</p> <p>7 the afternoon, you have four hours before you have to</p> <p>8 start to work, you go out and you walk around the sacred</p> <p>9 ground. I did it. Lots of people do it. We were never</p> <p>10 informed. You know, we were never given an orientation</p> <p>11 that says this is sacred, there are behaviors that are</p> <p>12 expected of you.</p> <p>13 And I think that one of the things that we need</p> <p>14 to do for ATST, should it be built, is there will be a new</p> <p>15 group of astronomers who come there from all over the</p> <p>16 world, and we need to make sure that they are properly</p> <p>17 oriented. And I would see this as an activity that could</p> <p>18 be done engaging public.</p> <p>19 Am I off base on that?</p> <p>20 MR. SOL KAHO'OHALAHALA: No. I think you are</p> <p>21 right on.</p> <p>22 MR. JEFF BARR: I have a point to make. I am</p> <p>23 Jeff Barr. I am the architect for ATST. I worked in</p> <p>24 Tucson, so I am familiar with Kitt Peak.</p> <p>25 I would like to kind of relate what we are</p>

<p style="text-align: right;">62</p> <p>1 talking about with this konohiki who would have a  2 long-term role with what we've identified as the cultural  3 monitor during construction, and whether or not there  4 could not be some overlap or might be more appropriate to  5 try to find somebody who is more culturally attuned or  6 acceptable to the Native Hawaiian community as the  7 legitimate representative of the native culture on the  8 mountain, earlier on. Because certainly that five-year  9 period of construction will be some of the most disruptive  10 activity and some of the most greatest potential for, you  11 know, conflicts of access, and all kinds of other  12 potential cultural issues. Rather than us going out and  13 contracting a cultural monitor the way we would, you know,  14 somebody to do the plumbing up there, or something else  15 like that.</p> <p>16 So, to me, I mean -- and it's not a trivial  17 issue, the cultural monitoring in itself. It's  18 incorporated well, I think, into the long-range  19 development plan.</p> <p>20 I am giving Mike a little bit of heartburn over  21 there because it's a well worked out arrangement. But it  22 seems to be more appropriate somehow to have that early  23 input and have somebody who is, as I say, maybe considered  24 to be the more legitimate representative of the native  25 culture there during the construction, not just during the</p>	<p style="text-align: right;">64</p> <p>1 archeology and all that.</p> <p>2 Your cultural monitor probably has more  3 experience in standing out there and, let's say, seeing  4 the backhoe hits something and go, woah, wait a minute, I  5 see a profile, I see a burial pit profile, you know,  6 like --</p> <p>7 MR. JEFF BARR: Uh-huh.</p> <p>8 MR. HINANO RODRIGUES: So he probably will catch  9 those stuff better than a konohiki would.</p> <p>10 MR. JEFF BARR: Well, maybe there's a  11 relationship, though, between the cultural monitor and the  12 konohiki. And maybe the konohiki should be established  13 before construction.</p> <p>14 MR. HINANO RODRIGUES: That would be ideal.</p> <p>15 MR. JEFF BARR: The cultural monitor can be a  16 representative and, you know, sort of more answer to --</p> <p>17 MR. SOL KAHO'OHALAHALA: That would have been my  18 comment, is don't merge the two because they are not  19 necessarily -- by labeling or assuming the konohiki means  20 all this.</p> <p>21 MR. JEFF BARR: By the way, I am also not trying  22 to assert that we wouldn't properly compensate the  23 cultural monitor.</p> <p>24 MR. SOL KAHO'OHALAHALA: You are demonstrating  25 that you are going to be responsible for cultural</p>
<p style="text-align: right;">63</p> <p>1 operation.</p> <p>2 MR. SOL KAHO'OHALAHALA: Do you want my two  3 cents?  4 Go ahead.</p> <p>5 MR. HINANO RODRIGUES: You know, you need to  6 understand what a konohiki is. You see, our ancestors  7 were really smart. You know, you look up at them and you  8 think, wow, they really got these leadership qualities and  9 skills. But the true leader is the one who depends on  10 people under him. Right?</p> <p>11 Now they say that the good manager is the one  12 who brings out the best in himself. But the true leader  13 is the one who brings out the best in others.</p> <p>14 So your konohiki will not necessarily be the one  15 who knows everything, but he has people around him that  16 know everything, yeah. And that, in a sense, might be the  17 cultural monitor.</p> <p>18 So you have your cultural monitor and you have  19 your konohiki. Your konohiki makes a decision based on  20 what he hears from the people around him. Which means  21 that we shouldn't assume that he is the one that knows  22 everything.</p> <p>23 MR. JEFF BARR: Sure.</p> <p>24 MR. HINANO RODRIGUES: I am only speaking for  25 the cultural historic for SHPD where we work with</p>	<p style="text-align: right;">65</p> <p>1 monitoring?</p> <p>2 MR. JEFF BARR: Yeah.</p> <p>3 MR. SOL KAHO'OHALAHALA: You are also going to  4 allow for this konohiki as a manager?</p> <p>5 MR. JEFF BARR: To me, it seems they are very  6 integrated and linked concepts. It should not be  7 something where a cultural monitor does this activity  8 during construction and somebody takes over then. You  9 know, to me it seems like there ought to be kind of a more  10 natural segue between the long-term stewardship of the  11 site.</p> <p>12 MR. SOL KAHO'OHALAHALA: My only caution is  13 don't lump it all together and expect that that -- that is  14 a cover-all.</p> <p>15 MS. ANNELLE AMARAL: If I can jump in here, too.  16 There are criteria provided for cultural monitors in  17 Hawaii Revised Statutes and definitions, wherein no such  18 definition and statute exists for konohiki, except maybe  19 old Hawaiian law. But a process and a cultural  20 recognition of konohiki exists. And to try to marry  21 western with traditional creates something that is  22 anathema to practitioners, to Hawaiians. You know, this  23 hapa haole version of our culture.</p> <p>24 So what I hear is while you all have concerns  25 about cultural monitors and need to implement, they are</p>

66

1 not necessarily compatible and you can't necessarily  
 2 switch off from them. And for some of us talking about  
 3 konohiki, just the thought of konohiki starts to create  
 4 this immense thing, the potential is so huge and exciting,  
 5 that it doesn't pop, at least in my mind, when I think of  
 6 cultural monitors. Cultural monitors, I think of  
 7 something very finite and limited.

8 So if you truly are talking about collaboration  
 9 and sensitivity with the Hawaiian culture, konohiki is a  
 10 potential to create that awesome collaboration and  
 11 empowerment for the culture in a way that cultural monitor  
 12 is not.

13 I am not explaining it well, Caroline.

14 MS. CAROLINE BLANCO: Would it be helpful to  
 15 maybe say we would identify a cultural monitor in  
 16 consultation with the konohiki? No?

17 MR. SOL KAHO'OHALAHALA: I think it's more  
 18 important to establish that as part of the process you  
 19 will have someone who will be monitoring.

20 MS. CAROLINE BLANCO: Right. That's different  
 21 than a konohiki.

22 MR. SOL KAHO'OHALAHALA: Let it stand as that.  
 23 Then, also, now, acknowledge that you are open to the idea  
 24 of creating this idea of konohiki.

25 MS. CAROLINE BLANCO: So don't link the two?

67

1 MR. MIKE MABERRY: That the university would;  
 2 not the project. The project doesn't have the kuleana.  
 3 The entity that is responsible that has the stewardship is  
 4 the institute that --

5 MR. SOL KAHO'OHALAHALA: I think all we're  
 6 trying to do is be cautious about making assumptions about  
 7 what the konohiki is or should be or should be responsible  
 8 for. But if you identify the tasks that are going to be  
 9 agreed upon, then those are standalone tasks, and we will  
 10 find appropriate people to take on those tasks.

11 DR. CRAIG FOLTZ: We will write appropriate  
 12 placeholders in the MOA for someone else to craft the  
 13 language.

14 MR. SOL KAHO'OHALAHALA: That's all I am saying,  
 15 is don't make assumptions about the konohiki.

16 MS. CAROLINE BLANCO: Maybe I am getting just a  
 17 little confused. And, again, I am thinking of lawyer  
 18 things, hopefully, as trying to put in provisions in an  
 19 MOA. And that goal always is to try to reflect what the  
 20 intent is. And so there would be a provision saying that,  
 21 you know, konohiki would be identified in some way. I  
 22 mean, we deal with the language there. It would have a  
 23 particular purpose and we would outline the tasks and so  
 24 forth that we -- the goal would be to have a konohiki.  
 25 Are you then saying, with regard to the cultural monitor,

68

1 that the konohiki would identify that person or that we  
 2 would identify the project team?

3 MR. MIKE MABERRY: Let me share a little bit  
 4 what has been done historically. I think that would  
 5 probably help. Because I am not sure how familiar you  
 6 are. We did a long-range development plan in 2004. It  
 7 was called a long-range development plan rather than a  
 8 master plan, which it really is, in effect. We did  
 9 everything that you would do for a state EIS and for a  
 10 master plan.

11 Because there are over 27 different entities  
 12 with stewardship responsibilities from above 6,000 feet  
 13 elevation to the summit, it was inappropriate for us,  
 14 being responsible for only 18 acres, 18 acres of that  
 15 area, to call it a master plan and have it maybe confuse  
 16 the public that it's a master plan for the whole summit.  
 17 Okay.

18 Over the period of several years of talking with  
 19 people in the community and kupuna, we developed the  
 20 elements of the long-range development plan that are  
 21 related to construction or any activity that would trigger  
 22 Chapter 13 of Department of Land and Natural Resources  
 23 Conservation District Use Regulations. It's Title 13, not  
 24 Chapter 13.

25 And what some of those elements were -- and in

69

1 the past construction had used an archeologist, would have  
 2 an archeologist on staff. And, you know, they typically  
 3 would make pop inspections. And jump in here any time you  
 4 want. It was suggested that, no, you really need somebody  
 5 up there all the time. So we did make it a requirement,  
 6 and it has been implemented, it has been used on a couple  
 7 of projects, that there be a cultural monitor there the  
 8 entire time any construction was going on.

9 And so what we did is, is we basically used the  
 10 process that she was talking about. We required that the  
 11 contractors go to the website and find those who are  
 12 identified as having the expertise and were recognized for  
 13 doing cultural monitoring and the contractor would have to  
 14 hire one of those people.

15 First off is there was a training process for  
 16 all construction workers, which was very interesting.  
 17 Because construction workers were not real happy about  
 18 having to sit through, you know, sense of place training.  
 19 And there was a video that was developed with Hokilani  
 20 Holt Padilla, Kahu Maxwell, Kaleikoa Ka'eo. And so that  
 21 is part of the training that not only the people who do  
 22 construction have to go through, but everybody that works  
 23 at the summit. The Air Force, you know, all the  
 24 observatories, anybody that works within that 18 acres has  
 25 to receive that sense of place training. But, again, the

<p style="text-align: right;">70</p> <p>1 construction people are required to.</p> <p>2 And then the cultural monitor is up there, opens</p> <p>3 the day with a pule, you know, is there throughout the</p> <p>4 day, there for consultation, anything specific. Like you</p> <p>5 say, watching for anything special that may require -- and</p> <p>6 I've seen where they have liked stopped construction, make</p> <p>7 a couple of phone calls, talk to kupuna, and then come</p> <p>8 back and make a decision as to how to proceed.</p> <p>9 So that is what Jeff is referring to, he is</p> <p>10 talking about.</p> <p>11 So the university has done a project since this</p> <p>12 has been implemented in 2004, that has utilized the</p> <p>13 cultural monitor, in fact a couple, as well as the Air</p> <p>14 Force. The Air Force used a different cultural monitor</p> <p>15 than we did.</p> <p>16 I just felt, in order to kind of bring this</p> <p>17 together here, I would explain a little bit about what has</p> <p>18 been going on.</p> <p>19 MR. HINANO RODRIGUES: I think maybe, because</p> <p>20 some of us are involved in archeology, that we already</p> <p>21 have our own definition of what a cultural monitor's role</p> <p>22 is and others don't. So, yeah, I think you kind of</p> <p>23 clarified that.</p> <p>24 To make it really easy, the stage at which a</p> <p>25 cultural monitor is involved is different from when a</p>	<p style="text-align: right;">72</p> <p>1 MS. CAROLINE BLANCO: How about this? Again</p> <p>2 thinking in terms of provisions, how about if we have a</p> <p>3 provision just saying that we will have a cultural monitor</p> <p>4 and archeologist onsite, and then the IFA would work with</p> <p>5 the Native Hawaiian community to identify a konohiki and</p> <p>6 the tasks to be undertaken?</p> <p>7 MR. HINANO RODRIGUES: Right. We keep it</p> <p>8 totally separate.</p> <p>9 MS. CAROLINE BLANCO: Okay.</p> <p>10 MR. MIKE MABERRY: Please.</p> <p>11 MS. CAROLINE BLANCO: IFA is the right entity?</p> <p>12 Does that sound good? Okay.</p> <p>13 MR. MIKE MABERRY: The three of us, at least,</p> <p>14 know it will be controversial because there are kupuna who</p> <p>15 already feel they have the kuleana. If you actually go</p> <p>16 back and look at the genealogy, that's not going to be the</p> <p>17 case. So it's going to -- it may not be in place and --</p> <p>18 DR. CRAIG FOLTZ: Rough waters ahead.</p> <p>19 MR. MIKE MABERRY: Yeah, any time soon.</p> <p>20 MS. CAROLINE BLANCO: It sounds like a very --</p> <p>21 MR. JEFF BARR: We may not be building any time</p> <p>22 soon, either.</p> <p>23 MS. CAROLINE BLANCO: And there may be a</p> <p>24 decision not to build at all. Who knows? But at least --</p> <p>25 MR. MIKE MABERRY: That being said, the</p>
<p style="text-align: right;">71</p> <p>1 konohiki becomes involved. So that is why Sol is saying</p> <p>2 keep it totally separate.</p> <p>3 DR. CRAIG FOLTZ: Yes.</p> <p>4 MR. HINANO RODRIGUES: When you have any kind of</p> <p>5 construction, that's what my office does, we recommend</p> <p>6 that you have an archeological monitor, at the very least.</p> <p>7 Not all islands have a cultural monitor requirement. Oahu</p> <p>8 has it, Hawaii has it. Maui, not necessarily. So what is</p> <p>9 going to happen is when construction starts, that is</p> <p>10 where -- your cultural monitor is there with the</p> <p>11 archeology monitor at the same time. And the roles are</p> <p>12 totally -- the roles with the konohiki are totally</p> <p>13 separate, yeah.</p> <p>14 Go ahead.</p> <p>15 DR. CHARLIE FEIN: We do use an archeological</p> <p>16 monitor as well.</p> <p>17 MR. MIKE MABERRY: As well.</p> <p>18 DR. CHARLIE FEIN: Most frequently, it's Eric</p> <p>19 Frederickson.</p> <p>20 We typically will have the archeology expert</p> <p>21 onsite and the cultural monitor. There is two separate</p> <p>22 functions. The archeologist is looking for a potential</p> <p>23 impact to historic cultural resources that have already</p> <p>24 been identified or will be newly identified during the</p> <p>25 process. Cultural monitors looking for something else.</p>	<p style="text-align: right;">73</p> <p>1 institute is interested in this regardless whether this</p> <p>2 project goes forward or not.</p> <p>3 MR. SOL KAHO'OHALAHALA: Aside from the project</p> <p>4 itself, I think what you are allowing for is a Hawaiian</p> <p>5 process to be initiated and now involving decision making</p> <p>6 at that level. And that is a good thing. Whether it's</p> <p>7 tough, and it will be, it's still that process which I</p> <p>8 think empowers the Hawaiian community to make some</p> <p>9 decisions for how to participate. And that is something</p> <p>10 that needs to be done at that level and not by some other</p> <p>11 process.</p> <p>12 MS. CAROLINE BLANCO: And that's true. I mean,</p> <p>13 IFA is a consulting party here, you all are. It's a good</p> <p>14 way of managing that, it sounds to me.</p> <p>15 MR. HINANO RODRIGUES: Just to illustrate what</p> <p>16 Sol said -- and I know this is water under the bridge.</p> <p>17 And I don't mean to go back. But I think this will help</p> <p>18 you in your next two meetings that you're going to have in</p> <p>19 August. You guys kind of dropped the ball because you</p> <p>20 didn't approach it from a very Hawaiian way. And you need</p> <p>21 to understand that we Hawaiians love to show up at the end</p> <p>22 of the game. So it would behoove you to find a way to get</p> <p>23 us involved at the beginning of the game.</p> <p>24 And I know you attempted to do it here.</p> <p>25 The specific example of where we kind of dropped</p>

<p style="text-align: right;">74</p> <p>1 the ball is you called this an open house. Maybe if you  2 had called it a talk story session, more people would have  3 showed up.  4 MS. CAROLINE BLANCO: Huh.  5 MR. HINANO RODRIGUES: Because, again, we have a  6 different perspective.  7 We think -- people who know not much about the  8 Hawaiian culture think talk story is just chitchat. It's  9 not. It's for all of us to come into the same room and,  10 to use local lingo, for me to check you out. And what  11 happens in that process is you create a trust  12 relationship. Once you create the trust relationship,  13 then you start to move on and everybody works together.  14 Unless you get to that point -- and I share your  15 frustrations with you. Unless you get to that point, you  16 will be frustrated all the way because you haven't created  17 the trust relationship. So from that -- that's why 2005  18 until now, you know, you don't get much response.  19 MS. CAROLINE BLANCO: Right.  20 MR. HINANO RODRIGUES: Because you didn't quite  21 jump that first hurdle yet. So, again, this is an example  22 where, in the Hawaiian culture, it's a Hawaiian issue, you  23 got to approach it the Hawaiian way. If not, you will  24 ultimately fail in that process.  25 MS. ANNELLE AMARAL: Uh-huh.</p>	<p style="text-align: right;">76</p> <p>1 creation of the star compass utilizing sites on Haleakala  2 and, as another way of engaging the skills of the Hawaiian  3 community, for learning, for traditional knowledge. It  4 moved to the larger issue of that perhaps there are  5 proposals by the larger Hawaiian community similar to  6 something like what was proposed for the star compass. I  7 am wondering if these two are in fact one provision that  8 needs to be made in the MOA, or do we want to talk about  9 it as two separate provisions?  10 Is the star compass so singularly important that  11 it needs to be pulled out and discussed separately from  12 seeking proposals from the Native Hawaiian community for  13 additional learnings and cultural sensitivity?  14 MR. SOL KAHO'OHALAHALA: Well, again, my  15 thought -- and the reason I introduced that as a  16 suggestion -- is that, obviously, at Haleakala, in  17 reference to the la, the sun, the compass itself, in terms  18 of teaching navigation through Hokule'a and through Nainoa  19 and through Mau have always been focused on the rising  20 sun, moon, constellation, and the location. There are  21 very -- it's very important to have a clear view of the  22 horizons if you are going to be able to teach -- you know,  23 the best conditions for teaching.  24 If you are looking at the fact that the  25 telescope is looking for the best location for observing</p>
<p style="text-align: right;">75</p> <p>1 MR. HINANO RODRIGUES: Our whole culture is  2 process.  3 MS. CAROLINE BLANCO: I so greatly appreciate  4 those comments. The next time we're in Hawaii, we're  5 calling you.  6 MS. ANNELLE AMARAL: I wonder if I could step in  7 here. We have been going at this for more than two hours  8 and I need to give the stenographer a break.  9 MS. CAROLINE BLANCO: Not quite two hours, 13  10 minutes left. It's quarter until 12:00.  11 MS. ANNELLE AMARAL: Then we will give her a  12 break early. And hold the thought.  13 Could we take ten minutes?  14 MR. JEFF BARR: Sure.  15 MS. ANNELLE AMARAL: Thank you.  16 (Recess.)  17 MS. ANNELLE AMARAL: Have we finished the  18 discussion about konohiki? Allowing this is going to be  19 complex, it's going to require a lot of adept writing,  20 but, in concept, there is agreement to providing for  21 konohiki as a way to provide for respectful consultation  22 and proper protocol and engagement of the Hawaiian  23 community. So we can set that concept to the side.  24 Moving on. It came up sort of as two  25 discussions. There was the specific discussion of the</p>	<p style="text-align: right;">77</p> <p>1 the la, then shouldn't you be able to acknowledge the fact  2 that the Hawaiians also seek the best location for  3 teaching. And this might be a location where we might  4 consider bringing culture and its teaching and its  5 practice at a same location where science would like to  6 advance its thinking and its research as well.  7 So the compass itself relies only on the  8 horizons. And it's not usable anywhere above 15 degrees  9 above the horizon. So I think there is more of a specific  10 reason why this would be a location for this consideration  11 than any other place. So it's not just a checklist of  12 things that are Hawaiian, but I think, because you're  13 talking solar exploration and research, that you might  14 give some credence to the fact that Hawaiians have a  15 practice of training and teaching using the sun, the moon  16 and the stars at a location that's most advantageous for  17 the Hawaiian class or the Hawaiian way of teaching.  18 MS. ANNELLE AMARAL: You had your hand up.  19 MR. JEREMY WAGNER: My name is Jeremy Wagner. I  20 represent the National Solar Observatory, consulting  21 party.  22 We believe that mitigation is appropriate and  23 that it can and it should be applied. We support specific  24 proposals like this compass that tie these traditional  25 practices in with the sort of science that is proposed for</p>

<p style="text-align: right;">78</p> <p>1 ATST. Specific proposals like this I think are very good.  2 I spent quite a bit of time last night reading  3 about the compass. It's very interesting. Very exciting,  4 actually.  5 MR. SOL KAHO'OHALAHALA: Perhaps you can  6 participate in the Hawaiian learning center --  7 MR. JEREMY WAGNER: Sure.  8 MR. SOL KAHO'OHALAHALA: -- for astronomy.  9 But I think that would be the reason why this  10 would be a standalone, because I know in discussion with  11 Nainoa, the society has always been seeking to find a  12 place, you know, which would be conducive to the teaching.  13 And, again, there's a difference between teaching the  14 constellations and the positions of the sun and the moon  15 versus that of being on the sea. So this location is  16 specific for the teaching of the celestial bodies versus  17 the other part of it which would be actually on the sea  18 itself, you know. So --  19 MS. CAROLINE BLANCO: If I can ask reactions  20 from some of the other consulting parties, too, to this.  21 I think it sounds like a fabulous idea.  22 MR. HINANO RODRIGUES: I think from a more  23 dynamic approach, you need to find a way to involve the  24 Hawaiian people and make this their project, also. And I  25 think that's what Sol is doing right here.</p>	<p style="text-align: right;">80</p> <p>1 rather than try to define something up front? And then --  2 MR. HINANO RODRIGUES: Well, maybe -- and I will  3 leave this up to Caroline -- craft the language such that  4 it makes it very clear that the Hawaiian community is  5 involved in this, and then maybe come up with a couple  6 more examples of how they could be involved in this.  7 MR. SOL KAHO'OHALAHALA: Let me just add to  8 this, is that Nainoa and I have had these discussions for  9 a long, long time. Even so much so that they felt it  10 would be appropriate that each island have a location  11 where a star compass is placed. So that the people on  12 that island will have an opportunity to also be oriented  13 to the celestial bodies.  14 So what I am trying to say is that this is not a  15 void of any discussion, these are discussions we've had  16 for -- and as I told you, there is only one notation that  17 I know of where this compass has actually been  18 implemented. And that's Hualalai, you know.  19 MR. JEREMY WAGNER: Sol, is there a Hawaiian  20 name for the compass? I mean, star compass, but is there  21 a Hawaiian name? I couldn't find one. I was looking last  22 night.  23 Just an aside. Sorry.  24 MR. SOL KAHO'OHALAHALA: I know that all of the  25 components of the compass is named in Hawaiian. You could</p>
<p style="text-align: right;">79</p> <p>1 And I hate to say this, because I used to teach  2 at the university, also. And I was accused of, oh, yeah,  3 you guys in your ivory tower kind of thing. I am quite  4 sure that the Maui community or the Native Hawaiian  5 community looks at this in the same way. So there needs  6 to be that attitude adjustment, no, you are a part of us,  7 also. The Hawaiian culture is ever-exclusive versus, in  8 certain ways, the western culture which is more -- I mean  9 Hawaiian culture is more inclusive. Western culture is  10 somewhat exclusive in that everybody is put in a  11 cubbyhole, and this is you, this is your label and all  12 that.  13 So with the Hawaiian people, you need to make it  14 perfectly clear to them, this is about you and we want you  15 involved. And so projects like the star compass -- I am  16 assuming I know what it is, I am not too sure. But based  17 on the discussion, I can guess what it is. Now the people  18 are involved in it.  19 You know, the Hokule'a and Nainoa Thompson and  20 all that, that has had such a great impact on the  21 self-esteem of the Native Hawaiian people. So let's run  22 with the ball, you know. This is it.  23 MR. JEFF BARR: Excuse me. Are you saying that  24 we should leave it more open-ended until there is this  25 kind of grass roots buy-in and proposal from the community</p>	<p style="text-align: right;">81</p> <p>1 call it something, I guess.  2 MR. JEREMY WAGNER: I just wondered.  3 MS. CAROLINE BLANCO: From a logistical  4 standpoint -- this is clearly the western side of me  5 coming out, right -- how do you approach that? Is it  6 that --  7 MR. SOL KAHO'OHALAHALA: Okay. What I was going  8 to say is that one of the things I am considering and  9 planning to do now is to, again, meet with Nainoa.  10 Because, as I said, that the compass itself is a good  11 idea. And in a location, I think, they would agree would  12 be an appropriate place. But as the navigators, I would  13 like their collective input, because there are many  14 navigators today. At a time there were none. Okay. But  15 get Nainoa to help to participate or spearhead the  16 gathering of the navigators, even to the point that they  17 would come and assemble here at Haleakala to actually look  18 at the site and look at what is being proposed in the  19 project to understand how they would consider integrating  20 in terms of design, location.  21 And we're talking about some of these things  22 right now, which is good. So that there are other bits of  23 information that would be helpful to them as navigators.  24 But that would be the next step that I am planning to do.  25 MS. CAROLINE BLANCO: And maybe one thought --</p>

<p style="text-align: right;">82</p> <p>1 tell me what you think about this, because I certainly  2 don't want to sound presumptuous in any of this. Much  3 like what we are talking about with the konohiki, maybe  4 another way to do this, for purposes of putting this in a  5 document, is to have the IFA work with the Native Hawaiian  6 community to find a location for the star compass. Would  7 something like that work?</p> <p>8 I mean, I hate to box it in too much because I  9 want the flexibility of that development to go on. But,  10 yet, I want some assurance, at least, so, you know, people  11 can look at this and know what the expectation is and make  12 them comfortable with that.</p> <p>13 I am trying to translate it into a provision  14 again. It's that lawyer thing again.</p> <p>15 DR. CRAIG FOLTZ: I also wanted to add -- I  16 think we talked about this a bit yesterday -- is that if  17 there are other support facilities -- now, I mean, we're  18 not going to build dormitories, stuff like that -- but if  19 there are modifications to building that would allow for a  20 warm place, a safe place, a place to get out of the  21 weather, a place to use the restroom facilities, that's  22 something that we, the project, would need to iterate.</p> <p>23 And it's not specific to the design of a  24 compass, but having some understanding of how many people  25 will be there, what happens if it snows, you know, where</p>	<p style="text-align: right;">84</p> <p>1 And so it's not something that would be used during the  2 day because the sun will take off all, you know, other  3 orientations of constellations. But the rising sun and  4 the setting sun and the nighttime is the use. So the  5 early morning, early evening, and then through the night.  6 That is the time that the compass is used.</p> <p>7 MS. ANNELLE AMARAL: So you wouldn't have too  8 much competition, then, for the site or interference with  9 the --</p> <p>10 MR. SOL KAHO'OHALAHALA: It would be like  11 talking about the compass, but you couldn't really  12 demonstrate how it applied, the compass.</p> <p>13 MR. JEFF BARR: As I was mentioning to you  14 yesterday, there are some nighttime activities at the  15 observatory, preparing for the next day. But I wouldn't  16 see any --</p> <p>17 DR. CRAIG FOLTZ: However, there are other  18 nighttime observatories there.</p> <p>19 MR. JEFF BARR: That's right.</p> <p>20 MR. MIKE MABERRY: Eleven other observatories  21 working at night.</p> <p>22 DR. CRAIG FOLTZ: We can't go up and set off a  23 flare.</p> <p>24 MR. JEFF BARR: Lots of astronomical  25 observatories, including Kitt Peak, accommodate a very</p>
<p style="text-align: right;">83</p> <p>1 do we put people, that sort of thing. So that actually  2 factors into the planning.</p> <p>3 It may be premature for that. I mean, I think  4 that it's got to be cooperative in that sense because we  5 don't want -- I will express my western leanings and  6 thinking about liability, we want to make sure that this  7 is a safe experience.</p> <p>8 MR. JEFF BARR: And there are a lot of other  9 astronomical observatories that build in very nice visitor  10 facilities.</p> <p>11 MR. MIKE MABERRY: Galleries.</p> <p>12 MR. JEFF BARR: Galleries and facilities. So  13 people can get up close to look at the telescopes and also  14 appreciate the sites for the spiritual and cultural  15 values.</p> <p>16 So it wouldn't be new. We could certainly  17 incorporate some of that kind of infrastructure.</p> <p>18 In fact, for some of the other six sites that we  19 looked at, that was very much on the table. Because they  20 were very much sort of visitor-oriented, whereas Haleakala  21 observatory has been open in the ways that it's been open,  22 but it's never really been a big important part of the  23 program.</p> <p>24 MR. SOL KAHO'OHALAHALA: The other thing is that  25 the star compass is really most usable during the night.</p>	<p style="text-align: right;">85</p> <p>1 robust visitor program.</p> <p>2 MS. ANNELLE AMARAL: I am getting very excited  3 because one of the other things I facilitate is a landfill  4 over in Nanakuli. That's very exciting, I know. Talk  5 about getting screamed at, that's one of those places.  6 But I bring that up because when you talk about the star  7 compass, you talk about other islands, other locales, I  8 don't know if you are aware of it, but Nanakuli has lots  9 of Maui stories. And, you know, you have the reclining  10 Maui in Wai'anae, you have the Cave of Hina, the mother of  11 Maui, in Nanakuli. Just as I think about it, and I think  12 about sending the navigators out to find another site,  13 Wai'anae, the place where there isn't a whole lot of pride  14 in being Hawaiian, this could be one of the sources of  15 pride as you think about this being the model and then  16 taking it out to other sites. It could be quite exciting.</p> <p>17 MR. SOL KAHO'OHALAHALA: I mean I think talking  18 about the -- you know, gaining sense of place once more  19 and gaining the kind of respect and esteem that I think  20 Hawaiians surely could use a lot more of, that if you  21 bring them to Haleakala and you allow them to now be a  22 part of this mountain, that that in itself is already a  23 major accomplishment in terms of having them access the  24 summit and being able to talk about the sun, the moon and  25 the stars and to be able to teach them alongside, I think,</p>

<p style="text-align: right;">86</p> <p>1 with new innovative technologies and sciences. That is  2 the kind of, I think, preparing that gives empowerment and  3 gives use and practice once more in a very significant  4 place.  5 DR. CRAIG FOLTZ: Those are programs.  6 Certainly, we could develop programs. I mean, obviously,  7 there are limits as to numbers.  8 MR. SOL KAHO'OHALAHALA: Right. Right.  9 DR. CRAIG FOLTZ: For your information, all of  10 the observatories that we fund -- and there are a large  11 number -- all are required to have education, public  12 outreach programs and internships and research experience  13 for undergraduates and for teachers and so on. So if  14 there were a way to integrate the activities in the ATST,  15 which are all going to happen after sun, with these sort  16 of activities you are talking about, to not exclude them.  17 Maybe they don't perfectly integrate, but they are both  18 cool.  19 MR. SOL KAHO'OHALAHALA: I know, but I think  20 being side by side and allowing for that overlap is what  21 we are trying to achieve here. So you can pull them in  22 out of the star compass and then look at the ATST  23 telescope and see some of the things that are being done  24 with the telescope is to bring to them possibilities, you  25 know, for their own --</p>	<p style="text-align: right;">88</p> <p>1 representation of the star compass.  2 But, basically, you don't need anything except a  3 level place with a circle of stones and then different  4 stones that represent different constellations at  5 different seasons, you know. I mean, that's basically how  6 it works.  7 But perhaps we might want to be more creative in  8 these times to allow for a compass that would be as  9 magnificent as the telescope. No. Just kidding.  10 DR. CRAIG FOLTZ: We will make it out of glass.  11 MR. SOL KAHO'OHALAHALA: But, you know,  12 Hawaiians are very, very simple. And they only wanted to  13 know that these are the simple tools that help to teach  14 the concepts. So --  15 DR. CRAIG FOLTZ: Thank you.  16 MS. ANNELLE AMARAL: Any more discussion about  17 the star compass? Are we pau with that? Okay.  18 Proposals from --  19 MR. SOL KAHO'OHALAHALA: Just one more comment.  20 I think what we are steering toward is that -- I  21 have heard it asked several times -- what benefit is this  22 to the Native Hawaiian community, you know, what do the  23 Hawaiian people gain from this project, the ATST project.  24 And I am hoping that what we are trying to do is  25 demonstrate and we're trying to build some of the ideas</p>
<p style="text-align: right;">87</p> <p>1 DR. CRAIG FOLTZ: Sure.  2 MR. SOL KAHO'OHALAHALA: -- careers, perhaps.  3 And that is what, I think, this is intended, in part, to  4 do, you know. So that would be wonderful.  5 DR. CRAIG FOLTZ: Just a question. And being a  6 Harvard kind of guy. Would you build this out of stone?  7 Would you build it out of -- how would you construct it?  8 Do you have an image of it?  9 MR. SOL KAHO'OHALAHALA: Again, the only  10 resources Hawaiians had was sticks and stones. So the  11 compass itself was really just tiny ahu of stone in a  12 circle. And those ahu represented the rising, and, on the  13 opposite side, the corresponding setting. So standing  14 there in the middle, you could use Pohaku as your point.  15 And that's how we would measure the movement of the sun's  16 path.  17 DR. CRAIG FOLTZ: Sure.  18 MR. SOL KAHO'OHALAHALA: And eclipses.  19 DR. CRAIG FOLTZ: Get your latitude.  20 MR. SOL KAHO'OHALAHALA: I mean the solstice and  21 equinox. So they are marked and it's stone.  22 The compass that's on Hawaii island, that I  23 talked to you about, is all made out of slab blue rock.  24 Just slabs of it, kind of put together like a puzzle, but  25 with all of the houses. So it's a more modern</p>	<p style="text-align: right;">89</p> <p>1 that are beneficial so that we can talk about what are  2 some of the beneficial outcomes in the project like this  3 that is going to collaborate with Hawaiian input, with  4 Hawaiian support, and for education, for practices, and  5 even for a compass like this. So I hope that this answers  6 some of those questions. And that we're leading toward  7 these kinds of directions, that will help to bring to the  8 table these kinds of things that would be beneficial to  9 the Hawaiian community who perceive of a compass --  10 telescope as something that doesn't benefit any Hawaiian,  11 you know.  12 MS. CAROLINE BLANCO: That's great.  13 MS. ANNELLE AMARAL: Nice. That's a nice one.  14 Other proposals from the Native Hawaiian  15 community, I don't remember how that got up there or what  16 the thought was. Do you recall?  17 MR. SOL KAHO'OHALAHALA: Well, I think what we  18 were talking about is it was commented yesterday as to  19 whether or not Sol spoke for the Hawaiian people.  20 MS. ANNELLE AMARAL: Oh, that was it.  21 MR. SOL KAHO'OHALAHALA: I made very clear that  22 I wasn't speaking for the Hawaiian people, but that this  23 is an example of an idea. And I used the compass as an  24 example of how input might come that relate to Hawaiian  25 culture, practices and disciplines. And that we should</p>

<p style="text-align: right;">90</p> <p>1 open that opportunity up. And I think the idea of the  2 further leanings that are being planned is to help get  3 some of that. So if there are other organizations and  4 other individuals or entities that would like to put on  5 the table some of these things, that there is an  6 opportunity for that. So --</p> <p>7 MS. ANNELLE AMARAL: So perhaps that would be as  8 sort of a note in the correspondence that goes out for  9 future MOA meetings, is that we would welcome a discussion  10 or proposal, other proposals, from the Hawaiian community.</p> <p>11 DR. CRAIG FOLTZ: I think this was -- I'm sorry.</p> <p>12 MS. CAROLINE BLANCO: Go ahead.</p> <p>13 DR. CRAIG FOLTZ: First of all, I think Sol was  14 being very modest. I mean, he presented the star compass  15 idea. It's a fabulous idea. But he did, I think, want to  16 allow for other ideas.</p> <p>17 MS. CAROLINE BLANCO: Right.</p> <p>18 DR. CRAIG FOLTZ: And certainly that is very  19 reasonable.</p> <p>20 And, obviously, we are eventually constrained as  21 to how many things that we can do. This is a beautiful  22 one. I mean, I think it's beautiful from its conception.  23 It's also beautiful from its economy, to be honest,  24 speaking as a funding agency.</p> <p>25 MR. SOL KAHO'OHALAHALA: Wait. Wait. Don't</p>	<p style="text-align: right;">92</p> <p>1 MR. SOL KAHO'OHALAHALA: And my personal feeling  2 is that I am not necessarily supportive of the idea of  3 restoration, but I would like to consider that if we were  4 Hawaiians today looking toward the future, as a Hawaiian  5 cultural practice, should I be allowed the same exercise  6 to create today something for tomorrow, or am I only  7 relegated to the fact that I can only restore what was  8 there. So there's two tracks. You can look at the  9 restoration of sites because, from your archeological  10 studies, you show that the Hawaiian site that existed  11 there no longer is there. Except we have the reports that  12 give you the measurements of the site. And if you were to  13 restore that, then, simply, you would be putting in place  14 something that is documented as having been there.</p> <p>15 One of the things that I would be cautioned is  16 whether or not that site, while it's restored, would also  17 come with the knowledge and the practice that's associated  18 with the site.</p> <p>19 On the flip side, if I had an opportunity to  20 create as a Hawaiian, and I am going to go back to the  21 compass, should I be able to create a compass here that  22 has purpose and has use that's forward movement, or should  23 I just relegate the Hawaiian culture and practice to its  24 past and in that the restored site, which has not  25 necessarily the same purpose or use today, you know. So I</p>
<p style="text-align: right;">91</p> <p>1 limit me there. I can be creative.</p> <p>2 MR. MIKE MABERRY: Because you're going to have  3 to buy Ulaula from the park.</p> <p>4 MS. CAROLINE BLANCO: I think there was  5 another --</p> <p>6 DR. CRAIG FOLTZ: The park would do well to  7 support this.</p> <p>8 MS. CAROLINE BLANCO: They would.</p> <p>9 There was another point under the other  10 proposals from the Native Hawaiian community that I had in  11 my notes.</p> <p>12 MS. ANNELLE AMARAL: Okay.</p> <p>13 MS. CAROLINE BLANCO: It was this idea of create  14 an opportunity for a new site, not just restore a  15 destroyed one, and to allow for a living practice. And I  16 apologize for not remembering your Hawaiian name for  17 the --</p> <p>18 MR. SOL KAHO'OHALAHALA: Pu'u.</p> <p>19 MS. CAROLINE BLANCO: I was afraid to say it. I  20 didn't want to get it wrong. Wasn't that one of the  21 discussion points?</p> <p>22 MR. SOL KAHO'OHALAHALA: You might want to  23 comment, because yesterday it was -- it was brought up by  24 one of the consultants about restoration of sites.</p> <p>25 MS. CAROLINE BLANCO: Right.</p>	<p style="text-align: right;">93</p> <p>1 am trying to make a distinction between restoration and  2 the ability for Hawaiians to be creative and not relegate  3 cultural practice only to its past.</p> <p>4 DR. CRAIG FOLTZ: You are talking specifically  5 about a site that does not exist anymore.</p> <p>6 MR. JEFF BARR: We are talking about --</p> <p>7 DR. CRAIG FOLTZ: This is not an issue of  8 preservation.</p> <p>9 MR. JEFF BARR: You are saying where Reber  10 Circle was built?</p> <p>11 MR. SOL KAHO'OHALAHALA: Right.</p> <p>12 MS. CAROLINE BLANCO: You are saying that, for  13 example, one of the thoughts was -- this came, I think,  14 within the context of restore the site, the Reber Circle.</p> <p>15 MR. SOL KAHO'OHALAHALA: I think that was a  16 comment, somebody said that, you know, we should restore  17 the sites that were --</p> <p>18 MR. JEFF BARR: Put back the pu'u.</p> <p>19 MS. CAROLINE BLANCO: Right. And we wouldn't  20 just leave a hole. We would do something with it. What  21 you are saying is maybe find even another location for it,  22 or not restore the old one? Create something new is what  23 I am hearing.</p> <p>24 MR. SOL KAHO'OHALAHALA: I would like us to  25 allow for Hawaiians to still have the ability to create</p>

<p style="text-align: right;">94</p> <p>1 sites that are new sites. And then there's the other part  2 of it that says you can preserve and restore old sites.  3 Okay.</p> <p>4 MR. MIKE MABERRY: Which is the case with the  5 two ahu. The two ahu are new, they are not restorations  6 of previous ahu. The Native Hawaiians chose those sites  7 and they developed, built the ahu.</p> <p>8 DR. CRAIG FOLTZ: These are on the mountain,  9 recently built?</p> <p>10 MR. SOL KAHO'OHALAHALA: What are your thoughts?</p> <p>11 MR. HINANO RODRIGUES: Those are issues that I  12 face every day at work, Monday through Friday, 8:00 to  13 5:00. Good question.</p> <p>14 I think, my personal opinion -- not my SHPD  15 opinion, my personal opinion -- is only recreate or -- we  16 can't say recreate. Only create if you have to, yeah. So  17 with reference to a specific example of the star compass,  18 we have to. So we have to do it, you know. But if you  19 have a site that needs to be restored, and you have many  20 examples of that specific site, let's say a heiau, no need  21 to, no need to. Because the whole process of actually  22 building the heiau 400 years ago, the feeling is not here  23 today. It's not that you have a site, a heiau site, and  24 you have the rocks there. It was what was put in it. And  25 that, we cannot recreate. So let's not attempt to</p>	<p style="text-align: right;">96</p> <p>1 So there is an element to it versus a restoration of a  2 site that has really very little knowledge of practice,  3 you know.</p> <p>4 MS. CAROLINE BLANCO: So any thoughts on how we  5 translate this into sort of a provision, or is there an  6 idea here that we want to pursue? Is there something that  7 might just be another conceptually similar --</p> <p>8 MR. SOL KAHO'OHALAHALA: If you wanted to just  9 generalize it and say that part of this is an  10 acknowledgment of the dynamics of the people, so you can  11 put it in that context, without being so specific that you  12 are saying that this and this is what you can do and this  13 is what you cannot do. But an acknowledgment that the  14 culture is dynamic and that we would be supportive of.  15 You know, I don't know if that's too broad or too scary.</p> <p>16 MR. JEFF BARR: That's pretty broad.</p> <p>17 MS. CAROLINE BLANCO: Again, the idea is, you  18 know, long after we're gone, I mean, somebody can look  19 back at this MOA and say this is what was intended, and so  20 there is an understanding of expectations and to try to be  21 able to clarify this as best as possible. So --</p> <p>22 MR. SOL KAHO'OHALAHALA: Well, you are  23 supporting the ideas of recreating, let's say, a star  24 compass. You are supporting the ideas of allowing for the  25 idea of konohiki.</p>
<p style="text-align: right;">95</p> <p>1 recreate that.</p> <p>2 But, you know, the thing about art -- it's kind  3 of like art, right? What is beautiful to one person is  4 not to the other. So it's the same thing here, you know.</p> <p>5 You can look at somebody who practices his  6 culture. Then you're going to have the purist who is  7 going to do things only one way. And then you have the  8 one that needs to move on. You know, because life is not  9 static, even within our own culture. How they built the  10 heiau in 1200 is not the same as how they built it in  11 1500. How we spoke Hawaiian in 1200 is not the same  12 Hawaiian that we speak today. It's dynamic. It's not  13 static.</p> <p>14 So as educated people, we need to understand  15 that.</p> <p>16 MR. SOL KAHO'OHALAHALA: And that, I think, idea  17 of being dynamic is what I am really asking is that you  18 still allow for that opportunity within the culture so  19 that culture can see that they are not static and that  20 there is some room for this.</p> <p>21 Like you described the ahu that were placed  22 there, it is a dynamic implementation or practice that  23 comes with some purpose. And I would look at the compass  24 as perhaps another expression of that in the dynamic. To  25 allow -- but it's living and it's using and it's teaching.</p>	<p style="text-align: right;">97</p> <p>1 MS. CAROLINE BLANCO: Right. Right.</p> <p>2 MR. SOL KAHO'OHALAHALA: If you take those  3 things and you're saying that -- you know, in an MOA, that  4 we acknowledge that these things are cultural practices of  5 importance and that the idea of allowing them to -- I  6 don't know. Can you pick up on these examples as an  7 acknowledgment to show that --</p> <p>8 MS. TONIA MOY: Can I?</p> <p>9 MS. CAROLINE BLANCO: Yeah.</p> <p>10 MS. TONIA MOY: I think if you have it in the  11 whereas, whereas, you know, the dynamic of the Hawaiian  12 culture, dah, dah, dah, then the provisions are --</p> <p>13 MS. CAROLINE BLANCO: That's interesting.</p> <p>14 MR. MIKE MABERRY: Yeah. Yeah, it is. Good  15 idea.</p> <p>16 MS. CAROLINE BLANCO: Good idea. Thank you.</p> <p>17 DR. CRAIG FOLTZ: I just think differently.</p> <p>18 MR. JEFF BARR: I know. She started writing  19 when she said "whereas."</p> <p>20 MS. CAROLINE BLANCO: Well, that's the  21 traditional thing in an MOA. She knows exactly.</p> <p>22 MR. SOL KAHO'OHALAHALA: Provided that.</p> <p>23 MS. CAROLINE BLANCO: Very good. And a  24 "heretofore" is good.</p> <p>25 DR. CRAIG FOLTZ: Don't stipulate.</p>

<p style="text-align: right;">98</p> <p>1 MS. CAROLINE BLANCO: I want to work with you to  2 come up with that language to sort of -- since you  3 suggested it. If we could find something that is  4 responsive, you know, and reflective of the  5 acknowledgment, I think that -- we want to make sure we  6 get that one right. It's important.</p> <p>7 DR. CRAIG FOLTZ: The big ones.</p> <p>8 MS. ANNELLE AMARAL: Now comes the provision  9 that there is a finite lifetime for telescopes, that the  10 MOA would reflect that time and would make provisions for  11 the commitment to deconstruct this expensive piece of  12 machinery, remove all man-made objects.</p> <p>13 MS. TONIA MOY: You guys feel technology is  14 going to --</p> <p>15 MR. MIKE MABERRY: You did a really good job  16 yesterday.</p> <p>17 MS. TONIA MOY: Sorry. Again, got to repeat  18 everything.</p> <p>19 DR. CRAIG FOLTZ: We support long-range  20 facilities and we have observatories that we have been  21 running for almost 50 years. And there is always a reason  22 to keep them going, and because there's always  23 astronomical facilities. This isn't true of like physics  24 colliders and accelerators and things like that, but even  25 the very small telescopes. The one-meter telescopes, in a</p>	<p style="text-align: right;">100</p> <p>1 years. And you really want to study over two. Because  2 you would really like to know are the observations of the  3 first one unique.</p> <p>4 Now what happens if they are different the  5 second time around? Well, you know, you'll cross that  6 bridge when you come to it.</p> <p>7 We also believe -- sorry.</p> <p>8 MS. TONIA MOY: You will need another 23 years.</p> <p>9 DR. CRAIG FOLTZ: I think that if you look at  10 the progress of astronomical technology -- and one thing I  11 never said before is going to space doesn't help us. You  12 know, people have said just launch your telescope.</p> <p>13 If you put a telescope in space, you get outside  14 of the atmosphere, but you still need this really big  15 telescope.</p> <p>16 Now, in 45 years, we may have telescopes on the  17 moon. Now that's where you put a solar telescope. That's  18 where you put the big, big wonderful solar telescope. We  19 can't do it now. It's absolutely precluded. We can't  20 send anything to the moon.</p> <p>21 But we are willing to say, in 45 years, or 50,  22 give us a little margin because it will take a little  23 while to get it going, but in the order of 50 years of  24 operation, this telescope will do its scientific mission.  25 And we could keep it running and we could do good science.</p>
<p style="text-align: right;">99</p> <p>1 world of eight and ten-meter telescopes -- a ten-meter  2 telescope has 100 times the collection area of a one-meter  3 telescope. I am on nighttime telescopes now. There are  4 still uses for them. They are great.</p> <p>5 But in some sense they continue to cost money  6 and their existence hamstrings us a little bit in terms of  7 the discretionary money that we spend. They get in the  8 way of being able to really dedicate yourself to moving  9 forward on some of the new things.</p> <p>10 I am not saying that this one will, but what I  11 am saying is that in roughly 45 years or so, in a 45-year  12 period, we will observe the sun go through two very  13 important cycles. The sunspot cycle is -- you know, if  14 you just sit and count the number of sunspots every day,  15 over an eleven-year period it goes from low to high and  16 then back down to low again. That's the sunspot cycle,  17 it's half of what is called the Hale cycle.</p> <p>18 What happens is the magnetic field of the sun  19 flips, so what was the North Pole becomes the South Pole  20 every 11 years, then it flips again. We don't know why.  21 We have these really cute theories that you can draw on  22 the board with flux tubes become bouyant, all this stuff,  23 migrating to the poles. But really, in order to  24 understand -- this is all about magnetic activity, you  25 want to study the over the full cycle, and that's 22</p>	<p style="text-align: right;">101</p> <p>1 And we could do that. But I think that out of respect  2 from the point of view of planning for the long-term, it  3 is entirely sensible for us to require that the project  4 plan for, put in escrow for, before request of funds at  5 the end of the lifetime, in order to take the facility  6 down and remove all traces of it. Now I won't say restore  7 the site.</p> <p>8 MR. MIKE MABERRY: Anymore.</p> <p>9 DR. CRAIG FOLTZ: Yeah. And what happens to  10 that site is something that we could discuss. But that is  11 something that the NSF is perfectly comfortable signing  12 off on.</p> <p>13 MR. MIKE MABERRY: Or the university could make  14 it a condition of the lease. And, you know, we could give  15 them a lease for only 50 years.</p> <p>16 DR. CRAIG FOLTZ: So, you know, this whole issue  17 of mitigation and minimization, this is where we've had  18 discussions which are just of academic interest. In some  19 interest, it's a minimization because if you integrate  20 over time the impact of the telescope over a 100-year  21 period, well, it's gone, you know. So we sort of  22 minimized it, we cut it in half. I don't think there's  23 much else to discuss on it other than we will do it, we  24 will write it down.</p> <p>25 MS. ANNELLE AMARAL: It is an unusual offer, as</p>

102	<p>1 I understand it.</p> <p>2 MS. TONIA MOY: Yes.</p> <p>3 MR. JEFF BARR: Very new to astronomical</p> <p>4 observatories, that they have a finite lifetime and that</p> <p>5 they are taken down at the end of it. Which they do tend</p> <p>6 to collect dust after a while.</p> <p>7 DR. CRAIG FOLTZ: And this telescope, over 50</p> <p>8 years, with construction and operations, will cost \$1</p> <p>9 billion. Most of that is not in construction, most of</p> <p>10 that is -- you know, three quarters of that or so will be</p> <p>11 in operation.</p> <p>12 MR. MIKE MABERRY: What you were talking</p> <p>13 about --</p> <p>14 DR. CRAIG FOLTZ: I forgot what I was talking</p> <p>15 about.</p> <p>16 MR. MIKE MABERRY: What the sun does, what we</p> <p>17 are trying to see.</p> <p>18 Computer not working. Can you see that?</p> <p>19 MR. SOL KAHO'OHALAHALA: That's the surface of</p> <p>20 the sun?</p> <p>21 DR. CRAIG FOLTZ: You want to talk, Mike, or you</p> <p>22 want me to?</p> <p>23 MR. MIKE MABERRY: Go ahead.</p> <p>24 DR. CRAIG FOLTZ: This is the photosphere. This</p> <p>25 is where the light comes from. The sun doesn't have a</p>	104	<p>1 Coronal loop.</p> <p>2 DR. CRAIG FOLTZ: Have you got a coronal mass</p> <p>3 ejection?</p> <p>4 We are sort of off the point here, but everybody</p> <p>5 is eating.</p> <p>6 MR. MIKE MABERRY: That's pretty cool.</p> <p>7 MR. JEREMY WAGNER: Is it? Okay.</p> <p>8 DR. CRAIG FOLTZ: What you got?</p> <p>9 MR. JEREMY WAGNER: I don't know. All kinds of</p> <p>10 videos.</p> <p>11 MR. SOL KAHO'OHALAHALA: So, Craig, the ATST</p> <p>12 telescope, you are saying, will give you an image that's</p> <p>13 going to be 20 miles versus --</p> <p>14 DR. CRAIG FOLTZ: Yeah. Versus 100 or 200. It</p> <p>15 depends on the wavelength. It will improve that picture</p> <p>16 by at least a factor of five.</p> <p>17 Down at the finest scales, at the 20-mile</p> <p>18 scales, there's other processes that are forcing</p> <p>19 everything into equilibrium. They are forcing things to</p> <p>20 be the same over like a 20-mile scale. That's the photon</p> <p>21 mean free path. That's the distance that a typical photon</p> <p>22 travels. And photons are a little bundle of light. So</p> <p>23 that sort of keeps things in equilibrium.</p> <p>24 That's the pressure scale height. That's the</p> <p>25 distance over which pressure doesn't change by much. So</p>
103	<p>1 surface, it's gaseous. If you were to fall into it, you</p> <p>2 would burn up long before you fell into it. But there is</p> <p>3 no surface, you would just fall into it. The temperature</p> <p>4 is about 6,000 degrees centigrade.</p> <p>5 And what you see here is the surface of the sun</p> <p>6 is turbulent, sort of boiling. This is just away from the</p> <p>7 sunspot. And you can see these sort of turbulent cells</p> <p>8 that come and go. It's like, you know, slow boiling where</p> <p>9 blobs of gas rise up from below.</p> <p>10 And to give you some idea, a typical size of one</p> <p>11 of these blobs -- since it's moving it's hard, but you get</p> <p>12 some idea -- that's about the size of Texas. And what you</p> <p>13 see is that -- I love this word -- at the interstices of</p> <p>14 the convective cells, sometimes you see these little</p> <p>15 bright points. See these sort of bright areas? That's</p> <p>16 the field being gathered. And the action there is sort of</p> <p>17 on a 30 kilometer or 20-mile light scale.</p> <p>18 But what you are resolving here -- this is the</p> <p>19 best we can do. It's the best we can do from the ground.</p> <p>20 It's equivalent to the best we can do from space. And you</p> <p>21 are resolving here 200 to 300 miles. So you are off by</p> <p>22 almost a fact of a tenth, maybe a little less.</p> <p>23 What else you got on this? You got the</p> <p>24 beautiful sunspot?</p> <p>25 MR. JEREMY WAGNER: No, I don't think so.</p>	105	<p>1 given the temperatures and the radiation environment, and</p> <p>2 the pressure, below 20, you expect everything is going to</p> <p>3 be the same, right. So that's kind of where --</p> <p>4 And that's beautiful. That's beautiful. So</p> <p>5 there's a sunspot moving. Again, to calibrate, you can</p> <p>6 see the granulation around the outside. Again, these</p> <p>7 blobs are like the size of Texas.</p> <p>8 This is a sunspot first discovered in the</p> <p>9 western world by Galileo, who got into serious trouble.</p> <p>10 You could easily -- this is called the umbra of the</p> <p>11 sunspot. It's an analogy to a shadow. This is the</p> <p>12 penumbra. You can easily drop the earth into this. This</p> <p>13 is the base of an active region.</p> <p>14 And what we know is the reason that this looks</p> <p>15 dark is -- it's not dark. It turns out it's just dark in</p> <p>16 contrast to the bright photosphere. This is cooler. And</p> <p>17 it's cooler -- get ready -- because there's a strong</p> <p>18 magnetic field here. Magnetic fields contribute to</p> <p>19 pressure. Pressure times temperature in an equilibrium</p> <p>20 situation is constant. So the pressure in here times the</p> <p>21 temperature in here is equal to the pressure out here</p> <p>22 times the temperature out here. Since the pressure is</p> <p>23 higher, the temperature is lower.</p> <p>24 Are we cool?</p> <p>25 MS. CAROLINE BLANCO: Why are you looking at me?</p>

106

1 DR. CRAIG FOLTZ: The brightness varies as the  
 2 temperatures of the fourth power. So the brightness is a  
 3 strong factor to function of the temperature. So this is  
 4 dark because it's cool.  
 5 Why is it cool? Because there's a huge mass of  
 6 magnetic field that has been bundled in here. And it's  
 7 supporting in here.  
 8 And so in the umbra, the field lines are coming  
 9 out toward you. In the penumbra, it's bent over. It's  
 10 just beautiful. You look at this, you say there's got to  
 11 be flow, there's got to be stuff coming out. And in some  
 12 of these movies, you can see this.  
 13 What is wonderful about this is these things  
 14 come in pairs typically. So you will have another sunspot  
 15 nearby, opposite polarity. And over those is where the  
 16 field is strong, the field interacts, the field -- it's  
 17 usually a matter of energy. A magnetic field has  
 18 intrinsic energy.  
 19 If you release that energy by some process, that  
 20 I do not understand -- because when they talked about this  
 21 stuff when I was studying physics, astrophysics, I decided  
 22 I am not going to do solar. This is magnetohydrodynamics.  
 23 I don't understand a word of it.  
 24 So this is where -- the active sun, that's where  
 25 it happens. That's so cool. I love that.

107

1 And that's done with a National Solar  
 2 Observatory telescope in New Mexico. And it uses a  
 3 technique called adaptive optics, which I won't talk  
 4 about.  
 5 We should be back to mitigation here.  
 6 MR. JEREMY WAGNER: Sure.  
 7 MS. ANNELLE AMARAL: So with respect to the  
 8 deconstruction of the telescope, we have no comments,  
 9 concerns, we're going to leave the language to --  
 10 DR. CRAIG FOLTZ: We will write it.  
 11 MS. ANNELLE AMARAL: All right. Okay.  
 12 MR. SOL KAHO'OHALAHALA: Wasn't it brought up in  
 13 that discussion that what if the Native Hawaiians wanted  
 14 now to own and operate it?  
 15 DR. CRAIG FOLTZ: We can talk about either the  
 16 deconstruction or the divestment. And the divestment in  
 17 the case of the Native Hawaiians. And I know that Clyde  
 18 is sensitive to this. And I think that we would just  
 19 allow for that to happen. We could even say divestment to  
 20 Native Hawaiian interests.  
 21 I think what we would want is if the NSF were  
 22 prepared to tear it down, and somebody else came in and  
 23 said, no, you know, I am here from the University of  
 24 Jersey City -- actually that's probably way too close to  
 25 NJIT -- and we want to run this, we would want to make

108

1 sure that signatories to the MOA would have the leverage  
 2 to say, no, you said you would take it down, take it down.  
 3 MR. SOL KAHO'OHALAHALA: Okay. I just want to  
 4 kind of toss in another idea. Is that not only the  
 5 potential for divesting it to a Native Hawaiian, but is  
 6 there a potential for it to have some economic value to  
 7 Native Hawaiians? Because at some point, if they chose to  
 8 be the owners of a facility that would allow continuous  
 9 use, that there would be an opportunity for it to have an  
 10 economic --  
 11 DR. CRAIG FOLTZ: There is always potential.  
 12 What I would say is that if I take any telescope that was  
 13 built 50 years ago, and a telescope that was built 50  
 14 years ago -- and take the Palomar 200-inch, great  
 15 monument, beautiful thing, fabulous machine, you wouldn't  
 16 build another one like it now. And you might find people  
 17 to buy some of the time. But we have such better  
 18 technology now. And I believe that that will probably  
 19 continue.  
 20 We could certainly allow that. I mean, we will  
 21 iterate the language, but we will make sure that there is  
 22 some possibility, should it be of value to Native Hawaiian  
 23 groups, that value could be realized.  
 24 MR. JEFF BARR: How were you thinking that --  
 25 what kind of economic value were you imagining?

109

1 DR. CRAIG FOLTZ: You could sell time.  
 2 MR. JEFF BARR: Well, that is a possibility.  
 3 MR. SOL KAHO'OHALAHALA: Remember what Mike  
 4 said, that, in 50 years, it's going to be Hawaiian  
 5 sovereign lands?  
 6 MR. MIKE MABERRY: Well, it's ceded land.  
 7 MR. SOL KAHO'OHALAHALA: The Hawaiians would  
 8 have an interest in understanding how their own lands will  
 9 have some economic value for use. So I am just trying to  
 10 say that, in the future, should there be an opportunity  
 11 for Hawaiians to consider what economic value there might  
 12 be in the use of these lands of which they will be  
 13 responsible for maintaining or operating or whatever,  
 14 that's an opportunity, I guess.  
 15 MS. CAROLINE BLANCO: So are you referring to  
 16 the telescope or the underlying plans?  
 17 MR. MIKE MABERRY: Telescope.  
 18 MR. SOL KAHO'OHALAHALA: Telescope and the  
 19 lands.  
 20 MR. MIKE MABERRY: But that's not your issue.  
 21 MS. CAROLINE BLANCO: I think that is beyond the  
 22 scope of this MOA.  
 23 MR. SOL KAHO'OHALAHALA: But the facility.  
 24 MS. CAROLINE BLANCO: The facility, sure. Okay.  
 25 Thanks.

110	<p>1 MS. ANNELLE AMARAL: So some provision made in</p> <p>2 the language of the MOA not only with respect to the</p> <p>3 deconstructing of the telescope, but provisions for it to</p> <p>4 be divested to Native Hawaiian interests, or, should there</p> <p>5 be a potential of economic use, either of the equipment or</p> <p>6 some other future use of it, that language would be</p> <p>7 provided for the MOA for that. Understanding, of course,</p> <p>8 that the use is limited in time.</p> <p>9 Michael, can you raise this?</p> <p>10 MR. MIKE MABERRY: I'm sorry. Excuse me.</p> <p>11 DR. CRAIG FOLTZ: She could have written all</p> <p>12 over your nice new screen.</p> <p>13 MS. ANNELLE AMARAL: I would be happy to do</p> <p>14 that, but Michael would not be happy with me.</p> <p>15 MR. MIKE MABERRY: No.</p> <p>16 MS. ANNELLE AMARAL: That was this reference,</p> <p>17 then, to use by Hawaiians as appropriate.</p> <p>18 Let's see. Moving on to number three, the MCC</p> <p>19 proposal -- I mean, page three, MCC proposal and</p> <p>20 integrating Hawaiian knowledge and Hawaiian science and</p> <p>21 Hawaiian practices with the science curriculum. That --</p> <p>22 DR. CRAIG FOLTZ: It's a very broad proposal.</p> <p>23 It has workforce development through internships,</p> <p>24 internships at a variety of levels, it has curriculum</p> <p>25 development. And it is something that we will have to</p>	112	<p>1 DR. CRAIG FOLTZ: I would rather not right now.</p> <p>2 Because it will be on the record. And I haven't read it</p> <p>3 in a while and I don't want to get it wrong.</p> <p>4 MS. CAROLINE BLANCO: Okay. Maybe we can just</p> <p>5 talk about workforce development programs, educational</p> <p>6 programs.</p> <p>7 DR. CRAIG FOLTZ: Internship programs.</p> <p>8 MS. CAROLINE BLANCO: Internship programs.</p> <p>9 That's the kind of thing.</p> <p>10 DR. CRAIG FOLTZ: One of the things that we</p> <p>11 support on Maui through one of our other centers is a very</p> <p>12 successful internship program which tries to address two</p> <p>13 needs. One is the need for technical expertise, technical</p> <p>14 adept workforce here on Maui, because it's the high-tech</p> <p>15 industry on Maui, of which there is substantial -- finds</p> <p>16 that it's tremendously expensive to bring people from the</p> <p>17 mainland and the resident's time here is short, typically</p> <p>18 two years. And so the relocation costs and the training</p> <p>19 and so on makes it expensive.</p> <p>20 Furthermore, the other role was to provide</p> <p>21 internships for Hawaiian, and not necessarily Native</p> <p>22 Hawaiian, but for Hawaiian students, to let them know that</p> <p>23 if they were interested in a technical, science,</p> <p>24 technology, engineering or mathematic, type of career that</p> <p>25 there are places for them to work here. So it tries to</p>
111	<p>1 negotiate. It is entirely consistent with the NSF's</p> <p>2 mission, which is the integration of training and</p> <p>3 research.</p> <p>4 And as I said, we support education, public</p> <p>5 outreach, et cetera, directly. And we also support it at</p> <p>6 our federally-funded observatories.</p> <p>7 I think at this point I would like to not</p> <p>8 discuss this too openly because it's a subject that we</p> <p>9 need to have more discussion on. It is an expensive</p> <p>10 mitigation. And we, the NSF, need to continue to talk to</p> <p>11 MCC. And we also at NSF need to talk to ourselves, which</p> <p>12 we do so well.</p> <p>13 MS. CAROLINE BLANCO: Could we, though, Craig,</p> <p>14 talk in concepts?</p> <p>15 DR. CRAIG FOLTZ: Sure.</p> <p>16 MS. CAROLINE BLANCO: As far as --</p> <p>17 DR. CRAIG FOLTZ: I am not taking it off the</p> <p>18 table. I am just saying not everybody has read it and --</p> <p>19 I mean, I don't want to discuss it in detail here. We</p> <p>20 could certainly say the components of workforce</p> <p>21 development.</p> <p>22 MS. CAROLINE BLANCO: Why don't you go through,</p> <p>23 just for their knowledge, so everybody is on the same page</p> <p>24 with it, to maybe talk about the various components of it?</p> <p>25 Then we can maybe --</p>	113	<p>1 fight sort of two countervailing forces. One, the sense,</p> <p>2 you know, if you grow up on Maui and you love computers,</p> <p>3 that somehow you're going to have to move to California.</p> <p>4 And the other is the difficulty in recruiting talented</p> <p>5 workforce to come to Maui. This has been a very</p> <p>6 successful program.</p> <p>7 MS. ANNELLE AMARAL: I'm sorry here, but I</p> <p>8 wonder, as the facilitator, if you could give me a moment</p> <p>9 for me to take a break and I can come back in about five</p> <p>10 minutes?</p> <p>11 DR. CRAIG FOLTZ: Sure. I understand that.</p> <p>12 MR. MIKE MABERRY: And you haven't eaten yet.</p> <p>13 MS. ANNELLE AMARAL: And I haven't eaten yet,</p> <p>14 either. Just give me five minutes.</p> <p>15 (Recess.)</p> <p>16 DR. CRAIG FOLTZ: Let me clarify my previous</p> <p>17 position, about not wanting to discuss this in detail.</p> <p>18 The issue is that, you know, I don't want to misspeak.</p> <p>19 Then, Clyde, perhaps you can talk about it --</p> <p>20 MR. MIKE MABERRY: Sol, representing Clyde. I</p> <p>21 am just kidding.</p> <p>22 DR. CRAIG FOLTZ: I apologize.</p> <p>23 This is an area that NSF is very active in.</p> <p>24 It's very active in that we have lots of buzzwords on</p> <p>25 creating the workforce of the 21st century, we have a lot</p>

<p style="text-align: right;">114</p> <p>1 of emphasis on reaching out to underrepresented groups,  2 both for education and for workforce development. And  3 this is an area I think where things come naturally  4 together.</p> <p>5 The other thing that is an issue is the recently  6 passed American Competes Act, specifically talks about the  7 roles of community colleges.</p> <p>8 So, Sol, maybe you want to just summarize.</p> <p>9 MR. SOL KAHO'OHALAHALA: Well, basically, I  10 think what this proposal does is it creates like a bridge  11 program that is not only looking at the community college  12 level, but it's looking at the K to 12, you know, an  13 opportunity to introduce STEM programs, you know, to allow  14 our keiki, our children, to be involved in these kinds of  15 fields of interaction and study so that as they are  16 seeking higher education that they already have some  17 familiarity with the field of science, technology,  18 engineering and math. So it's sort of a bridge into the  19 community college level.</p> <p>20 Then on the opposite end of the spectrum, we  21 already are collaborating with the akamai program which  22 puts in place college students in an intern program in  23 those fields of science, technology, engineering and math.</p> <p>24 And so we see it as complimenting, so that there  25 will be a clear path perhaps that a student can begin that</p>	<p style="text-align: right;">116</p> <p>1 DR. CRAIG FOLTZ: And furthermore, the community  2 college is developing some four-year programs.</p> <p>3 MR. SOL KAHO'OHALAHALA: So the potential --</p> <p>4 DR. CRAIG FOLTZ: And they are technical  5 programs. And they are working on developing  6 electrooptics curriculum, which is very much aligned with  7 the sort of technical needs of observatories and so on.  8 So it all plays well.</p> <p>9 The details and the funding level, the funding  10 requirements, are yet to be negotiated.</p> <p>11 MS. ANNELLE AMARAL: Okay. Good. Yes.</p> <p>12 MS. TONIA MOY: Is it a good time now?</p> <p>13 MS. ANNELLE AMARAL: Yes.</p> <p>14 What we wanted to do, because we're sensitive to  15 the time constraints here -- and you have to leave to  16 catch a flight -- so we are going to pull away right now  17 from this next proposal. We're going to stop here for a  18 moment in order to raise an additional point. So we are  19 going to be off track a little bit.</p> <p>20 MS. TONIA MOY: I just wanted to make a point,  21 because it's not up there right now for any of the park,  22 the national park. Because there is a road, right,  23 there's the 1930s road. And I don't really know -- and I  24 think National Park Service is actually the ones who  25 should be discussing what the mitigation is because I am</p>
<p style="text-align: right;">115</p> <p>1 as early as kindergarten and can continue on into higher  2 education, and then allow for all of these things to be  3 put in place.</p> <p>4 It was, I think, offered as a proposal for  5 mitigation, seeing that the telescope is really one of the  6 tools, that kind of enhancement for students who are  7 seeking careers. And if we are intending now to look at  8 creating a workforce here at home, then we better start as  9 early as we can. So this is an opportunity to introduce a  10 proposal for mitigation where we would be creating sort of  11 a bridge program that creates a path for these kinds of  12 things.</p> <p>13 DR. CRAIG FOLTZ: Thank you. I think that's it.</p> <p>14 MR. SOL KAHO'OHALAHALA: That's why I got  15 involved, yeah.</p> <p>16 DR. CRAIG FOLTZ: There are potential curriculum  17 development issues and laboratory, you know, development  18 issues and so on. But it really is an attempt to build on  19 our previous successes and add to them and to extend them  20 to K-12.</p> <p>21 MR. SOL KAHO'OHALAHALA: And it did seem -- the  22 other thing, I guess, at the community college level, that  23 was a good progression from K to 12 into the community  24 college. Then further on into the four-year university if  25 you want to continue.</p>	<p style="text-align: right;">117</p> <p>1 not as familiar. All I know is that there's a road. And  2 I am sure there's other sites within the park that the  3 tower will have a visual impact for.</p> <p>4 DR. CHARLIE FEIN: We can address that.</p> <p>5 If you don't mind, I would like Jeff to talk a  6 little about what has been done with respect to the road  7 and what is left to be done. Then I will talk about the  8 visual impact.</p> <p>9 MS. CAROLINE BLANCO: Okay. If we can have her  10 finish her thought, too, that would be great.</p> <p>11 MS. TONIA MOY: No. Well, I just wanted to make  12 sure that there is someplace in the MOA for all of that.  13 It is just that it hasn't been mentioned yet. I know you  14 guys are going to talk to National Park Service.</p> <p>15 MR. JEFF BARR: Yes. And we have been  16 attempting, really, to elicit some commentaries and some  17 useful dialogue with the park regarding specifically the  18 road and protection of it as, as you say, a potentially  19 historic element of the park, 1930s WPA project, to  20 construct the road. And there are several specific  21 elements of the road, a bridge which has like rock  22 railings and embankments, and several culverts that were  23 made with the native rock from the site. And they are  24 contributing elements to the character of the road as  25 potentially listable as a historic place on the national</p>

<p style="text-align: right;">118</p> <p>1 register.</p> <p>2 And, frankly, we weren't aware of that until the</p> <p>3 park pointed it out to us after their review of the Draft</p> <p>4 EIS. And so becoming aware of that -- and the park at the</p> <p>5 time had also, previous to this, knowing that the project</p> <p>6 was coming in, that their review of the Draft EIS and that</p> <p>7 the telescope project was being proposed, on their own and</p> <p>8 sort of proactively, contracted with the National Highways</p> <p>9 Association for a study of the condition of the pavement</p> <p>10 of the road and what impact construction traffic for ATST</p> <p>11 would have on it. Then eventually they shared that report</p> <p>12 with us after the release of the Draft EIS.</p> <p>13 And that report was a bit inconclusive in terms</p> <p>14 of how much impact ATST construction traffic might have.</p> <p>15 It was very specific about the exact condition of the</p> <p>16 pavement. And, again, this gets a little bit into sort of</p> <p>17 technical details here that I am not sure is useful. And</p> <p>18 what would be necessary in terms of a refurbishment</p> <p>19 project for the road, either before or after ATST. And</p> <p>20 then some aspects of the road that were totally</p> <p>21 independent of ATST. There's certainly a lot of traffic</p> <p>22 on the road already.</p> <p>23 And so it recognized all the traffic that --</p> <p>24 yeah, here are a couple of examples. That's a picture of</p> <p>25 the bridge. Then there's a picture of the culvert there.</p>	<p style="text-align: right;">120</p> <p>1 Again, I mean, it's a bit of a tangent, but it</p> <p>2 certainly is one of the big concerns for the park. And we</p> <p>3 do intend to engage in discussion with them. They weren't</p> <p>4 able to make these meetings, but we are going to be</p> <p>5 meeting with them in August on that.</p> <p>6 DR. CHARLIE FEIN: Thank you, Jeff.</p> <p>7 I am going to talk about viewplain and visual</p> <p>8 impact level. The facility, the proposed facility, this</p> <p>9 is a rendering of what it would look like from the Red</p> <p>10 Hill overlook. And what you are looking at, this is the</p> <p>11 Air Force facility, AEOS, the Advanced Electrooptical</p> <p>12 System. This building is 117 feet tall. It currently is</p> <p>13 visible from the valley, on other places on Maui.</p> <p>14 This is the Maui space surveillance complex with</p> <p>15 its two 48-foot diameter domes.</p> <p>16 Over on this side, the University of Hawaii</p> <p>17 facilities, which are currently present, Panstars One and</p> <p>18 Magnum facility, some other facilities back here.</p> <p>19 And this is what ATST would look like from Red</p> <p>20 Hill. Now, from Red Hill, it is visible. There is no</p> <p>21 doubt about it, that is a park resource.</p> <p>22 When visitors come up to the national park and</p> <p>23 stand on the west side of Red Hill, this is what they see.</p> <p>24 And in fact, there is a large plaque there describing</p> <p>25 astronomy and the dark skies on Haleakala and so on.</p>
<p style="text-align: right;">119</p> <p>1 I don't know if we have the other pictures, or just</p> <p>2 generally the road. But the condition of the road --</p> <p>3 yeah. Here we go.</p> <p>4 This was a lava tube under the road here on the</p> <p>5 left that had collapsed.</p> <p>6 Again, all of this is obviously independent and</p> <p>7 not really related to ATST construction in general.</p> <p>8 But in general, the condition of the pavement</p> <p>9 and the park's concern that ATST, especially construction</p> <p>10 traffic, but also, to some extent, operational traffic,</p> <p>11 would have an impact and would have an impact on their</p> <p>12 obligation to maintain the road and how they act as proper</p> <p>13 stewards of this potentially cultural resource as well as</p> <p>14 just, obviously, a facility for public use.</p> <p>15 So I am not sure what all else Charlie had in</p> <p>16 mind.</p> <p>17 Oh, also, at this point we are expecting to</p> <p>18 contract for an engineering assessment of this bridge and</p> <p>19 the culverts because they were pointed out specifically by</p> <p>20 the park as potentially being subject to damage by heavy</p> <p>21 loads from ATST.</p> <p>22 So we want to find out, get better information,</p> <p>23 really, to find out what potential there really is for</p> <p>24 damaging these things and how we would go about protecting</p> <p>25 them.</p>	<p style="text-align: right;">121</p> <p>1 Perhaps you've seen that. It was put up about a year ago</p> <p>2 or so by the national park.</p> <p>3 With respect to visibility within the park</p> <p>4 itself -- where did we go? To the right. The Draft</p> <p>5 Environmental Impact Statement had a viewplain analysis</p> <p>6 which used software, GIS maps, GPS locations, overlays,</p> <p>7 topography and so on. And in a DEIS, the National Park</p> <p>8 Service superintendent was not satisfied with that</p> <p>9 particular viewplain analysis.</p> <p>10 So in the interim, in the time since, we have</p> <p>11 gone out into the field, we have sent folks out into the</p> <p>12 field with GPS locators, photography equipment, and so on.</p> <p>13 And using the viewplain software and GIS overlays, Google</p> <p>14 Earth, every kind of overlay you can think of, we</p> <p>15 calculated a model of what you would see from the national</p> <p>16 park. This being the crater area. This would be the</p> <p>17 location of ATST at its primary site next to the Mees</p> <p>18 observatory.</p> <p>19 As you can see from all -- and each of these</p> <p>20 points represents a photographic and GPS point. In other</p> <p>21 words, the engineers stood at that point, took a</p> <p>22 photograph back in that direction, and got a GPS location,</p> <p>23 and then it was all overlaid on GIS mapping.</p> <p>24 In that location, ATST would not be visible from</p> <p>25 anywhere in the crater, on any of the trails anywhere in</p>

122	<p>1 the crater.</p> <p>2 Now, in its alternative location, the</p> <p>3 alternative site, Reber Circle --</p> <p>4 DR. CRAIG FOLTZ: Charlie, just to clarify, the</p> <p>5 green areas are places where you could see it?</p> <p>6 DR. CHARLIE FEIN: Where you could see it.</p> <p>7 DR. CRAIG FOLTZ: See any part of it.</p> <p>8 DR. CHARLIE FEIN: In this one, the purple is</p> <p>9 where you would be able to see it.</p> <p>10 MR. MIKE MABERRY: In its alternative site.</p> <p>11 DR. CHARLIE FEIN: This is where it would be</p> <p>12 visible at the Reber Circle site. Now, Reber Circle is a</p> <p>13 little bit higher. It's also a little bit further --</p> <p>14 MR. MIKE MABERRY: North.</p> <p>15 DR. CHARLIE FEIN: -- to the north and east.</p> <p>16 So you can see that it would be a little bit</p> <p>17 more visible. Although, still not visible for many of the</p> <p>18 trails.</p> <p>19 Now, curiously -- if we put up the next one --</p> <p>20 all of this red area represents what you see from inside</p> <p>21 the crater, looking back toward the park overlook. These</p> <p>22 red areas are what you see, places from which you can see</p> <p>23 the park overlook inside the crater. A man-made facility,</p> <p>24 looking out, visible to visitors, hikers and so on.</p> <p>25 The final image, the blue areas represent what</p>	124	<p>1 DR. CRAIG FOLTZ: Pick one, Charlie.</p> <p>2 DR. CHARLIE FEIN: Yeah, that's good. Well,</p> <p>3 that's from Kihei. So it would be most visible from the</p> <p>4 Kihei --</p> <p>5 DR. CRAIG FOLTZ: Stop that.</p> <p>6 DR. CHARLIE FEIN: Hey, you're freaking me out,</p> <p>7 man.</p> <p>8 MS. CAROLINE BLANCO: The bottom one. Charlie,</p> <p>9 the bottom one.</p> <p>10 MR. JEREMY WAGNER: Which one?</p> <p>11 MS. CAROLINE BLANCO: That one. That's a good</p> <p>12 one.</p> <p>13 DR. CRAIG FOLTZ: Take your fingers off the</p> <p>14 keyboard.</p> <p>15 DR. CHARLIE FEIN: This is the entrance to the</p> <p>16 national park, right. So this is how it would appear as</p> <p>17 you drove into the national park, the first time you would</p> <p>18 be able to see it. There is the Air Force facility which</p> <p>19 is right on the edge of Kolekole. And this is what ATST</p> <p>20 would look like.</p> <p>21 MR. MIKE MABERRY: That is ten X magnification.</p> <p>22 DR. CHARLIE FEIN: Of course, that's looking</p> <p>23 through binoculars. Because with the naked eye, they are</p> <p>24 little dots, as you well know.</p> <p>25 Now, we've done these viewplain studies from all</p>
123	<p>1 you can see from the park overlook right at the crater, a</p> <p>2 little bit further downhill. The flashing windows of that</p> <p>3 facility are visible from almost anywhere in the crater.</p> <p>4 So with respect to ATST visibility, because of</p> <p>5 its position and because of the terrain blocking from</p> <p>6 magnetic peak, and so on, would not be visible from</p> <p>7 anywhere in the crater. Yes, it would be visible from</p> <p>8 some places on the road, but the observatories are already</p> <p>9 visible from those locations on the road.</p> <p>10 It would be visible for a brief period as you</p> <p>11 drive up the road past Hosmer Grove. The observatories</p> <p>12 are already visible from that area.</p> <p>13 With respect to the national park, the viewplain</p> <p>14 would not be significantly altered, there would be</p> <p>15 visibility from Red Hill. It is a large white facility.</p> <p>16 But the visitor experience within the crater would not be</p> <p>17 impacted whatsoever.</p> <p>18 The visibility of the facility from elsewhere on</p> <p>19 Maui is variable, depending on where you are. In some</p> <p>20 places, it would be completely invisible. In other</p> <p>21 places, it would appear between other facilities. And</p> <p>22 because of its location back on the south side of the</p> <p>23 Kolekole, it would appear shorter and less visible than,</p> <p>24 for example, the Air Force facility, which is -- woops.</p> <p>25 MR. JEREMY WAGNER: Did we lose it?</p>	125	<p>1 over the island. We have photographs and we've had</p> <p>2 renderings done.</p> <p>3 This one from Maalaea Harbor. Wow, I mean, you</p> <p>4 know, you can hardly see the observatories with the naked</p> <p>5 eye, little dots. But if you use binoculars, ten power</p> <p>6 binoculars, this is what you would see. And there is what</p> <p>7 ATST would look like.</p> <p>8 So we are not saying that the --</p> <p>9 MR. MIKE MABERRY: This is from right up the</p> <p>10 street.</p> <p>11 DR. CHARLIE FEIN: This is from the top of the</p> <p>12 street here. So this is a good example of how the</p> <p>13 facility would appear in between AEOS, for example, and</p> <p>14 the Air Force facilities, and appear to be either the same</p> <p>15 size or smaller from that particular location.</p> <p>16 Here --</p> <p>17 DR. CRAIG FOLTZ: There it is.</p> <p>18 DR. CHARLIE FEIN: There it is from the visitor</p> <p>19 lot.</p> <p>20 MR. MIKE MABERRY: This is from the main visitor</p> <p>21 parking lot.</p> <p>22 DR. CHARLIE FEIN: See the terrain blocking is</p> <p>23 complete here. But if you got back or over to the edge of</p> <p>24 the parking lot here --</p> <p>25 MR. MIKE MABERRY: Well, that's Reber Circle.</p>

<p style="text-align: right;">126</p> <p>1 That's the alternative site. So the one on the right, the  2 preferred site, it would not be visible from the main  3 park.  4 DR. CHARLIE FEIN: So we are not saying that the  5 facility is invisible or that it has no visual impact.  6 What we are saying is that, one, the visual impact is  7 subjective, it depends on who is looking and from where  8 they are looking, and, secondly, the visual impact from  9 the most visited part of the national park, from the  10 crater, is there is no impact from that location anywhere  11 in that location.  12 MS. TONIA MOY: Thank you.  13 MR. JEREMY WAGNER: In terms of avoidance,  14 minimization, mitigation, one of reasons that's our  15 preferred site is because it does minimize the impact.  16 MS. CAROLINE BLANCO: I think another way to  17 look at this is, from what you have heard today, you  18 probably were already understood this, but steps were  19 taken from early on in selecting these sites to already  20 avoid, already minimize to the extent possible. So if  21 that is helpful.  22 MR. MIKE MABERRY: Because we did meet early on  23 with Kahu Maxwell and others when some of these issues  24 were brought up. So they were already built in when doing  25 the Draft Environmental Impact Statement.</p>	<p style="text-align: right;">128</p> <p>1 different for different environmental protocols. So when  2 we say cumulative impact, does that impact relate solely  3 to the site, does it relate to include the national park.  4 And in the case of the road, it certainly does, as we've  5 agreed, that the cumulative impact of this project would  6 extend to the national park road and its historic nature.  7 And so there are varying degrees of region of  8 influence and how cumulative impact needs to be addressed.  9 And we are doing that.  10 MS. TONIA MOY: But I guess the concern is, like  11 this has a little bit of impact, and the next people are  12 going to say, well, you let that one go, so we can build  13 this one, and the next one, well, you let this go, so you  14 got to let this one go.  15 DR. CHARLIE FEIN: Yes. Tonia, that raises --  16 I'm sorry. I didn't mean to cut you off.  17 MS. TONIA MOY: So that's --  18 DR. CHARLIE FEIN: That raises an issue about  19 the University of Hawaii Haleakala observatories in  20 general that is discussed in the long-range development  21 plan. There are only a couple of sites --  22 MS. TONIA MOY: Left.  23 DR. CHARLIE FEIN: -- left. That 18 acres  24 cannot be host to ten more facilities, even three more  25 facilities, after ATST, unless something is removed and</p>
<p style="text-align: right;">127</p> <p>1 MS. TONIA MOY: The other thing that was in here  2 somewhere was, is there opportunity or -- because it's not  3 only up to NSF -- but a way to do like an LRDP for the --  4 you know, so that -- I mean, I think one of the comments  5 was, well, okay, yeah, that has a minimal impact, then  6 this one will have a minimal. So when are you going to  7 stop it from, you know --  8 MR. MIKE MABERRY: Cumulative impact?  9 DR. CHARLIE FEIN: Cumulative impact.  10 MR. MIKE MABERRY: Do you want to address that?  11 MS. TONIA MOY: Is that addressed anywhere?  12 DR. CHARLIE FEIN: The Draft Environmental  13 Impact Statement addressed cumulative impact. However,  14 the final environmental impact will address cumulative  15 impact in a much more comprehensive way.  16 There have been a number of recent rulings in  17 the last few years regarding cumulative impact because  18 there has been a number of interpretations as to what that  19 means. So, for example, you know, how far does cumulative  20 impact go.  21 I mean, the fact that we want to build something  22 on the mountain, does that impact alien species at sea  23 level. There are those kinds of questions. And they have  24 been addressed in various court cases.  25 So, you know, the region of influence is</p>	<p style="text-align: right;">129</p> <p>1 replaced. There just isn't any undeveloped property left.  2 The two sites we've used as alternatives are the  3 two sites available. ATST could not really be put  4 anywhere else on Haleakala observatories. There is no  5 land available that's appropriate for that facility.  6 That question was raised in meetings, you know,  7 why does it have to be there, why can't you move it 500  8 feet that way, or whatever. Okay?  9 MS. TONIA MOY: Okay.  10 DR. CHARLIE FEIN: Did that answer your  11 question?  12 MS. TONIA MOY: I think so, yeah. Just, you  13 know, the concern that where does it end. But if there is  14 an LRDP that has been approved --  15 MS. ANNELLE AMARAL: What is LRDP?  16 DR. CHARLIE FEIN: Long-range development plan.  17 Michael.  18 MR. MIKE MABERRY: Excuse me. I'm sorry?  19 MS. ANNELLE AMARAL: LRDP.  20 MR. MIKE MABERRY: What about it?  21 MS. CAROLINE BLANCO: She's concerned about the  22 cumulative effect of having more observatories, and sort  23 of the concern of, well, if you let this one in, what  24 about the next one and the next one and so forth. Could  25 you address that?</p>

130

1 MR. MIKE MABERRY: Okay. Well, I thought I  
2 heard him explaining. That's why we did the LRDP that  
3 identified the maximum build-out of the area with regards  
4 to cumulative impact.  
5 MS. TONIA MOY: So has the LRDP been sort of --  
6 is it a public document?  
7 MR. MIKE MABERRY: Yeah, it's on the web. It  
8 had almost a one-year comment period. And it was highly  
9 publicized. It was on the front page of the newspaper.  
10 In fact, also, in Honolulu as well.  
11 DR. CHARLIE FEIN: It was also presented in  
12 public meetings.  
13 MR. MIKE MABERRY: Yeah, it was presented in  
14 public meetings. It's in the libraries. And, yeah, like  
15 I said, it had almost a whole year worth of comment  
16 period.  
17 MS. TONIA MOY: Okay.  
18 MR. MIKE MABERRY: We did receive comments from  
19 the park and from the Friends of Haleakala National Park  
20 and others that were all included in the final. And the  
21 final is on the web.  
22 In fact, since then, for example, you will see  
23 sort of a couple of sections at the bottom relative to  
24 stormwater management that grew out of that. So we did  
25 additional studies even after the FEIS.

131

1 MS. TONIA MOY: Okay.  
2 MR. MIKE MABERRY: Like I touched on very  
3 briefly, early on, even though we didn't do and publish an  
4 EIS, we did the studies at the same level. I mean, we did  
5 a complete archeological, biological, geological survey of  
6 the entire 18 acres. And then since then, for other areas  
7 that we -- I mean, we went back and did even more detailed  
8 study of them. Specifically, the two sites that are being  
9 looked at for this project.  
10 DR. CHARLIE FEIN: Botanical surveys,  
11 entomological surveys.  
12 MR. MIKE MABERRY: Right. Then we did  
13 supplements to those, too.  
14 DR. CHARLIE FEIN: Supplements and additional  
15 surveys specific through the two sites, walking over the  
16 same ground, but focusing just on the small acreage that  
17 would be involved in construction.  
18 DR. CRAIG FOLTZ: But you identified only two  
19 remaining sites?  
20 MR. MIKE MABERRY: Only two remaining sites.  
21 Then again, like I think I heard him say, we could look at  
22 recycling.  
23 And you know with DLNR regs, that would keep us  
24 within reasonable footprints and such. So all that can  
25 easily be factored into looking at cumulative impact.

132

1 And we did take some actions, just to throw in,  
2 based on input from the draft LRDP. It was requested that  
3 we take action on some alien species, for example. And we  
4 did do that and we documented, at the request of the  
5 community, and removed some alien species.  
6 MS. ANNELLE AMARAL: So let me --  
7 MR. MIKE MABERRY: Also -- I'm sorry -- we  
8 talked early on about some of the things that we've  
9 implemented as far as culture goes with regards to the  
10 LRDP. But, also, with regards to endangered species and  
11 the environment, we are requiring, for example, when  
12 instruments are brought in or shipments come in for  
13 equipment that they are bug-bombed before they leave their  
14 place of origin, and it's redone again once we retrieve  
15 them at the harbor, or whatever, before it's brought to  
16 the top. So we are being a lot more conscious of the  
17 potential impact of our operations at the summit.  
18 MS. TONIA MOY: I am just wondering if that  
19 could be like a stipulation, another stipulation, that,  
20 you know, the LRDP is going to be as approved at this  
21 point in time.  
22 DR. CHARLIE FEIN: It actually says that in the  
23 DEIS, that the LRDP will apply, the provisions will apply  
24 to the construction and operations of the facility. But I  
25 guess we could put it --

133

1 MS. CAROLINE BLANCO: We might also include that  
2 in the whereas clause, you know, at the beginning.  
3 Because it's sort of setting the -- you love the legal  
4 terms, I know -- but sort of setting out the whole  
5 upfront, you know, this is a presumption, this is a  
6 presumption, this is a presumption and so forth, then  
7 these are some of the additional ones. So it recognizes  
8 some areas of concern.  
9 Just as an idea. I mean, I don't have any  
10 objection to putting it in elsewhere as well, but I think  
11 that we might think about whether or not that addresses  
12 the issue.  
13 MS. TONIA MOY: Or that future LRDP will be --  
14 you know, will be specifically handed out to any of the  
15 consulting parties.  
16 MS. CAROLINE BLANCO: That's a good idea.  
17 That's a very good idea.  
18 MS. TONIA MOY: If it's updated and they want to  
19 add five more, then those consulting parties will be  
20 specifically contacted.  
21 MS. CAROLINE BLANCO: Are you comfortable with  
22 that, the IFA?  
23 MR. MIKE MABERRY: I believe so.  
24 MS. CAROLINE BLANCO: Okay. I think that's a  
25 very good idea. So we put it in the whereas clauses, and

<p style="text-align: right;">134</p> <p>1 then, in the actual terms, we would say that --</p> <p>2 MS. TONIA MOY: The future LRDP or whatever will</p> <p>3 be --</p> <p>4 DR. CRAIG FOLTZ: The other issue with respect</p> <p>5 to the LRDP is the mitigation issues that are laid out</p> <p>6 there, not all of which have we spoken about. But they</p> <p>7 can presumably be included by reference or specifically.</p> <p>8 MS. TONIA MOY: Include it in the LRDP.</p> <p>9 MS. ANNELLE AMARAL: The LRDP applies to the</p> <p>10 cumulative impact on --</p> <p>11 DR. CHARLIE FEIN: No.</p> <p>12 MS. CAROLINE BLANCO: -- management of the</p> <p>13 summit.</p> <p>14 DR. CHARLIE FEIN: It's the management of the 18</p> <p>15 acres.</p> <p>16 MR. MIKE MABERRY: Of the 18 acres; not of the</p> <p>17 summit.</p> <p>18 MR. JEFF BARR: Did you want to talk about how</p> <p>19 it's being more formalized now in terms of the</p> <p>20 comprehensive management plan process that you guys are</p> <p>21 going through?</p> <p>22 MR. MIKE MABERRY: No. Actually, the LRDP will</p> <p>23 be more comprehensive than the true comprehensive plan.</p> <p>24 MR. JEFF BARR: I know. What I am saying is I</p> <p>25 think the question is, is that public and is that an</p>	<p style="text-align: right;">136</p> <p>1 long-range development plan.</p> <p>2 MR. MIKE MABERRY: And our intention is for it</p> <p>3 to be not a project specific management plan, but for all</p> <p>4 the area under our responsibility.</p> <p>5 MS. TONIA MOY: That is how it should be.</p> <p>6 MR. MIKE MABERRY: Yes. It is not the guidance</p> <p>7 we have been given in the past, but it is what it will be.</p> <p>8 MS. ANNELLE AMARAL: Let me ask. So with</p> <p>9 respect to the MOA, I heard one addition of language with</p> <p>10 respect to the LRDP.</p> <p>11 MS. CAROLINE BLANCO: That is where the whereas</p> <p>12 clauses --</p> <p>13 MS. ANNELLE AMARAL: A provision that future --</p> <p>14 MS. CAROLINE BLANCO: That's right. Two</p> <p>15 different things, yeah.</p> <p>16 MS. ANNELLE AMARAL: Future LRDP will be</p> <p>17 provided to the consulting parties.</p> <p>18 MS. CAROLINE BLANCO: The future one, or do you</p> <p>19 want it as -- I was trying to wonder if it's notice or if</p> <p>20 it's the actual amendment that would be provided to you.</p> <p>21 MS. TONIA MOY: How do you guys usually send</p> <p>22 out?</p> <p>23 MR. MIKE MABERRY: Well, we have been -- since</p> <p>24 the web is so nice these days, we have been pretty much --</p> <p>25 we haven't really -- well, I take that back.</p>
<p style="text-align: right;">135</p> <p>1 official document. And in a sense, the LRDP was certainly</p> <p>2 a public document, but hasn't been adopted by any agency</p> <p>3 other than --</p> <p>4 MR. MIKE MABERRY: Okay. That's not entirely</p> <p>5 true, because it was adopted by the board of regents.</p> <p>6 MR. JEFF BARR: Okay.</p> <p>7 MR. MIKE MABERRY: Which is the ultimate</p> <p>8 responsible entity for that property at the moment. That</p> <p>9 being said, yes, there will be, as part of Attachment</p> <p>10 Three of Title 13 for the Conservation District Use</p> <p>11 Application Process, there will be a management plan,</p> <p>12 okay, that will be comprehensive in nature, that probably</p> <p>13 elements of which look very similar to and will be</p> <p>14 probably taken right out of our LRDP that will be approved</p> <p>15 by the board of Land and Natural Resources. So that will</p> <p>16 then be a requirement for all actions relative to this</p> <p>17 project.</p> <p>18 DR. CHARLIE FEIN: Yeah.</p> <p>19 MR. MIKE MABERRY: Did I say that right?</p> <p>20 DR. CHARLIE FEIN: Yes, you said that right.</p> <p>21 Title 13-5, Exhibit 3, lays out a very specific</p> <p>22 description of what a management plan needs to contain.</p> <p>23 And the management plan that is being prepared now is</p> <p>24 following that outline very carefully and includes all</p> <p>25 kinds of information, much of which overlaps with the</p>	<p style="text-align: right;">137</p> <p>1 There has been additional appendices made</p> <p>2 available, but we haven't republished the whole thing</p> <p>3 since the final. There is just additional appendices that</p> <p>4 are available on the web. And we sent out notices to the</p> <p>5 sister agencies, you know, when that has been added.</p> <p>6 I understand what you are trying to do. And,</p> <p>7 unfortunately, I am not thinking of how to word it.</p> <p>8 Getting some agreement from the project to adhere to</p> <p>9 future modifications or whatever to the LRDP. Because I</p> <p>10 could definitely, with konohiki, if that actually --</p> <p>11 sorry. If that actually works out, and I am sure there</p> <p>12 will be input from that process, and that will be wanting</p> <p>13 to add to the LRDP or modify the LRDP to include.</p> <p>14 MS. TONIA MOY: Right. So you would want to</p> <p>15 notify all the consulting parties here, anyway, right?</p> <p>16 MR. MIKE MABERRY: Right.</p> <p>17 MS. CAROLINE BLANCO: Is it a notice to modify</p> <p>18 or of an actual modification?</p> <p>19 MS. TONIA MOY: Well, it would depend on how --</p> <p>20 I think --</p> <p>21 MS. CAROLINE BLANCO: Because a modification</p> <p>22 would be a public process, anyway, would it not?</p> <p>23 MR. MIKE MABERRY: Excuse me?</p> <p>24 DR. CHARLIE FEIN: Yes. Yes, a draft would be</p> <p>25 issued.</p>

138	<p>1 MS. TONIA MOY: And not everybody is going to</p> <p>2 know when it comes out.</p> <p>3 MS. CAROLINE BLANCO: Right. So if that is the</p> <p>4 way -- if it is normally a public process, what I am</p> <p>5 thinking about is if you normally would then publish the</p> <p>6 draft, maybe it would definitely -- we would commit to --</p> <p>7 or if you are comfortable committing to having notice be</p> <p>8 provided at that juncture, specific notice to the</p> <p>9 consulting parties --</p> <p>10 MS. ANNELLE AMARAL: Of intent?</p> <p>11 MS. CAROLINE BLANCO: Of a draft modification,</p> <p>12 right.</p> <p>13 MS. TONIA MOY: And how to get it, you know,</p> <p>14 or --</p> <p>15 MS. CAROLINE BLANCO: Yeah.</p> <p>16 MR. MIKE MABERRY: I would definitely, you know,</p> <p>17 imagine that we would end up doing public meetings again.</p> <p>18 I mean, you know --</p> <p>19 DR. CHARLIE FEIN: Yeah.</p> <p>20 MS. TONIA MOY: People don't know about it.</p> <p>21 DR. CHARLIE FEIN: The original intent of the</p> <p>22 LRDP was a ten-year plan.</p> <p>23 MR. MIKE MABERRY: Right. Right.</p> <p>24 MS. TONIA MOY: So it's going to be modified.</p> <p>25 MR. MIKE MABERRY: Yeah.</p>	140	<p>1 consulting parties will be notified of proposed</p> <p>2 modification, proposed/draft modification, along with the</p> <p>3 public, right? Along with public notice?</p> <p>4 MR. MIKE MABERRY: Other state agencies or</p> <p>5 whatever.</p> <p>6 DR. CRAIG FOLTZ: All this does is put the</p> <p>7 consulting parties on the list.</p> <p>8 MS. CAROLINE BLANCO: Right. So they don't have</p> <p>9 to search for it.</p> <p>10 MS. TONIA MOY: Right. Right.</p> <p>11 MS. CAROLINE BLANCO: Okay.</p> <p>12 MS. ANNELLE AMARAL: So with respect to LRDP, in</p> <p>13 addition to normal public notice, when proposed</p> <p>14 modification is to take place, notice shall be provided to</p> <p>15 consulting parties? Does that sort of --</p> <p>16 MS. TONIA MOY: Yeah, to this MOA.</p> <p>17 MS. ANNELLE AMARAL: Okay.</p> <p>18 MS. CAROLINE BLANCO: We will work the language.</p> <p>19 MS. TONIA MOY: Thank you.</p> <p>20 MS. ANNELLE AMARAL: Our consulting parties,</p> <p>21 this group. Okay.</p> <p>22 And you brought up the issue of the road and the</p> <p>23 issue of the viewplain. I heard explanations. Did you</p> <p>24 want some language in the MOA, or were you satisfied with</p> <p>25 the explanations that have been provided? I heard --</p>
139	<p>1 MS. TONIA MOY: Several times within.</p> <p>2 MS. CAROLINE BLANCO: Something to think about</p> <p>3 as far as --</p> <p>4 MS. TONIA MOY: How you notify --</p> <p>5 MS. CAROLINE BLANCO: -- the logistics.</p> <p>6 MR. MIKE MABERRY: We're definitely open.</p> <p>7 MS. CAROLINE BLANCO: Yes. I am just thinking</p> <p>8 maybe if it's -- I am thinking of it as analogous to like</p> <p>9 a general management plan for the Park Service or some of</p> <p>10 the other agencies I've dealt with in the past where they</p> <p>11 do something similar to this. There is usually a draft</p> <p>12 that goes out. And if you provide specific notice, like</p> <p>13 in addition to your normal public notice, you would just</p> <p>14 agree to have a separate list that you would, you know --</p> <p>15 MR. MIKE MABERRY: From the consulting parties</p> <p>16 of this --</p> <p>17 MS. CAROLINE BLANCO: Exactly.</p> <p>18 MR. MIKE MABERRY: Yeah. No problem.</p> <p>19 MS. CAROLINE BLANCO: Oh, okay. So let's do a</p> <p>20 proposed modification.</p> <p>21 MS. TONIA MOY: Right.</p> <p>22 MS. CAROLINE BLANCO: Because, that way, there's</p> <p>23 still an opportunity for input.</p> <p>24 MS. TONIA MOY: Right.</p> <p>25 MS. CAROLINE BLANCO: If it is amended,</p>	141	<p>1 MS. TONIA MOY: Well, the road has got to be --</p> <p>2 yeah.</p> <p>3 MS. CAROLINE BLANCO: How about the viewshed, if</p> <p>4 we parse that out? Was that explanation a little bit --</p> <p>5 make things a little bit more clear?</p> <p>6 MS. TONIA MOY: Well, it does. But, you know, I</p> <p>7 really can't think of how that is going to be made into a</p> <p>8 stipulation. Really, you don't want to put plants around</p> <p>9 it to hide it, right? So what do you do? I don't know</p> <p>10 what you can stipulate to do that. Maybe National Parks</p> <p>11 has some ideas. I don't know.</p> <p>12 MS. ANNELLE AMARAL: So maybe is it sufficient</p> <p>13 that we've raised the point in our discussion, we're going</p> <p>14 to return to the point after we type up the motion,</p> <p>15 everything in the future meetings, and, hopefully, by</p> <p>16 then, National Parks is here.</p> <p>17 MS. TONIA MOY: That would be an adverse impact,</p> <p>18 right? So that would be in the whereas, I guess, right?</p> <p>19 MS. CAROLINE BLANCO: I think we would</p> <p>20 acknowledge that there would be, you know, some limited</p> <p>21 viewplain issues. I mean, it's very insignificant</p> <p>22 compared to -- I mean, everything you saw. There is no</p> <p>23 need to explain that more.</p> <p>24 But maybe what we ought to do is just sort of</p> <p>25 table that issue until we talk to the park on August 22nd,</p>

142

1 and, hopefully, they will join us again the following week  
2 at the consulting parties meeting.  
3 MS. ANNELLE AMARAL: Okay.  
4 MS. CAROLINE BLANCO: That might be helpful.  
5 I am curious about whether HHF has any  
6 particular concerns about historic road impacts.  
7 MS. TONIA MOY: We would be, yeah. That would  
8 be more, you know, our issue rather than Native Hawaiian  
9 issues. We're more geared toward the architecture side of  
10 things. So, you know, as a more modern history site,  
11 there would be concern to make sure that it gets impacted  
12 as little as possible and any damage gets repaired. And  
13 not so much -- another big concern is if the bridge gets  
14 severely damaged, then FHWA is going to come in and put a  
15 40-foot wide bridge.  
16 MR. MIKE MABERRY: Which the public and  
17 everybody doesn't want.  
18 MS. TONIA MOY: I know. That is -- you know,  
19 that would be a -- that would be a big concern, I guess.  
20 MR. JEFF BARR: We are working hard right now,  
21 trying to find out more about the bridge and to, as I say,  
22 open a dialogue with the park about how we go about  
23 protecting it.  
24 DR. CHARLIE FEIN: Tonia, is there any other  
25 historic structure that you are aware of along the

143

1 right-of-way or that is in the park that you think might  
2 be an issue?  
3 MS. TONIA MOY: You know, I haven't been up  
4 there for a long time. Maybe the lookout is probably over  
5 50 years old.  
6 MR. MIKE MABERRY: But it's well off the road.  
7 MS. TONIA MOY: Okay.  
8 MR. MIKE MABERRY: There's a huge parking lot  
9 between the two, between the road.  
10 MS. TONIA MOY: I don't know of any structure.  
11 There's the visitor's center, but that is new, right?  
12 MR. MIKE MABERRY: Yeah, the visitor center is  
13 new.  
14 MR. JEFF BARR: One of the other concerns the  
15 park has is their entrance station which actually does  
16 constrict the roadway. And it's not a historic structure.  
17 MR. MIKE MABERRY: No. It's like six years old.  
18 MR. JEFF BARR: But it's convenient to them to  
19 have it. And to us, in terms of the width of the road, it  
20 restricts. So that is another issue that the park has  
21 raised, and you probably maybe have seen in some of the  
22 correspondence.  
23 MS. CAROLINE BLANCO: Do you think it would be  
24 helpful, maybe, to have some of the folks here explain  
25 sort of what the process would be for taking up, you know,

144

1 the construction equipment, the materials, and the trucks  
2 and so forth to take it up, and some of the information  
3 you are trying to seek from the park?  
4 MR. JEFF BARR: Yeah.  
5 MS. CAROLINE BLANCO: And, also, the intent of  
6 once construction is done, if there is any damage to the  
7 road or the bridges and so forth, how you intend to deal  
8 with that.  
9 DR. CHARLIE FEIN: Jeff, do you have that little  
10 presentation we did for the park?  
11 MR. JEFF BARR: Yes, I do have.  
12 I am not sure whether or not that is the most  
13 useful use of the time here now. I could pull that up and  
14 we can go through.  
15 The number of trucks, the number of concrete  
16 trucks, we've kind of quantified that.  
17 As I say, the park did do a study with the  
18 Federal Highways Administration. And we cooperated in  
19 that. We gave them as much information as we could  
20 possibly put together on what kinds of trucks, what kinds  
21 of loads, what kinds of weights, how many vehicles, during  
22 what periods, how frequently. And, again, some of this is  
23 speculation because we don't have a contractor on board  
24 yet, but based on the construction project and range of  
25 activities, we could reasonably postulate how many

145

1 truckloads and what kinds they would be.  
2 We shared that all with the Federal Highways  
3 Administration and with the park.  
4 And I do have that information here. That is  
5 what Charlie is referring to. And I can put that up and  
6 show you.  
7 It is something like 450 concrete truckloads  
8 over a period of -- maybe those weren't all concrete --  
9 but truckloads over a period of something like two years  
10 or three years of intensive onsite actual building  
11 construction period. And then some larger loads for items  
12 like the primary mirror and big pieces of the telescope,  
13 big pieces of the dome. Those extra-wide loads would  
14 require special provisions, and extra heavy loads might  
15 require special provisions for protection of the bridge,  
16 getting past the entrance station, those kinds of issues.  
17 Those are exactly the sorts of things we would  
18 like to put more specifics around and be able to figure  
19 out how we are going to address those things in  
20 cooperation with the park, the stewards of the road.  
21 And it's really the eleven-mile section of the  
22 road that runs through the park that they are identifying  
23 as a concern. But our concern, obviously, is the entire  
24 length of the road, and protecting that and utilizing it  
25 for our construction. But, also, respecting the other

<p style="text-align: right;">146</p> <p>1 uses of it and the potential historic value of it.  2 And, again, I am not sure, I can put that  3 information up if you are interested.  4 MS. TONIA MOY: But is it going to be so wide  5 that it will affect the bridges or the culverts or just  6 that center?  7 MR. JEFF BARR: Well, it's close in terms of the  8 bridge. The culverts don't really project up above the  9 sides of the roads. So they don't really restrict the  10 width of the road. Some of our loads will be as wide as  11 20 or 24 feet. So they will take up the entire width of  12 the road, and won't allow traffic coming in the other  13 direction, or even behind it, at the same time.  14 So they go up very closely. They tend to go up  15 at night when nothing else is happening. And maybe they  16 can get up in one night, maybe they have to pull off the  17 side of the road and allow full use of the road during  18 other periods. So those kinds of loads.  19 And that is only for something less than ten, I  20 can't really tell you how many, of those extra-wide loads  21 would require those kinds of special protections and  22 provisions.  23 Most of the other loads will be a normal, as you  24 say, concrete truck or a flatbed truck carrying building  25 materials. And those kinds of loads are not uncommon</p>	<p style="text-align: right;">148</p> <p>1 access around Haleakala National Park entrance station  2 which could best be addressed in mutual consultation  3 between an appropriate agent between ATST and staff  4 representatives. He asked some specific questions in  5 particular. Going down the email, does HNP expect to  6 pursue a supplemental pavement condition investigation for  7 the Haleakala Highway. And followed up on some additional  8 question, or some additional issue there. Is there a  9 threshold of vehicle trips or equivalent single-axle loads  10 as described in the FHWA report which would trigger impact  11 conditions. We are currently working on better definition  12 of our construction logistics and could plan for  13 particular truck types and target specific numbers of  14 trips if those factors are considered critical.  15 And then, what is the rated capacity of the box  16 culverts on Haleakala Highway. And some other additional  17 ones.  18 And what is the optimal means to provide  19 clearance around the park entrance station for wide-load  20 vehicles, and, you know, questions such as that.  21 And those questions still have not been  22 answered. This was back in February. These were asked of  23 the park. The efforts have been to try to find out from  24 her what we could do to move that process forward. And  25 the response, basically, has been August 22nd.</p>
<p style="text-align: right;">147</p> <p>1 going up right now to the Air Force facility, like a bus.  2 MR. MIKE MABERRY: Or the national park.  3 MR. JEFF BARR: Or the national park or any  4 other project. So those kinds of loads would be much more  5 normal and could be accommodated in amongst the normal  6 kinds of traffic on the road.  7 The special kind of loads, we would have to work  8 with the park on how and when we take those up. And they  9 would be a very limited quantity and for very short  10 durations. We would have to actually close off the road  11 and utilize it for only the purposes of that one trip.  12 MS. CAROLINE BLANCO: Just so you are aware -- I  13 think this is in the packet of correspondence -- back in  14 February, Jeff had some correspondence with Marilyn  15 Parris. And, you know, she had requested that he deal  16 with her directly and said it was taking up -- his  17 questions were taking up park resources and so forth. And  18 he had a response letter that asked some particular  19 questions.  20 The questions in my originating email have  21 potential bearing on the discussions about the issuance of  22 a special use permit for ATST and the preservation of the  23 road as a historic property. I don't mean to burden your  24 staff, et cetera. There are issues, though, such as the  25 recommended follow-up road condition investigation and</p>	<p style="text-align: right;">149</p> <p>1 DR. CRAIG FOLTZ: We reiterated it.  2 MS. CAROLINE BLANCO: Craig's May letter to the  3 park -- you will see that again -- it reiterates the  4 attempt to try to find out the conditions of the road,  5 that information, so we could be better prepared for that  6 August meeting even. And that was the response. So --  7 MS. ANNELLE AMARAL: There's a comment back  8 here.  9 MR. JEREMY WAGNER: Jeff, we were prepared to  10 try to get answers to those questions back in July of last  11 year when we met.  12 MR. JEFF BARR: We started back in July. We  13 actually had a productive meeting with the maintenance  14 superintendent for the park in September, something like  15 that. Then this letter that Caroline just read was an  16 attempt to follow up on that, in February, because it  17 basically seemed to have fallen off their map. And then,  18 basically, we have been stonewalled since then.  19 MS. CAROLINE BLANCO: And I think the reason for  20 even the delay between last summer and February is that  21 there were -- back in July of last year, the park had said  22 there may be a special use permit that is required for  23 using the park road. There were several requests for that  24 permit application, so that they would know how to -- what  25 it was, what it entailed, how we could prepare for it.</p>

<p style="text-align: right;">150</p> <p>1 And they didn't provide it.</p> <p>2 And there was some correspondence last fall in</p> <p>3 addition. And they still hadn't provided it. Then this</p> <p>4 February email exchange occurred.</p> <p>5 I think it might have started in January. I</p> <p>6 didn't have the trail.</p> <p>7 MR. JEFF BARR: And several attempts since then,</p> <p>8 really, to follow up. Even as much as just a week or two</p> <p>9 before this meeting, we were trying to make last-minute</p> <p>10 attempts to try to get them to make somebody, a resource</p> <p>11 person from the park, available to us just to talk about</p> <p>12 these things, even if we weren't trying to reach any</p> <p>13 conclusions. And I think you can sense a certain amount</p> <p>14 of frustration on lack of communications from the park.</p> <p>15 DR. CHARLIE FEIN: Then there was the latest</p> <p>16 email, there is no application.</p> <p>17 DR. CRAIG FOLTZ: There is no application form.</p> <p>18 MS. TONIA MOY: No such thing as a special use</p> <p>19 permit.</p> <p>20 MS. CAROLINE BLANCO: Yeah. But they still</p> <p>21 intend to have a permit. There is no defined application</p> <p>22 for it. As I think I mentioned earlier, we are awaiting</p> <p>23 some document that she said she was going to be preparing</p> <p>24 for us. I think she said it would be available in two</p> <p>25 weeks -- which this week would have been at least two</p>	<p style="text-align: right;">152</p> <p>1 MS. CAROLINE BLANCO: Yeah.</p> <p>2 MR. HINANO RODRIGUES: Do we have a defined list</p> <p>3 of parties to the MOA?</p> <p>4 MS. CAROLINE BLANCO: Well, we have a list of</p> <p>5 consulting parties.</p> <p>6 MR. HINANO RODRIGUES: Okay.</p> <p>7 MS. CAROLINE BLANCO: The question came up</p> <p>8 yesterday. Pua asked us who would be the signatories.</p> <p>9 And I answered her by saying certainly the hope would be</p> <p>10 that NSF, SHPD, the Advisory Counsel, and anybody else who</p> <p>11 would be interested in signing on to it. Of course, since</p> <p>12 the project team is working so closely with NSF, sometimes</p> <p>13 I forget to mention they are consulting parties as well.</p> <p>14 But IFA is and NSO is as well. And I am sure they would</p> <p>15 be signatories to this as well.</p> <p>16 I am not sure we clarified this. Maybe Craig</p> <p>17 did. If NSF decides to fund this, the money would go to</p> <p>18 NSO. NSO would then provide the money to IFA.</p> <p>19 No? How does that work?</p> <p>20 MR. MIKE MABERRY: No. NSO would build it.</p> <p>21 MS. CAROLINE BLANCO: Built in conjunction.</p> <p>22 DR. CRAIG FOLTZ: But there would be a number of</p> <p>23 sub awards.</p> <p>24 MS. CAROLINE BLANCO: To IFA, right? Is that</p> <p>25 how it works?</p>
<p style="text-align: right;">151</p> <p>1 weeks, if not last week, I am not sure -- where it</p> <p>2 outlined the way to communicate and how they would</p> <p>3 approach this. We're unsure exactly what she has in mind,</p> <p>4 but look forward to seeing it.</p> <p>5 MS. ANNELLE AMARAL: Just to give you a heads</p> <p>6 up, my watch says it's about five until 2:00.</p> <p>7 DR. CRAIG FOLTZ: Close.</p> <p>8 MS. ANNELLE AMARAL: We had said we were going</p> <p>9 to end at 2:00. Is it all right if we continue on, or do</p> <p>10 you want to bring this to an end?</p> <p>11 DR. CRAIG FOLTZ: We're almost done with the --</p> <p>12 MS. ANNELLE AMARAL: We're right here.</p> <p>13 MS. CAROLINE BLANCO: I think it would be</p> <p>14 helpful -- certainly, I think, most of us can stay around.</p> <p>15 I am thinking, you know, we came to present to you this</p> <p>16 morning, we have been presenting you with a summary of</p> <p>17 yesterday, and going through these issues. Now I think we</p> <p>18 are done doing that.</p> <p>19 And you mentioned, Tonia, the additional park</p> <p>20 resources issues. And to ask again, at this point, do you</p> <p>21 have other issues that maybe we may want to look at?</p> <p>22 MS. TONIA MOY: I think you've got your</p> <p>23 placeholders in there for the Park Service, so --</p> <p>24 MS. CAROLINE BLANCO: Yeah.</p> <p>25 MR. HINANO RODRIGUES: Minor issue.</p>	<p style="text-align: right;">153</p> <p>1 DR. CRAIG FOLTZ: I am not sure exactly how</p> <p>2 that --</p> <p>3 MR. MIKE MABERRY: We are not building it.</p> <p>4 MS. CAROLINE BLANCO: I'm sorry. IFA would be</p> <p>5 the permittee.</p> <p>6 DR. CRAIG FOLTZ: The scope of this project</p> <p>7 includes instruments. And these instruments are being</p> <p>8 developed in a lot of places. So there's small sub awards</p> <p>9 to a lot of other institutions.</p> <p>10 MR. MIKE MABERRY: That is true.</p> <p>11 MS. CAROLINE BLANCO: But IFA's interest is that</p> <p>12 they are basically the land manager on top of the 18</p> <p>13 acres -- or University of Hawaii is?</p> <p>14 MR. MIKE MABERRY: We don't get money.</p> <p>15 MS. CAROLINE BLANCO: No, no. I am just saying</p> <p>16 the interest.</p> <p>17 MR. MIKE MABERRY: Oh, okay.</p> <p>18 MS. CAROLINE BLANCO: As a consulting party.</p> <p>19 So I don't know if that is helpful in terms of</p> <p>20 who would be signing this.</p> <p>21 Part of the problem up to these last couple of</p> <p>22 days is we have been unclear of who was interested in</p> <p>23 working with us to try to achieve something.</p> <p>24 Sol, I would certainly hope that you would be</p> <p>25 participating in this as well.</p>

154

1 And, you know, Tonia, you, too.

2 Whoever is more than willing to do this, you

3 know, we certainly would invite.

4 MR. MIKE MABERRY: It seems we have a problem

5 with educating the public so that they recognize what a

6 benefit it is to them to be a signatory. They get to then

7 hold the project, hold their feet to the fire. And, yet,

8 that doesn't -- by being a signatory doesn't mean they

9 support the project. That is a hard one to educate people

10 on.

11 MR. HINANO RODRIGUES: That is why I asked the

12 question. Because my fear is that the people who have a

13 stake in this aren't here. And, you know, one thing no

14 one wants it hear is, oh, it's too late, where were you.

15 MS. CAROLINE BLANCO: Right.

16 MR. HINANO RODRIGUES: I don't know -- that is

17 your program. This is your project kind of thing. But I

18 don't know how we can find a way to bring 'em in, even at

19 this stage of the game, because what you just said is

20 really important. So maybe they need to be educated on

21 that. It's really important, you know. You don't have to

22 agree, but, you know, at least we all sat down and we all

23 decided on this, and maybe by putting your signature down,

24 you are not agreeing to the project itself, but we all

25 agreed we made an effort to mitigate, minimize and --

155

1 yeah, mitigate and minimize.

2 MS. CAROLINE BLANCO: Right. Do you have ideas

3 about how we can engage? I mean, I look at this now and

4 think we have over two months now until the next meeting.

5 And it would be great if we could get further involvement,

6 you know, with people who -- or organizations that do have

7 an interest and would want to express that interest.

8 MR. HINANO RODRIGUES: I would like -- is there

9 a reason why Kilakila o Haleakala is not here?

10 MS. CAROLINE BLANCO: They were here yesterday.

11 MS. ANNELLE AMARAL: They couldn't make it

12 today. They came yesterday to give their comment because

13 they could not come today, they said.

14 MR. HINANO RODRIGUES: So it was just an issue

15 of they couldn't make it?

16 MS. ANNELLE AMARAL: That is what they said to

17 us.

18 MR. HINANO RODRIGUES: Not that they didn't want

19 to be in the process?

20 MS. CAROLINE BLANCO: The good news is, though,

21 too, they did give some specific information which is part

22 of what we have worked through today. So that was

23 helpful.

24 Although, I think maybe, in fairness, that may

25 have been more Kiope's individual comments than it was

156

1 Kilakila o Haleakala.

2 DR. CRAIG FOLTZ: We did discuss the benefit to

3 them of being a signatory, even if they disagreed.

4 MS. CAROLINE BLANCO: Right.

5 DR. CRAIG FOLTZ: So Kilakila o Haleakala and

6 Kiope and -- well, Mikahala, which I guess is not an

7 individual -- no, she's an individual consulting party.

8 So there were three consulting parties who were in sort

9 opposition of the project who at least heard us say, for

10 not the first time, that it was in their benefit to be a

11 signatory.

12 MR. HINANO RODRIGUES: Okay.

13 MS. CAROLINE BLANCO: It may be, also, Verna

14 might be interested in signing this. She seemed very --

15 MR. MIKE MABERRY: She would if she is here.

16 She, unfortunately, thinks she's moving -- in fact, I

17 thought she was already gone.

18 MS. SHARON LOANDO-MONRO: No. She showed up

19 this morning. We should put it for the record.

20 I don't know if you mentioned it, Tony.

21 She showed up. She had an appointment to go to

22 and said she apologizes for not being here. She wants to

23 write something that she was going to say today and submit

24 it. So we should just get that for the record.

25 MR. MIKE MABERRY: Isn't she moving to the

157

1 mainland, though?

2 MS. SHARON LOANDO-MONRO: While she's still

3 here --

4 MR. MIKE MABERRY: Even so, she is still Native

5 Hawaiian. She should be able to be a signatory regardless

6 where she lives.

7 Sorry for bringing it up.

8 MS. CAROLINE BLANCO: No, it's not

9 resident-based.

10 MR. MIKE MABERRY: And it's like it hit me,

11 she's moving, and I am like okay.

12 MS. ANNELLE AMARAL: Well, at least it's not Las

13 Vegas.

14 MR. MIKE MABERRY: Well, Las Vegas is just the

15 other island.

16 MS. CAROLINE BLANCO: And, also, Warren, I

17 think, would be interested.

18 MR. MIKE MABERRY: Yes. I would think Warren

19 would be interested in being a signatory.

20 MS. CAROLINE BLANCO: Right.

21 MS. ANNELLE AMARAL: So is the point you're

22 making, when the question is asked, do you have any

23 specific recommendations on how to get the word out to the

24 community --

25 MR. MIKE MABERRY: How to get them to understand

158

1 they can still be against it.

2 MS. ANNELLE AMARAL: Can we use some of these

3 people who have come and commented to get the word out to

4 their supporters?

5 MR. HINANO RODRIGUES: That would be the best

6 approach, is to utilize whoever showed up, Mikahala,

7 Warren and Kiope. I don't know Verna. I know the other

8 ones. I went to college with them. We all have our

9 Hawaiian studies degrees, more or less at the same time.

10 So I know them. And I am happy that, you know, they would

11 be signatories because those are people that I have

12 respect for.

13 MS. CAROLINE BLANCO: I don't know if Kiope

14 expressed an interest in signing anything yet. It was

15 unclear. I mean, he made certain suggestions to be

16 provided in an MOA that he thought would be helpful. But,

17 at the same time, he said he was not in support of the

18 project. So I am not sure he understood that, you know,

19 perspective of you can still be against it, but you can

20 sign it and have enforceable rights.

21 MR. MIKE MABERRY: We provided that information

22 to him in writing and email before.

23 MS. CAROLINE BLANCO: I am sure that is true.

24 MR. MIKE MABERRY: In painful detail.

25 MS. CAROLINE BLANCO: I am not sure it was at

159

1 the forefront of his mind at the time.

2 I should also mention Maui Community College,

3 they are a consulting party. And they would likely be

4 signatories to this, I am pretty sure.

5 Sol, can you speak to them?

6 MR. SOL KAHO'OHALAHALA: They will be.

7 I think the hesitancy is the concession, you

8 know. They are against the project altogether. Even

9 though there are ideas that are being, you know,

10 suggested, that the signing on means that they in some way

11 are supporting the project.

12 MS. CAROLINE BLANCO: Could we say something in

13 the MOA along those lines?

14 DR. CRAIG FOLTZ: In the Keck MOA, wasn't the

15 Royal Order's signatory in some dissenting way?

16 MS. CAROLINE BLANCO: Let me take a look. I

17 actually have it here.

18 MR. JEFF BARR: There were a number of

19 dissenting --

20 DR. CRAIG FOLTZ: Signatories. Do you have the

21 pages?

22 MR. MIKE MABERRY: I don't think I have the

23 signatory page.

24 DR. CRAIG FOLTZ: That was just in my

25 recollection.

160

1 MR. JEFF BARR: Mine, too.

2 MS. TONIA MOY: They can actually be parties and

3 not sign?

4 MS. CAROLINE BLANCO: That's right.

5 MR. JEFF BARR: They can do that, too.

6 MS. CAROLINE BLANCO: Unfortunately for them,

7 they wouldn't have the same rights --

8 MR. MIKE MABERRY: Standing, yeah.

9 MS. CAROLINE BLANCO: -- to enforce it. You

10 know, that is obviously their choice. Maybe we should

11 just, before I forget it, write it down. Perhaps consider

12 provision --

13 MS. ANNELLE AMARAL: Certainly if --

14 MS. CAROLINE BLANCO: -- noting objection,

15 right?

16 MR. MIKE MABERRY: Do you have any experience in

17 this?

18 MS. ANNELLE AMARAL: I mean, if Camille is an

19 attorney with NHLK, Kilakila o Haleakala, she was here

20 representing them, wouldn't she understand that one need

21 not be supportive of the project and could be a signatory?

22 MS. CAROLINE BLANCO: That is true. But I think

23 I tend to find in this area -- and, you know, if anybody

24 else has any other experience, then please share it --

25 there is often confusion about that point. So --

161

1 DR. CRAIG FOLTZ: Would it make sense for us to

2 write a letter?

3 MS. ANNELLE AMARAL: Is it possible to simply

4 write a letter, a simple letter to all people who have

5 submitted testimonies or something indicating --

6 MS. CAROLINE BLANCO: The consulting parties?

7 MS. ANNELLE AMARAL: Yeah. Indicating that your

8 signature does not mean your support, or something, but

9 gives you legal standing to monitor and further to object.

10 Just clarify.

11 MS. CAROLINE BLANCO: Would that be helpful, do

12 you think?

13 MR. HINANO RODRIGUES: I think so.

14 MS. CAROLINE BLANCO: Maybe would it be helpful

15 to have a letter, that be part of a letter that summarizes

16 some of these issues that were discussed during this

17 meeting?

18 DR. CRAIG FOLTZ: Or it may be that this is the

19 letter we send out to announce the meetings in August.

20 MS. CAROLINE BLANCO: We could do that, have

21 that all be part of the same one. And say these were the

22 ideas discussed during these two meetings, please note

23 that you may be a signatory to this and still object to

24 the project and with these rights, if you sign it, you

25 have these rights to enforce it.

162	<p>1 MS. TONIA MOY: Can you sign with objection or</p> <p>2 something like that?</p> <p>3 MS. CAROLINE BLANCO: Well, I just wonder if we</p> <p>4 could have a whereas clause that says, you know, Kiope</p> <p>5 Raymond, dah, dah, dah, whoever it is, these consulting</p> <p>6 parties object to the construction of the ATST telescope,</p> <p>7 however they agreed to these conditions if it is built.</p> <p>8 So at least their position is preserved, or at least it's</p> <p>9 recognized somehow.</p> <p>10 MR. HINANO RODRIGUES: So maybe in the form of</p> <p>11 an update as to what happened, as of July 17, we're here,</p> <p>12 we worked on MOA issues, what is an MOA. The only reason</p> <p>13 why I know what an MOA is, is because of what I do. But</p> <p>14 everybody out there don't know what that is.</p> <p>15 MS. CAROLINE BLANCO: Right.</p> <p>16 MR. HINANO RODRIGUES: So if you explain that,</p> <p>17 and why you have an MOA and why it's important for them to</p> <p>18 be a part of that process, you might have a different</p> <p>19 attitude and behavior on their part.</p> <p>20 MR. MIKE MABERRY: Good idea.</p> <p>21 MR. JEFF BARR: In fact, in the MOA, the word</p> <p>22 "agreement" in there sounds kind of dubious to them, I am</p> <p>23 sure. It sounds like agreement.</p> <p>24 DR. CRAIG FOLTZ: I am finding how that happens.</p> <p>25 MR. JEFF BARR: Words, go figure.</p>	164	<p>1 us who love place names and for whom place names help to</p> <p>2 educate people about the history of the place, this is</p> <p>3 something Hawaiians don't give up quickly, so it's there</p> <p>4 to push you forward.</p> <p>5 There is a question --</p> <p>6 DR. CRAIG FOLTZ: The facilitator takes the rap.</p> <p>7 MR. MIKE MABERRY: I thought you convinced us to</p> <p>8 put the signs up, anyhow.</p> <p>9 MS. ANNELLE AMARAL: What we have been known to</p> <p>10 do is to actually bring cut rock into areas with names of</p> <p>11 places and just place it there, whether your rules allow</p> <p>12 it or not. We are a very aggressive people.</p> <p>13 With respect to preferential hiring, there is</p> <p>14 some question about can we give preference to one race</p> <p>15 versus another. So there is some question. Though, this</p> <p>16 is not having to do with a lack of commitment, it's more</p> <p>17 there are some other things we need to look into here.</p> <p>18 DR. CRAIG FOLTZ: It a placeholder.</p> <p>19 MS. ANNELLE AMARAL: So it's a place saver.</p> <p>20 Cultural monitors I think we've dealt with.</p> <p>21 There is certainly a commitment to it.</p> <p>22 Sense of place training. There already is a</p> <p>23 commitment to that, so that certainly is there.</p> <p>24 And including practices that are outlined in the</p> <p>25 long-range development plan, the parties yesterday did not</p>
163	<p>1 MR. MIKE MABERRY: Ed Stephens, when he signed</p> <p>2 as a party concurring on the agreement wrote in, note, we</p> <p>3 signed this MOA with the understanding that it is not an</p> <p>4 endorsement of the proposed Keck Outrigger project, in</p> <p>5 principle we object to any activity, and blah, blah, blah,</p> <p>6 and the Hawaii Conservation District Use Application, dah,</p> <p>7 dah, dah. Anyhow, he actually wrote it in.</p> <p>8 DR. CRAIG FOLTZ: That is what I was thinking</p> <p>9 about.</p> <p>10 MS. CAROLINE BLANCO: And that may be something,</p> <p>11 too.</p> <p>12 MS. ANNELLE AMARAL: Okay. Have we sort of</p> <p>13 addressed -- I know you have to leave. But we've put the</p> <p>14 placeholder there for the issues you've raised. We've</p> <p>15 added some of your concerns here.</p> <p>16 Let me say quickly, with respect to the place</p> <p>17 names here, one of the issues that was raised was the idea</p> <p>18 of being able to give appropriate Hawaiian place names to</p> <p>19 the roads up at Mauna Kea.</p> <p>20 DR. CRAIG FOLTZ: Haleakala.</p> <p>21 MS. ANNELLE AMARAL: Sorry. Haleakala.</p> <p>22 The larger issue here is one of the roads are</p> <p>23 not owned by any one entity and is a collaborative effort</p> <p>24 that is needed with state and feds and multiple agencies.</p> <p>25 So this is easier said than done. However, for those of</p>	165	<p>1 want to just sort of create this long list of things that</p> <p>2 we know is listed somewhere else, or give the appearance</p> <p>3 that we are simply padding. I think that was the thought.</p> <p>4 But there is --</p> <p>5 DR. CRAIG FOLTZ: We may change our mind.</p> <p>6 MS. ANNELLE AMARAL: We may change our mind. We</p> <p>7 leave that one open, too.</p> <p>8 It looks like we've kind of covered everything,</p> <p>9 yes?</p> <p>10 Let me ask one more time. Is there any burning</p> <p>11 issue you think we need to add today?</p> <p>12 This is not the last day, by any means. We're</p> <p>13 coming back for two more meetings sometime in August. But</p> <p>14 I am ready to add anything else that you may have. If</p> <p>15 not, then --</p> <p>16 MR. JEFF BARR: I want to ask one -- no, please.</p> <p>17 MR. SOL KAHO'OHALAHALA: No. I just think this</p> <p>18 is beginning step. And what is going to happen is that</p> <p>19 there will emerge other statements or issues once there is</p> <p>20 something put out.</p> <p>21 So let this be the first pass at this. And it's</p> <p>22 going to encourage a few others to start coming forward.</p> <p>23 Because if they feel strongly about any one component that</p> <p>24 they believe is either lacking or not being sufficiently</p> <p>25 covered in any of these, it will come forward.</p>

<p style="text-align: right;">166</p> <p>1 MR. JEFF BARR: I was just going to ask, because  2 of the most intensive discussion of the road, and Tonia  3 has said that HHF, one of their big concerns would be the  4 road, the most intensive discussion is likely to be with  5 the park on those dates, that aren't necessarily the full  6 consulting party consultation. Would it be appropriate to  7 bring anybody else other than the park into those  8 discussions, do you think?  9 MS. CAROLINE BLANCO: I think since that one is  10 focused mostly on the SUP --  11 MR. JEFF BARR: Is it? Okay.  12 MS. CAROLINE BLANCO: Special use permit.  13 There's overlap because, you know, the road issues are  14 involved, it's the reason for the SUP. And it's also one  15 of the reasons for -- I mean, it also covers the issues  16 involved in impacts to the park. So my hope is that, in  17 addition, that either they can provide us with information  18 that we can present to the rest of the consulting parties,  19 if they cannot make it, on the 27th and 28th, or, best  20 case scenario, they can join us on the 27th and 28th.  21 DR. CRAIG FOLTZ: But not join us on the 22nd.  22 MS. CAROLINE BLANCO: Oh, other parties? No.  23 I am talking about the park joining the rest of  24 the group.  25 DR. CRAIG FOLTZ: I understand. But I thought</p>	<p style="text-align: right;">168</p> <p>1 discussed.  2 DR. CRAIG FOLTZ: In broad terms. I mean, I  3 worry about us hitting hot buttons that we don't know are  4 hot.  5 MS. CAROLINE BLANCO: If we could, if --  6 MS. TONIA MOY: Just the idea that they think  7 you finalized it when you didn't.  8 MS. CAROLINE BLANCO: I could run some of the  9 language by some of you, just to be sure that I am  10 handling it in a sensitive way. If we are drafting this  11 letter, I would not want to be presumptuous about trying  12 to, you know, talk about a konohiki when I just heard  13 about it yesterday. So I think it's a great concept, but  14 I want to be careful. I want to be careful in how I  15 present that.  16 And I have a question, also, given the comments  17 you had made, Sol, and the nodding of heads that I saw  18 about how, once this gets out and people understand, that  19 they may want a role in this and see that there is some  20 forward movement here. Do you feel that it is possible to  21 ultimately reach an MOA that the SHPO could sign, and  22 Advisory Counsel we will talk to in Washington, and,  23 hopefully, the SHPO will talk with as well with them?  24 MR. HINANO RODRIGUES: Before I answer that  25 question, you are talking about sending something out and</p>
<p style="text-align: right;">167</p> <p>1 Jeff's --  2 MS. CAROLINE BLANCO: That is why I say I think  3 it should be a meeting with the park, follow-up on the  4 SUP. But, hopefully, that can inform the meetings the  5 following week. And best case scenario, the park will  6 join us on the 27th, 28th.  7 MR. JEFF BARR: That is probably the better way.  8 MS. ANNELLE AMARAL: Is there a commitment,  9 then, to taking some of the notes that have come out of  10 this discussion and circulating it with all consulting  11 parties?  12 MS. CAROLINE BLANCO: Yeah. My sense from what  13 I wrote down here is that we would send out another letter  14 to the consulting parties. It would include several  15 different things. It would explain what is an MOA, what  16 is the purpose of it, explain the benefits of signing it,  17 that you get the ability to enforce the terms of it, that  18 you can still object to the underlying project but agree  19 to sign the MOA, and outline the progress of the meetings  20 we've had today and yesterday, and, also, announce the  21 next meetings for August 27th and 28th.  22 DR. CRAIG FOLTZ: I think we need to be very  23 careful with specifics.  24 MS. CAROLINE BLANCO: I think what we will do is  25 we will outline that these were issues that were</p>	<p style="text-align: right;">169</p> <p>1 then talking about the importance of being a signatory to  2 an MOA?  3 MS. CAROLINE BLANCO: Right.  4 MR. HINANO RODRIGUES: Maybe even take maybe a  5 step back. The importance not necessarily of being a  6 signatory to an MOA, but actually being a part of the  7 process itself.  8 MS. CAROLINE BLANCO: Okay.  9 MR. HINANO RODRIGUES: That way it is a little  10 bit less strong.  11 DR. CRAIG FOLTZ: Right.  12 MS. CAROLINE BLANCO: Then just explaining that  13 signatories do have enforcement rights.  14 MR. HINANO RODRIGUES: Yeah. That way, those  15 who don't want to be signatory to it can say, at least I  16 participated in it and I didn't compromise or -- you know,  17 I didn't compromise my position or -- you know, it gives  18 them a way to stand more neutral.  19 MS. CAROLINE BLANCO: So it's more of like note  20 that signatories have enforcement rights, but that is the  21 side piece of it. The main part of it is that it is a  22 benefit to being a part of the process.  23 MR. HINANO RODRIGUES: That you participated in  24 it and you contributed towards it. That is really  25 important.</p>

<p style="text-align: right;">170</p> <p>1 So your question regarding -- what was the 2 question? I'm sorry.</p> <p>3 MS. CAROLINE BLANCO: As far as do you see that 4 there is --</p> <p>5 MR. HINANO RODRIGUES: Oh, yeah. Well, we have 6 to look at it that way, yeah. We got to be optimistic.</p> <p>7 MS. CAROLINE BLANCO: Right.</p> <p>8 MR. HINANO RODRIGUES: So, yeah, it's hoped it 9 is possible. We have to work with the idea that it is.</p> <p>10 MS. CAROLINE BLANCO: Right.</p> <p>11 MR. HINANO RODRIGUES: If not, we could just 12 pack up now and leave and that is it.</p> <p>13 MS. CAROLINE BLANCO: Right.</p> <p>14 MR. HINANO RODRIGUES: We don't want to do that.</p> <p>15 MS. CAROLINE BLANCO: Right. It's just been 16 hard to gauge a bit, to find out, when parties haven't 17 been responsive, are they interested.</p> <p>18 This, to me, has been very encouraging because 19 it seems like we can really have some benefits to be able 20 to give back to the community, and yet, you know, still 21 work something out that is going to be a win-win for 22 everybody. And so it gives me hope. But I just wanted to 23 calibrate that a little bit and just see.</p> <p>24 MR. HINANO RODRIGUES: You will be able to find 25 that out in the next two meetings.</p>	<p style="text-align: right;">172</p> <p>1 sentences -- and not understand, but that is what will hit 2 them.</p> <p>3 MS. CAROLINE BLANCO: Right.</p> <p>4 MR. HINANO RODRIGUES: So this, I think, kind of 5 -- this is everybody's talk. This is what the people on 6 Maui understand. And that is why I am optimistic. I 7 think that we can move, we can start movement again.</p> <p>8 MS. CAROLINE BLANCO: That is good. That is 9 good.</p> <p>10 MR. HINANO RODRIGUES: I hope.</p> <p>11 MS. CAROLINE BLANCO: I hope so, too. I mean, 12 sort of the hope is that, at the end of the two meetings 13 in August, we will be able to actually have a draft and 14 will be able to start exchanging the draft for comment and 15 work to finalization of it. That is the hope that I would 16 put forward.</p> <p>17 MR. HINANO RODRIGUES: Personally, I don't think 18 any of us in this room truly understand how the people 19 feel yet. But I think in the next -- at the next two 20 meetings we will. Provided the dissemination of this 21 information is successful, I think we will.</p> <p>22 MS. CAROLINE BLANCO: Okay.</p> <p>23 MR. SOL KAHO'OHALAHALA: The only thing I would 24 add is I think that -- along the lines of what was already 25 expressed, is that there needs to be some manner in which</p>
<p style="text-align: right;">171</p> <p>1 MS. CAROLINE BLANCO: Okay.</p> <p>2 MR. HINANO RODRIGUES: You can gauge from what 3 happens. You can look at the dynamics as to the 27th and 4 the 28th of August and then get the answer to that 5 question right then.</p> <p>6 MS. CAROLINE BLANCO: What do you think is a 7 realistic expectation for the 27th and 28th as far as, at 8 the end of the 28th, what will we have accomplished in the 9 best case scenario? Or a realistic scenario, let's put it 10 that way?</p> <p>11 MR. HINANO RODRIGUES: Based on what I heard -- 12 and I think I've seen some correspondence because they 13 normally CC stuff that go to Oahu back to Maui. And based 14 on what I heard you express yourself this morning, about 15 not having response, responses --</p> <p>16 MS. CAROLINE BLANCO: Right.</p> <p>17 MR. HINANO RODRIGUES: -- I think you will after 18 today, you know.</p> <p>19 MS. CAROLINE BLANCO: That is good.</p> <p>20 MR. HINANO RODRIGUES: Something like this is a 21 little more concrete for the people of Maui to understand 22 versus this. You know, this is for those of us with 23 college degrees and graduate degrees. But the person -- 24 the normal person out there who has a stake in all of 25 this, you know, will understand maybe two or three</p>	<p style="text-align: right;">173</p> <p>1 this information is digested and interpreted at a level 2 that is going to be understood by our community. Too 3 often these discussions happen at a higher level 4 terminology. You lose a lot of the people who are most 5 concerned because they simply just don't understand 6 definitions or concepts that are being utilized in these 7 more formal discussions. So the key to that is 8 communicating back to the community at a level that they 9 understand.</p> <p>10 And I am not saying that they are unable to 11 comprehend, but oftentimes I find, having been in 12 political arena, is that we talk at the level that is 13 understood by the entire system of lawmakers, but it's not 14 often understood at the community level. And they get 15 confused. One word might just turn them off altogether. 16 But the importance of it is in -- you know, in the meat of 17 all of it. If they are not able to understand that, then 18 that one word could do more damage, because no one took 19 the time to explain a little bit more in terms of how we 20 understand.</p> <p>21 So that is what I think, in my view, along with 22 the fact that you'll disseminate this, if there is no 23 communication at the community level that will help them 24 to understand this, then that is going to be a major 25 obstacle.</p>

174	<p>1 DR. CRAIG FOLTZ: But let's be careful. How</p> <p>2 does that happen? The meetings in August are aimed at the</p> <p>3 consulting parties.</p> <p>4 MR. SOL KAHO'OHALAHALA: Okay. Your consulting</p> <p>5 parties are going to be part of community entities and</p> <p>6 organizations. So you can start with bringing them in,</p> <p>7 but they are going to bring in a slew of other people.</p> <p>8 DR. CRAIG FOLTZ: You are saying that will</p> <p>9 happen naturally?</p> <p>10 MR. SOL KAHO'OHALAHALA: Not naturally. I think</p> <p>11 part of what I see, my responsibility will be, is to touch</p> <p>12 bases with these consulting parties and looking at their</p> <p>13 leadership, and then taking their lead as to how this is</p> <p>14 going to be further disseminated into their organizations.</p> <p>15 To me, it's important that I be there in that process.</p> <p>16 So what he expressed earlier is that, you know,</p> <p>17 there needs to be a manner in which you are introduced</p> <p>18 into the organization and into the family, into the</p> <p>19 entity. And it's not just I sent you a formal notice.</p> <p>20 And it's that process that is going to build that kind of</p> <p>21 opportunity for building support and trust. And it's that</p> <p>22 process that I hope that we will be involved in that helps</p> <p>23 to explain fully to the point that everyone understands</p> <p>24 and that brings us all at the same level.</p> <p>25 MS. CAROLINE BLANCO: Do you have thoughts, to</p>	176	<p>1 in a way that they will listen to you. So it's a matter,</p> <p>2 I guess, of evaluating, analyzing the list of consulting</p> <p>3 parties, and figuring out who is the best people you send</p> <p>4 in to talk to them to prepare them for the upcoming</p> <p>5 meetings, answer their questions, respond.</p> <p>6 MR. SOL KAHO'OHALAHALA: Hinano said something</p> <p>7 about talk story. That is the level at which I think that</p> <p>8 I want to be supportive of, in the talk story level, with</p> <p>9 these individuals, these organizations. Because that is</p> <p>10 the level at which I think we understand that there can be</p> <p>11 an exchange and an openness and a degree of trust, you</p> <p>12 know. It's always important. So I think I can lend</p> <p>13 support in that area.</p> <p>14 MS. CAROLINE BLANCO: I greatly appreciate that.</p> <p>15 MR. MIKE MABERRY: Would it be appropriate,</p> <p>16 would it be acceptable to suggest that the next couple of</p> <p>17 meetings are talk story meetings with an emphasis on</p> <p>18 working on mitigation, or not use that word, use something</p> <p>19 else? Would that just not look right coming from the NSF</p> <p>20 in a letter?</p> <p>21 MS. ANNELLE AMARAL: Are you talking about the</p> <p>22 two meetings, 27th, 28th?</p> <p>23 MR. MIKE MABERRY: Yeah.</p> <p>24 MS. ANNELLE AMARAL: Those are not talk story</p> <p>25 meetings, right?</p>
175	<p>1 speak for NSF, how we can do that to better communicate</p> <p>2 with the public or with the consulting parties, at least,</p> <p>3 in this process, Sol, since we're in Washington?</p> <p>4 MR. SOL KAHO'OHALAHALA: Depending on who your</p> <p>5 parties are. Obviously, you know who the more involved</p> <p>6 and the more sophisticated your parties are that you have</p> <p>7 direct relationships with. But there are others that are</p> <p>8 not as involved or as -- are not as savvy and informed.</p> <p>9 And that is the ones that I think represent the broader</p> <p>10 base of people. If they are not informed, then they are</p> <p>11 not understanding, then you have that out there that will</p> <p>12 drive a broader community of supporters or non-supporters.</p> <p>13 So it's that component that I think I would like to be at</p> <p>14 least helpful in helping to bring clarity, to bring</p> <p>15 understanding, and then just let it continue from that</p> <p>16 point.</p> <p>17 MS. ANNELLE AMARAL: Let me jump in here.</p> <p>18 Someone like Sol going to the Royal Order and</p> <p>19 making a presentation to them, or to the different</p> <p>20 Hawaiian civic clubs here in Maui and Molokai and Lana'i,</p> <p>21 Sol's presence carries more weight with certain groups of</p> <p>22 people. And any questions they may have, they may be</p> <p>23 willing to raise with him in a way that they would not</p> <p>24 with others. Similarly, I would think that you all have</p> <p>25 the ability to communicate with a certain level of people</p>	177	<p>1 MR. MIKE MABERRY: By his definition, it is talk</p> <p>2 story.</p> <p>3 MR. SOL KAHO'OHALAHALA: Earlier, you had asked</p> <p>4 me, yesterday, what could be accomplished by August. I</p> <p>5 think my hope is that I would be involved in these talk</p> <p>6 story opportunities.</p> <p>7 MR. MIKE MABERRY: I am melding the two. No. I</p> <p>8 understand what you were saying, but I was asking, based</p> <p>9 on what you had said, that people might have been willing</p> <p>10 to sit down at this table if they thought it was more of a</p> <p>11 talk story rather than a mitigation discussion. And so</p> <p>12 that is what prompted me to ask is it appropriate in</p> <p>13 sending out the letters or the invitations for the next</p> <p>14 meetings to suggest something along those lines? Or is</p> <p>15 that going to look funny coming from the NSF in</p> <p>16 Washington, D.C. to come to Maui to do a talk story. You</p> <p>17 know where I am coming from?</p> <p>18 MR. JEFF BARR: Well, looks sort of patronizing</p> <p>19 for the NSF to use that kind of language.</p> <p>20 MR. HINANO RODRIGUES: For you guys. But for us</p> <p>21 it's nothing wrong because that is our method of</p> <p>22 communication. So it's just a label.</p> <p>23 MS. CAROLINE BLANCO: Can I be forthright and</p> <p>24 communicate a concern I have about the future?</p> <p>25 I am concerned that at the close -- and it's the</p>

<p style="text-align: right;">178</p> <p>1 reason why, I am sure, you can sort of see this as a  2 question. I am concerned that at the close of the  3 meetings on the 27th and 28th, we do make progress, which  4 would be great, but then things are continued on, and it's  5 not until six months later that an MOA really starts to  6 materialize. And part of the concern I have -- while I am  7 absolutely delighted with the progress we have made over  8 the last two days, and it gives me tremendous hope that we  9 will have very productive meetings later on. And with the  10 efforts that you have talked about to occur in the  11 interim, I think that really makes things very positive.  12 And I don't want to be too pushy, but, at the same time, I  13 want to be cognizant of some practical realities of moving  14 the process toward closure and how do we do that in a  15 sensitive way, and, yet, still, you know, make it happen.  16 So that is a question I pose to the two of you. And I  17 want to be sensitive, as I said, but I also do want to  18 make sure it moves to closure.  19 MR. HINANO RODRIGUES: You have to be prepared  20 for that to happen, to be perfectly honest.  21 MS. CAROLINE BLANCO: If you were to --  22 MR. HINANO RODRIGUES: You have to be prepared  23 to maybe accept the fact that you might -- the 106 process  24 might be extended, let's say, another six months. It's a  25 very Hawaiian thing. The Hawaiian thing is it's always</p>	<p style="text-align: right;">180</p> <p>1 mainland. Ten seconds is unacceptable. And I stood there  2 and I was losing my patience. And I told the guy, you  3 know what, I'll come back tomorrow, Sunday, and I will buy  4 the scoop net, I will just take the other ten items, by  5 then you have a price. He looked at me and he said, why,  6 do you have someplace important to go like the airport.  7 And it clicked. This guy is so right. He is so right.  8 You know, it takes me back to, you know, the  9 best time is the right time. And, obviously, this is not  10 it, you know. So I know that is a very weak answer to  11 give you, but I found, in my two and-a-half years of being  12 frustrated with the inefficiencies of life here in Hawaii,  13 that is the way it is.  14 MS. CAROLINE BLANCO: Right.  15 MR. HINANO RODRIGUES: If I want something out  16 of it, I got to change and live my life the way they live  17 their life. That is it. I can't change that.  18 MS. CAROLINE BLANCO: And I appreciate that. I  19 am trying to get my arms around a process that has already  20 been going on for over three years and how to provide  21 advice to clients in terms of what will -- I mean,  22 obviously, we can't all predict the future. We don't know  23 what is going to happen. It could be that everybody wants  24 to sign that day, who knows. Likely not. But to allow  25 them to be as patient, what will give them enough</p>
<p style="text-align: right;">179</p> <p>1 about the process, never the end, yeah. And if you deal  2 with the process, in the end, the end comes out okay.  3 It's if you push it that it doesn't come okay. In Hawaii,  4 we -- at least in the Hawaiian culture, we say that the  5 best time is the right time. And we don't quite know when  6 is the right time. But it will appear, you know, sooner  7 or later.  8 And so that being said, I mean, I know that  9 takes a lot of patience on our part, but, you know, that  10 is why we live to old age here in Hawaii, because we live  11 that. But to be honest, since you asked a very frank  12 question, my frank answer is I think you should be  13 prepared to maybe go on a little bit longer, you know.  14 And like I said, I -- I share -- I empathize with your  15 frustration. Because that is part of my daily job, too,  16 in finding closure to everything.  17 But I've learned.  18 Let me give you an example. I lived on the  19 mainland for 20 years. So I became very westernized. And  20 I came home two years ago. And I went to Kmart. And I  21 bought ten items. And the tenth item was a scoop net  22 because I wanted to go catch 'opae, shrimp, in the stream.  23 And the tenth item just didn't have the price tag on it.  24 And I stood there. And I swear it was ten minutes. Ten  25 minutes standing for a price check is unacceptable on the</p>	<p style="text-align: right;">181</p> <p>1 incentive to continue on for an additional several months,  2 or whatever it might end up being? In other words, where  3 is the credibility the two moving forward, that it's okay,  4 trust me, just keep on moving forward and we will be able  5 to see what we can do?  6 MR. HINANO RODRIGUES: Do you -- to respond to  7 that, let me ask you this question.  8 MS. CAROLINE BLANCO: Sure.  9 MR. HINANO RODRIGUES: Do you feel good about  10 what happened today?  11 MS. CAROLINE BLANCO: Yes.  12 MR. HINANO RODRIGUES: Okay. There's your  13 answer right there.  14 MS. CAROLINE BLANCO: I do.  15 MR. HINANO RODRIGUES: So it's up to you now to  16 convince your higher ups that you feel good about what  17 happened today and you feel good about what is going to  18 happen at the next two meetings, and then may be another  19 six months. Now it's your job to convince them of that,  20 trust me. Okay.  21 MS. CAROLINE BLANCO: I appreciate it.  22 MR. SOL KAHO'OHALAHALA: I was just going to add  23 and say that we have a period of two months. That is why,  24 when you asked me that question, what can be done by  25 August, and the only thing in my mind is that it's a</p>

182

1 period of time in which we will have an opportunity to be  
 2 engaged in these kinds of talk story.  
 3 MS. CAROLINE BLANCO: Right.  
 4 MR. SOL KAHO'OHALAHALA: If you are asking me  
 5 about what the outcome will be in this timeframe, I don't  
 6 have a clear answer for you. But I can tell you that in  
 7 the process of utilizing that time that there will be  
 8 active talk story sessions. It may be at the end of the  
 9 two months that we have been successful in having good  
 10 talk story sessions, that you will find that that point in  
 11 August that you will have support. But whether or not I  
 12 can define that, whether or not I can guarantee that, that  
 13 is something I am not prepared to say other than I have a  
 14 period of time of which to be involved, you know.  
 15 MS. CAROLINE BLANCO: I really appreciate your  
 16 candor. Thank you.  
 17 And I may be asking you questions, running  
 18 things by, as we talked about before, to make sure it's  
 19 done in a sensitive manner.  
 20 MR. SOL KAHO'OHALAHALA: You know, like we are  
 21 -- just the fact that we are looking at the consulting  
 22 parties. I am not necessarily looking at consulting  
 23 parties as I am looking at who the specific layers of  
 24 people that are necessary to help support the consultant  
 25 on this, you know. So while you are defining that as

183

1 specific entities or individuals, I am looking at the  
 2 network of who those parties are.  
 3 And it may be that they are not involved at all,  
 4 but they are important people to have these discussions  
 5 with, so that it can be part of the foundation for  
 6 consulting parties.  
 7 MS. ANNELLE AMARAL: Uh-huh.  
 8 MR. SOL KAHO'OHALAHALA: So if you don't make a  
 9 contact or you don't have an opportunity to identify and  
 10 build that foundation, then there is nothing to hold your  
 11 consulting parties, yeah.  
 12 MS. CAROLINE BLANCO: Right.  
 13 MR. SOL KAHO'OHALAHALA: So it's that part that  
 14 I find more important than identification of the  
 15 consulting parties. So --  
 16 MS. CAROLINE BLANCO: I appreciate that.  
 17 Thank you both so much.  
 18 MS. ANNELLE AMARAL: Yes. Thank you. It's a  
 19 good productive day. Thank you for your time.  
 20 We are going to bring this to a close now?  
 21 Thank you.  
 22 (Adjourned at 2:34 PM)  
 23  
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184

1 CERTIFICATE  
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 6  
 7 I, TONYA MCDADE, a Court Reporter of the State  
 8 of Hawaii, do hereby certify that the proceedings  
 9 contained herein were taken by me in machine shorthand and  
 10 thereafter was reduced to print by means of computer-aided  
 11 transcription; that the foregoing represents, to the best  
 12 of my ability, a true and accurate transcript of the  
 13 proceedings had in the foregoing matter.  
 14 I further certify that I am not an attorney for  
 15 any of the parties hereto, nor in any way concerned with  
 16 the cause.  
 17  
 18 DATED this \_\_\_ day of \_\_\_\_\_, 2008.  
 19  
 20 *Signature on File*  
 21 \_\_\_\_\_  
 22 Tonya McDade, RPR, CRR, CBC  
 23 Hawaii CSR #447  
 24  
 25

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**Appendix C(5): Transcripts  
Section 106 Meeting, UH IfA, Maikalani Facility,  
August 27, 2008 Afternoon Session**

Held at University of Hawaii Institute for Astronomy,  
Maikalani Facility, 34 Ohia Ku Street, Pukalani, Maui,  
Hawaii, commencing at 1:01 p.m. to 5:11 p.m., August 27,  
2008.

REPORTED BY:  
Tonya McDade  
Registered Professional Reporter  
Certified Realtime Reporter  
Certified Broadcast Captioner

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1 ATTENDANCE  
 2 NATIONAL SCIENCE FOUNDATION  
 Dr. Craig Foltz, ATST Program Officer  
 3 Ms. Caroline Blanco, Assistant General Counsel  
 Mr. Tony Gibson  
 4  
 NATIONAL SOLAR OBSERVATORY  
 5 Mr. Jeremy Wagner, ATST Project Manager  
 Mr. Steve Keil, Director  
 6 Ms. Jennifer Ditsler, Project Assistant  
 Mr. Rex Hunter, Administrative Facilities Manager  
 7  
 NATIONAL OPTICAL ASTRONOMY OBSERVATORY  
 8 Mr. Jeff Barr, ATST Project Architect  
 9 UNIVERSITY OF HAWAII INSTITUTE FOR ASTRONOMY  
 Mr. Mike Maberry, Assistant Director  
 10  
 KC ENVIRONMENTAL, INC.  
 11 Dr. Charlie Fein, Vice President  
 Ms. Sharon Loando-Monro, Planning Projects Manager  
 12  
 MEETING FACILITATOR  
 13 Ms. Annelle Amaral  
 14 OTHER ATTENDEES:  
 Ms. Mikahala Helm, Kilakila o Haleakala  
 15 Ms. Leiohu Ryder, Kilakila o Haleakala  
 Ms. Camille Kalama, Native Hawaiian Legal Corporation,  
 16 Kilakila o Haleakala  
 Ms. Pua Aiu, State Historic Preservation Office  
 17 Ms. Nancy McMahon, State Historic Preservation Office  
 Mr. Hinano Rodrigues, Cultural Historian, State Historic  
 18 Preservation Office  
 Mr. Jason Jeremiah, Office of Hawaiian Affairs, Policy  
 19 Advocate, Native Rights Land & Culture Division  
 Ms. Charlene Dwin Vaughn, Advisory Council on Historic  
 20 Preservation  
 Ms. Martha Catlin, Advisory Council on Historic  
 21 Preservation (via telephone)  
 Ms. Betsy Merritt, National Trust for Historic  
 22 Preservation (via telephone)  
 Ms. Tonia Moy, Historic Hawaii Foundation  
 23 Ms. Marilyn Parris, Park Superintendent, Haleakala  
 National Park  
 24 Ms. Liz Gordon, Haleakala National Park  
 Mr. Naaman Horn, Haleakala National Park  
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1 NATIONAL SCIENCE FOUNDATION  
 2 SECTION 106 MEMORANDUM OF AGREEMENT MEETING  
 3 AUGUST 27, 2008  
 4 TRANSCRIPT OF PROCEEDINGS  
 5 MS. ANNELLE AMARAL: Aloha, everyone. Thank you  
 6 all for coming today.  
 7 My name is Annelle Amaral. And I will be acting  
 8 in the role of your facilitator this afternoon and this  
 9 evening.  
 10 But before we begin, I have asked Shad Kane if  
 11 he would be willing to open this gathering with a pule.  
 12 And he has agreed.  
 13 Thank you, Shad.  
 14 MR. SHAD KANE: (Hawaiian.) Bless, bless each  
 15 one of us. Open up our minds and our hearts to the things  
 16 that is important to us. Bless our families and friends.  
 17 Mahalo.  
 18 MS. ANNELLE AMARAL: Mahalo. Thank you, Shad.  
 19 I would also like to ask those of you that have  
 20 your electronic devices on you, if you could turn them  
 21 off. Sorry, I am just talking about your cell phones or  
 22 your beepers or whatever it is you have. Those that have  
 23 computers and are using it, by all means, have at it. Be  
 24 comfortable.  
 25 And, again, before we begin, it's important for

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1 Mr. Shad Kane, Hawaii Representative, Native American  
 Advisory Group  
 2 Mr. Warren Shibuya  
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1 us to know who is in the room and you know who we are and  
 2 who we are representing.  
 3 I've introduced myself. My name is Annelle  
 4 Amaral. I was born on the Island of Hawaii. I live on  
 5 the Island of Oahu.  
 6 I have been asked to come here today to  
 7 facilitate the process, to assure that all voices are  
 8 heard. You will see me attempting to do that. You will  
 9 see me attempting to record what is taking place. Not in  
 10 the way that the court reporter does it, where she takes  
 11 every single word, but in a way where I try to capture as  
 12 much of your thoughts as I can in bullet form.  
 13 If you see me write the wrong thing down, by all  
 14 means, stop me, correct me. I am happy to correct things  
 15 here.  
 16 And then these papers go up on the wall. So  
 17 when others join us, they can keep up with the  
 18 conversation we're having today and this evening.  
 19 I would also like to know who else is in the  
 20 room and invite you to introduce yourself, to speak to who  
 21 it is you are here for and to make whatever other comments  
 22 you think are important for us to know.  
 23 I wonder if I could start with you. Aloha.  
 24 MS. CAMILLE KALAMA: Sure. Aloha. I am Camille  
 25 Kalama, I am from the Native Hawaiian Legal Corporation.

<p style="text-align: right;">6</p> <p>1 I am here on behalf of the Kilakila o Haleakala.</p> <p>2 MS. ANNELLE AMARAL: Aloha.</p> <p>3 MS. LEIOHU RYDER: Aloha, everybody. I am</p> <p>4 Leiohu Ryder. I live in Hawaiian Homes here in Maui. And</p> <p>5 I am here on behalf of my family and Kilakila o Haleakala.</p> <p>6 MS. ANNELLE AMARAL: Aloha.</p> <p>7 MS. MIKAHALA HELM: Aloha. My name is Mikahala</p> <p>8 Helm. And I am a consultant with Section 106. And I am</p> <p>9 part of Kilakila o Haleakala as well as representing</p> <p>10 myself and my kupuna.</p> <p>11 MS. ANNELLE AMARAL: Aloha.</p> <p>12 MR. REX HUNTER: Hello. My name is Rex Hunter.</p> <p>13 I am with the National Solar Observatory. I am at our</p> <p>14 Sunspot, New Mexico site as the Administrative Facilities</p> <p>15 Manager.</p> <p>16 DR. CRAIG FOLTZ: I am Craig Foltz. I am the</p> <p>17 Acting Director of the Division of Astronomical Sciences</p> <p>18 at the Natural Science Foundation. I have also been the</p> <p>19 Program Officer assigned to this project for, oh, at least</p> <p>20 the last five years.</p> <p>21 Should the project be funded, we would fund it,</p> <p>22 the National Science Foundation.</p> <p>23 MR. JASON JEREMIAH: Aloha. My name is Jason</p> <p>24 Jeremiah. I am representing the Office of Hawaiian</p> <p>25 Affairs today.</p>	<p style="text-align: right;">8</p> <p>1 come a distance to make it here today. Thank you.</p> <p>2 MS. LIZ GORDON: Hi, I am Liz Gordon. I work</p> <p>3 for Haleakala National Park. I am the Cultural Resources</p> <p>4 Program Manager.</p> <p>5 MS. MARILYNN PARRIS: I'm Marilyn Parris,</p> <p>6 Superintendent, Haleakala National Park.</p> <p>7 I need to say, unfortunately, we have other</p> <p>8 commitments, we will not be at the second meeting, but we</p> <p>9 will be here tomorrow. So sorry about that.</p> <p>10 MR. NAAMAN HORN: Aloha, Naaman Horn. I work at</p> <p>11 Haleakala National Park as a Management Assistant.</p> <p>12 MS. TONIA MOY: I am Tonia Moy. I am</p> <p>13 representing Historic Hawaii Foundation.</p> <p>14 MR. MIKE MABERRY: I am Mike Maberry. I am</p> <p>15 Assistant Director of the University of Hawaii Institute</p> <p>16 for Astronomy.</p> <p>17 MR. STEVE KEIL: Aloha. I am Steve Keil. I am</p> <p>18 Director of the National Solar Observatory, and, also, the</p> <p>19 PI on the Advanced Technology Solar Telescope.</p> <p>20 MR. MIKE MABERRY: PI is principal investigator,</p> <p>21 by the way.</p> <p>22 MR. STEVE KEIL: Sorry.</p> <p>23 MR. JEREMY WAGNER: Private investigator.</p> <p>24 MS. ANNELLE AMARAL: There you go.</p> <p>25 MR. JEREMY WAGNER: I am Jeremy Wagner, I am the</p>
<p style="text-align: right;">7</p> <p>1 And just ahead of time, I am going to be leaving</p> <p>2 early, but I will be attending the second meeting. I have</p> <p>3 other meetings this afternoon, so --</p> <p>4 MS. NANCY McMAHON: Aloha. I am Nancy McMahon</p> <p>5 with the State Historic Preservation Office. I am the</p> <p>6 Deputy Administrator and the Deputy State Historic</p> <p>7 Preservation Officer.</p> <p>8 MS. PUA AIU: I am Pua Aiu. I am Administrator</p> <p>9 of the State Historic Preservation Division.</p> <p>10 MS. CHARLENE DWIN VAUGHN: Aloha. My name is</p> <p>11 Charlene Vaughn, I am with the Advisory Council on</p> <p>12 Historic Preservation out of Washington.</p> <p>13 MS. ANNELLE AMARAL: Welcome.</p> <p>14 MR. SHAD KANE: Shad Kane. I belong to a number</p> <p>15 of Native Hawaiian organizations, including the World</p> <p>16 Order of Kamehameha. But I am here today speaking in</p> <p>17 behalf of the Native Hawaiian representative on the Native</p> <p>18 American Advisory Group. So I will be sharing with you my</p> <p>19 thoughts.</p> <p>20 MS. ANNELLE AMARAL: Aloha.</p> <p>21 MS. CAROLINE BLANCO: I am Caroline Blanco. I</p> <p>22 am the Assistant General Counsel of Environmental</p> <p>23 Compliance for the National Science Foundation.</p> <p>24 And I just want to extend a very warm welcome to</p> <p>25 all of you, and especially thank those of you who have</p>	<p style="text-align: right;">9</p> <p>1 ATST Project Manager. I work with National Solar</p> <p>2 Observatory out of Tucson, Arizona.</p> <p>3 MR. JEFF BARR: I am Jeff Barr. I am Project</p> <p>4 Architect. I, also, work in Tucson, Arizona.</p> <p>5 DR. CHARLIE FEIN: I am Charlie Fein. I am the</p> <p>6 Environmental Consultant to the ATST project.</p> <p>7 MS. ANNELLE AMARAL: Tony.</p> <p>8 MR. TONY GIBSON: I am Tony Gibson with the</p> <p>9 National Science Foundation.</p> <p>10 MS. ANNELLE AMARAL: And back here.</p> <p>11 MS. JENNIFER DITSLER: I am Jennifer Ditsler. I</p> <p>12 am with Project Administration for the ATST project in</p> <p>13 Tucson, Arizona.</p> <p>14 MS. ANNELLE AMARAL: Does the court reporter</p> <p>15 want to introduce herself?</p> <p>16 (Off record for Court Reporter to introduce</p> <p>17 herself.)</p> <p>18 MS. ANNELLE AMARAL: Aloha. Welcome.</p> <p>19 The process today is different from public</p> <p>20 hearing. This is a consultation process. And so we</p> <p>21 expect that we will be talking to one another. And as</p> <p>22 such, sometimes it gets a little dicey. Especially if</p> <p>23 someone says something that excites us, we may want to</p> <p>24 sort of jump in and interrupt. I am the traffic cop in</p> <p>25 the front of the room, making sure that we let people</p>

<p style="text-align: right;">10</p> <p>1 finish their thought, finish what it is they have to say  2 before we recognize someone else. So if you do want to  3 speak, if you could sort of indicate it, and I will make  4 eye contact with you, and we will get to you as soon as  5 people have finished saying what they need to say.  6 So the bottom line is, we let people finish what  7 they have to say. We don't interrupt them as much as  8 possible.  9 I am going to try to keep an eye open to make  10 sure that everyone has an opportunity to speak at least  11 once before we return back to someone to speak a second  12 time. So no one person dominates the conversation.  13 There are going to be times, however, when  14 people have specialized knowledge, and a question is  15 raised, and someone is going to indicate, "I have the  16 answer to that question." So then you will see me  17 recognize that person. And then you are going to get mad  18 at me because that person just spoke. That resource  19 person may end up speaking more than once because they  20 have the specialized knowledge.  21 But in the end, let's all sort of be patient  22 with one another.  23 I think this is exciting. This is one of the  24 most fun kind of discussions we can have, this  25 consultation piece.</p>	<p style="text-align: right;">12</p> <p>1 You are talking to a room that is filled with  2 people. And I am sorry, we had just done the  3 introductions. So just accept that there are lots of  4 people in the room.  5 MS. MARTHA CATLIN: Wonderful.  6 MS. CAROLINE BLANCO: Martha, I think -- this is  7 Caroline. I think maybe just the entities --  8 MS. ANNELLE AMARAL: All right. Then we will go  9 around and at least do the entities that are gathered  10 here. We have three representatives from Kilakila o  11 Haleakala. We have a representative from the Office of  12 Hawaiian Affairs, Public Policy Division. We have a  13 representative from the State -- two representatives from  14 the State historic sites --  15 MULTIPLE SPEAKERS: Preservation District.  16 MS. ANNELLE AMARAL: Yeah, State Historic  17 Preservation Division.  18 MS. CAROLINE BLANCO: And, of course, Charlene  19 is here, Martha and Betsy, from the Advisory Council.  20 MS. ANNELLE AMARAL: Yes. And we have Shad Kane  21 who represents a number of organizations, but here with us  22 here today as a Native American Advisory Group.  23 MS. CHARLENE DWIN VAUGHN: To the Advisory  24 Council.  25 MS. ANNELLE AMARAL: Yes, to the Advisory</p>
<p style="text-align: right;">11</p> <p>1 We will try to take frequent breaks. In part,  2 because it is difficult for the court reporter to always  3 be listening and taking notes. So I am going to do that.  4 I would note, also, that there is a bathroom  5 outside and down the hall. If you need to use the  6 facilities, just go. You don't need permission for that.  7 And before we begin the consultation, we need to  8 sort of set some foundation of where we have been and what  9 we have accomplished.  10 Sorry?  11 MS. CAROLINE BLANCO: Excuse me. Now, we are  12 supposed to have two people on conference call as well,  13 Martha Catlin from the Advisory Council and, also, Betsy  14 Merritt from the National Trust for Historic Preservation.  15 So I wonder if we could just take a quick break to make  16 sure that they are included.  17 MS. ANNELLE AMARAL: Thank you.  18 Aloha. This is Hawaii. Who do we have on the  19 line?  20 MS. BETSY MERRITT: Betsy Merritt, National  21 Trust for Historic Preservation in Washington, D.C.  22 MS. ANNELLE AMARAL: Aloha, Betsy. Is there --  23 MS. MARTHA CATLIN: Martha Catlin in Washington  24 D.C., Advisory Council on Historic Preservation.  25 MS. ANNELLE AMARAL: Aloha, Martha.</p>	<p style="text-align: right;">13</p> <p>1 Council.  2 We also have representatives from the National  3 Parks, Haleakala National Parks, including the Director,  4 in the guise of Marilyn Parris.  5 Representative from Hawaiian Historic  6 Foundation.  7 MS. TONIA MOY: Historic Hawaii Foundation.  8 MS. ANNELLE AMARAL: Historic Hawaii Foundation.  9 Mahalo.  10 Have I left any other organizations out?  11 DR. CRAIG FOLTZ: National Science Foundation.  12 MS. ANNELLE AMARAL: And the very small group  13 from the National Science Foundation.  14 DR. CRAIG FOLTZ: And the project.  15 MS. ANNELLE AMARAL: And the project.  16 DR. CRAIG FOLTZ: And they are distinct.  17 MS. ANNELLE AMARAL: Okay. Thank you and  18 welcome.  19 And as we've explained, this is a conversation,  20 it's a dialogue. And so I've asked people who need to  21 speak to indicate. And we will try not to step over one  22 another so all voices can be heard.  23 And those of you on the conference call, you  24 just need to sort of shout out when you want to speak.  25 And we will try to make room for your voice as well.</p>

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1 MS. MARTHA CATLIN: Thank you.  
2 MS. ANNELLE AMARAL: You should have a copy of  
3 the Agenda before you. Yes?  
4 And then I guess what we would like to do, then,  
5 is we note that that were handouts that were also  
6 available. But I think we are going to start out with  
7 some background.  
8 MS. CAROLINE BLANCO: I think other -- this is  
9 -- Sharon, did you want to introduce yourself?  
10 MS. ANNELLE AMARAL: Oh.  
11 MS. SHARON LOANDO-MONRO: I am Sharon  
12 Loando-Monro. I work for KC Environmental.  
13 MS. CAROLINE BLANCO: She's arranged to have  
14 handouts, extra copies of the Agenda.  
15 And, also, I think all of you had received the  
16 Frequently Asked Questions, and answer to those questions.  
17 So we have a set those as well.  
18 Plus, we have a handout of the web page where  
19 other information on this Section 106 process that NSF has  
20 conducted can be found and located.  
21 And, also, for Betsy and Martha, we have a court  
22 reporter here today who is taking notes of what is going  
23 on here. And so that will be transcribed and will also be  
24 posted on the website.  
25 In addition, Annelle is writing down notes of

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1 comments that are made during this discussion. And those  
2 notes will also be condensed into a document that will  
3 also be posted on the website.  
4 This is much like what transpired during the  
5 June meeting, the same thing.  
6 MS. ANNELLE AMARAL: The court reporter has  
7 reminded me that -- and especially the people on the  
8 phone -- when you speak, if you can please identify  
9 yourself. The people in the room here, too, as well, when  
10 you speak, if you could say your name ahead of time so the  
11 court reporter can identify these different voices.  
12 So that will help. And if you forget, we will  
13 both remind you to state your name first before you begin.  
14 The thought was to provide some foundational  
15 information first. And so we were going to invite  
16 Caroline and then Charlene and then Marilyn, yes, to give  
17 us some -- oh, and Pua, I believe -- Pua, and you, to  
18 provide us with some background information.  
19 So I guess we will start with you --  
20 MS. CAROLINE BLANCO: Okay.  
21 MS. ANNELLE AMARAL: -- Caroline.  
22 MS. CAROLINE BLANCO: I again wanted to thank  
23 everybody for taking the time out of their schedules to  
24 meet with us today. We are very much looking forward to a  
25 good conversation about various views and ideas that

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1 people have.  
2 And, likewise, I would like to certainly let  
3 everybody know that if there are any questions along the  
4 way, please don't hesitate to ask.  
5 I am hopeful we brought into this room people  
6 that have answers to any of the questions about the  
7 project that is being proposed. So, hopefully, you'll get  
8 answers to those questions.  
9 To basically give you some background about the  
10 proposed undertaking, I wanted to stress that there has  
11 been no decision that has been made. There has been  
12 design and development that has gone on for a number of  
13 years, since, I believe, 2000. And then, in 2004, a  
14 proposal for federal funding. And that is what triggers  
15 our Section 106 obligation here. That proposal for  
16 construction came up in 2004, late 2004. And then the  
17 environmental compliance processes started in 2005. And  
18 so the Section 106 process began then.  
19 And all of this will be taken into  
20 consideration. Ultimately, the Director will make a  
21 decision as to whether or not to fund this project. No  
22 decision has been made yet. And no decision will be made  
23 until all of the environmental compliance work has been  
24 completed.  
25 As you know, on the National Environmental

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1 Policy Act side of it, many of you folks here were  
2 involved in that, a Draft Environmental Impact Statement  
3 was prepared. A Final Environmental Impact Statement will  
4 not be prepared until the Section 106 process has been  
5 completed. So that is why a final one has not been issued  
6 as of yet.  
7 And so we are now at -- we have had many  
8 meetings dealing with 106 and issues that have come up.  
9 And this particular meeting is really geared toward a  
10 discussion. It's true consultation. We can have a  
11 discussion about views, ideas that people have. And that  
12 is the goal of the meeting today, both meetings today.  
13 And both meetings, to clarify, are redundant. I  
14 mean this meeting will be the same as the one tonight.  
15 And the only difference for the two were just to  
16 accommodate schedules of people.  
17 So that is the overview of where we are at in  
18 the process.  
19 I would like to say that, early on, there were  
20 identification of potential effects. And, recently, we  
21 added in the area potential effects, park resources.  
22 And Marilyn, I am sure, will be speaking about  
23 the Special Use Permit and the Park interests. But we  
24 will shortly be working with the Park. We are working out  
25 an agreement with them to try to learn more about the park

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1 resources and find out what the impacts might be from the  
 2 proposed project. So that is already moving forward.  
 3 But with regard to the direct, indirect, and  
 4 cumulative impacts that have already been identified, and  
 5 the national register criteria applied to them, I would  
 6 like to actually turn to Charlie Fein who is our  
 7 environmental contractor to identify some of those  
 8 resources. And, hopefully, our discussion today can focus  
 9 on those resources and thoughts that you may have.  
 10 Charlie.  
 11 DR. CHARLIE FEIN: Thank you, Caroline.  
 12 I am Charlie Fein. I am the Environmental Plan  
 13 Drafter working for the ATST Project.  
 14 The Draft Environmental Impact Statement that  
 15 was issued on September 8th, 2006, considered 13 separate  
 16 environmental protocols. Those protocols -- and I will  
 17 just list them at this point and then discuss a little bit  
 18 more about them.  
 19 What was considered was land use. And,  
 20 specifically, land use within Haleakala observatories and  
 21 the adjacent property.  
 22 The next protocol was cultural and historic  
 23 resources; archeological resources; biological resources,  
 24 which include critical habitat; and botanical resources;  
 25 topography, geology and soils; visual resources with

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1 particular viewplain and visual impact; water resources  
 2 for the local and island-wide aquifer system; hazardous  
 3 materials and solid waste; infrastructure and utilities;  
 4 noise; air quality; socioeconomics and environmental  
 5 justice, specifically for the Island of Maui; public  
 6 services and facilities. So those were the 13  
 7 environmental protocols that were considered.  
 8 In considering those protocols, the various  
 9 surveys, analyses, studies, inventories, and so on that  
 10 were conducted from 2005 through August of 2006, were all  
 11 designed to elicit a determination in the document as to  
 12 whether there would be significant impact to those  
 13 resources, significant impact, but impact which was  
 14 mitigatable, less than significant impact, no impact, or,  
 15 actually, beneficial impact. So those were the various  
 16 criteria that were used to assess the various impacts to  
 17 the resources that I mentioned.  
 18 In the document, we identified various  
 19 environmental concerns. Some of which did lead us to  
 20 conclude -- or issue a determination in the document that  
 21 there would be significant impact.  
 22 Impacts to historic and cultural resources were  
 23 deemed to be significant for a number of reasons. Those  
 24 reasons included the potential for impact to traditional  
 25 cultural property, the impact to Native Hawaiian spiritual

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1 resources, impacts to Native Hawaiian visual resources, as  
 2 they pertain to the spiritual practices and so on.  
 3 So we said that there would be significant  
 4 impacts with results -- with respect to historic and  
 5 cultural resources. But we, also, at the time assessed  
 6 that those impacts could be mitigated. And we said so in  
 7 the document.  
 8 We also said that there would be impacts to  
 9 biological resources, specifically endangered species.  
 10 We sought consultation with the U.S. Fish and  
 11 Wildlife Service. A biological opinion was ultimately  
 12 realized by U.S. Fish and Wildlife. And that opinion  
 13 offered various conservation measures and other means of  
 14 mitigating those impacts.  
 15 There were also impacts to other areas within  
 16 the confines of Haleakala observatories, impacts to  
 17 stormwater management. Those were addressed. And, in  
 18 fact, were addressed for all Haleakala observatories, not  
 19 just the site or the primary alternate sites where the  
 20 facility would be built.  
 21 We also considered potential impacts to plant  
 22 life, for example, to insect life. And so an  
 23 entomological study was conducted.  
 24 In summary, all of the impacts that we  
 25 identified were identified as less than significant, with

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1 the exception of the potential impact to historic and  
 2 cultural resources.  
 3 In post-DEIS or post-draft environment impact  
 4 statement period, we received numerous comments on draft.  
 5 There were many suggestions and recommendations as to how  
 6 to further analyze and further develop a means of  
 7 mitigating the impacts we described.  
 8 We conducted additional studies in the  
 9 intervening year and-a-half, including a supplemental  
 10 cultural impact assessment, which was a rather large  
 11 undertaking and produced a rather large document, which is  
 12 publicly available.  
 13 We also produced a supplemental entomological  
 14 study, supplemental botanical studies. We did an  
 15 additional viewplain analysis, and several other analyses  
 16 as well. Those are all going to appear in the Final  
 17 Environmental Impact Statement.  
 18 So where the process is at now is, as Caroline  
 19 said, it awaits Section 106 input to the Section 4, which  
 20 is the impact section.  
 21 And, also, we will then be able to further  
 22 complete the cumulative impact section of the document as  
 23 well, because we have not yet been able to completely  
 24 populate the text with respect to cumulative impact. We  
 25 do not have every piece of information we need to do that.

<p style="text-align: right;">22</p> <p>1 So that is where we are with the document as of 2 right now.</p> <p>3 MS. CAROLINE BLANCO: It's Caroline again. 4 What I wanted to also say is Charlie is speaking 5 in NEPA language. The two processes, the Section 106 6 process and the NEPA process, we're working hand-in-hand. 7 More emphasis had been given because of the significance 8 of the cultural impacts to the 106 process. So we have 9 had additional meetings in addition to those that were 10 also covered through the NEPA process.</p> <p>11 And so I think that, you know, another way to 12 look at this is to say that the impacts that were 13 identified in 106 terms were considered to be adverse. 14 And so at this point, what we take a look at is how do we 15 resolve those adverse impacts, which leads us to this 16 meeting today, and looking under the Section 106 17 regulations, the avoidance, minimization and mitigation.</p> <p>18 Also, just to note, in May, the Advisory Council 19 came out with their protocols dealing with how to do 20 consultation with Hawaiian organizations. And we have 21 been working with that, those protocols, and trying to 22 work within that context.</p> <p>23 And, again, that is part of the reason why we 24 are here today, hoping to reach out to the Native Hawaiian 25 community, to try to learn more about how we can go</p>	<p style="text-align: right;">24</p> <p>1 Also, educational programs. There was 2 expression of interest in promoting educational programs. 3 Signage.</p> <p>4 There were other comments about some of the 5 three proposals that were given, the formal proposals that 6 were given in advance of those meetings.</p> <p>7 I think copies of those proposals have gotten to 8 all of you. If not, they are also posted on the website 9 as well.</p> <p>10 If you do not have internet access, we can make 11 arrangements to provide them to you. Any of the 12 information that is on the website, we can make 13 arrangements to provide that to you.</p> <p>14 And so of the three proposals that were out 15 there, one was for the Maui Community College and had a 16 suite of programs that could be available to help with 17 Native Hawaiian education and science and technology and 18 furtherance.</p> <p>19 But, actually, I think, with regard to these, 20 Craig, if you want to give just a very quick summary of 21 those three proposals that were provided. And then I 22 believe, hopefully, we can move forward, unless folks have 23 questions.</p> <p>24 DR. CRAIG FOLTZ: I am Craig Foltz, again, 25 Division of Astronomy at NSF.</p>
<p style="text-align: right;">23</p> <p>1 forward and resolve adverse impacts through the 106 2 process.</p> <p>3 And to give a little background on our last 4 meeting, we held two meetings on June 16th and 17th, and 5 we had some really wonderful comments that were provided. 6 There was -- of course, to give complete disclosure, there 7 were comments that were given by people that expressed 8 opposition to the project.</p> <p>9 And that is fine. If people want to make those 10 comments, that is all part of what is considered with the 11 Director making a final decision. So there were those 12 comments heard as well.</p> <p>13 But some of the really interesting -- there were 14 some, also, interesting comments that were made by people 15 who had specific ideas for how to resolve some adverse 16 effects.</p> <p>17 One idea was provided. And that was the Star 18 Compass, for example. That maybe that might be an 19 interesting way to recognize traditions in the Native 20 Hawaiian culture.</p> <p>21 And another one was to have a konohiki, a type 22 of liaison that could be available to help with 23 interpretation of the sites and so forth.</p> <p>24 And those were two concrete ones that came out 25 of the meetings last time.</p>	<p style="text-align: right;">25</p> <p>1 There were three written proposals provided to 2 us. There were a number of other suggestions that were 3 made orally in these meetings.</p> <p>4 The three proposals, very briefly.</p> <p>5 One from Charles Maxwell and his family, to 6 develop a Native Hawaiian cultural center here and to 7 operate it for some time.</p> <p>8 The second was from Maui Community College, 9 which proposed, as Caroline said, a suite of programs, 10 internships, curriculum development, workforce 11 development, for Native Hawaiian and Maui residents, 12 concentrating in science, technology, engineering and 13 math, but with a clear connection to Native Hawaiian 14 cultural considerations.</p> <p>15 The third was from an individual, Warren 16 Shibuya. And it was a bit of a grab bag. It had some 17 very interesting sub-proposals, including naming the 18 roads, et cetera, establishing a four-year technical 19 university in Maui, and one that we take very seriously, 20 which is to establish a limited lifetime for the facility 21 and to specify that, at the end of that lifetime, or 22 sooner, subject to negotiation, that the telescope 23 structure and building would be removed from the site, the 24 site be renovated.</p> <p>25 That is on the table.</p>

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1 MS. CAROLINE BLANCO: And, Craig -- this is  
 2 Caroline again -- if you wanted to explain to folks what a  
 3 lifetime would look like.  
 4 DR. CRAIG FOLTZ: Okay.  
 5 MS. CAROLINE BLANCO: Because that was a  
 6 separate NSF idea as well.  
 7 DR. CRAIG FOLTZ: Sure. Sure.  
 8 The telescope -- and I don't want to -- I won't  
 9 get too technical, unless you ask me to, in which case I  
 10 will get more technical than you want. And I will refer  
 11 to the resource people who will even baffle me. The  
 12 telescope is designed to study the real outstanding  
 13 problem -- a set of outstanding problems with respect to  
 14 solar physics. These are problems that actually bear on  
 15 life on Earth.  
 16 For somebody who is an astronomer, who never  
 17 really considered anything closer than a billion light  
 18 years, in my research career, it's actually kind of  
 19 refreshing to talk about something that has actual impact  
 20 on the Earth. And that has to do with the phenomenon  
 21 called solar activity, which is a whole suite of  
 22 phenomenon. Basically, sunspots, solar flares and giant  
 23 eruptions from the sun that spew out literally trillions  
 24 of tons of material at 3,000 to 5,000 kilometers per  
 25 second. We don't understand the genesis of that. And

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1 this telescope is being designed to study solar activity.  
 2 It turns out that the sun has a very cyclic  
 3 behavior with respect to activity. And it varies on a  
 4 22-year cycle. During that 22 years, sunspots, the number  
 5 of sunspots increases, decreases, increases and decreases  
 6 again. And during that time, the magnetic field of the  
 7 sun switches.  
 8 We want to be able to ensure that we can observe  
 9 the sun for at least two solar cycles, 34 years. And  
 10 given that there's some fits and starts, we would propose  
 11 or consider -- let me put it a different way -- consider  
 12 that the telescope would be deconstructed after 50 years  
 13 after it begins its full operation. At that time the  
 14 telescope and the building would be removed and we would  
 15 renovate the site.  
 16 This would be specified -- in an ideal  
 17 situation, this would be specified in the Memorandum of  
 18 Agreement. And that would give it -- that would  
 19 essentially require the NSF, through its awardee, to take  
 20 steps to prepare for that and carry it out when it  
 21 happened.  
 22 So that is what I mean by lifetime.  
 23 MS. CAROLINE BLANCO: Thanks.  
 24 I just wonder at this point if there are any  
 25 questions before we have Marilyn?

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1 MS. LEIOHU RYDER: Questions before we -- this  
 2 is Leiohu Ryder -- questions before we --  
 3 MS. CAROLINE BLANCO: Before Ms. Parris is going  
 4 to give some remarks about the Park's role. And then the  
 5 SHPO would like to and then, also, the Advisory Council.  
 6 And then get into a discussion of ideas and thoughts that  
 7 people have.  
 8 MS. LEIOHU RYDER: I have a question. How do  
 9 you mitigate spirituality?  
 10 MS. CAROLINE BLANCO: Well --  
 11 MS. LEIOHU RYDER: How do you mitigate  
 12 spirituality?  
 13 How do you mitigate the inalienable right of a  
 14 consciousness of Haleakala?  
 15 MS. CAROLINE BLANCO: If I could maybe help to  
 16 address that a bit.  
 17 Caroline, again.  
 18 I guess I would ask in what ways do you see the  
 19 impacts impinging upon your ability to practice and your  
 20 ability to have spirituality?  
 21 Charlene.  
 22 MS. CHARLENE DWIN VAUGHN: I think we should  
 23 finish the background. Because we've got a finite amount  
 24 of time. So this conversation needs to flow orderly. So  
 25 let's wrap it up, understand the resources, and then I

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1 think these questions flow.  
 2 MS. LEIOHU RYDER: All right.  
 3 MS. CHARLENE DWIN VAUGHN: You'll have a better  
 4 context.  
 5 MS. LEIOHU RYDER: That is why I asked, because  
 6 I wanted to make sure that came out.  
 7 MS. BETSY MERRITT: This is Betsy Merritt. I am  
 8 having a hard time hearing Caroline and Charlene in  
 9 particular.  
 10 MS. CAROLINE BLANCO: Shall we move?  
 11 MS. ANNELLE AMARAL: They are, in fact, standing  
 12 very far away. And that is probably why you are having a  
 13 hard time. We are now looking at maybe moving this table  
 14 towards the middle of the room. That may help you to be  
 15 able to hear everyone.  
 16 MS. CAROLINE BLANCO: Betsy, is this better?  
 17 Betsy?  
 18 MS. BETSY MERRITT: Yes.  
 19 MS. CAROLINE BLANCO: Is this better? Can you  
 20 hear me better now? Well, maybe with all the -- okay.  
 21 MS. BETSY MERRITT: Yes, that is better.  
 22 MS. CAROLINE BLANCO: Okay.  
 23 MS. ANNELLE AMARAL: Go ahead.  
 24 MS. MIKAHALA HELM: Excuse me. This is Mikahala  
 25 Helm.

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1 And I just wanted to add something for -- to be  
 2 sure it's clarified. That at the last meeting that you  
 3 were here, I notice that in the minutes they -- I think --  
 4 or in your letter noted that there were several of us who  
 5 were for avoidance, and then you went on, like today, and  
 6 explained the discussion or ideas about mitigation. And  
 7 so I wanted to be clear that the reason there were only a  
 8 few of us there is because only a few of us were included  
 9 in that invitation letter for that meeting to -- who  
 10 represented avoidance. And that the focus seemed to be  
 11 underlining on focusing on people who have come along more  
 12 recently, at least one of them -- meaning entity of Maui  
 13 Community College -- in focusing on proposals which may be  
 14 focusing on mitigation.

15 And so I just wanted to make sure that, you  
 16 know, that has been -- now Craig sent that second letter,  
 17 including what he entitled interested parties. And my  
 18 correspondence to Craig was that majority of these people  
 19 under interested parties, in his letter, were actually  
 20 individuals who submitted requests to be Section 106  
 21 consultants toward somewhere between September and the end  
 22 of 2006. So I think I may have said in the last letter,  
 23 it was 2007. But when I went back and checked, I think it  
 24 was 2006.

25 So I am glad that he extended that including

31

1 them for this meeting. But to make sure it's clear, that  
 2 a number of them, you know, have been excluded since 2006,  
 3 as far as I know, at least some of them. And so that is  
 4 why I wanted to make sure we have the full picture here  
 5 and that the emphasis has been in these last -- the past  
 6 meeting and this one on, it seems, mitigation proposals.

7 So I just wanted to make sure it was balanced.  
 8 Thank you.

9 MS. CAROLINE BLANCO: Okay. Thank you.

10 MS. CHARLENE DWIN VAUGHN: Finish up.

11 MS. CAROLINE BLANCO: Can we move to Marilyn?  
 12 Would you like to say anything?

13 MS. MARILYNN PARRIS: Sure.

14 Marilyn Parris, Superintendent at Haleakala  
 15 National Park.

16 Our role -- the proposed project will -- the  
 17 access is through the Park, through -- the road is under  
 18 the Park -- National Park Service jurisdiction,  
 19 exclusively. It is a historic road.

20 According to 36 Code of Federal Regulations, for  
 21 any commercial vehicles to utilize Park Service roads,  
 22 exclusive jurisdiction Park Service roads, that aren't in  
 23 connection to park operations, must be issued a Special  
 24 Use Permit. Okay. And that is what this is.

25 We met last week with the National Science

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1 Foundation and all the groups involved. We are working on  
 2 drafting a Memorandum of Understanding, an MOU, that will  
 3 lay out how we go about working through that special use  
 4 process.

5 A Special Use Permit does require all NEPA  
 6 compliance, it requires compliance with the National  
 7 Historic Preservation Act and with the Endangered Species  
 8 Act. So it's 106, Section 7, and NEPA.

9 Our goal is to work together on the compliance  
 10 with the National Science Foundation, but, in the end, the  
 11 compliance will have to meet Park Service standards. And,  
 12 again, we are drafting a Memorandum of Understanding right  
 13 now, how we will work through that process to do the  
 14 compliance and allow the -- that access.

15 Is that it? Does that cover what we talked  
 16 about last week?

17 We are -- this is our first opportunity for 106  
 18 consultation. We don't know the impacts to the historic  
 19 road. So that is kind of a void for us right now. We  
 20 will have to look at mitigation issues such as we better  
 21 understand what the impacts to that historic structure are  
 22 going to be, by not only the construction of this project,  
 23 but the operation of the facility. The Special Use Permit  
 24 will cover -- would fall under construction and operation.  
 25 So --

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1 MS. CAROLINE BLANCO: With regard to commercial  
 2 vehicles?

3 MS. MARILYNN PARRIS: With regard to commercial  
 4 vehicles and use of an exclusive jurisdiction road that  
 5 comes under the authority of the Park Service.  
 6 So that is kind of it in brief.

7 MS. ANNELLE AMARAL: Good. Good.  
 8 Any questions?

9 We will move to Charlene, I think, and then to  
 10 Pua. We will move --

11 MS. CHARLENE DWIN VAUGHN: I would say to Pua  
 12 first or Nancy.

13 MS. ANNELLE AMARAL: All right. We will move to  
 14 Pua first.

15 MS. PUA AIU: I will let Nancy go.

16 MS. NANCY McMAHON: We wrote a letter back on  
 17 October, 23rd -- this is Nancy McMahon for Historic  
 18 Preservation -- October 23rd, 2006, reviewing the Draft  
 19 EIS of which we basically felt that this was an adverse  
 20 effect upon the Crater Historic District, which is a site  
 21 in our historic place inventory. It's also listed on the  
 22 National Register.

23 We also are concerned about the Park road, which  
 24 also fits under the two criteria, A and C of the National  
 25 Historic Register criteria, because of the bridges, the

34

1 culvert boxes. And that the project is in that area, the  
2 APE.  
3 We also felt that this is a traditional cultural  
4 property, and it needs to be documented as such.  
5 And we stand on the fact that this is an adverse  
6 effect and we need to -- and we have not been given any --  
7 what are the mitigation proposals to address these adverse  
8 effects to these focused sites of traditional cultural  
9 properties.  
10 So I guess if there is any questions you have on  
11 that, but we would like to stand on what we had written  
12 back in 2006. And we are still awaiting for -- to see the  
13 results of the consultation.  
14 MS. ANNELLE AMARAL: Thank you.  
15 MS. CAROLINE BLANCO: If I could just respond a  
16 little bit, Nancy.  
17 Do you want me to say my name each time?  
18 I just wanted -- with regard to your comments  
19 about you hadn't received mitigation proposals, I wanted  
20 to be sure that you had received the three written ones  
21 and were made aware of the ones raised at the last  
22 meeting. Right?  
23 MS. NANCY McMAHON: Right. We're also waiting  
24 for more consultation and the end result.  
25 MS. CAROLINE BLANCO: I see. Thanks.

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1 MS. CHARLENE DWIN VAUGHN: I am Charlene Vaughn.  
2 I am from the Advisory Council.  
3 And I would like to thank NSF for arranging for  
4 us to participate in this meeting. I think by virtue of  
5 the overview, the background, it's been clear that we have  
6 an undertaking as defined in the Council's regulations  
7 that requires the National Science Foundation to  
8 coordinate with stakeholders or consulting parties to  
9 evaluate how to avoid, minimize and mitigate adverse  
10 effects.  
11 I think it's very important and germane that the  
12 SHPO identify those historic properties because that is,  
13 at this juncture, the focus of what the SHPO and the  
14 Advisory Council are looking at with regard to what are  
15 the historic properties that we need to deal with in the  
16 process.  
17 So we are very encouraged that there has been an  
18 ongoing collaboration, but consultation to us is very  
19 distinct and different from NEPA in that NEPA is  
20 disclosure. It tells people things. Consultation is  
21 conversation, where you seek views and perspectives. And  
22 it's more interactive.  
23 So today's meeting, it's not about lecturing,  
24 it's not about debating, it's not about validating or  
25 invalidating comments that are made. It's about seeking

36

1 to understand and listening.  
2 In that regard, all comments are relevant. We  
3 need to understand everybody's issues. And while there  
4 are proposals on the table, I think it would be helpful  
5 for all to look at those in the context of the historic  
6 resources, because that is what gets us here.  
7 So offsite creative mitigation, while well  
8 intended and good, we need to go through this process and  
9 these steps first. We need to understand what you could  
10 do with the historic resources, that if something needs to  
11 augment that, we will be open and listening to that in the  
12 proper context.  
13 We are here to understand the Native Hawaiian  
14 organization's point of view. And as I've said since I  
15 have been here, I have heard a lot of "We don't really  
16 want it, but." And I need to understand the but today.  
17 What do you mean when you say but? Does that  
18 mean that you are trying to figure out how to get  
19 compensation or make it palatable, even though there's  
20 some trepidation and reservation?  
21 We need for NSF to fully understand where people  
22 are coming from. Because this consultation, I think, is  
23 in full force based on this meeting. Caroline and Craig  
24 will decide how many subsequent meetings are needed. So  
25 this is a real important juncture for all of us to

37

1 understand what consultation needs to be to fill in the  
2 gaps and to have clarity on the next step.  
3 So I hope, in that regard, everybody  
4 participates fully and in good faith. And you put it all  
5 out there. There is nothing that is off the table.  
6 MS. ANNELLE AMARAL: Good. Thank you.  
7 At this point, then, I think sufficient  
8 background information has been provided. And we would  
9 like to invite the parties to begin to address some of  
10 what you have heard. And we will record it, we will try  
11 to talk about it and let's see where we go.  
12 Who wants to start?  
13 Shad, you want to start?  
14 MR. SHAD KANE: Shad Kane. I am the Native  
15 Hawaiian rep of the Native American Advisory Group.  
16 Before I share my thoughts, I just want to say a  
17 couple things to kind of clarify how I see my role. I  
18 also want to say that I don't like burning bridges and the  
19 door is always open. So irregardless, you know, how I  
20 feel about different things, I think it's important that  
21 we continue to talk about it. The whole -- it's all about  
22 resolving concerns and mitigation, so we got to be  
23 talking, we got to be talking about it.  
24 I am not sure how familiar you are with the  
25 Native American Advisory Group, so I will just share, just

38

1 share a little bit. I am not exactly sure how many  
 2 members, but it's made up of Native Americans from across  
 3 the country, from Indian country. I am the Native  
 4 Hawaiian representative in this group. And there is one  
 5 from Alaska that sits on this group. And we, basically,  
 6 advise ACHP on matters of concern to Native Americans.  
 7 Real quickly, we just adopted the policy  
 8 statement. Some of you may be familiar with that  
 9 particular policy statement. And, basically, it's an  
 10 effort to integrate the religious practices and traditions  
 11 and culture into the interaction between Native Hawaiian  
 12 organizations and ACHP. And, hopefully, to get other  
 13 federal agencies to also adopt similar policies.  
 14 But my role is -- I don't feel I really  
 15 represent all the Native Hawaiian organization. I see my  
 16 role as drawing attention to the need to talk to as many  
 17 Native Hawaiian organizations that we can.  
 18 And, for example, I am from the Island of Oahu;  
 19 I am not from Maui. So for me, what is most important is  
 20 consultation with Native Hawaiian organizations, amongst  
 21 other places, but, really, with those Native Hawaiian  
 22 organizations from the Island of Maui.  
 23 One of the things that I am very much involved  
 24 in is trying to get different Native Hawaiian  
 25 organizations such within the Hawaiian civic clubs because

39

1 it's organized geographically amongst different items,  
 2 seven states in the mainland. So, basically, the whole  
 3 idea -- and it's defined in the bill that just passed last  
 4 year, basically trying to get Native Hawaiian  
 5 organizations to take responsibility for their respective  
 6 kuleana, their respective places. And it makes -- it  
 7 makes the work and effort much more -- much more  
 8 manageable.  
 9 So, you know, although I am the Native Hawaiian  
 10 representative, for me, irregardless of the position or  
 11 comments you hear coming from me, what is most important  
 12 to me is that you include as many other Native Hawaiian  
 13 organizations. If that is done, in our opinion, that is  
 14 mitigation. That is trying to work it out with the people  
 15 who -- who -- who are really, you know, from this  
 16 particular place.  
 17 One of the things I did before I even came to  
 18 this meeting is that I wanted to -- I called as many  
 19 different friends of mine in those organizations here on  
 20 the Island of Maui to kind of get their -- get a sense on  
 21 where they -- they stand with respect to the things that I  
 22 am concerned about. And interesting enough, I found quite  
 23 a few organizations that don't feel basically the same  
 24 way.  
 25 One of the policy statements that was integrated

40

1 into that statement, that ACHP statement, that was adopted  
 2 was -- there's several. And one of particular interest to  
 3 me, and that is acknowledging religious and cultural,  
 4 traditional practices into their interaction with federal  
 5 agencies, in this case AC -- in this case the Advisory  
 6 Council on Historic Preservation. And it's that where we  
 7 find the significance of Haleakala. And I think that was  
 8 shared. And it's really something that is really  
 9 difficult for any one person to explain. I think you got  
 10 to hear it from everybody, how important these places are  
 11 in terms of religious and cultural practices.  
 12 I can share one thing with you from my  
 13 perspective. On the island of Oahu, there's a direct  
 14 relationship between Haleakala -- well, the eastern gate  
 15 of the rising sun is Kumukahi on the Big Island of Hawaii.  
 16 And the western gate of the setting sun is at  
 17 Pu'uokapolei, Island of Oahu. And associated with  
 18 Pu'uokapolei is Pu'umakakilo, whose name comes from place  
 19 of observation. Pu'umakakilo is one of the few places  
 20 where you can actually see six of all the main islands.  
 21 You can see Haleakala.  
 22 So for us, the significance of Haleakala with  
 23 respect to the traditional cultural practices, it has --  
 24 we can't see -- we can't see -- we can see Haleakala. If  
 25 you see Haleakala, we know where (inaudible). So we know

41

1 where the sun needs to be different times of year. So for  
 2 us, Haleakala plays that divine role for us. So I have a  
 3 personal attachment in terms of Haleakala with respect to  
 4 traditions and cultural practices.  
 5 But I think the main concern that I have is  
 6 making certain that we talk to the people of Maui. And  
 7 getting paid should not be a criteria. You need to  
 8 include all those other Native Hawaiian organizations, not  
 9 just those who are involved by way of a paycheck, to  
 10 really, you know, determine the sincerity of those people.  
 11 And you need to include those people who are willing to  
 12 get involved on a voluntary basis.  
 13 In addition to that, it's establishing the kind  
 14 of relationship with these organizations into perpetuity,  
 15 in other words, memorandum of agreements, being able to  
 16 come up with the kind of language to secure the kinds of  
 17 relationships that I think would be supportive of  
 18 different Native Hawaiian organizations.  
 19 All too often -- even the Native American  
 20 Indians, all too often when they sit amongst federal  
 21 agencies where something might be said within these  
 22 discussions -- but, you know, when the project is all  
 23 going and the project is done, the focus shifts to the  
 24 primary purpose of the construction.  
 25 So, basically, I think what I am trying to say,

42

1 and get us to help us to understand, how important it is  
2 to work with the Native Hawaiian organizations from Maui  
3 and draft that or have it written into those long-term  
4 documents, to secure that relationship with its people  
5 into perpetuity.  
6 MS. ANNELLE AMARAL: Mahalo. Thank you.  
7 MS. CAROLINE BLANCO: I wonder if I could just  
8 follow up on your comments, Shad?  
9 What I was hearing from you is that you are  
10 wanting to have a long-term relationship being encouraged  
11 with the Native Hawaiian organizations in Maui. I  
12 wondered if you had any particular thoughts in mind about  
13 how to accomplish that?  
14 MR. SHAD KANE: One of the things -- I can only  
15 speak from a personal perspective. So the things I share  
16 with you are from a personal perspective on the Island of  
17 Oahu. And I am only assuming that might be the situation  
18 in Maui, but I am not really certain.  
19 But I am very much involved in the preservation  
20 of archeological sites, cultural landscape.  
21 And Pua is very aware, very aware of that.  
22 And it's actually an attempt that -- you know,  
23 that it will serve as a venue to share and to teach and  
24 share the cultural with -- with the people from the island  
25 and, ultimately, with our ancestors and our children, so

43

1 that they have these special places.  
2 All too often, these lands are owned by city,  
3 state, federal agencies, private landowners. So the  
4 difficulty is access for religious and cultural practices.  
5 So it needs to be at a time and place mutually agreed upon  
6 between the landowner and the organization, but we all  
7 know that's not that easy.  
8 You got little league concerns and interests and  
9 all these kinds of things. So it makes it -- if the  
10 organization is very sincere about visiting a place for  
11 religious and cultural practices. I think special effort  
12 has to be made in these situations, especially one as  
13 great as Haleakala.  
14 MS. CHARLENE DWIN VAUGHN: This is Charlene from  
15 the Advisory Council.  
16 I think NSF has been introducing and has  
17 participated in discussions about access and use and  
18 traditional cultural properties. My dilemma is how do you  
19 find the appropriate Native Hawaiian organizations to  
20 develop those protocols. Because I don't think it's about  
21 meeting with one or two groups; it's about having an  
22 inclusive opportunity for people to share what their needs  
23 are. So how would NSF approach that in a meaningful way  
24 where they could evidence on a focused response to Shad's  
25 recommendation?

44

1 MR. SHAD KANE: Shad Kane again.  
2 And I fully understand. Like I said earlier,  
3 it's -- it should not be a criteria to get a date. I  
4 think -- for example, I think the person that you hired,  
5 the cultural person that you hired, is -- I think I heard  
6 earlier on that there was plans to put something together,  
7 some kind of plan with respect to --  
8 MS. MIKAHALA HELM: Mitigation.  
9 MR. SHAD KANE: -- the cultural into perpetuity.  
10 I thought I heard someone say that. But in addition to  
11 that person and his family -- in addition to just that  
12 person and his family, I think we need to make a better  
13 effort and to try to find others where money is not an  
14 issue, where Haleakala is important.  
15 MS. PUA AIU: I think we have some of those  
16 people here, so perhaps they want to talk.  
17 MS. CAMILLE KALAMA: If I could make a quick  
18 comment, too.  
19 This is Camille Kalama from Native Hawaiian  
20 Legal Corporation. I am here on behalf Kilakila o  
21 Haleakala.  
22 Sorry.  
23 This is coming from the last meeting and about  
24 the consultation process. And, you know, I heard -- I  
25 didn't get involved until the last meeting. Some of the

45

1 members of the group were involved for a long time. And I  
2 did hear, you know, criticism, especially from Nancy and  
3 Pua, about the process, and some concern.  
4 And after, Caroline, you asked them what their  
5 proposal was, they suggested at least three more meetings.  
6 Now, to me, that was because the meeting that we  
7 were at, they didn't feel -- I think a lot of people  
8 didn't feel like that was -- I think the invitation said  
9 open house. And so there were a lot of people that  
10 probably weren't there that may have wanted to  
11 participate. But because of the format that we're used to  
12 with that, you know, they didn't slow up. So I didn't --  
13 to me, that wasn't a meeting that really counted as one of  
14 those.  
15 So when I saw the correspondence and I saw that  
16 that was being considered as one, then today and, I guess,  
17 tomorrow -- I am still unclear about what tomorrow -- who  
18 is involved and what it's for. But that those are being  
19 considered the three meetings and that there would be an  
20 MOA signed, I guess, tomorrow.  
21 MS. CAROLINE BLANCO: No.  
22 MS. CAMILLE KALAMA: Well, that is -- I mean,  
23 that is how it came across in the correspondence.  
24 I was concerned because, to me, that really  
25 wasn't what I heard coming from them. And, you know, when

46

1 we are talking about real consultation and Native Hawaiian  
2 organizations, if you come here and say, you know,  
3 avoidance and minimization is off the table, we're only  
4 talking mitigation, you are already talking to a lot fewer  
5 groups, you know.  
6 Because, for example, Kilakila o Haleakala, they  
7 are not talking about mitigation. They are talking about  
8 avoidance, in particular.  
9 So, you know, I think that, to me, a real  
10 consultation process allows for those groups to be  
11 involved, and not just getting to the point, you know,  
12 really quickly. If we are only talking about mitigation,  
13 I think you are losing a lot of the groups that really  
14 have a stake here.  
15 MS. CAROLINE BLANCO: If I could respond to her  
16 comment.  
17 MS. ANNELLE AMARAL: Please.  
18 MS. CAROLINE BLANCO: Last meeting, I had asked  
19 Pua how many more meetings would we need. I think we're  
20 correct on that. And you are welcome to go ahead and look  
21 at the transcript that is on the website. And my  
22 recollection -- and we went back to look after the  
23 meeting, to be sure we heard it correctly -- was one to  
24 two more meetings. And we talked about we were meeting  
25 with the Park Service on the 22nd, would it be okay if we

47

1 held those meetings the following week, the one or two  
2 meetings. And the answer was yes. And so that is -- that  
3 is why we are holding these meetings.  
4 And the meetings today, as I said, there are two  
5 of them that are the same, but they will accommodate  
6 different schedules.  
7 Tomorrow, the meetings are between who will be  
8 the signatories if an MOA is reached. And that would be  
9 the SHPO and the Advisory Council, the Park Service,  
10 because of the jurisdiction that they have with regard to  
11 the Special Use Permit, NSF and the permittee, which would  
12 be AURA, which is the -- if an award is made to allow  
13 construction, the federal funds would go to AURA. And a  
14 part of AURA is -- it's a consortium of universities, in  
15 part, in sum. It's more complicated than that.  
16 DR. CRAIG FOLTZ: I will explain, Caroline. But  
17 let's finish and then I will explain, if that is all  
18 right.  
19 MS. CAROLINE BLANCO: Then underneath AURA,  
20 there's a division, the National Solar Observatory. They  
21 are the ones who actually would be carrying this out. But  
22 AURA is the legal entity. And so federal funds would  
23 issue to AURA, and then it would go down to NSO. And that  
24 is how the project would be built, if approved. And so  
25 AURA would be at the meeting tomorrow as well, and IFA,

48

1 that it would be built on top of the observatory that IFA  
2 has jurisdiction over. So that was -- the idea for  
3 tomorrow was to have those of us that would be signatories  
4 to any Memorandum of Agreement to sit down, reflect on  
5 what has happened today, come up with some particular  
6 ideas -- hi, good to see you -- and then to try to see if  
7 we can -- you know, what next step should happen. You  
8 know, is there enough material to begin the draft of the  
9 Memorandum of Agreement or how do we move forward, is  
10 there an additional meeting that is necessary to clarify  
11 some information, what are the next steps. And that is --  
12 that is the purpose of that meeting.  
13 And if I -- Charlene, I know you want to speak.  
14 I just wanted to make one last comment about avoidance and  
15 minimization.  
16 We had -- you are correct. We had made a focus  
17 on mitigation last time because we thought that we had --  
18 that we were being responsive to what the Advisory Council  
19 had asked us to do, and set forth our position on  
20 avoidance and minimization. Talking about, well, we could  
21 only make it a certain color for scientific reasons, we  
22 could only make it so high for scientific reasons. And  
23 that can be explained here again if you folks have  
24 questions. And we hadn't heard back from anybody else.  
25 We explained to them in the letters. So we honestly

49

1 thought we were at that stage.  
2 And, also, the thought was, what we were hearing  
3 back from people, they just didn't want it. Some people  
4 did not want it and some did. But some people did not  
5 want it. So that wouldn't resolve adverse effects other  
6 than to say, if you don't build it, of course, that would  
7 resolve adverse effects because it wouldn't be built. But  
8 if it would be built, you couldn't address certain of  
9 those things.  
10 But in any event, this is a meeting to discuss.  
11 And we did send out letters to everybody who had expressed  
12 an interest, that we became aware of, who were potentially  
13 interested parties. And it has been an invitation to  
14 allow everybody to discuss.  
15 And if, today, people have questions about  
16 avoidance or minimization, we will do our best to address  
17 that.  
18 As I said, and as Charlene had mentioned,  
19 everything is on the table for us to discuss.  
20 MS. LEIOHU RYDER: So may we have an opportunity  
21 to speak, then?  
22 MS. CHARLENE DWIN VAUGHN: Well, just one  
23 second, please.  
24 MS. LEIOHU RYDER: Okay.  
25 MS. CHARLENE DWIN VAUGHN: I think that we are

50

1 operating under regulations. And regulations,  
2 fortunately, describe and define consultation, which is  
3 what this is about. And it says, "Consultation means the  
4 process of seeking, discussing and considering the views  
5 of other participants, and, where feasible, seeking  
6 agreement with them regarding matters arising in the  
7 Section 106 consultation."  
8 I don't know how to say this, but 106 doesn't  
9 prescribe a set number of meetings. It doesn't establish  
10 time limits. Our regulations have limitations on timing  
11 and everything. For this process, it doesn't.  
12 So I think the notion that you got two  
13 opportunities and two more meetings or whatever is not  
14 really conducive to free-flowing open communication.  
15 And I think NSF has tried to operate in good  
16 faith, but they are seeking guidance and getting varied  
17 suggestions.  
18 But the notion that two more meetings will do  
19 it, three more meetings will do it, put that out of your  
20 head. Because I think that limits how we interface with  
21 each other. I think good faith consultation means that  
22 you meet until you try to resolve all the issues, or, if  
23 you find they can't be resolved, you go another way.  
24 So tomorrow's meeting, as Caroline said, is with  
25 the major stakeholders, to gauge what is needed here, what

51

1 did we hear, what are the gaps, what's the trajectory to  
2 get through this process, which while ongoing and  
3 protracted, and, you know, having involved lots of  
4 meetings, it's still some unresolved issues.  
5 MS. CAMILLE KALAMA: Thank you for responding.  
6 My point was just that what I heard from our own  
7 historic preservation was that we needed more process.  
8 And what I felt like, with the schedule and some of the  
9 correspondence, was that this was kind of it, you know.  
10 And I didn't feel that that was -- I was just concerned  
11 that it was being cut off too soon.  
12 MS. PUA AIU: I think your concern is well  
13 justified.  
14 We had some discussions with NSF yesterday on  
15 the process. And I think at this point we can -- we can  
16 kapae any of the three meetings and we can move forward  
17 because we're going to have, I think, more. Now we're  
18 more focused on the process. Earlier, the focus was on,  
19 well, this is the last meeting. I don't think we're  
20 there.  
21 We might move to an MOA faster than you guys  
22 want, but the MOA process itself allows for other  
23 meetings.  
24 So the SHPO is now more comfortable with the way  
25 the process is going. And I hope that you guys can be a

52

1 little bit more comfortable as well.  
2 MS. CAMILLE KALAMA: Thank you.  
3 MS. CAROLINE BLANCO: And any MOA would, of  
4 course, be circulated among consulting parties and allowed  
5 for input and comments and so forth. That is an  
6 interactive process as we do it.  
7 MS. ANNELLE AMARAL: Charlie has his hand up.  
8 DR. CRAIG FOLTZ: Craig. This is Craig.  
9 And I just wanted to -- this is a different  
10 subject, but I wanted to get back to defining AURA, so  
11 there is no confusion here.  
12 The National Science Foundation is a federal  
13 agency that, by law, cannot operate facilities directly.  
14 We are not like the Department of Energy, which has  
15 laboratories under which it operates, or NASA. It  
16 operates them directly.  
17 We operate our observatories and our  
18 laboratories through entities that are called managing  
19 organizations. These tend to either be universities or  
20 small nonprofit corporations whose job it is to oversee  
21 the management of the facilities.  
22 So in the case of the National Solar Observatory  
23 and the National Optical Astronomy Observatory, and, in  
24 fact, the Gemini Observatory, which is on Mauna Kea, one  
25 of the telescopes on Mauna Kea. The managing organization

53

1 is the association -- the Associated Universities for  
2 Research and Astronomy. AURA is the acronym. Nice  
3 acronym.  
4 AURA has been around for at least 50 years.  
5 They started out as a coordination, a cooperation of a  
6 number of midwestern universities. They have subsequently  
7 since grown to having over 33 members, including some  
8 international affiliate members. And so they are a  
9 corporation with about six employees in Washington D.C.  
10 We make our awards to run the facilities through them. So  
11 they accept certain shared responsibilities on our part.  
12 They are not necessarily the managing  
13 organization for the observatories forever. The  
14 management of our facilities is -- is intermittently,  
15 every five to ten years, re-competed, where proposals are  
16 accepted from groups to manage, maintain and operate our  
17 facilities. And those are evaluated on the basis of merit  
18 review and a new agreement is then entered into.  
19 AURA has been the NSO's, National Solar  
20 Observatory's, managing organization since the National  
21 Solar Observatory existed. And they will -- we are  
22 currently in the process of renewing a five-year  
23 cooperative agreement to have them manage it for  
24 potentially the next five years.  
25 So when you hear AURA, AURA is a legal entity,

54

1 it is a corporation.

2 National Solar Observatory is not. Okay.

3 National Solar Observatory and National Optical

4 Astronomy Observatory employees are AURA employees. They

5 are not federal employees. So we need to make this

6 distinction.

7 MS. CAROLINE BLANCO: And it's a not-for-profit

8 agency.

9 DR. CRAIG FOLTZ: As I said, it's a

10 not-for-profit corporation.

11 MS. ANNELLE AMARAL: Okay.

12 DR. CRAIG FOLTZ: So, you know, if you are

13 talking about -- if you have to have a legal relationship

14 with the project, you don't have it with NSF, and you

15 don't have it with NSO, you have it with AURA.

16 MS. CHARLENE DWIN VAUGHN: So, Craig, just a

17 follow-up for that.

18 DR. CRAIG FOLTZ: Sure.

19 MS. CHARLENE DWIN VAUGHN: That means that

20 negotiating any agreement where follow-up is needed and

21 oversight over implementation, it would be with AURA more

22 than NSF on a day-to-day?

23 DR. CRAIG FOLTZ: On a day-to-day, yes.

24 MS. CHARLENE DWIN VAUGHN: Okay.

25 DR. CRAIG FOLTZ: On the other hand, what we

55

1 would do, for example, if we had an MOA that prescribed

2 certain things, you know that steps would be taken, for

3 example, to guarantee access -- which I think is something

4 we want to get back to later.

5 MS. CHARLENE DWIN VAUGHN: Right.

6 DR. CRAIG FOLTZ: Or to establish workforce

7 development programs. We would actually write that into

8 the special terms and conditions of the cooperative

9 agreement. Think of the cooperative agreement sort of as

10 a softer contract. We don't manual contract. But NSF

11 would put those special terms and conditions in, and then

12 the performance of the managing organization, and in fact

13 the performance of the observatory, would be measured

14 against those.

15 MS. ANNELLE AMARAL: Thank you.

16 MS. MARILYNN PARRIS: And as we discussed on

17 Friday, the Special Use Permit will likely be with AURA.

18 DR. CRAIG FOLTZ: That's correct.

19 MS. MARILYNN PARRIS: It will definitely not be

20 with the National Science Foundation.

21 DR. CRAIG FOLTZ: That's right. Absolutely.

22 MS. MARILYNN PARRIS: Is that correct?

23 DR. CRAIG FOLTZ: Absolutely correct.

24 MS. ANNELLE AMARAL: Let me see if I can bring

25 us back to the -- the question was asked much earlier, how

56

1 do you mitigate spirituality, which also gets to some of

2 the comments that Shad was making about special sites,

3 cultural practices. And I wondered if anyone wanted to

4 speak more to that?

5 And I am going to start with Camille.

6 MS. MARILYNN PARRIS: I am wondering if they got

7 their full comment out.

8 MS. PUA AIU: Right.

9 MS. MARILYNN PARRIS: Because you were kind of

10 cut off while we finished this other technical stuff.

11 MS. LEIOHU RYDER: It's been happening the whole

12 time.

13 MS. MARILYN PARRIS: Well, I would just like to

14 hear --

15 MS. LEIOHU RYDER: Thank you.

16 MS. MARILYNN PARRIS: I would like to hear you

17 finish your comment.

18 It was a good summary, but I don't think she was

19 through.

20 MS. ANNELLE AMARAL: I wasn't summarizing. I

21 was trying to get back to that question.

22 MS. LEIOHU RYDER: I would appreciate that.

23 MS. MARILYNN PARRIS: All right.

24 MS. LEIOHU RYDER: Okay. But I am clear on that

25 this is a consultation and we are putting it out there.

57

1 And, you know, when I read the word mitigation,

2 it was a red flag for me because how do you mitigate your

3 bones, how do you mitigate your ancestral ties to

4 something that is unique and sacred to those of us whose

5 bones are related to the DNA of these very volcanic

6 islands.

7 The inalienable right for Haleakala to be its

8 own consciousness will be a travesty if we dig and

9 desecrate the mana of this mountain.

10 You know, you speak of studying the sun. The

11 eloquence of our forefathers knew of the sun. Why is it

12 not that the National Foundation does not speak to us as

13 ones of these islands in the language of the native

14 perspective, in the language and in the protocols of the

15 native perspective, the native lineage of Earth, not only

16 the natives of this land?

17 Our forefathers came from the stars. This

18 energy grounded this land. These are our mo'olelos, these

19 are our stories.

20 If we picture Haleakala as a human, as a human

21 body, will all of you live, will you still be connected,

22 will you still be able to survive, if we cut all our heads

23 off right here and now? Will you be able to survive?

24 Haleakala is a living, breathing consciousness

25 from those planetary explorers of the sun, of the stars

58

1 and beyond.

2 Science is limited in its perspective because it

3 does not consider the science beyond the science, which is

4 that spiritual force that co-created what we are now.

5 How can you mitigate the energy of those -- of

6 this force where our ancient kahunas, the spiritual force

7 of these islands, represented in the DNA of those of us

8 who practiced this spirituality?

9 My forefathers went to that mountain, many of my

10 forefathers from all the islands. It was a place where

11 many gathered.

12 This is not a foregone thought of something that

13 we read in the textbooks, something that we do not

14 remember. Many gathered from all parts of the Pacific,

15 from Maui, from Hawaii, to pray on that mountaintop,

16 specifically on that mountaintop.

17 And so every grid, astral grid, geological grid,

18 it is an entity in and of itself.

19 You will kill the life force of the spirit of

20 the body of this mountaintop.

21 It does not matter where we cut on the mountain,

22 but when you go to the top -- which is already desecrated

23 by what has happened to the top of that mountain, what

24 stands there now. So much has been destroyed. But when

25 you do what you are planning on doing, to dig into the

59

1 belly, the womb, of this mother, then it will desecrate so

2 much more. And the ancient ones that speak to us when we

3 go to pray, they show us the grids.

4 But, see, science, because it has to be a

5 special proof, cannot taste, touch, feel and explore their

6 -- the DNA of what is pono and truthful in the mind, the

7 duality of the science mind.

8 You cannot mitigate spirituality. You cannot

9 mitigate the life force of this mountain. It is that

10 special and sacred.

11 And the invitation as Native Hawaiians to be a

12 part of this is very limited, because the scope is limited

13 to study the sun, to create jobs, to create all of these

14 things, when all could have been done eons ago. We have

15 never been invited to sit at the table to co-create

16 together. It's always an afterthought, an after,

17 after-fact.

18 And so I implore this question again. How do

19 you mitigate something that is inalienable, that has a

20 right to be, it is a life force? It is an entity in and

21 of itself. It connects us to the portals of times, to the

22 portals of the universe.

23 MS. CAROLINE BLANCO: Anelle --

24 MS. LEIOHU RYDER: That is my biggest concern.

25 That is -- that is -- the spiritual aspect of this

60

1 mountain is compromised.

2 MS. CAROLINE BLANCO: If I could try to address

3 a couple points that were raised.

4 I think, first of all, I want to reemphasize

5 that part of the purpose of the meeting today is to make

6 sure we are all sitting at a table, around a table, so to

7 speak, before a decision has been made. So it's not after

8 the fact; it is now.

9 And I think that, hopefully, you will see that

10 we are here for a purpose. Many of us have traveled a

11 long way, have spent an inordinate amount of time,

12 dedicated to trying to reach out to people, to find out

13 what their views are. And that is why we are here again

14 today.

15 And we appreciate your views very much. And

16 certainly they will be taken into consideration. I think

17 that what might be helpful, although I don't think they

18 would fully address the concerns you raise -- but I think

19 it might be helpful for -- Mike, for you to describe the

20 access that is already allowed for traditional practices

21 now. And the same would be true if funding were approved.

22 And, again, I am not suggesting that this

23 completely addresses your concerns. However, I do want to

24 make sure that people do understand that there are steps

25 that have been taken to try and recognize the desire of

61

1 people to carry out traditional practices.

2 Mike.

3 MR. MIKE MABERRY: I am in Hawaii because I

4 followed my wife out from Hawaii -- from the mainland.

5 And I have had the honor of living and working on

6 Haleakala for almost 25 years. And I know a lot of people

7 in this room -- I am speaking as loud as I can, if you

8 really want me to be able to get through this. Okay?

9 I have a lot of friends in the Native Hawaiian

10 community who aren't here today. I -- when I -- for many

11 years, I -- I was a worker bee at the summit and just

12 enjoying the great opportunity to be there. And from

13 talking with my friends, I knew early on and recognized

14 that it is a church, that it is a sacred place. And there

15 wasn't any protocol established for the people who worked

16 up there, so that everyone who worked up there actually

17 understood that and could take that into consideration and

18 appreciate that in their daily lives as far as their work

19 activities go. So that they could show as much respect as

20 possible under the circumstances.

21 We set about a consultation process as best as

22 we could and understood how to. Meeting with elders in

23 the community, meeting with leaders in the community,

24 asking who we should talk to.

25 I met with Kiope Raymond and Clyde Sakamoto just

62

1 as one of the groups of people, and asked them who should  
2 we consult with, who should we talk to as we develop a  
3 process to try to show some respect for the host culture.  
4 And we did what we were told, or what was  
5 suggested. We met with those people. We took notes. We  
6 established what studies we would undertake. We met with  
7 people and asked what kind of things we can do.  
8 And what that led to was the development of our  
9 long-range development plan which is only relevant to the  
10 18 acres that we are the temporary stewards of, until, you  
11 know, a Native Hawaiian government is established that  
12 takes control of ceded lands. And recognizing that that  
13 particular piece of land has a specific land use. As I've  
14 shared with others before, Mauna Kea is a completely  
15 different situation. It has both commercial and  
16 recreational uses associated with it.  
17 That 18 acres doesn't. According to state law,  
18 that 18 acres is -- has one use, and that is observatory  
19 purposes. It's the only land use -- it's the only area  
20 with that land use designation on Maui.  
21 And what we heard, and what we did our best to  
22 -- to put together, in our long-range development plan,  
23 was to study the entire 18 acres as thoroughly as  
24 possible, as humanly possible, to -- despite the land use  
25 issues, to make sure that we provided unrestricted access

63

1 for cultural practitioners. That we provided places where  
2 there could be practice of the culture, where there would  
3 be minimal impediment and the ability to do so in  
4 traditional dress, without having 1.7 million tourists  
5 with cameras standing around, flashing photos of you.  
6 And to that end -- and to -- and to ask  
7 forgiveness. Because one of the things we heard is, you  
8 know, ask permission, give thanks, and leave with minimal  
9 impact. And to give thanks.  
10 And so there -- we wanted to ask forgiveness.  
11 And we had discussions with elders and others at State  
12 Historic Preservation and State Parks Department. And we  
13 did set aside an area that had the largest concentration  
14 of archeological artifacts in the 18 acres, and sought out  
15 the specialist, recognized specialist, in restoring and  
16 maintaining and building ahus and heiaus.  
17 And that was Billy Fields and his company from  
18 Kona, who are Native Hawaiians.  
19 And so they came. And they looked at the area.  
20 And they built the west-facing ahu.  
21 In consultation with them -- it was wonderful  
22 people. It was just -- it's amazing the work that they  
23 do. It was a great honor to get to meet them and to get  
24 to know them.  
25 And when they -- as part of the long-range

64

1 development plan, we looked at the carrying capacity end  
2 of our site and recognized that there are only two sites  
3 that could be developed that are left, that aren't already  
4 developed in the area. And that is the two areas being  
5 looked at for this project.  
6 One is actually -- one of the areas was,  
7 actually, the first site that was ever developed in the 18  
8 acres, which is referred to as Reber Circle. And the  
9 other site is, basically, across the street from that,  
10 which -- at any rate.  
11 So when asked what our future desires or  
12 potential plans or whatever, however you want to put it,  
13 were discussed, we shared with them the potential of this  
14 particular project. And we were asked to show them where  
15 that project -- where the proposed site was. And we went  
16 there and we looked at it. And they walked it and they  
17 looked at it. And they looked at the crater and the  
18 crater rim and they looked at the Big Island. And they  
19 recommended that we offer something. Not a quid pro quo,  
20 just a gift to start the conversation, so to speak, or to  
21 show some sincerity.  
22 And so they recommended -- and we accepted, and  
23 we went through the process, in order to see it to  
24 fruition -- the collection of stones from the proposed  
25 project area to create the east-facing ahu. So that there

65

1 would be a place that looks out and you can see the rim of  
2 the crater that is above Kalepeamoa, which is an area I  
3 understand is where Maui stood when he last looked at the  
4 sun, and then across the ahu to realize the connection  
5 between Haleakala and Mauna Kea and the Big Island, where  
6 -- where Pele went after she left Haleakala.  
7 And so, anyhow, we did put together some  
8 signage. While recognizing that -- and wanting to  
9 acknowledge -- because those of you that have been there,  
10 the area is extremely small. There is not very much room  
11 for turning around or for parking. So we wanted to -- for  
12 safety reasons as well as liability, to control the  
13 entrance of, you know, tourists because of the number of  
14 tourists that are up there. So there is signage that  
15 restricts access to the people who work there with the  
16 exception of the sign that is in Hawaiian that invites the  
17 Kanaka Maoli into the site.  
18 So that, in addition to the fact that -- that  
19 those of you -- many of you who are in this room who are  
20 from Maui know that we -- we did put together a protocol  
21 training aid, getting consultation, and the story of  
22 somewhat of a Kumulipo, and other parts about how sacred  
23 Haleakala is. That is required for all of our -- all of  
24 our people who work at the summit, to view and to take  
25 with them to -- for reflection, as well as anyone who does

66

1 any construction at the site.  
2 Protocol was established that the aina is never  
3 removed from Haleakala. That when the aina is disturbed  
4 for projects that there is a cultural monitor onsite who  
5 provides appropriate consultation and pule, if that is  
6 what is considered appropriate for the type of activity  
7 that is done. And to make sure that the construction  
8 workers are respectful during their process, that trash is  
9 controlled, that -- that things are done as pono as  
10 possible under the circumstances, recognizing that we are,  
11 in a sense, working in a church.  
12 Is there more we can do? Absolutely, I am sure.  
13 And we are open to considering what more we can do.  
14 We have heard -- and it's really difficult,  
15 right, because -- you know, you will hear one thing from  
16 one group of people, make recommendations, you will hear  
17 something from another group of people that may even  
18 contradict what was recommended by this group of Native  
19 Hawaiians. And we really have tried in good faith to do  
20 as best we can. And we are always open for input as to  
21 how we can more respectfully share this space that we are  
22 -- where we are at the moment.  
23 MS. CAROLINE BLANCO: And if I could follow up,  
24 Mike.  
25 If the project were approved for funding and if

67

1 it were built, would any of those protocols change? I  
2 mean, would people still have access to the site for  
3 practices?  
4 MR. MIKE MABERRY: Absolutely. The project  
5 would not be allowed to restrict access.  
6 MS. LEIOHU RYDER: If I could -- this is Leiohu  
7 Ryder.  
8 If I could follow up with a question. If -- and  
9 I appreciate what is there. And knowing that the ahus are  
10 there for many of us to go and share our prayers and --  
11 and other areas of Haleakala. But knowing this, that it  
12 is a church -- and you brought up faith -- why couldn't  
13 that mana'o, that concern, that you represent being there,  
14 why wasn't that -- is that not shared amongst those that  
15 represents this ATS? Why is that -- why wasn't that  
16 honored in the way that you honor it today, the idea of  
17 faith, honoring the sacredness of the mountain? Because  
18 the mountain is a, in your word, "church."  
19 MR. MIKE MABERRY: I'm sorry. I don't know -- I  
20 don't know how to answer that.  
21 MS. LEIOHU RYDER: Well, it's just a point,  
22 then.  
23 MS. ANNELLE AMARAL: Okay. Having made that  
24 point, I'm sorry, we have gone two and-a-half hours into  
25 this discussion, and the stenographer needs a break. We

68

1 are taking ten minutes. Thank you.  
2 (Recess, 2:35 p.m. to 2:51 p.m.)  
3 MS. ANNELLE AMARAL: I wonder if I can begin to  
4 call us back into the discussion. We have some wonderful  
5 things to tape.  
6 I need to know, are the people on the conference  
7 call back with us?  
8 MS. BETSY MERRITT: This is Betsy Merritt. I am  
9 here.  
10 MS. ANNELLE AMARAL: Thank you.  
11 In an effort to assure that all voices are  
12 heard, it was pointed out to me that there are certain  
13 people here that I have not called on or asked to see if  
14 they wanted to make comment. It's not my intention to  
15 ignore anyone. If you want my attention, you sort of have  
16 to wave at me. But --  
17 MS. PUA AIU: Can I introduce Hinano who came in  
18 a little bit late?  
19 MS. ANNELLE AMARAL: Hinano can introduce  
20 himself.  
21 Aloha.  
22 MR. HINANO RODRIGUES: Hinano Rodrigues,  
23 Cultural Historian for the Islands of Maui and Lanai, with  
24 State Historic Preservation.  
25 And I know kind of half of you guys already from

69

1 the last time.  
2 MS. ANNELLE AMARAL: Aloha. Welcome.  
3 Warren, did you want to introduce yourself as  
4 well?  
5 MR. WARREN SHIBUYA: Hello. I am Warren  
6 Shibuya.  
7 I notice my name was mentioned here. I am the  
8 guy that mentioned that.  
9 And thank you very much, Craig.  
10 MS. PUA AIU: Can I also mention something?  
11 Shad didn't mention it because he probably  
12 didn't know, but Uncle Charlie is in the hospital. He got  
13 his leg amputated on Friday. So I thought that we could  
14 just remember him for a minute because he has been  
15 important in this process as well.  
16 MS. ANNELLE AMARAL: Okay. We can take a  
17 moment.  
18 (Silence.)  
19 MS. ANNELLE AMARAL: Mahalo.  
20 Thank you for pointing that out to us.  
21 Specifically, I wanted to ask if the Historic  
22 Foundation had any comments it wanted to make?  
23 MS. TONIA MOY: I think a lot of them are going  
24 to be addressed upcoming. I think we brought up most of  
25 what we wanted to really bring up at the last one.

70

1 I did want to make one little comment about --  
2 I'm sorry -- what you were saying.  
3 MS. LEIOHU RYDER: Leiohu Ryder.  
4 MS. TONIA MOY: Because we are not -- we are  
5 not --  
6 MS. ANNELLE AMARAL: You want to say your name  
7 again?  
8 MS. TONIA MOY: This is Tonia with Historic  
9 Hawaii Foundation.  
10 You know, we're more on the building side of  
11 consultation. But I think, you know, from what I got from  
12 what you were saying is more to involve the Hawaiian  
13 community in the actual science part of the -- of this  
14 whole process, not just -- not just culture, but that  
15 there's a lot of science that the Hawaiian community knew  
16 and maybe could share and bring some light into the  
17 process as well. I don't know.  
18 MS. LEIOHU RYDER: Yes. And I am talking about  
19 traditional knowledge, you know.  
20 MS. TONIA MOY: Right. Right, which is kind of  
21 like a science.  
22 MS. LEIOHU RYDER: Yes. Yes.  
23 MS. TONIA MOY: It is a science, though.  
24 MS. LEIOHU RYDER: It's an inherent quality that  
25 is in us, you know.

71

1 MS. TONIA MOY: Uh-huh.  
2 MS. LEIOHU RYDER: That is never tapped until  
3 you want to pass a project or, you know, it's -- sometimes  
4 it becomes an afterthought.  
5 MS. TONIA MOY: Yeah. So, I mean -- so what I  
6 was looking at was kind of like include them as part of  
7 the whole science of it.  
8 MS. CAROLINE BLANCO: You know, Tonia, last  
9 meeting, you might recall -- I think you were there on the  
10 second day, right?  
11 MS. TONIA MOY: Right.  
12 MS. CAROLINE BLANCO: And, Hinano, also, when we  
13 talked about the Star Compass. I mean, that came up on  
14 the first date as well, but I think that was maybe an  
15 extension of that concept that we thought was pretty  
16 exciting and something to talk about. Certainly we could  
17 talk about it more today.  
18 DR. CRAIG FOLTZ: Speaking of Uncle Charlie, I  
19 would point out that this is -- we've had long discussions  
20 with Uncle Charlie about this very issue. And Uncle  
21 Charlie has -- or had been involved in some of our science  
22 internship programs that the NSF funds, through a  
23 different entity, here on Maui to bring traditional  
24 culture and try and integrate it with the projects that  
25 the interns were doing.

72

1 And there is a component of this in the Maui  
2 Community College proposal. That we -- we don't want to  
3 drive a wedge between tradition and science, but we want  
4 to try to integrate them so that those guys learn, and  
5 they learn science and tradition and they learn and  
6 maintain respect. So I think that this has been in the  
7 minds of the project, actually, for several years.  
8 MS. CAROLINE BLANCO: And something that could  
9 continue beyond the project consistent with a comment you  
10 were making earlier, Shad.  
11 MS. ANNELLE AMARAL: Hinano.  
12 MR. HINANO RODRIGUES: I think the point Tonia  
13 was trying to make is that when Leiohu spoke, Leiohu spoke  
14 whereby science and tradition is one of the same.  
15 And our existence goes back to cosmology. The  
16 source of life for the -- from the Hawaiian perspective is  
17 a matter of cosmology. It goes back to evolution. It  
18 goes back to the Kumulipo that actually starts with there  
19 is nothing and then now there is something in the bottom  
20 of the sea that eventually moves out from the bottom of  
21 the sea and comes onto land, and then there's evolution  
22 and everything changes.  
23 Well, it's -- it's the same thing. And so,  
24 spiritually, it's cosmology. Science is evolution. It's  
25 one of the same. So I think Tonia was trying to say that

73

1 what Leiohu was saying is our traditions do contribute,  
2 maybe do not have the label of science, but it's one in  
3 the same.  
4 MS. LEIOHU RYDER: And I, you know -- this is  
5 Leiohu again.  
6 You know, I appreciate what you shared, Mike,  
7 but, at the same time, you don't speak on behalf of me.  
8 And -- and -- and this is some of the points that those of  
9 us are in -- you know, are making is that we represent the  
10 iwi, the bones, of this land. And it's important that --  
11 and I -- and I know that -- that there -- the ahus are up  
12 there. But for 50 years since, you know, those 18 acres  
13 have been up there, you know, the land is in question  
14 because of the -- you know, just historically, the whole  
15 situation. And the area is compromised. So just because  
16 -- I mean, you know, we are here now, in 2008, sharing  
17 that legacy.  
18 Maybe our forefathers didn't question 50 years  
19 ago when -- when things were decided on behalf of the  
20 native people. But we are here, as those representatives  
21 now, saying hear us, listen to us and take it to heart  
22 without dollars and cents.  
23 And as far as Maui Community College, it's a  
24 fantastic educational facility, but that, too, it is part  
25 of the State situation, it's part of the State funding,

74

1 it's part of the politics of this land. And what we speak  
 2 of when we speak of Haleakala is a conscious entity that  
 3 has attachment to all that is beyond what Maui Community  
 4 College is all about, also.  
 5 MS. ANNELLE AMARAL: Mikahala.  
 6 MS. MIKAHALA HELM: This is Mikahala.  
 7 And, you know, I appreciate what you shared.  
 8 And I know that was from your na'au, Mike, and so I  
 9 appreciate that. And I also honor all that Uncle Charlie  
 10 has done, because he has worked for years to respect and  
 11 honor Haleakala.  
 12 And what I want to understand is, this process,  
 13 as far as is going on, I want to make sure, Caroline, that  
 14 you -- you know, because we had two other lawyers that  
 15 came with the prior years meetings, okay, and you have  
 16 come more recently. And I think the other lawyers heard a  
 17 lot of the Section 106, they attended sessions when our  
 18 community was there and shared from the na'au. People who  
 19 never come out to meetings came out to share how deeply  
 20 they felt about avoiding building a 14-story white  
 21 telescope on Haleakala.  
 22 And so, you know, I need to let you know that  
 23 when I hear you say that nobody, you know, seemed to do  
 24 much -- or I forgot your exact words, but make comment  
 25 about last meeting, that it was 14 stories, that it was

75

1 white, that hurts. Because we have been going through  
 2 years of all of this testimony, and that is what is in the  
 3 Draft EIS, and that is why the supplemental cultural  
 4 statement, or whatever project you did needed to be done,  
 5 because there were so many questions about how this was  
 6 going to affect. And so much strong testimony about how  
 7 this proposed white 14-story telescope would affect the  
 8 historic property that, you know, you call historic  
 9 property, Haleakala. For us, it's much more.  
 10 And so I want to make sure you know that when we  
 11 don't say something at the meeting, that is because we  
 12 come with the history of being here and being present, to  
 13 let the voice be heard, that it is a sacred place, that  
 14 there is no price on the sacredness of Haleakala.  
 15 And so I want to be really clear about this  
 16 process we're going through. Because I can be here today,  
 17 I can be here tonight; I cannot be here tomorrow. And  
 18 what I am worried about is that from the past thrust. And  
 19 I hear, you know, from what is being shared, that we don't  
 20 have to worry about this being number two meeting and then  
 21 tomorrow is number three or whatever. I just want to  
 22 clarify certain things. And that is, it seems that the  
 23 thrust has been to sign a Memorandum of Agreement. Now, I  
 24 may be totally wrong.  
 25 From what has been happening, it feels like the

76

1 Memorandum of Agreement is signed by whoever happens to be  
 2 present and it's going to be supporting whichever  
 3 proposals or ideas happen to just come out that are  
 4 mitigation proposals. And that is how it feels. I may be  
 5 wrong.  
 6 But I know that in what I've read, the  
 7 literature that Craig sent out, that NSF will give all  
 8 consideration of analysis -- of a completed analysis  
 9 before a decision is made if this ATST telescope is  
 10 built -- I mean, ATST is built. However, it feels like  
 11 what we are leading to is -- is there a meeting tomorrow?  
 12 MS. CAROLINE BLANCO: There is a meeting between  
 13 the major stakeholders, the SHPO, the Advisory Council,  
 14 National Park Service, AURA, University of Hawaii, and  
 15 NSF.  
 16 MS. MIKAHALA HELM: And the Hawaiians present in  
 17 this are not major stakeholders?  
 18 MS. CAROLINE BLANCO: It's not intended to be  
 19 communicated that way. It's that, according to the law,  
 20 the regulations implementing Section -- implementing the  
 21 National Historic Preservation Act, it identifies who has  
 22 to be a signatory to a Memorandum of Agreement. And that  
 23 is -- we're looking at the regulations. We are not making  
 24 judgments about whose feelings are more important, whose  
 25 views are more important. We are following the

77

1 regulations which is what brings us here today.  
 2 MS. MIKAHALA HELM: Well, what will the  
 3 agreement be about? That is what -- because my sense  
 4 was --  
 5 MS. CAROLINE BLANCO: Go ahead, Pua.  
 6 MS. MIKAHALA HELM: My sense was an agreement  
 7 about approved mitigation or something like that.  
 8 MS. CAROLINE BLANCO: It won't be signed  
 9 tomorrow, or anything like that.  
 10 MS. PUA AIU: What happens is that if we feel  
 11 like we can get through an MOA, like a draft MOA,  
 12 tomorrow, then we might have one, we might not. We might  
 13 not feel like we are there yet.  
 14 Once you have a draft MOA, it will be circulated  
 15 amongst all of the parties. So you might get the first  
 16 Draft MOA. And you might say, this really sucks, I don't  
 17 like this part, this part, this part, this part. Then it  
 18 goes around again. So that the -- but the process of a  
 19 106 is to get to a Memorandum of Agreement so that you can  
 20 mitigate. Because that is what the process is.  
 21 So one of the mitigations is avoidance. But  
 22 that is what the process is. So that is -- that is -- if  
 23 we are going to go through the process, that is kind of  
 24 where we need to go. We cannot be meeting perpetually,  
 25 saying, we're doing this -- NSF is saying, "Okay, this is

78

1 what we are proposing," and you guys saying, "No, we don't  
2 want it."  
3 We have to -- in order for this -- otherwise, we  
4 just shouldn't meet. Because in order for this process to  
5 work, we have to come out with something.  
6 And you guys may end up saying, you know, we  
7 don't agree, but we want to -- we want -- we don't agree  
8 with this, but we want to be part of determining what  
9 happens on the mountain in the future, so we will be  
10 concurring parties, even though we don't agree with the  
11 concept. And you can do that.  
12 So we will not get to a signed MOA tomorrow. I  
13 can guarantee you that.  
14 MS. CHARLENE DWIN VAUGHN: Let me amplify that,  
15 though. Because I think she needs to understand the regs  
16 and be able to go to our website and understand the  
17 process of 106.  
18 106 does not preordain an outcome. So we can go  
19 through all of this, and the Council can make a decision  
20 that it doesn't want to entertain an MOA.  
21 In which case, this goes to the group of  
22 presidentially-appointed members with the recommendation  
23 that we feel that this can't be mitigated, cannot, and  
24 that we would recommend these steps be taken. Likewise,  
25 we can all agree that we would never agree, but it's in

79

1 the public interest to go forward with this project,  
2 having heard everything that has been shared, and we  
3 would take all of the comments and try to shape them  
4 into something that reflected a balance between this  
5 spirit, the project needs, and try to codify it in a way  
6 that we would then share for your feedback.  
7 And you could say, "I don't like nine of the  
8 ten." But if we feel that it represents our best effort  
9 to capture what has been said, and we feel that this  
10 project can in fact embrace a preservation at the -- and  
11 a traditional cultural effort in that the decision is  
12 made that you will get more out of us formalizing, in a  
13 legal document, your right to establish protocols for  
14 participating in future projects.  
15 We might go through, but I think what -- we  
16 are moving real fast for me. And we do this all the  
17 time, and they are big projects.  
18 The purpose of today's meeting is to hear what  
19 you have to say about different concepts, be it  
20 avoidance, do nothing, be it mitigate it, be it do it a  
21 different way. And I think tomorrow's meeting is,  
22 again, from my perspective, or the Council's  
23 perspective, to see where we are at, what are people  
24 saying, what is the summary that is coming out of this.  
25 The last meeting had eight people, eight

80

1 participants. And out of that came three solid  
2 proposals. We thought there was still more  
3 communication to come forward. We're here to hear that  
4 in the context of those meetings as well.  
5 But I don't think we have a trajectory where,  
6 in two months, we will be done. We might, in two  
7 months, have the framework of what we think is  
8 mitigation, but it's still open to input.  
9 And this end point that we are rushing to is  
10 troublesome for me because, again, the regs do not  
11 preordain a timeframe. There is nothing in here.  
12 But at any point, NSF can say, we don't feel  
13 this is going forward, or, we don't feel this is  
14 productive. They can shut it down. We can shut it down.  
15 Pua can shut it down. But the bottom line is we are  
16 trying not to get to that point. We are trying to work  
17 through the issues.  
18 MS. MIKAHALA HELM: Okay. I am just wanting to  
19 make sure that the EI -- the Draft EIS and all the  
20 supplemental work that was done in this upcoming EIS is a  
21 part of whatever decision is made. That is my big  
22 concern.  
23 MS. CHARLENE DWIN VAUGHN: It is --  
24 MS. CAROLINE BLANCO: If I can maybe, hopefully,  
25 give you some comfort with that concern.

81

1 Yes, it's true, there were two attorneys that  
2 were on this case before I came along. And certainly  
3 there are transcripts of a lot of comments that were made  
4 during public hearings, heartfelt comments, significant  
5 concerns that were expressed. That is all part of what we  
6 call the administrative record. Everything that happened  
7 through this entire process is what is to be before the  
8 decision-maker and, ultimately, the Director of the  
9 National Science Foundation. In thinking about all of  
10 that, in making the final decision as to whether or not to  
11 fund, even if we come up with a Memorandum of Agreement --  
12 just as a hypothetical, if we did -- and let's say your  
13 comments were that you completely disagreed with this, you  
14 think avoidance of the whole thing is the only way to deal  
15 with this. The Director could look at that and say, you  
16 know what, I agree with Mikahala and I am going to  
17 disapprove it. So it is all before the Director, all of  
18 these comments.  
19 But as Charlene just said, the effort here is to  
20 try to see what are the viewpoints, what are the various  
21 thoughts that people have, and can we find a way to work  
22 together. And even if there is opposition to the project,  
23 if there is a way that maybe we can do something that is  
24 positive to come up with this.  
25 By signing an MOA, it doesn't mean you

82

1 necessarily support the project. But you may think that  
2 -- there are benefits to the mitigation proposals that are  
3 in there. And you may want a part of it.  
4 And if, for example, you think down the line --  
5 if this project is funded and if these mitigation measures  
6 go into effect, then what would happen is if something  
7 went wrong and you signed it, you would be in the legal  
8 position to challenge it. So, you know, that is a benefit  
9 of being involved in the process as well. Even if you  
10 continue to object to the project. I am not saying you do  
11 or don't, but, you know, whatever the viewpoint may be  
12 that you may have.  
13 So all of these viewpoints are considered and  
14 are part of the administrative records. One reason we  
15 have a court reporter here so it's all documented. So  
16 everything is before the Director and he can see that.  
17 MS. MIKAHALA HELM: I'm sorry. Can I just  
18 reiterate two things? And that is about the two out of  
19 three proposals.  
20 And one is that Uncle Charlie stated clearly  
21 that -- when we went to one of the meetings in Pukalani,  
22 he said that he is submitting the proposal, but that he  
23 was against it and that he was -- he did it because they  
24 were going to do it, anyway. And that is the words I  
25 remember him saying.

83

1 Number two, the MCC proposal, it was authored  
2 not to be used as a mitigation, but it is being used as a  
3 mitigation.  
4 So that is my -- that is all I wanted to share.  
5 MS. CHARLENE DWIN VAUGHN: MCC, for those of us  
6 who don't know, what does that mean?  
7 MS. MIKAHALA HELM: Means Maui Community  
8 College.  
9 MS. MARILYN PARRIS: Local branch of UH.  
10 MS. CAROLINE BLANCO: Our understanding,  
11 Mikahala, is that they are mitigation proposals and they  
12 all want to be considered as mitigation proposals by the  
13 authors of those three written proposals that we've had.  
14 And I consider those -- NSF would consider those proposals  
15 part of the mitigation proposals.  
16 Also, the Star Compass and some of the other  
17 ideas that were generated out of the last meetings are  
18 likewise proposals. NSF has not made any decision to  
19 build. So that may be what -- what others might have  
20 said, but that is not the position of the agency.  
21 MS. ANNELLE AMARAL: Okay. There's a hand here.  
22 MS. LIZ GORDON: Liz Gordon from Haleakala  
23 National Park.  
24 You know, I know the purpose of this meeting is  
25 to hear folks' comments. I would actually like to ask a

84

1 question of the project proponents or whoever is working  
2 on the design, which I assume is not final yet.  
3 What other parameters or information can you  
4 give us about how you can avoid or minimize in your  
5 design, or other things, part of the project, that we can,  
6 you know, sort of consider if we were going to propose  
7 mitigation or anything else? You know -- yeah, what is on  
8 the table?  
9 I mean, you have said that maybe decommissioning  
10 things in, you know, 50 years is on the table. Is there  
11 any other information you can provide us so we can have  
12 some more background about what is on the table from the  
13 project proponents' perspective?  
14 DR. CRAIG FOLTZ: You want me to speak to that?  
15 MR. JEREMY WAGNER: Go ahead, Craig.  
16 DR. CRAIG FOLTZ: Okay. We can give you lots  
17 and lots of technical information, which these gentleman  
18 can provide in copious detail, more than you probably  
19 want. But I do want to point out a few things.  
20 And above them all is the National Science  
21 Foundation does not have a limitless budget. And so when  
22 we consider proposals and when we consider -- and we  
23 review designs very, very critically with panels of  
24 experts from all over the world. We look at designs to be  
25 as economical as possible. All right. We don't -- if

85

1 there is a design that has -- well, we consider to be  
2 excess scope, we tell them cut that out, make this -- do  
3 this -- we want you to -- if you are going to have a  
4 design that is designed to do a certain job, prove to us  
5 that it can do it, but prove to us that it's the least  
6 that you have to do to do it in order to minimize the  
7 cost.  
8 So it is not, I think, generally understood when  
9 we have these discussions, but this design is very highly  
10 optimized. That is, it's been worked over for a number of  
11 years to be the best way to do the job that it's putting  
12 itself out to do at the lowest cost and the lowest impact.  
13 MS. LIZ GORDON: For the science.  
14 DR. CRAIG FOLTZ: For the science. Well, and --  
15 MR. JEREMY WAGNER: But there are a lot of  
16 dividers in there. For example, we talked about a church.  
17 Jeremy Wagner. I'm sorry. Jeremy Wagner, ATST  
18 Project Manager.  
19 We talked about a church, Haleakala being  
20 essentially a church environment. So we looked at noise  
21 levels that would be appropriate for a church environment.  
22 And so we have done a lot of engineering to try to  
23 minimize the noise produced by the rotation of the  
24 cohesive, for example. So that when you are standing at  
25 the ahu on the east side, you are essentially in a church

86

1 environment when it comes to the noise produced by that  
2 telescope. Okay. And that is our attempt at being  
3 respectful of that environment.  
4 The height of the facility. Craig talked about  
5 the dollar cost. But we understood when we were doing the  
6 design that the viewplain issues are a real issue. And we  
7 went through the scoping. We understand that people don't  
8 want to see the telescopes anymore than they have to. So  
9 we made that telescope as short as we possibly could and  
10 still meet the science requirements. So it isn't -- it  
11 isn't a millimeter higher than it has to be, for example.  
12 DR. CRAIG FOLTZ: Yeah, those are the specific  
13 examples.  
14 And as far as noise issues, for example, I mean,  
15 we would like to hear, because we don't know, you know,  
16 are there -- are there specific times of day that would be  
17 critical for this site to be quiet? These could fold into  
18 the operations model for the telescope.  
19 Really, that is the kind of input that we need,  
20 you know. Is the period just before sunrise important,  
21 that we could be quiet. Because although one wants to  
22 observe the sun shortly after sunrise, if the period just  
23 before sunrise is critical, we will quiet everything down.  
24 We will make sure everything is taken care of before that,  
25 quiet it down and not make a peep until practitioners

87

1 leave the site if they are on the site. We can  
2 accommodate that.  
3 I speak for myself and physicist friends. And  
4 Steve agrees with that. But that is the sort of concrete  
5 thing that we need to hear because we don't understand.  
6 And we want to understand.  
7 MS. CHARLENE DWIN VAUGHN: Color continues to be  
8 on the table. Help us about the color. Because the  
9 community is vehemently opposed to the white color.  
10 MR. JEFF BARR: Yes, that is true.  
11 DR. CRAIG FOLTZ: Identify yourself.  
12 MR. JEFF BARR: I am Jeff Barr, I am the Project  
13 Architect.  
14 I wasn't the lead engineer in terms of figuring  
15 out the thermal analysis of the enclosure which leads to  
16 the color, but I was involved in it. And I have been in  
17 meetings. And, you know, I am ready to explain why it has  
18 to be white.  
19 And essentially, any color other than white,  
20 even something sky blue or anything that has any  
21 heat-absorbing quality, when the sunlight hits it, it  
22 heats up considerably, a considerable amount more than a  
23 very white surface.  
24 We've even looked at a range of different kinds  
25 of white coatings, which to most of you doesn't make a lot

88

1 of difference. If it's going to be white, it's going to  
2 be very visible. And so that is what is sort of wrong.  
3 But even within that, the range of white, there's a  
4 variation. So we have to minimize in order for the  
5 telescope to be able to observe through clear,  
6 un-thermally disturbed air.  
7 The enclosure itself, all the structure that  
8 surrounds the telescope, has to be a very light color that  
9 doesn't absorb heat. And that color, because of all the  
10 coatings we have looked at in the thermal analyses and the  
11 modeling we have done with some various sort of technical  
12 methods, it proves out to be only white.  
13 And certainly we looked at, because we were  
14 aware in the long-range development plan that Mike talked  
15 about, that if a building can be -- and anything other  
16 than solar observatories should blend in with the natural  
17 terrain so that it's as invisible as it can be. So we  
18 took that color and modeled that, that brown color, the  
19 natural brown color of the rock there. And that turns out  
20 to be four times as much heat that is absorbed. And that  
21 means that, in order to cool that, we would take four  
22 times as much electricity.  
23 And this gets back to Craig's point. We don't  
24 have an unlimited budget and we can't bring a new power  
25 line up to the -- to the -- to the summit in order to

89

1 provide all that additional power that would be necessary.  
2 So we are constrained by practical limitations in some  
3 ways. But, essentially, it comes down to anything other  
4 than that white color of the dome will basically damage  
5 the observing to the extent that we can't do the science.  
6 MR. MIKE MABERRY: Anelle.  
7 MS. ANNELLE AMARAL: Uh-huh.  
8 MR. MIKE MABERRY: Mike.  
9 MS. ANNELLE AMARAL: Mike.  
10 MR. MIKE MABERRY: But please respond, even if  
11 you -- even if you did paint it brown and you did provide  
12 additional cooling, is it even possible? I mean, won't  
13 you still have the thermal plume in front of the field of  
14 view?  
15 MR. JEREMY WAGNER: That is true.  
16 MS. CAROLINE BLANCO: For the non-scientists,  
17 can you explain the thermal plume?  
18 MS. CHARLENE DWIN VAUGHN: Keep it simple.  
19 MR. JEREMY WAGNER: This is Jeremy Wagner again.  
20 MS. CHARLENE DWIN VAUGHN: You can try.  
21 MR. JEREMY WAGNER: Let me start at the  
22 beginning.  
23 You look at the lava up there, the rock up  
24 there, it's a dark color. And we observe the sun during  
25 the day, which is obvious. The dark rock heats up.

90

1 DR. CRAIG FOLTZ: Important.  
2 MR. JEREMY WAGNER: It's like if you put a  
3 hammer out in the sun, it gets hot, right, you burn  
4 yourself when you pick it up. The rock gets hot. Well,  
5 the air above the rock is disturbed by that.  
6 DR. CRAIG FOLTZ: It gets hot.  
7 MR. JEREMY WAGNER: Yeah, it gets hot.  
8 MR. MIKE MABERRY: It's like driving down the  
9 road and seeing the shimmer.  
10 MR. JEREMY WAGNER: Okay. So if we build a  
11 telescope at ground level and try to observe through that,  
12 the air is disturbed and we can't see what we have to see.  
13 All right. If you build the telescope up high to get up  
14 above that disturbed layer and then you paint it the same  
15 color as the rock, you bring that disturbed layer up with  
16 you.  
17 MR. MIKE MABERRY: Same thing.  
18 MR. JEREMY WAGNER: And you've destroyed it.  
19 There is no point in building it high. So if you build it  
20 high to get above the layer and then you paint it white  
21 and cool it, then you are above that layer. You are  
22 looking through this stable atmosphere and you can  
23 actually meet the science requirements and see what you  
24 are supposed to be able to see to do the science.  
25 MR. JEFF BARR: The only thing I would take

91

1 issue with is what Mike said, is that, basically, we could  
2 paint it black, we could paint it as dark as we possibly  
3 could, and, if we provided enough cooling to it, we could  
4 prevent that thermal plume. But we can't do that. As I  
5 say, there are practical limitations to how much coolant  
6 we can really apply to that surface. It has to do with  
7 electricity and has to do with some very sort of, you  
8 know --  
9 MR. MIKE MABERRY: My point is it's not just  
10 electricity. There are some technical challenges with  
11 regard to how --  
12 DR. CRAIG FOLTZ: Well, there's also the  
13 uniformity question. Uniformity of cooling.  
14 MR. MIKE MABERRY: Yes. I apologize. I know  
15 you didn't want to get interaction, but let's make it  
16 correct.  
17 MS. CAROLINE BLANCO: And it's not just money is  
18 what your point is.  
19 MR. MIKE MABERRY: No. My point is it's not  
20 just money. There are technical issues.  
21 MS. CHARLENE DWIN VAUGHN: So let's take it out  
22 another decimal point. Would this project be rendered  
23 infeasible or not meeting the objectives if it were any  
24 color other than white?  
25 MR. JEFF BARR: Yes.

92

1 MR. JEREMY WAGNER: Yes.  
2 MS. ANNELLE AMARAL: Okay. There's a comment  
3 down here at the front.  
4 MS. LEIOHU RYDER: Which leads to, you know, if  
5 you want to be respectful of the church, because it is,  
6 the height is, also. It's going to be the largest  
7 building on Maui.  
8 MR. JEFF BARR: Yes.  
9 MS. LEIOHU RYDER: Now, how can that -- I mean,  
10 I don't know if a church is that big, but if Haleakala is  
11 that sacred, why would we want something looking -- with  
12 that visual to disturb the clarity of the spirit?  
13 Number two, also, is --  
14 MS. CAROLINE BLANCO: I'm sorry.  
15 MS. LEIOHU RYDER: -- the electricity. Okay.  
16 We live on limited resources here on Maui. It's got to  
17 come from somewhere. So it's going to put additional  
18 stress on the resources, the shared resources of the  
19 population on Maui. And that is going to affect  
20 everything, all life here.  
21 MS. CAROLINE BLANCO: Mike, can you address  
22 two -- at least two of the points, about the impact on the  
23 electricity, and, also, whether it would be the highest  
24 building on Maui?  
25 MR. MIKE MABERRY: I am not sure that I can

93

1 address electricity. I think -- well, I am not sure who  
2 can, but it definitely will not be the tallest building on  
3 Maui. There are two buildings right now in Kaanapali --  
4 while the County does not define the height of a story, it  
5 is typically 13 feet. Okay. And there are two 14-story,  
6 real 14-story tall buildings in Lahaina.  
7 MS. CHARLENE DWIN VAUGHN: But are they visible  
8 in the same way that this telescope --  
9 MR. MIKE MABERRY: They are not on top of  
10 mountains.  
11 MS. CHARLENE DWIN VAUGHN: Right.  
12 DR. CRAIG FOLTZ: But you might make an estimate  
13 as to the comparison of, say, the electric power compared  
14 to a county building compared to a hotel.  
15 MR. MIKE MABERRY: If I am not mistaken, it's --  
16 the entire Haleakala summit uses less energy than the  
17 Grand Wailea, I think is what we saw, all of the  
18 facilities.  
19 DR. CRAIG FOLTZ: With 17 telescopes plus --  
20 MR. MIKE MABERRY: Yeah, over 17 total  
21 telescopes.  
22 MR. JEREMY WAGNER: The project has worked  
23 closely with MECO, with the power company, for the last  
24 couple years to try and reduce the amount of power  
25 required, because they are interested in that as well.

94

1 MR. JEFF BARR: Yeah. And we are very sensitive  
2 to how much power we're using, because, again, that is an  
3 operational cost that goes out for the entire life of the  
4 telescope.  
5 MR. JEREMY WAGNER: For example, we've minimized  
6 the number of cooling panels that we need to just the  
7 minimum load.  
8 MS. LEIOHU RYDER: And also considering the  
9 present -- the present situation with energy now as we  
10 speak --  
11 MR. MIKE MABERRY: Yeah.  
12 MS. LEIOHU RYDER: -- and those rising costs for  
13 our community.  
14 MR. JEREMY WAGNER: That is where --  
15 MS. LEIOHU RYDER: And global --  
16 MR. JEREMY WAGNER: Global warming.  
17 MS. LEIOHU RYDER: Exactly.  
18 MR. JEREMY WAGNER: I am very concerned about  
19 that in my personal life.  
20 MS. LEIOHU RYDER: Exactly.  
21 MS. CAROLINE BLANCO: I wonder if maybe -- one  
22 of the points that she had raised, I think, might be the  
23 height of the building. I think that was partially  
24 answered earlier, but I wondered if Jeremy might speak to  
25 that.

95

1 MR. JEREMY WAGNER: It's driven by the  
2 characteristics of the site. And it's science-based. It  
3 is no higher than it has to be.  
4 MS. LEIOHU RYDER: Yes.  
5 MR. JEREMY WAGNER: Absolutely not a millimeter  
6 higher than it has to be.  
7 DR. CRAIG FOLTZ: The cost scale is not quite  
8 linear with height, but probably the difference in cost  
9 scales are on height. So it is very -- you know, we are  
10 very conscious of cost. And we hammer -- I mean, if it's  
11 funded, it is funded out of us. And we want to make sure  
12 that --  
13 MR. JEREMY WAGNER: I want to make it clear,  
14 though, the discussion that I had with the project  
15 scientists when we were arguing -- it was an argument  
16 about, you know, heat -- the scientists would put it much,  
17 much taller if they could. And we argued. And the  
18 viewplain issue, the fact that you could see it from down  
19 below or from the road or whatever was in that argument.  
20 MS. CAROLINE BLANCO: And in fact --  
21 MR. JEREMY WAGNER: We needed to consider that  
22 in making it short as we possibly could.  
23 MS. CAROLINE BLANCO: In fact, I think the  
24 alternative site is scientifically more preferable, right?  
25 MR. MIKE MABERRY: Correct.

96

1 MS. CAROLINE BLANCO: And so because of viewshed  
2 issues, you know, the preferred alternative is -- what is  
3 the preferred alternative? I just wonder if we --  
4 I wanted to be sure that, Liz, we addressed your  
5 question about what else is on the table. I mean, I think  
6 part of what you are hearing and -- and I think what NSF  
7 would look at as its position here with regard to what is  
8 on the table. A lot has been put into this already in  
9 terms of mitigation or minimization, you know, what --  
10 what is the most efficient way of doing this so that it  
11 could reduce viewshed issues, so that it could still  
12 obtain the science objectives without having as much of an  
13 impact. So a lot of that has already gone into it. And I  
14 am not sure if you have other ideas about what might be  
15 helpful.  
16 MS. LIZ GORDON: No. I guess the issue is that  
17 this is a discussion, we're trying to come up with things.  
18 It's really hard. You know, it's good to know these  
19 things. So, obviously, there's really nothing that can be  
20 done in the design to avoid or minimize unless it was a  
21 different site.  
22 MR. JEREMY WAGNER: Well, I would state it as  
23 nothing more.  
24 DR. CRAIG FOLTZ: No further.  
25 MR. JEREMY WAGNER: Yeah. We've tried the

97

1 placement at the Mees site, our preferred site, back a way  
2 from the ridge, so that it's blocked by the existing  
3 telescopes, it's blocked by the topology. So we prefer  
4 that site because of that. If we put it up at Reber  
5 Circle, as Caroline said, it's potentially a better site  
6 scientifically, but we trade that off because we can hide  
7 some of the facility from view.  
8 It's a bit closer to the birds. So we worked  
9 very closely with U.S. Fish and Wildlife to understand,  
10 you know, what we could do to mitigate our impact on the  
11 birds. And we were successful with that, if we take into  
12 account what concerns they had and what mitigation efforts  
13 they asked us to do during construction.  
14 And then the cultural issues, we went straight  
15 ahead and tried to identify a Maui-based local  
16 environmental engineering firm. We tried to get Uncle  
17 Charlie, for example, involved right away.  
18 And he made it very clear to me the day he shook  
19 my hand that he was against the project. Okay. And we  
20 brought him on board so that we could have that connection  
21 to the folks on Maui and understand what the issues were  
22 right away.  
23 The project -- I was actually invited to  
24 participate in the dedication of the ahu up on -- up on  
25 the Haleakala. It was a very moving experience. I could

98

1 tell you the story. I just -- well, anyway, it was a very  
2 moving experience. There were a couple things that  
3 happened that were pretty interesting, as Tony would say.  
4 I've talked with a Native Hawaiian astronomer.  
5 We drank tequila until we couldn't walk, for heaven's  
6 sake, to understand what the perspective was. We've come  
7 out here and listened, tried to understand what folks were  
8 concerned about.  
9 And I have learned so much about Hawaii, about  
10 the culture. I've met so many people. We have all -- all  
11 of us in the project have made, I think, lifelong friends  
12 out here.  
13 And so it's really -- from my perspective,  
14 anyway, it's been a very positive experience. It's  
15 emotional and it's -- on both sides, because you talk  
16 about a church. You know, the most spiritual experience I  
17 ever had was in a telescope -- was with a telescope. You  
18 know, my mom bought me telescope when I was eight years  
19 old, and I have been in astronomy ever since. And so you  
20 want -- you talk about respect. Absolutely, we have  
21 respect.  
22 MS. CHARLENE DWIN VAUGHN: But, you know, I  
23 think -- this is Charlene again. I am listening and I am  
24 trying to follow the conversation trying to come out of  
25 the other side of my brain. But here -- here is where I

99

1 am lost. In the design of this project, you all have  
2 taken in information and comments over a three or  
3 four-year period. And in receiving this information, you  
4 all have made changes, modifications, evaluated things.  
5 And while you can articulate it, I think that, for  
6 transparency purposes, it's not real clear to us because  
7 it -- do you understand what I am saying?  
8 You probably have done the right thing with the  
9 right intent and the right spirit, but the package is  
10 offputting in that it seems like it's a package with a bow  
11 and it's presented. Yet, we're now here to talk about it.  
12 And that -- and -- hear me out.  
13 MR. JEREMY WAGNER: I am. I am.  
14 MS. CHARLENE DWIN VAUGHN: I am trying to  
15 navigate. And I can see they are, too. How do you untie  
16 this bow, open the package up, give us clarity about the  
17 contents and the substance, so we can see how you moved  
18 from point A to point B, to get here now where we are  
19 dealing with this project as proposed. It's a disconnect  
20 somewhere.  
21 Do you understand?  
22 MS. NANCY McMAHON: Yeah. This is Nancy.  
23 MS. CHARLENE DWIN VAUGHN: Maybe she can restate  
24 it.  
25 MS. NANCY McMAHON: This is Nancy.

100

1 And I think what she is trying to say is you did  
2 this Draft EIS in 2006 with the same information.  
3 MR. JEFF BARR: Uh-huh.  
4 MS. NANCY McMAHON: We don't understand how you  
5 got there, to give that information out. You already had  
6 the consultations that we were never involved in, that any  
7 of us participated in, to make that Draft EIS. And maybe  
8 you did it and you tried to reach out, but we didn't  
9 understand that.  
10 Usually, when you do the Draft EIS, when you get  
11 to the final, the changes happen. This in-between, we  
12 would be doing this right now. Because you are -- you may  
13 have already had a 30-foot telescope, and it came down to  
14 being a 14 one because we told you this is more realistic  
15 to do.  
16 MS. ANNELLE AMARAL: So is it --  
17 MS. NANCY McMAHON: Because the public part,  
18 what we see is the Draft EIS, and nothing has changed.  
19 Is that pretty clear?  
20 I think that is pretty clear with everybody  
21 here. We are still -- three years later still at the same  
22 level.  
23 MR. JEREMY WAGNER: But we did --  
24 MS. NANCY McMAHON: And we may -- and I know  
25 what you are saying. And I think we understand you.

101

1 MS. CHARLENE DWIN VAUGHN: We can see you --  
2 MS. NANCY McMAHON: We see you all are stressed  
3 about this, too. We all know the importance of this site  
4 and the spirituality. There is not one person here who  
5 has never been up there.  
6 MS. CHARLENE DWIN VAUGHN: That's not the  
7 subject of debate.  
8 MS. NANCY McMAHON: We're not arguing about  
9 that. We're all on the same table with that level.  
10 It's how did you come to the -- you were at  
11 final in 2006. And we were just coming on board.  
12 MS. CHARLENE DWIN VAUGHN: To have a discussion.  
13 MS. ANNELLE AMARAL: Okay. All right.  
14 MS. NANCY McMAHON: So you need to explain that  
15 to us. How did you get 2006 -- you should have been  
16 trying to work it out now.  
17 MS. ANNELLE AMARAL: Okay. Let me -- let me ask  
18 the question.  
19 MS. NANCY McMAHON: Okay.  
20 MS. ANNELLE AMARAL: I am hearing -- what I hear  
21 is a process question, that an EIS was drafted with some  
22 conclusions in 2008 --  
23 MS. NANCY McMAHON: Six.  
24 MS. CHARLENE DWIN VAUGHN: Six.  
25 MS. ANNELLE AMARAL: Okay. Drafted in 2006,

102

1 with some conclusions reached without public input. That  
2 is what is being said.

3 Now, I need to know who in this process can  
4 begin to address that. And that's Jeremy or that's  
5 Michael.

6 MR. MIKE MABERRY: I had my hand up longer than  
7 you have.

8 MR. JEREMY WAGNER: All right.

9 MR. MIKE MABERRY: Okay.

10 MS. ANNELLE AMARAL: Process.

11 MR. MIKE MABERRY: Folks, I represent the  
12 Institute for Astronomy at the University of Hawaii. I am  
13 sure most of you are familiar with the issues on Mauna Kea  
14 for the last 12 years. And it has to do with  
15 observatories and sacred sites.

16 I think it would be incredibly disingenuous and  
17 incredibly rude and really stupid of us to have gone  
18 through all of those public meetings where the Native  
19 Hawaiians expressed their concern over specific issues --  
20 and the public, over specific issues, for us to just let  
21 the NSF come in and say, okay, we're not going to tell you  
22 anything, we will just let you run amok here and then we  
23 will rein you in later after we get comment from the  
24 public and you get to hear what we already know. We had a  
25 responsibility as a state agency to share with them that,

103

1 you know, because we have land responsibilities,  
2 responsibilities to the lands that we are temporary  
3 stewards of, you will do this, this, this and this, and  
4 you will consider these issues.

5 Because that is what we have heard over the last  
6 ten years, of mistakes that have been made. And, you  
7 know, we don't want you to make those mistakes.

8 So it's -- it's a very delicate issue. It's a  
9 -- it's a big challenge. I mean, take, for example, just  
10 the fact that we are doing a federal EIS, federal and  
11 state EIS. This is the first federal and state EIS that  
12 has ever been done for a single facility on Haleakala.

13 Why? Because we told them, "You will have to do  
14 it." I mean, we are not going to go through it -- we  
15 weren't going to go through the whole situation like we  
16 did Keck Outriggers.

17 MS. LIZ GORDON: Federal dollars.

18 MS. MARILYN PARRIS: That was federal dollars.

19 MR. MIKE MABERRY: No. No, no, no.

20 What I mean is, if you are familiar with the  
21 Keck Outrigger project on Mauna Kea, it was a situation  
22 where the lawyers sitting back in D.C. looked at it, they  
23 say the impact is not significant, you will -- we are only  
24 going to do an environmental assessment, okay, an EA.  
25 And, yet, after years of painful testimony, people taking

104

1 time, like many of you folks are today out of your daily  
2 lives, to come in and testify, that it's not showing the  
3 appropriate respect for the host community -- I mean the  
4 host culture, you need to do an EIS. They finally reached  
5 the point where they did one. It took years for them to  
6 finally come around.

7 So we told the project, right up front, if you  
8 don't want to do an EIS, there's the door.

9 He was in the room.

10 There's the door if you don't want to do a  
11 federal EIS.

12 So, I mean, you know --

13 MS. CHARLENE DWIN VAUGHN: But I think --

14 MR. MIKE MABERRY: It's been a challenge, I  
15 mean, you know, for us to want to acknowledge that we have  
16 learned something.

17 MS. CHARLENE DWIN VAUGHN: Okay. But let me,  
18 please --

19 MS. ANNELLE AMARAL: And before you -- let me  
20 get to Jeremy to answer the question, and then you can  
21 comment.

22 Go ahead.

23 MR. JEREMY WAGNER: We did -- part of the site  
24 survey that we did, we also looked at site impacts. All  
25 right. So when we got to the point where we had about six

105

1 sites listed, after we went through the 72 originally,  
2 Jeff, for example, went around -- a group of us went  
3 around and we did a site impact study. And the things we  
4 looked at, for example, were environmental issues, would  
5 you do an EA and EIS, cultural issues, viewplain issues,  
6 all of those things. We went around and looked at the  
7 different sites that were under consideration to  
8 understand what those sorts of things would be that we  
9 might have to deal with.

10 So right up front, since Haleakala was mentioned  
11 as a possible site at that point, we went around and  
12 looked at it, and wrote up a report, which was available,  
13 and started to look at those kinds of things. And those  
14 initial inputs from long-range development plan, from our  
15 site impact studies, went into forming the design.

16 MS. CAROLINE BLANCO: And let's --

17 MR. JEREMY WAGNER: Why would we try to make it  
18 taller if people didn't want it, and we didn't want it to  
19 be taller, either?

20 The white color, for example, we couldn't  
21 change. We spent lots and lots of engineering hours on  
22 it, trying to figure out if we could.

23 MS. CHARLENE DWIN VAUGHN: But let me explain --  
24 hold on -- if the National Park Service took the same  
25 approach you all did to developing an EIS and planning a

<p style="text-align: right;">106</p> <p>1 park, they would be in court for forever.</p> <p>2 Here is my point about this: You used some</p> <p>3 concepts that -- that were good, about you heard this</p> <p>4 from, by, benefited from. That's all good, I like that.</p> <p>5 But transparency, clarity, coordination, public</p> <p>6 disclosure. And you said share with them. But who is the</p> <p>7 them? It's the whole public -- no. Hear me out.</p> <p>8 MR. JEREMY WAGNER: We had public here.</p> <p>9 MS. CHARLENE DWIN VAUGHN: You had public</p> <p>10 hearings, but, again, was it talking to or involvement</p> <p>11 with. Two different approaches to negotiating and</p> <p>12 consulting.</p> <p>13 Talking to me is standing at a podium and</p> <p>14 telling me what this is, how this is, why I am doing that,</p> <p>15 why this works, why that doesn't work. Consulting with is</p> <p>16 these are issues, what do you think about this issue, we</p> <p>17 have to consider this, what is your recommendation for</p> <p>18 that, give me your feedback.</p> <p>19 Because, then, people feel ownership, they feel</p> <p>20 that they have influenced the outcome and they</p> <p>21 participated significantly in the decision-making process.</p> <p>22 I am not saying what you have done is wrong.</p> <p>23 Don't take this out of context. I am saying how you got</p> <p>24 there is confusing.</p> <p>25 MR. JEFF BARR: Uh-huh.</p>	<p style="text-align: right;">108</p> <p>1 or construct a federal highway using this alignment, that</p> <p>2 alignment or that alignment, and still achieve the</p> <p>3 purpose.</p> <p>4 We are talking about a very specific scientific</p> <p>5 goal here. And if you can achieve it, this is the way to</p> <p>6 achieve it. If you don't do it this way, it can't be</p> <p>7 built.</p> <p>8 So to have back and forth about, well, what if</p> <p>9 you designed it this way, unless you're a scientist that</p> <p>10 is on the team, how could you possibly -- I couldn't</p> <p>11 contribute to that discussion with my law background, you</p> <p>12 know. But there are other things that can be included in</p> <p>13 this in terms of how you get there and what you do. But</p> <p>14 this is a science-driven project.</p> <p>15 MS. ANNELLE AMARAL: Okay. I am seeing four</p> <p>16 people raise their hand. I am going to call them in the</p> <p>17 order that I saw them go up. I saw Craig raise his hand,</p> <p>18 then Leiohu, then Jeremy and then Liz.</p> <p>19 DR. CRAIG FOLTZ: The only thing I wanted to say</p> <p>20 is there was give and take.</p> <p>21 MS. ANNELLE AMARAL: And Warren.</p> <p>22 DR. CRAIG FOLTZ: And that really folded into</p> <p>23 the design.</p> <p>24 And a perfect example was at one of the many</p> <p>25 public meetings -- and we had more public meetings than</p>
<p style="text-align: right;">107</p> <p>1 MS. ANNELLE AMARAL: Comment here.</p> <p>2 MS. CAROLINE BLANCO: I think it's helpful to</p> <p>3 understand the NEPA process is a separate process to some</p> <p>4 extent, with different requirements, pursuant to different</p> <p>5 -- it's a different statute, different regulations. There</p> <p>6 are lots of similarities. And it requires public input.</p> <p>7 That is a very important component of NEPA.</p> <p>8 It's a little different than consultation. NEPA</p> <p>9 doesn't require this kind of sitting around a room,</p> <p>10 talking back and forth, trying to figure out what would go</p> <p>11 into mitigation. It does require public input.</p> <p>12 So the Draft EIS was shaped through public</p> <p>13 input. And there were meetings that occurred. And in the</p> <p>14 -- all of that led to the development of the Draft EIS.</p> <p>15 So what led up to the Draft EIS was a process that</p> <p>16 included a lot of public input.</p> <p>17 So in that sense, there is transparency. In</p> <p>18 that sense, there's a back and forth between the public</p> <p>19 and the project team and NSF, trying to figure out what</p> <p>20 might be a good proposal that meets scientific criteria.</p> <p>21 And I've said this before, and I want to</p> <p>22 reiterate it here, that NSF is a different type of federal</p> <p>23 agency. This is not like building the visitor's center in</p> <p>24 a park where you can move it in a number of different</p> <p>25 alternative locations and still have the visitor's center,</p>	<p style="text-align: right;">109</p> <p>1 were required by statute at the recommendation of our</p> <p>2 consultant. And we worked very hard to distribute them</p> <p>3 around the island. At one of the public meetings,</p> <p>4 somebody said this is a solar telescope and, yet, I don't</p> <p>5 see solar panels anywhere. And that is -- you know, that</p> <p>6 is kind of an embarrassing point, you know.</p> <p>7 So we talked to the project and said, can you</p> <p>8 guys look into whether you can run this thing. And Jeff</p> <p>9 did a study. And it turns out that it's not practical,</p> <p>10 but he did a study. And it was give and take.</p> <p>11 MS. NANCY McMAHON: But do people know that?</p> <p>12 That information is --</p> <p>13 MS. CAROLINE BLANCO: There were 13 meetings --</p> <p>14 DR. CRAIG FOLTZ: There were 13 meetings.</p> <p>15 MS. CAROLINE BLANCO: -- for the Draft EIS.</p> <p>16 MS. NANCY McMAHON: People didn't know --</p> <p>17 DR. CRAIG FOLTZ: And that was then presented at</p> <p>18 a subsequent meeting.</p> <p>19 MS. NANCY McMAHON: I had just thought that when</p> <p>20 she asked that very question, it's a solar thing, why</p> <p>21 aren't we using technology. But I don't think people know</p> <p>22 that you did a study.</p> <p>23 DR. CRAIG FOLTZ: It was presented in a --</p> <p>24 MS. NANCY McMAHON: They don't know that</p> <p>25 information is out there.</p>

110

1 MS. ANNELLE AMARAL: I wonder if I could bring  
 2 the mudder down a little bit, because she can't write all  
 3 of your voices.  
 4 And you jumped ahead --  
 5 MS. NANCY McMAHON: Sorry.  
 6 MS. ANNELLE AMARAL: Leiohu.  
 7 Craig, did you finish?  
 8 DR. CRAIG FOLTZ: I just wanted to point out  
 9 that the results of that study were presented at a  
 10 subsequent public meeting.  
 11 MS. NANCY McMAHON: Okay.  
 12 MS. CAROLINE BLANCO: And part of the problem  
 13 here is this process has gone on for so long, over quite a  
 14 lengthy period of time.  
 15 And, you know, to look at the NEPA public  
 16 hearings, we've had 20-some-odd, you know, formal,  
 17 informal Section 106 meetings. And granted, you know,  
 18 there might be dispute about what might be consultation,  
 19 what isn't consultation, but that aside, there has been a  
 20 lot of transparency, a lot of public process. All of  
 21 these documents are available to the public if there is  
 22 any question about it. We've never said we are not going  
 23 to share things with folks.  
 24 MS. ANNELLE AMARAL: Okay.  
 25 MR. JEREMY WAGNER: The other thing that we've

111

1 done --  
 2 MS. ANNELLE AMARAL: I'm sorry. Leiohu was  
 3 next, then I am coming to Jeremy, then to Liz.  
 4 MS. LEIOHU RYDER: Well, one of the points I  
 5 wanted to make is that, you know, when you say that, you  
 6 know, Haleakala Park can make -- you know, have a restroom  
 7 or facility here, and NSF, it's a specific process, and  
 8 this whole project is science-driven, you know, you can  
 9 duplicate these things on many other plains of this Earth,  
 10 but you cannot -- you cannot recreate the universal entity  
 11 of spirit that is Haleakala. And it is not  
 12 science-driven; it is spirit-driven. It is  
 13 spirit-manifested. And it is the universal law, universal  
 14 law inherent in all spiritual traditions, in all  
 15 spirituality. This mountain cannot be compromised with  
 16 science-driven and timelines and -- and semantics,  
 17 semantics that are defined by limited interpretation.  
 18 MS. CAROLINE BLANCO: May I ask you a question?  
 19 MS. LEIOHU RYDER: Sure.  
 20 MS. CAROLINE BLANCO: How would you propose  
 21 seeing this process go forward in light of your views?  
 22 MS. LEIOHU RYDER: I would -- I would never have  
 23 seen the process go after my initial -- if I, as a  
 24 scientist, or I, as a human being, went up to Haleakala  
 25 for the first time and I felt that magic, that majesty, as

112

1 each one feels it in this room, then the universal spirit  
 2 of pono and truth and righteousness and grace would  
 3 indicate to me that to have a -- an -- an entity of this  
 4 type would be a tremendous -- a tremendous -- I can't even  
 5 describe the word -- to humanity, to creation. And it  
 6 would never have gone this far for me. This is my  
 7 personal view.  
 8 MS. CAROLINE BLANCO: Thank you. I appreciate  
 9 your answer.  
 10 MS. ANNELLE AMARAL: Okay. Thank you.  
 11 I am coming now to Jeremy.  
 12 MR. JEREMY WAGNER: The Park was ahead of me.  
 13 MS. ANNELLE AMARAL: No. I am coming to Jeremy,  
 14 then I am going to Liz, then I am coming to Warren. And  
 15 that is the way it goes.  
 16 Thank you.  
 17 Jeremy.  
 18 MR. JEREMY WAGNER: No comment.  
 19 MS. ANNELLE AMARAL: No comment now?  
 20 MR. JEREMY WAGNER: No.  
 21 MS. ANNELLE AMARAL: Then I am coming to Liz,  
 22 then I am coming to Warren.  
 23 MS. LIZ GORDON: Okay. I guess I had a question  
 24 about the issue of science goals, that, obviously, for  
 25 whatever particular goal of science, it has to be this

113

1 way. Is there a way that maybe -- have you set -- you  
 2 know, certain goals for science, but can you minimize your  
 3 goals a little so that would be on the table for  
 4 minimizing or avoiding certain issues that, you know, are  
 5 to be had with the height, the excavation depth, the  
 6 color? I mean, there is the give and take.  
 7 But, I mean, have you reached so much for the  
 8 moon is on the table that you -- or the sun -- can you  
 9 lower the goals a little and help, you know, the  
 10 discussion about -- or the negotiation of this, for this  
 11 particular site?  
 12 MS. CAROLINE BLANCO: Steve, can you remind  
 13 folks who you are?  
 14 MS. ANNELLE AMARAL: Identify yourself.  
 15 MR. STEVE KEIL: This is Steve Keil. I  
 16 initiated this project with the community, on behalf of  
 17 the community.  
 18 MS. CAROLINE BLANCO: The scientific community.  
 19 MR. STEVE KEIL: The scientific community, solar  
 20 astronomers, and astronomy in general. This project has a  
 21 long lifetime. It came through for funding the last  
 22 survey of astronomy in 2000. It is something that needs  
 23 to be done. That laid out the things that we wanted the  
 24 telescope to do. And having given that range of  
 25 scientific goals that we wanted the telescope, we then

114

1 tried to take in the minimum structure that would do that  
 2 range of scientific things.  
 3 Now, of course, it would always be possible to  
 4 set, you know, some lower -- lower objectives to different  
 5 things. But this is what the community -- you know, this  
 6 was built on the long tradition, historical tradition of  
 7 looking back at how solar physics had developed and what  
 8 was needed to be done to move forward in understanding the  
 9 sun.  
 10 And when we looked at sites, and we looked at  
 11 Haleakala, Haleakala turns out to be the best site in the  
 12 world. And I think it is very fitting that it is the best  
 13 site in the world because it is involved with the sun.  
 14 And, you know, it was selected as the best site.  
 15 The science goals are minimized, both on the  
 16 cost issue, as you've heard, and on what the community  
 17 wants to achieve with this telescope. So I think we're  
 18 there where you would like us to be in terms of minimizing  
 19 the telescope. I mean, a lot of us would like to have  
 20 seen an eight-meter telescope and look at the sun, but a  
 21 four-meter will get us to the science goals that have been  
 22 laid out.  
 23 MS. LIZ GORDON: I guess that wasn't my point.  
 24 I guess, because the give and take, you're asking folks to  
 25 give a lot. And is the science community willing to give

115

1 certain goals, you know, that, while are in good science,  
 2 because of this site and the impacts, you know, which is  
 3 just not appropriate at this time. I guess that is good  
 4 to know.  
 5 MS. CAROLINE BLANCO: And keep in mind that they  
 6 are the proposers. That's not NSF.  
 7 MS. LIZ GORDON: Right.  
 8 MS. CAROLINE BLANCO: So, you know, NSF -- the  
 9 proposal comes to NSF as a package for us to consider.  
 10 Our goal -- our role is not to reevaluate all of that. It  
 11 is responsive to the scientific community. So that is why  
 12 I say it's a little different than other federal agencies  
 13 in that respect.  
 14 MS. ANNELLE AMARAL: I am coming to Warren, and  
 15 then Nancy, and then Charlene.  
 16 Warren.  
 17 MR. WARREN SHIBUYA: Okay. I am Warren Shibuya.  
 18 When I first found out about ATST, it was in  
 19 2005. I was retired at that time, and had worked in the  
 20 space and missile systems, designing satellites and  
 21 rockets. And I thought it was a wonderful career that I  
 22 had for over 32 years. I wanted to have this experience  
 23 experienced by someone on Maui, more particularly a  
 24 resident of Maui.  
 25 I had been mentored by now the Dean of the

116

1 College of Engineering at UH. I worked in the radio  
 2 science lab, at that time it was called, on CENTCOM III  
 3 satellite communications. I was a sophomore.  
 4 I was selected, and I was just floored.  
 5 And I also worked with the guys in the Air  
 6 Force, at Palehua Solar Observatory, on solar flares. In  
 7 making the correlation, connecting the dots between solar  
 8 flares and the communication disruptions and the studying  
 9 of the ionospheres and how these satellite communications  
 10 were impacting human race as well as threatening proposed  
 11 NASA launching of astronauts into space meant a lot to me.  
 12 I wanted this experience, this type of  
 13 knowledge, to be shared by not only even the Maui folks,  
 14 but the world. If we could have people enthused in doing  
 15 basic research, applied research, applied engineering,  
 16 this will be great. I had that chance because somebody  
 17 mentored me, somebody took an interest in me.  
 18 I am here to give back. I am here because I saw  
 19 the potential in this project, not only for Maui, but the  
 20 whole world, in sharing information on a very basic  
 21 information about our sun which provides not only  
 22 spirituality -- it's a symbol of that -- but we also look  
 23 in terms of our lives. It provides the basis for our  
 24 lives. We all know that.  
 25 In that respect, I wanted to know more about it,

117

1 what is it, I knew that there were layers of gases and  
 2 there's temperature differences. And because of the  
 3 turbulence, you have these flares coming out. And they  
 4 have tremendous powers. They can nuke or radiate or  
 5 microwave an astronaut in space if they were directed in  
 6 the same direction. And that is tremendous power that we  
 7 can probably harness in some way.  
 8 And we are talking about renewable energy. Here  
 9 we have a renewable energy crisis because we're not even  
 10 applying a basic one that the satellites use,  
 11 photovoltaics. And there is no long screwdriver that  
 12 fixes our panels up there.  
 13 I have them in my house. So, you know, I am not  
 14 only thinking and talking about it, I have done it. And  
 15 it's working for over five years now.  
 16 The point here is that I've worked with this.  
 17 And I've worked with Craig personally to come up with  
 18 solar panels.  
 19 Why don't you have solar panels?  
 20 What about mitigating some of these -- the  
 21 height? Can't. We went through all of these engineering  
 22 studies, went through the technical details. I sympathize  
 23 with many of these items.  
 24 The other part, in terms of the grounds, how can  
 25 we restore this? Because every time we have a scientific

118

1 project, we apply permanency. And so it came about, the  
2 sunset clause. That idea came about in our discussions.  
3 So now the sunset clause is going to be part of  
4 that, I hope it is, a part of the MOA. That is after you  
5 are pau with your four sun cycles, you clear it up. Okay.  
6 You take your rubbish and go home. You clean up the place  
7 and make it look good.  
8 But in the meantime, you share this knowledge,  
9 you share this opportunity, you provide for the chance for  
10 people to worship this sacred area. You share this with  
11 both the science and the spiritual aspects of it.  
12 That was part of the discussion. And that is  
13 why this sunset clause was developed.  
14 Also, the institute that Uncle Charlie proposed  
15 was a means of mitigating, allow for the residents,  
16 especially the native host people, to come up and bring  
17 themselves up. I am not talking about OJT, on-the-job,  
18 training. I am talking education, basic education of  
19 math, science, engineering, technology, all of these  
20 matters. Bring yourself up, bootstrap is fine, but you  
21 need the basis of education, you need a chance to have a  
22 mentor, you have a chance to see it in action, as I had  
23 that opportunity.  
24 This is a rare opportunity. I hope everyone has  
25 a chance in some field or another.

119

1 I did work in terms of that. And so there was a  
2 lot of back and forth. I was a public person doing this.  
3 I had no personal -- I don't represent any organization.  
4 I am just retired.  
5 Thank you.  
6 MS. ANNELLE AMARAL: Thank you.  
7 Going to Nancy, and then Charlene.  
8 MS. NANCY McMAHON: Thanks for sharing that.  
9 I mean, I think even our host culture would be  
10 appreciative to know that the sacred spot could perhaps  
11 someday provide information and knowledge to help the rest  
12 of the world out. I think they would be greatly  
13 acknowledged by that.  
14 I think -- to let you understand that -- and I  
15 think of myself as a scientist, but I have to look at the  
16 other issues that aren't just science here. And part of  
17 the concept was the culture, and even the public, you've  
18 probably made a lot of concessions, you'll provide  
19 training, you are providing access. You have done all  
20 this, but we're still here and they didn't -- they didn't  
21 participate.  
22 MR. WARREN SHIBUYA: Yes.  
23 MS. NANCY McMAHON: So now there's no room for  
24 negotiation. There is no things to negotiate. You've  
25 reached your level of best you could. And we don't

120

1 understand that from this side. And I don't know how to  
2 -- and you've had to address different people. And you've  
3 had to -- and there are various views. And you may have  
4 taken and thought you were following the right one and you  
5 were open about that. I think that is important. And we  
6 are here because of that reason.  
7 I think, you know, that you have -- beyond the  
8 timeframe, maybe we don't -- not all of us understand all  
9 the documents and the studies that you did to get there.  
10 But it seems like we've reached this point where we got to  
11 now, which is what we got involved in -- because you've  
12 done concessions, and now we -- and you've done a lot.  
13 You probably have done a lot. It's just hard for us to  
14 see that.  
15 And I just wanted to have you understand that  
16 from this side. And I don't think -- because of the  
17 situation, and several that went up the other day with us,  
18 you heard from Pua, there has been a lot of desecration up  
19 there. And there is a lot of hurt. So you are also  
20 taking the burden of that with you. And you are being  
21 asked to heal that. And that is huge to have it on you.  
22 And there is probably no right or wrong answer  
23 here for any of us. And so I think, you know, trying to  
24 keep this door on this communication is the best thing we  
25 can do in trying to figure out, you know, okay, we -- we

121

1 -- maybe we can do something. What are we -- and we just  
2 need to hear these things and let -- acknowledge the fact.  
3 And I think you tried this time to do that, but people  
4 aren't going to be happy with this no matter what. But  
5 acknowledge that is their right to know that.  
6 MR. WARREN SHIBUYA: Sure.  
7 And, Mike, can you tell them about the part that  
8 we came about in terms of cleaning up some of this mess  
9 that she is talking about?  
10 MS. CAROLINE BLANCO: That's right.  
11 MR. WARREN SHIBUYA: Like Reber Circle.  
12 MR. MIKE MABERRY: I apologize. I am not sure  
13 that I remember who had suggested it. I think it was  
14 Kiope.  
15 But, for example, the very first telescope that  
16 was ever built at the summit, in the -- in the Kolekole  
17 area, the first -- the first observing was actually done  
18 from Puu Ulaula, Red Hill. And that is the reason there's  
19 a building there today.  
20 But Reber Circle is a -- it's an area where  
21 there is a concrete circle, and there may be still some  
22 pieces of the track that was on it, that was built in the  
23 early 1950s. And it was suggested that that area be  
24 cleaned up and restored. It is a -- it would -- it would  
25 -- you know, it's something that we can consider. I mean,

122

1 we're -- we're open.  
 2 You want to follow up on that, Craig?  
 3 DR. CRAIG FOLTZ: The broadcast.  
 4 MR. MIKE MABERRY: The broadcast, yeah, exactly.  
 5 When you are standing at Ulaula, looking toward Kolekole,  
 6 one of the first things you see in the foreground is a  
 7 group of shacks and antennas. It looks like, you know,  
 8 trailer -- trailer trash. The project team has sought and  
 9 secured funding and is in the process of relocating those  
 10 antennas and those shacks. And they will be gone before  
 11 the end of February of '09. So that is -- that is part of  
 12 the cleanup that we are looking at.  
 13 And we are open -- we are open to suggestions as  
 14 far as some of the things that we can try to do.  
 15 MS. ANNELLE AMARAL: Okay. I am coming back to  
 16 Charlene.  
 17 MS. CHARLENE DWIN VAUGHN: There was a question  
 18 about how this process could have worked differently. And  
 19 I think, for me, one of the things that might have been  
 20 useful would have been for a lot of activity and resources  
 21 that have been expended being proactive, that have been  
 22 held in abeyance until we got through this process, and  
 23 people understood what you were putting on the table in  
 24 terms of mitigation or whatever. So that there would be a  
 25 collaboration, a discussion and a buy-in.

123

1 When I look through the National Historic  
 2 Preservation Act, and it talks about properties of  
 3 traditional religious and cultural significance that may  
 4 be eligible for the National Register, consistent  
 5 throughout this is consult with Native Hawaiians'  
 6 organizations -- consult with Native Hawaiian  
 7 organizations, develop an agreement or MOU with Native  
 8 Hawaiian organizations. Which, to me, speaks to sitting  
 9 down with people, understanding what you are doing, why  
 10 you are doing it, the intent, and how it ultimately will  
 11 benefit the long-term goals and needs of that community.  
 12 We have a lot of things that have been done.  
 13 And I think they are all good things. And you are to be  
 14 commended. It's hard to look at it in the context of  
 15 mitigation and sensitivity and respectfulness in this  
 16 forum at this time.  
 17 So, again, I think we got way ahead of  
 18 ourselves. I think we're way out there on the end where  
 19 this discussion is now truncated to, okay, we've done all  
 20 this, we've had the conversation, modified this, let's  
 21 talk about how to wrap this up. It's just not the way  
 22 consultation typically is carried out or has been managed.  
 23 So I am struggling with trying to get back on  
 24 the trajectory that I am most familiar with in dealing  
 25 with Native Hawaiian organizations and Native Americans

124

1 per an act, you know. So, today, we're here talking about  
 2 so what else can be done. But in having that discussion,  
 3 we keep hearing what has been done or what decision has  
 4 been reached or how this will work or how this is, you  
 5 know, something that will help long-term.  
 6 I am not sure. So how do you fold that into  
 7 going forward?  
 8 MS. CAROLINE BLANCO: You know, it might be  
 9 helpful to understand that IFA has separate  
 10 responsibilities than the NSF.  
 11 MR. MIKE MABERRY: It's a state agency.  
 12 MS. CHARLENE DWIN VAUGHN: Okay.  
 13 MS. CAROLINE BLANCO: So they continue to go  
 14 forward with their progress. And that is separate and  
 15 apart from NSF and its process.  
 16 MS. CHARLENE DWIN VAUGHN: But does the SHPO  
 17 collaborate with you on any of this? Because there is  
 18 some commonality here.  
 19 DR. CHARLIE FEIN: Constantly.  
 20 MS. CHARLENE DWIN VAUGHN: So you --  
 21 MS. TONIA MOY: When?  
 22 MR. MIKE MABERRY: The previous Director.  
 23 DR. CHARLIE FEIN: They can say whatever they  
 24 like, but we have many, many letters.  
 25 MR. MIKE MABERRY: Documenting, yes.

125

1 DR. CHARLIE FEIN: Document --  
 2 MS. CHARLENE DWIN VAUGHN: Where they have  
 3 endorsed a lot of these actions?  
 4 DR. CHARLIE FEIN: Yes.  
 5 MR. MIKE MABERRY: Well, first off, there is a  
 6 concept in Hawaii, and that was discussed at the last  
 7 meeting, for example, and that is the konohiki. And in a  
 8 sense, what we had identified to us, and not -- and not  
 9 just Kiopē, but yourself and many others in the community,  
 10 when we went out in early 2003-2004, and asked, who is the  
 11 elder kupuna who has responsibility. Okay. And the  
 12 konohiki concept is -- is -- you know, it was identified  
 13 as a person, as an entity who has long-term background  
 14 information. And we were told by everybody that it's Kahu  
 15 Maxwell. And Kahu Maxwell was consulted. He was the  
 16 first person we met with. Him and Hokilani Padilla, early  
 17 on, the first time these guys ever hit the ground, and  
 18 these concepts were started being discussed. And all of  
 19 these projects that have been done or in the process of  
 20 being done, we did consult the konohiki before we started  
 21 doing it.  
 22 MS. ANNELLE AMARAL: I am wondering, however, if  
 23 -- if you are raising an issue with respect to regulation  
 24 or with respect to law, that something has been violated  
 25 here in terms of public notice, public discussion. Is

<p style="text-align: right;">126</p> <p>1 that what you are raising?</p> <p>2 MS. CHARLENE DWIN VAUGHN: I don't think it's a</p> <p>3 violation at all. It's a clarity of the process and how</p> <p>4 the collaboration unfolded to sanction. What really is</p> <p>5 being presented as a lot of concessions, as Nancy said, a</p> <p>6 lot of mitigation to be sympathetic to Haleakala, or at</p> <p>7 least respectful of, when it doesn't seem to be that a lot</p> <p>8 of stakeholders participated in sanctioning it or saying</p> <p>9 that, yes, this is acceptable to move this forward.</p> <p>10 You are saying the record is there, that you</p> <p>11 have the authority under state law to do that. For us,</p> <p>12 again, it seems like there had to be some linkage with the</p> <p>13 state agency that we work with, which is the SHPO. And I</p> <p>14 have just never heard the SHPO go on record indicating</p> <p>15 they understood all this was going on.</p> <p>16 MS. ANNELLE AMARAL: That is -- all right. That</p> <p>17 is just a simple factual statement that somebody can</p> <p>18 clearly answer, right? I mean, there has --</p> <p>19 MS. CHARLENE DWIN VAUGHN: Who sat at the table?</p> <p>20 I heard Charlie Maxwell. But did Charlie share with the</p> <p>21 other people, what was the process, or is there one?</p> <p>22 MS. ANNELLE AMARAL: There must be a process.</p> <p>23 MR. JEREMY WAGNER: Well --</p> <p>24 MS. ANNELLE AMARAL: Jeremy.</p> <p>25 MR. JEREMY WAGNER: I am not sure -- this is</p>	<p style="text-align: right;">128</p> <p>1 MS. CHARLENE DWIN VAUGHN: So how --</p> <p>2 MR. JEREMY WAGNER: -- for the site. So we want</p> <p>3 to make it as short as we can.</p> <p>4 So were people consulted? Yeah, because they</p> <p>5 told us height was an issue.</p> <p>6 Did they have input into the design?</p> <p>7 Absolutely.</p> <p>8 MS. CHARLENE DWIN VAUGHN: Did the SHPO ever</p> <p>9 come to the table or meeting representing Native Hawaiian</p> <p>10 interests or your organization?</p> <p>11 I mean, there seem to be some established</p> <p>12 entities here that tend to come to all the meetings that I</p> <p>13 know my office is involved with on Oahu for the Navy and</p> <p>14 the Army. And, I mean, it's their work, but I know we</p> <p>15 bring select people to most meetings to have these</p> <p>16 discussions. I am just trying to figure out how they were</p> <p>17 involved.</p> <p>18 MR. JEREMY WAGNER: Well, I am trying to use the</p> <p>19 height as a specific example.</p> <p>20 MS. CHARLENE DWIN VAUGHN: Okay. But --</p> <p>21 MR. JEREMY WAGNER: So we didn't -- we did not</p> <p>22 wait for SHPO to tell us to make it shorter.</p> <p>23 MS. CHARLENE DWIN VAUGHN: But did you tell the</p> <p>24 SHPO, in the context of complying with the federal</p> <p>25 regulation for this project that had an impact on a</p>
<p style="text-align: right;">127</p> <p>1 Jeremy Wagner again. I am not sure I am following</p> <p>2 exactly.</p> <p>3 But for the height, for example --</p> <p>4 MS. CHARLENE DWIN VAUGHN: Okay.</p> <p>5 MR. JEREMY WAGNER: -- the viewplain was</p> <p>6 identified as the issue essentially the day we looked at</p> <p>7 Haleakala. All right. And it was from discussions with</p> <p>8 people out here. It was from experience through the</p> <p>9 long-range development plan, and our environmental</p> <p>10 contractor and such. They said viewplain will be a</p> <p>11 significant issue. It was cultural, birds, the viewplain.</p> <p>12 That is -- those were the three big ones that we</p> <p>13 identified.</p> <p>14 And the project team -- and the National Solar</p> <p>15 Observatory is responsible for executing the project. And</p> <p>16 the project at this point is the design and development of</p> <p>17 this facility. It's not construction, because we haven't</p> <p>18 been awarded funds for that. It is an improvement. So</p> <p>19 design and development.</p> <p>20 So we hear that the viewplain is an issue. So</p> <p>21 immediately that becomes part of the requirement list that</p> <p>22 goes into or feeds into the engineering studies, into the</p> <p>23 engineers' work, to design the facility. So height needs</p> <p>24 to be minimized. Not only is it a cost issue, but it's --</p> <p>25 it's an issue for the folks on Maui --</p>	<p style="text-align: right;">129</p> <p>1 property that was known to be a traditional, cultural</p> <p>2 property, was there a discussion -- please hear me out.</p> <p>3 MR. JEREMY WAGNER: Uh-huh.</p> <p>4 MS. CHARLENE DWIN VAUGHN: Was there a</p> <p>5 discussion that said this is going to be critical to us</p> <p>6 having this consultation, can you come to a meeting, or</p> <p>7 won't you look at a memo, or can you give us insight or</p> <p>8 feedback into? I am still struggling with the</p> <p>9 coordination.</p> <p>10 MS. ANNELLE AMARAL: Okay. Here. Here. Here,</p> <p>11 here, here. Here, the answer.</p> <p>12 DR. CHARLIE FEIN: If you would like us to</p> <p>13 gather the documentation for all of the invitations to the</p> <p>14 SHPO with specific requests for input, month after month</p> <p>15 after month -- would you like us to do that?</p> <p>16 MS. CHARLENE DWIN VAUGHN: What is that going to</p> <p>17 share with me? Tell me, because they need to hear.</p> <p>18 DR. CHARLIE FEIN: What that is going to share</p> <p>19 is that we expressed our concerns --</p> <p>20 MS. CHARLENE DWIN VAUGHN: Okay.</p> <p>21 DR. CHARLIE FEIN: -- to the SHPO, invited the</p> <p>22 SHPO to the 13-some-odd meetings that we had between the</p> <p>23 scoping and the issuance of the DEIS to request their</p> <p>24 input, their particular --</p> <p>25 MR. JEREMY WAGNER: Process.</p>

130

1 DR. CHARLIE FEIN: -- perspective on those  
2 specific issues. We have that documented.  
3 MS. CHARLENE DWIN VAUGHN: Okay. I don't want  
4 to come across as pedantic, but under our regulations,  
5 800.8(c), says specifically if it's the agency's intent to  
6 coordinate Section 106 and NEPA, the SHPO has to document  
7 that they agree to such coordination.  
8 Can you show me that letter where there was  
9 buy-in that this was going to happen this way?  
10 DR. CHARLIE FEIN: Yes.  
11 MS. CHARLENE DWIN VAUGHN: You have that?  
12 DR. CHARLIE FEIN: We have that letter.  
13 MS. CHARLENE DWIN VAUGHN: Okay. So you feel  
14 that by not participating, the SHPO, in a default  
15 manner --  
16 DR. CHARLIE FEIN: Thank you.  
17 MS. CHARLENE DWIN VAUGHN: -- allowed you all to  
18 take some of the actions that you did?  
19 DR. CHARLIE FEIN: Thank you.  
20 MS. CHARLENE DWIN VAUGHN: Okay.  
21 MS. MARTHA CATLIN: Excuse me. This is Martha.  
22 I don't think that we have ever seen any kind of  
23 documentation to the Advisory Council --  
24 MS. CHARLENE DWIN VAUGHN: And my office.  
25 MS. MARTHA CATLIN: -- and that was intending to

131

1 use 800.8(c). Could that be clarified?  
2 MS. CAROLINE BLANCO: I --  
3 MS. CHARLENE DWIN VAUGHN: It will be a letter.  
4 It can't be clarified out of the written comment, Martha.  
5 They are saying it exists.  
6 MS. CAROLINE BLANCO: Well, I don't think -- I  
7 think this isn't getting us where we really need to go.  
8 If there were problems in the process, the problems  
9 existed years ago.  
10 MS. CHARLENE DWIN VAUGHN: But there are --  
11 MS. CAROLINE BLANCO: I understand what you are  
12 saying, Charlene. And I understand you are trying to  
13 grasp with how did they get to this point.  
14 MS. CHARLENE DWIN VAUGHN: Foundation.  
15 Foundation. To say we're at the point to execute and  
16 negotiate an agreement, you have to have a foundation.  
17 There has to be a history. Everybody who is going to get  
18 a circulated agreement needs to understand how it built  
19 and evolved over time.  
20 I am not saying it didn't have a basis for its  
21 evolution. I am saying I am not seeing it. I don't  
22 understand it. And I am being talked through it. And you  
23 can't talk me through it. I need to see -- give me a  
24 summary of what outreach you did and what decision points  
25 and milestones you reached out because you knew things

132

1 needed to happen. I would love to see that.  
2 MS. CAROLINE BLANCO: Charlene.  
3 MS. CHARLENE DWIN VAUGHN: That, at least, gives  
4 me a chronology that helps me to understand.  
5 DR. CHARLIE FEIN: Did we not provide that to  
6 you?  
7 MS. CAROLINE BLANCO: We have sent that to you  
8 in several different letters. And the process is all out  
9 there on the website.  
10 MS. CHARLENE DWIN VAUGHN: Okay.  
11 MS. CAROLINE BLANCO: To revisit it all now does  
12 not seem to me to be productive.  
13 I think that we have a transparent process. We  
14 have a website. We have people who can explain things.  
15 The problem is if people haven't familiarized themselves  
16 with the entire record that has occurred over years, that  
17 is not something that I think we should do right now --  
18 MS. CHARLENE DWIN VAUGHN: Okay. But --  
19 MS. CAROLINE BLANCO: -- to use the time most  
20 effectively.  
21 MS. CHARLENE DWIN VAUGHN: Okay. But it's a  
22 yeomen's task for you to expect everybody here to go to a  
23 website and read through three to four years of background  
24 to get to today. So what are we talking about, what could  
25 be considered mitigation, where are we at in coming up

133

1 with a proposal.  
2 MS. CAROLINE BLANCO: Charlene, I realize that,  
3 but, the truth is, we have let people know from the time  
4 it began. So regardless of the fact that we have people  
5 now that may be new to the process, the entities involved  
6 have been involved from day-one and have had access to the  
7 documents and have been familiar.  
8 MS. CHARLENE DWIN VAUGHN: Liz is sitting there  
9 at the Park Service, saying, no, she hasn't. She's a  
10 critical player. She doesn't know this information.  
11 MS. CAROLINE BLANCO: Well, you know, part of  
12 the problem is, too, if there are invitations to meetings  
13 that people don't attend, that is not something you can  
14 do. Not just that, I am talking about years ago, and how  
15 the process has been involved. I wouldn't expect that  
16 anybody would be completely intimately involved with all  
17 of the process that has gone on at any given time.  
18 MS. CHARLENE DWIN VAUGHN: So we're to accept  
19 the color is set, the height is set, a lot of other  
20 factors are set, they are cast in concrete for the  
21 scientific needs, so we need to go forward with this as a  
22 given, there is no opportunity to discuss certain things,  
23 so let's fast forward?  
24 MS. ANNELLE AMARAL: Well, let's --  
25 MS. CHARLENE DWIN VAUGHN: Yeah.

134

1 MS. ANNELLE AMARAL: That doesn't sound -- all  
2 right. Let me -- what I hear, quite frankly, is a  
3 discussion about we're missing some foundational  
4 information.  
5 MS. CHARLENE DWIN VAUGHN: That is all I am  
6 saying.  
7 MS. ANNELLE AMARAL: We are missing some factual  
8 information.  
9 MS. CHARLENE DWIN VAUGHN: All right. Do you  
10 agree?  
11 MS. LIZ GORDON: Yes.  
12 MS. ANNELLE AMARAL: So we did not -- can we  
13 take a bit of a break? I believe we have the information  
14 available on a computer for Powerpoint presentation.  
15 MS. CHARLENE DWIN VAUGHN: Okay.  
16 MS. ANNELLE AMARAL: So let's walk through that  
17 timeline of what documents --  
18 DR. CRAIG FOLTZ: We're past time.  
19 MS. ANNELLE AMARAL: Okay.  
20 In the meantime, let me take a little -- okay.  
21 We were supposed to end at 4:00.  
22 And, Marilyn, you have got to go?  
23 Superintendent, you have to go?  
24 MS. MARILYN PARRIS: Well, I have to leave  
25 before 5:00.

135

1 MS. ANNELLE AMARAL: Before 5:00. Just talk  
2 amongst yourselves while I ask the process question.  
3 (Recess, 4:17 p.m. to 4:34 p.m.)  
4 MS. ANNELLE AMARAL: Back on the record. We're  
5 back on the record.  
6 And before we proceed any further, Caroline has  
7 said there's a five-minute explanation.  
8 MS. CAROLINE BLANCO: Or less.  
9 MS. ANNELLE AMARAL: Or less.  
10 MS. CAROLINE BLANCO: The question had come up  
11 about whether -- I mean, we started to get into some  
12 specific 106 speak, so to speak. And in that there's a  
13 question about these two environmental compliance  
14 processes, there's NEPA and Section 106. And if you're  
15 going to combine the two processes, which the regulations  
16 allow for, the -- and the National Historic Preservation  
17 Act allows for Section 106, there is specific procedures  
18 that have to be followed to go ahead and do that.  
19 I can say, having been around the 106 world for  
20 a while, agencies are fairly -- they are getting -- you  
21 know, it's becoming more common that they combine  
22 processes. I think you would probably agree. I mean,  
23 it's relatively recent that this is becoming, you know,  
24 something that happens as a matter of course for  
25 efficiency reasons.

136

1 But, of course, there's a lot of overlap. NEPA  
2 requires consideration of a federal activity on cultural  
3 resources, historic resources. And, of course, that is  
4 the center of Section 106. So there is overlap. The  
5 regulations are wonderful in that they allow for that  
6 combination of it.  
7 But there are specific requirements to do it.  
8 And I think what happened here is that there was an  
9 attempt to try to combine the processes, but there was no  
10 announcement, formal letter that said this is exactly how  
11 we're going to do it and we got the buy-in of the SHPO and  
12 everybody else to understand this is the way it's going.  
13 That being said, a lot of the process happened  
14 in a de facto way of a combination of these two. I  
15 explained this at the last meeting, but I really didn't go  
16 ahead and explain this at this meeting. And, largely,  
17 because I wanted to keep the background parts, you know,  
18 very summarized and so we could have more of a discussion  
19 about impacts and how to resolve them.  
20 But just to clarify, there was no specific  
21 letter that said, pursuant to the NHPA, Section 106  
22 regulations, we're combining these two processes such that  
23 everything that happens under NEPA gets critical 106, vice  
24 versa, and so forth.  
25 With that being said, there was an awful lot of

137

1 transparency that happened in terms of public process.  
2 Now, whether it's public process for purposes of 106, we  
3 get into some confusion there.  
4 So that being said, what did appear in the Draft  
5 EIS was the tower as it is now determined to be proposed.  
6 Correct?  
7 The height of it, the color of it and so forth.  
8 And so I think where we stand now, in terms of how we move  
9 forward, is to look at it in terms of this is the tower  
10 that is minimized to the most efficient -- in the most  
11 efficient way to meet the scientific objectives.  
12 So is there a way to make it smaller and meet  
13 the purpose of the project? The answer is no.  
14 Would we like to have that be the case? Yes, of  
15 course. It would be great to be able to tell you, in all  
16 honesty, sure, we would love to lower it by 15 feet or 100  
17 feet, but we can't do that if it's going to beat the  
18 scientific goals of the project that is being proposed.  
19 So that is where we are at with regard to those,  
20 those issues, height and color.  
21 And so what I would like to do is, first of all,  
22 answer -- or direct folks to answer questions if there are  
23 still questions remaining about -- about that piece of it,  
24 and can there be anything that we can do with regard to  
25 putting that on the table. If there is any further

138

1 clarification of that issue, we would be happy to try to  
2 help explain it.

3 MS. CHARLENE DWIN VAUGHN: So can you clarify  
4 for all of us what is on the table? Because that is what  
5 you are saying --

6 MS. CAROLINE BLANCO: Sure.

7 MS. CHARLENE DWIN VAUGHN: -- we need to focus  
8 on. What can we look at in terms of mitigation,  
9 minimization -- and you said all three.

10 MS. CAROLINE BLANCO: Absolutely. Absolutely.  
11 Okay.

12 With avoidance, to sort of categorize, I have --  
13 it's not that NSF is opposed to avoidance. That is not  
14 the -- I want to make sure that message is conveyed. The  
15 problem is that we can't see any way to avoid the impacts  
16 based on the scientific need for the tower to be X number  
17 of feet and to be a certain color. So as far as that  
18 goes, it's hard to imagine what avoidance would look like  
19 unless somebody has an idea that we haven't thought about.

20 And nobody is perfect. So, by all means, if  
21 anybody has ideas, understanding that the scientific goals  
22 would still have to be met in order for it to go forward,  
23 then -- then please let us know.

24 Minimization, I think that there was one  
25 proposal that did come under the category of minimization.

139

1 And that is some -- the sunset provision, limiting the  
2 life of the telescope, if it's approved for funding, and  
3 restoring it back to the community. That is on the table.

4 And then we look at mitigation, which are, you  
5 know, some other types of proposals. We have the three  
6 written proposals that were presented. That is the Maui  
7 Community College, Warren Shibuya and Uncle Charlie's,  
8 those three proposals.

9 We also had -- from the last meeting, we had the  
10 Star Compass as being a possibility. That is on the  
11 table.

12 Dr. -- or Craig Foltz here. He's a doctor, too,  
13 but we will call him Craig. So he had also talked about  
14 might people be interested in looking at ways to help with  
15 traditional practices with regard to noise, are there  
16 certain times that are more important to Native Hawaiians  
17 that should be under consideration. That is on the table.

18 MS. CHARLENE DWIN VAUGHN: And I heard another  
19 one, and that is how it involved Native Hawaiians and  
20 protocols or access and use --

21 MS. CAROLINE BLANCO: Absolutely.

22 MS. CHARLENE DWIN VAUGHN: -- to be on the  
23 table.

24 MS. CAROLINE BLANCO: And that kind of goes  
25 nicely with one of the proposals from the last meeting,

140

1 which was this concept of a konohiki that would work with  
2 the -- with the IFA to allow for -- there is access now  
3 that is allowed for traditional purposes, practices. But  
4 I think it was for the purpose of looking at how to  
5 interpret this site.

6 I think that was the main purpose, was it not?  
7 It was the main purpose of the konohiki concept,  
8 for interpretation and purposes of that.

9 Did you remember something else to remember?  
10 MS. TONIA MOY: Actually, I just want to say  
11 avoidance is actually still on the table in that if he  
12 chooses not to fund it.

13 MS. CAROLINE BLANCO: Excellent point.  
14 Excellent point.

15 And that is if we are --  
16 MS. CHARLENE DWIN VAUGHN: Okay.

17 MS. CAROLINE BLANCO: If we are looking at  
18 trying to reach an agreement between everybody, that  
19 wouldn't be -- I mean, that would not be the way to go  
20 with it, but -- for obvious reasons. But certainly we can  
21 look at minimization with regard to the sunset provision,  
22 or, again, any other ideas that folks have. And  
23 mitigation, certainly we're open to any other additional  
24 thoughts that -- that may come about.

25 MS. CHARLENE DWIN VAUGHN: And I would like to

141

1 go on record saying some of the things Mike is doing are  
2 clearly mitigation. They need to be documented and  
3 presented as such. He is doing a lot of things that he  
4 has worked out.

5 MS. CAROLINE BLANCO: Excellent point.

6 MS. CHARLENE DWIN VAUGHN: But it doesn't come  
7 across as mitigation --

8 MS. CAROLINE BLANCO: Right.

9 MS. CHARLENE DWIN VAUGHN: -- so he needs --

10 MS. CAROLINE BLANCO: Which reminds me, the  
11 Reber Circle.

12 MS. PUA AIU: Wait, wait, wait. That is not  
13 mitigation for this project. My concern is that's  
14 different context.

15 MR. MIKE MABERRY: Exactly.

16 MS. CHARLENE DWIN VAUGHN: What I heard, it was  
17 a couple, can you --

18 MS. CAROLINE BLANCO: Reber Circle cleanup.

19 MS. CHARLENE DWIN VAUGHN: That is what I am  
20 talking about.

21 MS. CAROLINE BLANCO: And, also --

22 MS. CHARLENE DWIN VAUGHN: Oh, no, no.

23 MS. CAROLINE BLANCO: -- I think the broadcast  
24 tower cleanup. Because, at the last meeting, we did talk  
25 about -- a lot about the cleanup of the --

142

1 MR. MIKE MABERRY: And the east-facing ahu.  
 2 DR. CRAIG FOLTZ: They actually were proposals.  
 3 MR. MIKE MABERRY: That's the reason.  
 4 MS. ANNELLE AMARAL: There were comments and  
 5 Mike --  
 6 MR. JEREMY WAGNER: Hey, you guys need to be  
 7 cognizant of her need to record this.  
 8 MR. MIKE MABERRY: I'm sorry.  
 9 MS. ANNELLE AMARAL: There was the projects that  
 10 Mike is working on also as mitigation, there was a Reber  
 11 Circle, the broadcast tower cleanup.  
 12 MR. MIKE MABERRY: East-facing ahu.  
 13 MR. WARREN SHIBUYA: East-facing ahu.  
 14 DR. CRAIG FOLTZ: There are a number of other  
 15 things that are still on the table.  
 16 MS. CHARLENE DWIN VAUGHN: Okay.  
 17 DR. CRAIG FOLTZ: I mean, for example, the bird  
 18 which has cultural significance, according to our  
 19 understanding. We have monitored the --  
 20 MS. LEIOHU RYDER: Petrels?  
 21 DR. CRAIG FOLTZ: The Petrel. We have monitored  
 22 the burrows. We would continue to monitor the burrows.  
 23 We are not -- we could not construct during breeding  
 24 season. We would not build fences.  
 25 There are -- the viewshed improvements, there

143

1 are issues of access and coordinating access.  
 2 MS. CAROLINE BLANCO: And all the mitigation  
 3 proposals in the letter and the draft.  
 4 I will tell those in a moment, but, by all  
 5 means, go ahead.  
 6 MR. HINANO RODRIGUES: Hinano Rodrigues, State  
 7 Historic Preservation.  
 8 We are talking -- and I am approaching this  
 9 strictly from a cultural perspective. We are talking all  
 10 about our mitigation proposals. And in talking about all  
 11 those mitigation proposals, we are, from my perception,  
 12 totally ignoring the cultural perspective in the sense  
 13 that -- and I think Leiohu has very well articulated what  
 14 the Hawaiian perspective is, in the sense that Haleakala  
 15 as a whole is a sacred site. What we are trying to do  
 16 when we discuss our mitigation proposals is to take that  
 17 whole and say, well, yeah, it's all important, but maybe  
 18 we can just narrow down to the specific area. I -- I  
 19 really think we are totally missing the point that Leiohu  
 20 is trying to make.  
 21 And we need -- we really need -- as someone  
 22 whose ancestors have lived on Maui for at least 900 years,  
 23 if not 1,500, if I am half Maoli -- half -- not Maoli, but  
 24 Marquesan, half Tahitian. So if I am Marquesan, then I go  
 25 back 1,500 years here. We need -- we need to look at it

144

1 from a cultural perspective. And we need to really  
 2 understand that Haleakala as a whole is a sacred place.  
 3 And that being said, it's almost impossible to talk about  
 4 mitigation.  
 5 MR. MIKE MABERRY: It is.  
 6 MS. CHARLENE DWIN VAUGHN: So with that being  
 7 said, help the group understand if you are saying all  
 8 discussions are shut down, off the table. Because a lot  
 9 of the things that are being cast as mitigation, you're  
 10 right, don't speak to the spirituality, don't speak to the  
 11 culture, don't speak to the tradition.  
 12 Nevertheless, there are things that are on the  
 13 table that could help deal with some desecration issues,  
 14 that would preserve access and use, and formalize  
 15 something that is now very fluid, unformal, unstructured.  
 16 So you have to put this in context for us. I heard what  
 17 you said, but then help me with that next linkage to that.  
 18 MR. HINANO RODRIGUES: Right. And the thing is,  
 19 I don't see how we can get to the next linkage until we  
 20 actually address it. And it looks as though no -- we are  
 21 not addressing it.  
 22 MS. CHARLENE DWIN VAUGHN: Okay.  
 23 MR. HINANO RODRIGUES: We heard Leiohu. And I  
 24 would say that almost everybody in this room feels exactly  
 25 what she is saying. But I am not quite too sure that it's

145

1 dead, that the issue is dead. It's just that the issue is  
 2 not being discussed.  
 3 MS. ANNELLE AMARAL: So allowing, Hinano, the  
 4 issue, how do you mitigate spirituality, is that the issue  
 5 we are talking about?  
 6 MR. HINANO RODRIGUES: Right.  
 7 MS. ANNELLE AMARAL: Okay. And in what ways can  
 8 you mitigate spirituality?  
 9 MR. HINANO RODRIGUES: Let's all discuss it, you  
 10 know.  
 11 MS. ANNELLE AMARAL: Okay. Start it. You start  
 12 it.  
 13 MR. HINANO RODRIGUES: How do we mitigate  
 14 spirituality? How do you -- I hear this talk about  
 15 church. Why are you applying Western concepts?  
 16 MR. JEREMY WAGNER: No.  
 17 MR. HINANO RODRIGUES: It's not a church. Well,  
 18 because when somebody said, "Oh, well, let's bring down  
 19 the volume," I go, "What." "Oh, do we do it before the  
 20 sun come up or the sun come down," I go, "What." You  
 21 know, our church is not Sunday, our church is not one day  
 22 out of the week. Our church is 24 hours, seven days. So  
 23 that -- we shouldn't even use that perspective. Let's  
 24 just throw it to the side because it's a poor analogy. It  
 25 doesn't work. Because you cannot understand our way you

<p style="text-align: right;">146</p> <p>1 want to use the word church.</p> <p>2 So, you know, once we start to do that, we are</p> <p>3 on a slippery slope. So we need to look -- we need to,</p> <p>4 all of us, take off our Western hats and put on our</p> <p>5 Hawaiian hats and see, like she said, if we can come up</p> <p>6 with ways to define or to mitigate spirituality.</p> <p>7 I think -- I think we can --</p> <p>8 MS. ANNELLE AMARAL: Okay.</p> <p>9 MR. HINANO RODRIGUES: -- you know.</p> <p>10 MS. CHARLENE DWIN VAUGHN: So give us an example</p> <p>11 of how we can.</p> <p>12 MR. HINANO RODRIGUES: Why don't we go around</p> <p>13 the room and ask everybody what they think spirituality</p> <p>14 is? We can't discuss spirituality unless we know what</p> <p>15 it is.</p> <p>16 MS. ANNELLE AMARAL: We're speaking of the</p> <p>17 sacredness of Haleakala. We are speaking of this is a</p> <p>18 spiritual center, it is a sacred site.</p> <p>19 So, Hinano, I thought I heard you say that you</p> <p>20 don't hear any disagreement in the room acknowledging that</p> <p>21 this is a spiritual sacred place. You don't hear any -- I</p> <p>22 didn't hear any disagreement in the room. I didn't hear</p> <p>23 anybody say it's not spiritual, it's not sacred. So I</p> <p>24 don't know that we need to discuss spiritual and sacred.</p> <p>25 MR. JEREMY WAGNER: This is Jeremy Wagner again.</p>	<p style="text-align: right;">148</p> <p>1 an effort that you have made with regard to the site</p> <p>2 itself. And I wonder if maybe that might be one way to</p> <p>3 approach this.</p> <p>4 MS. CHARLENE DWIN VAUGHN: Another way, I think,</p> <p>5 that you deal with spirituality is to acknowledge that it</p> <p>6 is unfettered use and access. There are minimum, if any,</p> <p>7 prohibitions to connecting with something that is</p> <p>8 spiritual and that is part of and defines who you are.</p> <p>9 MS. CAROLINE BLANCO: And that should be</p> <p>10 actually up there on the list of mitigation, is access.</p> <p>11 And I also had to -- or wanted to add to that</p> <p>12 list of mitigation. These are actually defined in the</p> <p>13 Draft EIS, if anyone wants to take a look at that.</p> <p>14 It's --</p> <p>15 MS. ANNELLE AMARAL: It's there.</p> <p>16 MS. CAROLINE BLANCO: This is consistent with</p> <p>17 what Mike was explaining earlier about the site. That NSF</p> <p>18 would require the presence of a cultural specialist</p> <p>19 engaged at the earliest stages of the planning process to</p> <p>20 monitor construction process and consult with and advise</p> <p>21 the onsite project manager regarding any cultural or</p> <p>22 spiritual concerns. And then NSF would also require that</p> <p>23 all construction crew members attend sense of place</p> <p>24 training by qualified Native Hawaiian practitioners. And</p> <p>25 then --</p>
<p style="text-align: right;">147</p> <p>1 I would like to say, I mean, from my experience</p> <p>2 to not mitigate, but show respect for the spiritualness of</p> <p>3 the site, basically, it comes from knowledge, knowledge of</p> <p>4 how that spirituality developed, what the culture involved</p> <p>5 considers in respect to that site. And so it might be</p> <p>6 shown -- you might show respect through being quiet. You</p> <p>7 might show respect by covering your head. You might show</p> <p>8 respect in lots of different ways. And so the knowledge</p> <p>9 of how that spirituality exists up there, I think, is the</p> <p>10 first way you -- maybe not mitigate it, but you show</p> <p>11 respect to it.</p> <p>12 MS. ANNELLE AMARAL: Jeremy, I need to expand on</p> <p>13 this. When you say "by knowledge," do you mean that if we</p> <p>14 provide for a way for non-practitioners to be explained or</p> <p>15 to help them understand the sacredness, that the conduct</p> <p>16 of those practitioners, then, would be more in keeping</p> <p>17 with the sacredness of the site? Is that what you are</p> <p>18 trying to say by knowledge, teach more?</p> <p>19 MR. JEREMY WAGNER: Yes. I think the more you</p> <p>20 understood about it, the more respectful, potentially, you</p> <p>21 could be.</p> <p>22 MS. CAROLINE BLANCO: Might this get us back to</p> <p>23 something that Shad Kane had talked about in terms of</p> <p>24 protocols for helping to develop that knowledge?</p> <p>25 Mike, I think that is something that's already</p>	<p style="text-align: right;">149</p> <p>1 MS. CHARLENE DWIN VAUGHN: Go ahead.</p> <p>2 MS. MARILYN PARRIS: I think that's all well and</p> <p>3 good, but what Leiohu -- this is Marilyn, Park Service --</p> <p>4 was that she doesn't feel -- don't let me speak for you --</p> <p>5 somebody cuts off the head, it dies. How can you mitigate</p> <p>6 someone's head? And was that your point?</p> <p>7 MS. LEIOHU RYDER: And something that is at</p> <p>8 risk.</p> <p>9 MS. MARILYN PARRIS: At risk of dying?</p> <p>10 MS. LEIOHU RYDER: Yes. Energetic.</p> <p>11 MS. MARILYN PARRIS: It's going to be difficult</p> <p>12 to mitigate that.</p> <p>13 MS. CAROLINE BLANCO: Can you think of a way --</p> <p>14 MS. CHARLENE DWIN VAUGHN: That is what he was</p> <p>15 saying.</p> <p>16 MS. ANNELLE AMARAL: To mitigate something in</p> <p>17 danger of dying?</p> <p>18 Well, I would just point out our experience.</p> <p>19 And that was we were about to lose our language. We</p> <p>20 retrieved our language. We went to the Maoris, we learned</p> <p>21 to tanga leo, we translated that into punana leo.</p> <p>22 This is Annelle taking facilitator's hat off for</p> <p>23 a moment.</p> <p>24 One thing we have not, as a native people,</p> <p>25 worked on is the issue of our spirituality. Because we</p>

150

1 run afoul with our kupuna who don't want us to talk about  
2 the old gods and don't want us to talk about the way  
3 things were. It is a challenge for our people, for us.  
4 Not them; for us. We know that.  
5 MS. MIKAHALA HELM: Something that you brought  
6 up, though, sparks this. If we are to protect that, then  
7 we would put into place a plan for Haleakala so that it is  
8 protected.  
9 MS. ANNELLE AMARAL: Uh-huh.  
10 MS. MIKAHALA HELM: So this does not happen. So  
11 if we are going to protect the sacredness of our -- we all  
12 know as far as identity for Hawaiian people, if you check  
13 any song that is written about Maui, you will almost be  
14 sure Haleakala is in there.  
15 MS. CHARLENE DWIN VAUGHN: Uh-huh.  
16 MS. MIKAHALA HELM: You know, so if we're going  
17 to talk about what you just mentioned, that would be the  
18 extent to which we would go.  
19 MS. CHARLENE DWIN VAUGHN: And how would you --  
20 MS. MIKAHALA HELM: I would have a plan on how  
21 to protect Haleakala and not have this come up with this  
22 particular ATST, with Pan-Star sitting in -- I don't know  
23 where it is. And all of a sudden, we get another letter,  
24 one more telescope, some other thing is going to happen.  
25 That is how we are experiencing these kinds of things

151

1 happen.  
2 MS. LEIOHU RYDER: And we don't -- this is  
3 Leiohu. And we don't look at it from, you know, one thing  
4 and another thing. See, we see the relationship in all  
5 things. So when -- when we speak of the head being  
6 removed, the ancient ones show us the grids.  
7 Now, how do you document it as a Western  
8 scientist? You just got to take our word for it.  
9 They show us the grids. They show me the grids.  
10 They show me what connects. And then they have us feel  
11 it. And then they have us experience, through our bodies,  
12 what it feels like when it's drilled or when it's  
13 disconnected, when it's something that is cut off from the  
14 umbilical of that life force.  
15 Now, how do we put it into the context of this  
16 discussion? I've just said it. And that is the cultural,  
17 that is the spiritual voice. And it's not even my voice.  
18 It's Maui's voice. Maui who we say is a fictitious hero.  
19 He is the real deal, folks. He is sitting right here in  
20 the room, because I see him. I can describe him.  
21 Now, science will say, well, maybe she should go  
22 to a medical facility, but I beg to differ. Because this  
23 is the level of what we know as people of this land.  
24 People who come from the stars, people who have direct  
25 relationship in astronomically physically transferring our

152

1 -- our mana. We can go to those stars. We can be in  
2 relationship, as you spoke about the telescope. We are  
3 imbued with the DNA of the stars. But science doesn't  
4 teach us that. The records in our bones do.  
5 You cannot mitigate, you cannot litigate -- you  
6 know, you can't -- you cannot -- I can't even describe in  
7 the Western language what it feels like in my bones, but I  
8 can assure you that we are all invited into this -- this  
9 awareness of clarity about the truth echoing vibrantly to  
10 all -- through all Haleakalas across the globe.  
11 MS. ANNELLE AMARAL: Here is the dilemma. The  
12 dilemma is that the mysterious experience, it can't be  
13 translated, then, also, cannot be negotiated, cannot be  
14 put on paper. I mean, we are at this sort of --  
15 MS. LEIOHU RYDER: Yes.  
16 MS. ANNELLE AMARAL: -- juncture where, how do  
17 you bridge.  
18 Hinano.  
19 MR. HINANO RODRIGUES: Let me.  
20 MS. ANNELLE AMARAL: Okay.  
21 MR. HINANO RODRIGUES: Hinano Rodrigues.  
22 But let me talk off my SHPD hat. Okay, I will  
23 keep it on. Keep it on.  
24 MS. ANNELLE AMARAL: Taking hats off.  
25 MR. HINANO RODRIGUES: Let me take off my SHPD

153

1 hat and talk to you as a half Kanaka Maoli, because I am  
2 also Portuguese and Japanese. You know what I see is that  
3 we have people on two sides. And on one side, they are  
4 saying, and rightfully so, that Haleakala is our best  
5 location. And then we have the Kanaka Maoli on the other  
6 side who says Haleakala is our only Haleakala. So, wow,  
7 we have a major issue. And I think that is what the issue  
8 is right here. We need to discuss the only and the best.  
9 Because in life we cannot have the best of  
10 everything, right? But how about the only of everything?  
11 There is only one only. So how do we come -- how do we  
12 reconcile our needs?  
13 And I think we are ignoring that because we  
14 discuss mitigation. Because when we do, we completely  
15 preclude the only argument that the Kanaka Maoli is trying  
16 -- is trying very hard to make.  
17 MS. CAROLINE BLANCO: If I can just ask a  
18 question.  
19 It sounds to me, based on that, that there is no  
20 way to go forward with this project, even with mitigation  
21 measures, under that -- under that concept. And if that  
22 is the case -- and if I am wrong, that is good news, we  
23 have something more to talk about. But I am wondering if  
24 I have misheard this and I am wondering if you do see a  
25 way that there can be a bridge brought between the only

<p style="text-align: right;">154</p> <p>1 and the best. And if maybe you could help us with that.</p> <p>2 MR. HINANO RODRIGUES: Hinano Rodrigues.</p> <p>3 Someone as old as I am, if there is anything</p> <p>4 that I ever learned is that there are always solutions to</p> <p>5 things. And another thing -- and I have also learned that</p> <p>6 I might not have the answer to it, but others might. And</p> <p>7 I think that is a reason why we have a quantity of people</p> <p>8 here, because maybe you guys have the answers. Because I</p> <p>9 am the first to admit, maybe I don't have the answer. But</p> <p>10 I do know that I should never ever in life say, you know,</p> <p>11 there is no solution. There always is, but somebody else</p> <p>12 might have that solution that I don't.</p> <p>13 MS. CHARLENE DWIN VAUGHN: When you say only and</p> <p>14 best, does that mean that to save and salvage the only,</p> <p>15 you have to go someplace else to get to the best? I --</p> <p>16 you lost me with those concepts, only and best.</p> <p>17 MR. HINANO RODRIGUES: Well, I notice that the</p> <p>18 words -- I notice the word best, best is used, but best</p> <p>19 does not equal only. So I am wondering if they are saying</p> <p>20 that while Haleakala is the best location, is it the only</p> <p>21 location.</p> <p>22 MS. CAROLINE BLANCO: It's the only one that met</p> <p>23 the scientific criteria.</p> <p>24 MR. JEREMY WAGNER: Best is the wrong word.</p> <p>25 DR. CRAIG FOLTZ: I think it's the only site.</p>	<p style="text-align: right;">156</p> <p>1 MS. CAMILLE KALAMA: Uh-huh.</p> <p>2 DR. CRAIG FOLTZ: And that would have</p> <p>3 absolutely, positively, by a factor of -- 12 meter, by a</p> <p>4 factor of three, been able to see the detail that we need</p> <p>5 -- we know we need to see. But what the project said,</p> <p>6 that is what the solar physics community said, was we need</p> <p>7 to get to a certain resolution and will accept just -- we</p> <p>8 only need what we need to get there. We don't need more.</p> <p>9 And that -- and I agree with -- and I think that Charlene</p> <p>10 has had difficulties because this part of the process was</p> <p>11 invisible. This was -- to you all. This was -- this was</p> <p>12 -- but it is the natural development of a scientific</p> <p>13 project. And I think that that is -- I understand that is</p> <p>14 alien. It's sort of second nature to a lot of us.</p> <p>15 MR. JEREMY WAGNER: And that is somewhat site</p> <p>16 independent as well. A lot of that was done before the</p> <p>17 selection.</p> <p>18 DR. CRAIG FOLTZ: Yeah, that is site specific.</p> <p>19 MS. ANNELLE AMARAL: Liz, I think, has a</p> <p>20 comment.</p> <p>21 MS. LIZ GORDON: And I guess this is kind of a</p> <p>22 bit more detailed to get into. But I guess in reading the</p> <p>23 Draft EIS, I did have some questions about -- I know there</p> <p>24 were 72. And then, from a broad set of criteria, they</p> <p>25 were narrowed down to six. And there was a table at the</p>
<p style="text-align: right;">155</p> <p>1 MS. CAROLINE BLANCO: I think we're dealing with</p> <p>2 only and only.</p> <p>3 MS. LEIOHU RYDER: To clarify, there was the</p> <p>4 Canary Islands and there was -- there were three -- there</p> <p>5 were top -- there were three --</p> <p>6 MS. CAROLINE BLANCO: That's correct.</p> <p>7 MS. LEIOHU RYDER: There were three.</p> <p>8 MS. CAROLINE BLANCO: There were scientific</p> <p>9 criteria that we measured on each. And the only one that</p> <p>10 passed all the scientific criteria was Haleakala.</p> <p>11 MS. CAMILLE KALAMA: I did want to comment that</p> <p>12 I think that is where, looking back at what Liz said</p> <p>13 earlier, you know, is there -- what is on the table? You</p> <p>14 know, there is all these scientific objectives. Are you</p> <p>15 willing to compromise on any of those? Because you're</p> <p>16 asking, you know, the groups here to compromise on their</p> <p>17 values.</p> <p>18 DR. CRAIG FOLTZ: What we said is we've already</p> <p>19 compromised on those.</p> <p>20 MS. CHARLENE DWIN VAUGHN: You --</p> <p>21 MS. CAMILLE KALAMA: That you have already</p> <p>22 compromised on the scientific objectives.</p> <p>23 DR. CRAIG FOLTZ: On the scientific objectives.</p> <p>24 We could have designed the telescope that was a 12-meter</p> <p>25 telescope that stood 300 feet high.</p>	<p style="text-align: right;">157</p> <p>1 end of the appendices that kind of listed some of the</p> <p>2 broad criteria you are using. Distance from a lake,</p> <p>3 closest to the ocean, you know, annual sun. I don't have</p> <p>4 it there with me. But it appeared that there were -- I</p> <p>5 guess it was unclear to me that, okay, six sites were</p> <p>6 chosen, but there seemed to be other six sites --</p> <p>7 additional sites that maybe could have been looked at</p> <p>8 before it was narrowed down to three, somewhere in Chile,</p> <p>9 one was Mount Laguna in California. You know, there were</p> <p>10 certain things that seemed to meet that broad criteria</p> <p>11 that wasn't really fully explained in the Draft EIS, why</p> <p>12 the 72 were narrowed down just to those specific six.</p> <p>13 MS. CAROLINE BLANCO: You may want to review it</p> <p>14 again. Because the thing is, it did talk about it started</p> <p>15 at 72, and then it went down to six, then it went down to</p> <p>16 three, based on monitoring, and an additional year went by</p> <p>17 with monitoring at these three sites.</p> <p>18 MS. LIZ GORDON: I am kind of clear with the 72</p> <p>19 to the six, but I still didn't quite get why just it was</p> <p>20 six.</p> <p>21 MS. CAROLINE BLANCO: Why did it get to six?</p> <p>22 MS. LIZ GORDON: I mean --</p> <p>23 DR. CRAIG FOLTZ: People in the room.</p> <p>24 MR. STEVE KEIL: We first took the 72 sites and</p> <p>25 we gathered whether -- whatever other information we could</p>

158

1 get on those 72.  
2 DR. CRAIG FOLTZ: Without going to them?  
3 MR. STEVE KEIL: We went to some of them. We  
4 couldn't go to all of them.  
5 But we looked at the statistics for all 72  
6 sites, picked the six best, which is what we could afford  
7 to actually mount telescopes on, and tested those six best  
8 sites with a number of instruments. We weren't doing this  
9 in a vacuum because there had been a number of site  
10 surveys before us.  
11 So there was a large one that tested most of the  
12 mountains in California. The large European solar  
13 telescope, which never was built, tested a number of  
14 sites, including Mauna Kea. So we had a lot of data to  
15 start with.  
16 The six we picked, by the way, turned out that  
17 four of them had observatories on them, because they were  
18 the results of site surveys. And that is why the  
19 observatories were there on those six.  
20 And two didn't that we tested.  
21 Then out of all those, only Haleakala has the  
22 skies capable of looking at the sun.  
23 MS. CHARLENE DWIN VAUGHN: This has been  
24 peer-reviewed?  
25 MR. STEVE KEIL: Peer-reviewed.

159

1 MS. CHARLENE DWIN VAUGHN: Agreed to by  
2 scientists that are not all part of this?  
3 MR. MIKE MABERRY: Not part of the project.  
4 MS. CHARLENE DWIN VAUGHN: That's not what I am  
5 saying.  
6 MR. STEVE KEIL: So that was done very, very  
7 carefully and not in a vacuum.  
8 MS. MIKAHALA HELM: Annelle.  
9 MS. ANNELLE AMARAL: Yes.  
10 MS. MIKAHALA HELM: And Haleakala was the only  
11 site that native people said was sacred, is that correct?  
12 MR. JEREMY WAGNER: Yes.  
13 MS. MIKAHALA HELM: Yes. So this is what I am  
14 so troubled by in this process that is happening right  
15 now, is that in the literature that came with Charlie's  
16 letter, it said that NSF will make a decision when it's as  
17 -- it has considered and completed analysis on the  
18 effects, yeah, on the impacts on the environment, on the  
19 historic and cultural resources, you know, as well as  
20 proposals for mitigating those impacts. But this -- what  
21 appears to me is that there was so much of a process of  
22 getting input from our community about the importance of  
23 Haleakala, and then we seem to be haphazardly coming up  
24 with ideas, well, how might we mitigate the sacredness of  
25 Haleakala, where we hitting this, this, this, piecemeal,

160

1 when there has been so much input on the sacredness of  
2 Haleakala. How can we possibly sit here and talk -- and  
3 even if we talk until tonight and talk until tomorrow, we  
4 are not looking at the environmental impact statement or  
5 the full picture of really what -- what are all these  
6 things to be considered. How can you do a full  
7 consideration and come up with these kind of piecemeal  
8 mitigation -- I mean, I know -- you know, they seem like  
9 important things. And they are. However, how can we come  
10 about with such a thing?  
11 MS. CAROLINE BLANCO: I think it might be  
12 helpful to remind ourselves that we are talking about the  
13 106 process and not about all of the other environmental  
14 impacts that may or may not occur as a result of the  
15 proposed project. And we are not -- none of us here in  
16 this room are the decision-maker as to whether or not the  
17 telescope will be built. We are here to gather  
18 information and we are here to propose something to the  
19 National Science Director that if -- the National Science  
20 Foundation Director, that, if it is built, these are  
21 mitigation measures that people would like to see.  
22 And that is what the purpose of this is right  
23 now. It definitely has gone on record and will continue  
24 to be considered, maybe avoidance of it completely,  
25 because of the significance of it, is a very viable

161

1 option. And it may be the turning point for the Director.  
2 I don't know. That will be up to him after considering  
3 the entire record. But those points have definitely been  
4 made and definitely been heard and will continue to be  
5 heard.  
6 And so it may very well be he will decide he  
7 just doesn't want to fund it. It may be that he decides  
8 he wants to fund it and this is the mitigation package.  
9 So here is an opportunity that, if he makes that  
10 decision, based on the entire record, these are ways in  
11 which we can go ahead and let him know that these are  
12 things that people would like to see. And I think we  
13 should also keep in mind that there have been, also,  
14 Native Hawaiians that have suggested that they are --  
15 Warren said he is very much in support of this. We've  
16 heard from other people over the years. And in June, we  
17 heard people say that they really are in support of it.  
18 And so, you know, in other -- some thoughts have come into  
19 mind that there might be a way to share this special  
20 place, you know, both for practitioners and for  
21 scientists. And those were some suggestions that came  
22 about.  
23 Others, of course, would take a different  
24 position. And we are here to hear all of that.  
25 But if there is a way that you think -- if

162

1 there's a mitigation measure that you think would be very  
2 helpful to have included, that you would like to see if  
3 the Director decides he wants to fund this, based on the  
4 entire record, we really want to hear what you have to  
5 say.  
6 MS. ANNELLE AMARAL: Okay. I am afraid I let  
7 this go a bit over time. My job was to call for time at  
8 5:00.  
9 MS. PUA AIU: Can I clarify the record on one  
10 thing, though?  
11 I believe Warren is not Native Hawaiian.  
12 Correct me if I am wrong.  
13 MS. CAROLINE BLANCO: Oh, I thought he was.  
14 MR. MIKE MABERRY: But Verna is.  
15 MS. CAROLINE BLANCO: And Sol as well, right?  
16 Sol?  
17 MS. PUA AIU: Sol, right. But I just want to  
18 make the record clear.  
19 MS. CAROLINE BLANCO: I'm sorry. I thought he  
20 was.  
21 MS. PUA AIU: He's local.  
22 MS. ANNELLE AMARAL: There were a few -- okay.  
23 Is that --  
24 DR. CHARLIE FEIN: Yeah.  
25 MS. ANNELLE AMARAL: Is it okay if we take a

163

1 break? We are set to come back here at --  
2 DR. CHARLIE FEIN: 6:00.  
3 MS. ANNELLE AMARAL: 6:00, okay. All right. So  
4 I am going to call for a break for now.  
5 Thank you.  
6 (Meeting Adjourned at 5:11 p.m.)  
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164

1 CERTIFICATE  
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6  
7 I, TONYA MCDADE, a Court Reporter of the State  
8 of Hawaii, do hereby certify that the proceedings  
9 contained herein were taken by me in machine shorthand and  
10 thereafter was reduced to print by means of computer-aided  
11 transcription; that the foregoing represents, to the best  
12 of my ability, a true and accurate transcript of the  
13 proceedings had in the foregoing matter.  
14 I further certify that I am not an attorney  
15 for any of the parties hereto, nor in any way concerned  
16 with the cause.  
17  
18 DATED this \_\_\_ day of \_\_\_\_\_, 2008.  
19  
20 *Signature on File*  
21 \_\_\_\_\_  
22 Tonya McDade, RPR, CRR, CBC  
23 Hawaii CSR #447  
24  
25

**Appendix C(6): Transcripts  
Section 106 Meeting, UH IfA, Maikalani Facility,  
August 27, 2008 Evening Session**

Held at University of Hawaii Institute for Astronomy,  
Maikalani Facility, 34 Ohia Ku Street, Pukalani, Maui,  
Hawaii, commencing at 6:12 p.m. to 8:44 p.m., August 27,  
2008.

REPORTED BY:  
Tonya McDade  
Registered Professional Reporter  
Certified Realtime Reporter  
Certified Broadcast Captioner  
Hawaii Certified Shorthand Reporter #447

<p style="text-align: right;">2</p> <p>1 ATTENDANCE  2 NATIONAL SCIENCE FOUNDATION  Dr. Craig Foltz, ATST Program Officer  3 Ms. Caroline Blanco, Assistant General Counsel  Mr. Tony Gibson  4  5 NATIONAL SOLAR OBSERVATORY  Mr. Jeremy Wagner, ATST Project Manager  Mr. Steve Keil, Director  6 Ms. Jennifer Ditsler, Project Assistant  Mr. Rex Hunter, Administrative Facilities Manager  7  8 NATIONAL OPTICAL ASTRONOMY OBSERVATORY  Mr. Jeff Barr, ATST Project Architect  9 UNIVERSITY OF HAWAII INSTITUTE FOR ASTRONOMY  Mr. Mike Maberry, Assistant Director  10  11 KC ENVIRONMENTAL, INC.  Dr. Charlie Fein, Vice President  Ms. Sharon Loando-Monro, Planning Projects Manager  12  13 MEETING FACILITATOR  Ms. Annelie Amaral  14 OTHER ATTENDEES:  Ms. Mikahala Helm, Kilakila o Haleakala  15 Ms. Leiohu Ryder, Kilakila o Haleakala  Ms. Camille Kalama, Native Hawaiian Legal Corporation,  16 Kilakila o Haleakala  Ms. Pua Aiu, State Historic Preservation Office  17 Ms. Nancy McMahon, State Historic Preservation Office  Mr. Hinano Rodrigues, Cultural Historian, State Historic  18 Preservation Office  Mr. Jason Jeremiah, Office of Hawaiian Affairs, Policy  19 Advocate, Native Rights Land &amp; Culture Division  Ms. Charlene Dwin Vaughn, Advisory Council on Historic  20 Preservation  Ms. Martha Catlin, Advisory Council on Historic  21 Preservation (via telephone)  Ms. Betsy Merritt, National Trust for Historic  22 Preservation (via telephone)  Mr. Warren Shibuya  23 Ms. Melissa Prince  Mr. Daniel Kanahele  24 Ms. Lianna Horovitz  Ms. Joyclynn Costa  25 Ms. Jamie Fernandez</p>	<p style="text-align: right;">4</p> <p>1 NATIONAL SCIENCE FOUNDATION  2 SECTION 106 MEMORANDUM OF AGREEMENT MEETING  3 AUGUST 27, 2008  4 TRANSCRIPT OF PROCEEDINGS  5 MS. ANNELLE AMARAL: Aloha, everyone, and  6 welcome back. I hope that everyone had a nice break and  7 you have all returned in a good mood. And that makes life  8 easier for me.  9 And welcome to our two new people. If you could  10 introduce yourselves to us, and then we will introduce  11 ourselves to you as well.  12 MS. MELISSA PRINCE: I am Melissa Prince. And I  13 have been sort of following the solar telescope to date.  14 And I am the one that was videotaping some of the  15 sessions. The one that was down in the poolroom at the  16 community center, I videotaped that. And another one at  17 the Hawaiian Homestead Homes, I videotaped that one, also.  18 MS. ANNELLE AMARAL: Okay.  19 MS. MELISSA PRINCE: So -- but my computer broke  20 and I wasn't able to bring my camera today. I am just  21 here to attend.  22 MS. ANNELLE AMARAL: Thank you for coming.  23 Aloha.  24 MR. DANIEL KANAHELE: Aloha. I am Daniel  25 Kanahele from South Maui.</p>
<p style="text-align: right;">3</p> <p>1 Ms. Ohua Morando  Ms. Claire Apana  2 Mr. Ed Lindsey  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25</p>	<p style="text-align: right;">5</p> <p>1 MS. ANNELLE AMARAL: Aloha. Nice to meet you.  2 Now we're going to go around and introduce  3 ourselves so you know who we all are.  4 MR. JASON JEREMIAH: My name is Jason Jeremiah.  5 I am from the Office of Hawaiian Affairs, today  6 representing our office. I am a policy advocate in the  7 Native Rights Land and Culture Division.  8 MS. CAROLINE BLANCO: I am Caroline Blanco. I  9 am Assistant General Counsel over at the National Science  10 Foundation, responsible for environmental compliance for  11 the agency.  12 MS. CHARLENE DWIN VAUGHN: My name is Charlene  13 Vaughn. I am with the Advisory Council of Historic  14 Preservation in Washington.  15 MS. NANCY McMAHON: I am Nancy McMahon. I am  16 the Deputy Administrator and Deputy State Historic  17 Preservation Officer for the State Historic Preservation  18 Division.  19 MS. PUA AIU: I am Pua Aiu. I am the  20 Administrator for the State Historic Preservation Office.  21 MR. HINANO RODRIGUES: You guys know who I am,  22 but just in case you forgot, Hinano Rodrigues, State  23 Historic Preservation Division.  24 DR. CRAIG FOLTZ: I am Craig Foltz, I am the  25 Director of National Science Foundation, Acting Director.</p>

6

1 MR. REX HUNTER: I am Rex Hunter. I am at the  
 2 National Solar Observatory in Sunspot, New Mexico. I am  
 3 the Administrative and Facilities Officer.  
 4 MS. MIKAHALA HELM: Aloha. I am Mikahala Helm  
 5 and part of Kilakila o Haleakala, and, also, here for  
 6 myself and my family.  
 7 MS. CAMILLE KALAMA: Aloha. I am Camille  
 8 Kalama. I am from Native Hawaiian Legal Corporation. And  
 9 I am here on behalf of Kilakila o Haleakala.  
 10 DR. CHARLIE FEIN: Aloha. Charlie Fein. I am  
 11 the Environmental Consultant for the project.  
 12 MR. JEFF BARR: I am Jeff Barr. I am the  
 13 architect for the ATST Project.  
 14 MR. JEREMY WAGNER: I am Jeremy Wagner Project  
 15 Manager for the ATST project.  
 16 MR. STEVE KEIL: I am Steven Keil. I am  
 17 Director of the National Solar Observatory.  
 18 MR. MIKE MABERRY: Hi. I am Mike Maberry. I am  
 19 Assistant Director for the Institute of Astronomy at UH.  
 20 MS. ANNELLE AMARAL: Tony.  
 21 MR. GIBSON: Hi. I am Tony Gibson with the  
 22 National Science Foundation.  
 23 MS. ANNELLE AMARAL: Sharon.  
 24 MS. SHARON LOANDO-MONRO: Sharon Loando-Monro  
 25 with KC Environmental, Planning Manager.

7

1 MS. JENNIFER DITSLER: Jennifer Ditsler. I am  
 2 from the ATST Project office in Tucson, Arizona. And I do  
 3 project administration.  
 4 (Off the record for Court Reporter to  
 5 introduce herself.)  
 6 MS. ANNELLE AMARAL: Aloha. My name is Annelie  
 7 Amaral. And I am the facilitator, just trying to help  
 8 manage the conversation. You can tell I am the  
 9 facilitator because I am the only one that is all marked  
 10 up. It's been a long day. I have markings all over me.  
 11 Because we have a court reporter here, what you  
 12 will hear us do is we will preface with our names so that  
 13 the court reporter knows who is speaking. We try very  
 14 hard not to speak over one another. Otherwise, we get  
 15 yelled at by the court reporter, because she cannot write  
 16 down all five voices. So we will try to let people finish  
 17 what they have to say before we jump in.  
 18 If you indicate to me you want to speak, I start  
 19 a little list in the corner and I will call you in the  
 20 order that you have waved to me and indicated.  
 21 As you can tell, we've done a lot of talking  
 22 today. We started out by presenting some background on  
 23 where we are on the project. We've been assured that no  
 24 decision in fact has been made as of yet and that we are  
 25 gathered to hear one another's views, ideas and

8

1 suggestions.  
 2 Charlie went through the specifics of what you  
 3 find in the EIS, that you may already have a copy of and  
 4 may have read through.  
 5 Craig talked a little bit about some of the  
 6 proposals that have been met when we last met in June,  
 7 some specific proposals to try to mitigate the impact,  
 8 adverse impact on the project.  
 9 And then we just sort of went around to talk  
 10 about some of the questions we have about the projects or  
 11 some of the issues that we may have.  
 12 Quite frankly, what is, is -- keeps coming up  
 13 over and over again goes to the sacredness of Haleakala  
 14 and how is it that we are supposed to mitigate sacredness.  
 15 And beyond that, a discussion of real attempts to try to  
 16 deal with issues that the community has brought up with  
 17 respect to height and color and location and -- and how we  
 18 arrived at some of the changes that are already proposed  
 19 and have been dealt with.  
 20 But in the end, the question really is one of  
 21 what is on the table, where are we at this point. And the  
 22 answer to that is quite simply that there are three things  
 23 still very much on the table. One is avoidance, that this  
 24 is not a site that we should be at, that this is not the  
 25 place for this to take place. That is still on the table.

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1 And the National Science Foundation is not opposed to  
 2 that, though they are having some difficulty imagining  
 3 what that is going to look like.  
 4 The issue of minimizing, the minimization effort  
 5 for this project. And there have been suggestions. A  
 6 sunset provision has been put on the table, and that is,  
 7 by a time certain, clean up and move on. And there have  
 8 been a number of proposals to mitigate.  
 9 You all, I think, have seen Uncle Charlie  
 10 Maxwell's proposal. There has been the proposal from the  
 11 Maui Community College that perhaps you have already seen  
 12 in the last discussion that we had with community in June.  
 13 There was a proposal for connecting Hawaiian learning,  
 14 Hawaiian science and Hawaiian traditional knowledge with  
 15 the project that is taking it -- that is proposed to take  
 16 place at Haleakala through the use of building a Star  
 17 Compass right next to the site, the Star Compass,  
 18 utilizing Hawaiian knowledge and connecting it to the  
 19 science that takes place up there.  
 20 What is also on the table is the need to  
 21 maintain the connection to cultural practices that take  
 22 place there. It has been suggested that a konohiki could  
 23 be named for the site with overall responsibilities for  
 24 that area, and the coordination of culturally appropriate  
 25 behavior in that area.

10

1 Certainly there are ongoing mitigation efforts.  
 2 Cleaning up of the Reber Circle, taking down or cleaning  
 3 up of the broadcast towers that are already up there, the  
 4 east-facing ahu that has been built.  
 5 When we last left this discussion, the issue  
 6 that came up was, well, how do you mitigate spirituality.  
 7 If we are in fact spiritual and the place is spiritual 24  
 8 hours a day, seven days a week, how do you show respect  
 9 for the sacredness of that place, how do you protect that  
 10 place and still have this feature on it.  
 11 MS. CAROLINE BLANCO: Annelle, Warren Shibuya  
 12 also is not listed up there, his proposal. Warren has a  
 13 mitigation written proposal.  
 14 MS. ANNELLE AMARAL: Oh, sorry. Yes. Yes.  
 15 Warren also -- I need to add that in that -- has a  
 16 proposal that he has submitted in fact and has been  
 17 working very closely on working on mitigation efforts.  
 18 I will make note of that.  
 19 So when we left this discussion, we left this  
 20 discussion talking about sacredness. Talking about -- I  
 21 think we were sort of down to avoidance at this point,  
 22 Hinano, yeah. Because trying to reconcile sacredness and  
 23 the site, use of the site.  
 24 Then I think at that point we all determined we  
 25 just needed to get something to eat and get out of this

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1 place for a little while.  
 2 So, hopefully, we've come back wiser now. But  
 3 we will continue the discussion.  
 4 So we will start with you.  
 5 MR. HINANO RODRIGUES: I am in the hot seat.  
 6 MS. ANNELLE AMARAL: Why not?  
 7 MR. HINANO RODRIGUES: Before we discuss that,  
 8 maybe we should listen to what the two new people here  
 9 want to say.  
 10 MS. CAROLINE BLANCO: I don't know if they have  
 11 got any questions based on the summary.  
 12 MS. ANNELLE AMARAL: Yes. Yes.  
 13 MR. DANIEL KANAHELE: I found out about this  
 14 meeting like an hour and-a-half ago. I was -- there was a  
 15 fire next to Maui Meadows which started up again, I  
 16 believe. And I got a phone call from a friend about some  
 17 meeting happening up here. So -- and they may or may not  
 18 allow public testimony or people to speak. It wasn't much  
 19 information.  
 20 So I had to call around and to find out a little  
 21 bit more about the meeting and where it's located. So I  
 22 should say that it would be good for me to have a little  
 23 clear idea of what this meeting is about. I am more than  
 24 happy to share some thoughts with the group, but if you  
 25 could summarize what is happening here, I would really

12

1 appreciate it.  
 2 MS. CAROLINE BLANCO: Annelle, I see there are  
 3 two more people that are going to be joining us, so  
 4 perhaps before we --  
 5 MS. ANNELLE AMARAL: Okay. And it's not really  
 6 a public testimony; it really is a consultation session.  
 7 It is a discussion. Public hearings are sort of one-way  
 8 communications. This is very much a dialogue that is  
 9 taking place.  
 10 I take it, then, that you had not seen any of  
 11 the environmental impact statement reports that have come  
 12 out or any of the work that's come out about the solar  
 13 telescope at Haleakala?  
 14 MR. DANIEL KANAHELE: I know some.  
 15 MS. ANNELLE AMARAL: You've read some.  
 16 MR. DANIEL KANAHELE: I've read some, listened  
 17 to some. I haven't really read anything.  
 18 MS. ANNELLE AMARAL: You haven't?  
 19 MS. CAROLINE BLANCO: Annelle --  
 20 MR. DANIEL KANAHELE: Thank you for --  
 21 MS. CAROLINE BLANCO: -- I was just wondering if  
 22 it might be helpful to give them context for this meeting.  
 23 This meeting is a consultation meeting pursuant  
 24 to the National Historic Preservation Act. Under Section  
 25 106 -- we just finally call it Section 106 -- is a back

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1 and forth discussion that happens. And it's a -- it's a  
 2 federal process. And by statute and by regulation,  
 3 Advisory Council of Historic Preservation has the  
 4 regulations to implement the statute. And it basically  
 5 involves any time a federal agency is involved in what  
 6 they call an undertaking -- here it would be the National  
 7 Science Foundation's issuance of federal funds, if it  
 8 decides to fund this project -- that triggers compliance  
 9 with 106, which then requires the agency to go ahead and  
 10 take a look at that undertaking, identify effects and  
 11 determine if those are historic resources and National  
 12 Register resources. And then to take a look at whether or  
 13 not there are adverse effects or not, and then work  
 14 between the State Historic Preservation Office and the  
 15 Advisory Council as well, and other people that may have  
 16 an interest. And they are called consulting parties.  
 17 And I don't know if either of you are ones that  
 18 are on the list of consulting parties. It didn't sound  
 19 familiar to me -- or potentially interested parties. If  
 20 you do want to be a consulting party, there is a formal --  
 21 pursuant to the regulations, there's a way to request  
 22 that.  
 23 MR. DANIEL KANAHELE: Okay.  
 24 MS. CAROLINE BLANCO: But we're happy to have  
 25 you participate in the meeting if you are not.

<p style="text-align: right;">14</p> <p>1 And so the way it ends up working is we have a  2 discussion here about the adverse effects and, primarily,  3 looking at ways to resolve them through either avoidance,  4 minimization or mitigation. And that is the context in  5 which this meeting takes place.  6 It's not about other environmental impacts that  7 are pursuant to the process under the National  8 Environmental Policy Act. This is focused on historic  9 resources and cultural resources.  10 MR. DANIEL KANAHELE: Thank you.  11 MS. ANNELLE AMARAL: I wanted to note the  12 arrival of two more people and give you an opportunity to  13 introduce yourselves.  14 Aloha.  15 MS. JOYCLYNN COSTA: Aloha. My name is Joyclynn  16 Costa.  17 MS. JAMIE FERNANDEZ: I am Jamie Fernandez.  18 MS. ANNELLE AMARAL: Great. And are you  19 representing any organization or just yourself?  20 MS. JOYCLYNN COSTA: Yes, Haleakala.  21 MS. ANNELLE AMARAL: Haleakala. Aloha.  22 Welcome.  23 MS. MELISSA PRINCE: I had a question. I  24 realize that you are here to be a consultant to those who  25 may have signed up to be on the list. So I was wondering,</p>	<p style="text-align: right;">16</p> <p>1 That's correct, Shad Kane was here. Warren  2 Shibuya is here as a consulting party.  3 MR. GIBSON: National Park Service.  4 MS. CAROLINE BLANCO: National Park Service was  5 here. And, of course, we have the State and the Advisory  6 Council.  7 MR. DANIEL KANAHELE: Thank you.  8 MS. CAROLINE BLANCO: And anybody who would like  9 to, you know, join in on our meetings.  10 MS. ANNELLE AMARAL: And then what is happening  11 is, as you talk to one another up here, you all sort of  12 drop your voices, but the court reporter is down here. So  13 keep in mind, when you speak, try to project so the court  14 reporter can hear you down at this end.  15 You had a comment or question?  16 MR. DANIEL KANAHELE: Yeah, I did. I was ready  17 to say -- to make a comment, if that is appropriate.  18 MS. ANNELLE AMARAL: Sure, yeah.  19 Let me introduce one more person.  20 Aloha. I am wondering, you just seated  21 yourself, did you want to introduce yourself to the group  22 and who you represent?  23 MS. OHUA MORANDO: Sure. Okay. Aloha mai  24 kakou.  25 MS. ANNELLE AMARAL: Aloha.</p>
<p style="text-align: right;">15</p> <p>1 is there a list of people who are formally asked to be  2 consulted?  3 MS. CAROLINE BLANCO: The list is made up of  4 people who have requested to be consulting parties through  5 public meetings and so forth. And then they have  6 requested to become consulting parties, indicating to us  7 they have an interest that they would like to be involved  8 in this process and stakeholders in this process. Then we  9 have -- I don't think we've denied anybody a consulting  10 party status.  11 MS. MELISSA PRINCE: Well, the reason why I  12 asked is because I am wondering, are any of them here  13 today.  14 MS. CAROLINE BLANCO: Yes.  15 MS. ANNELLE AMARAL: Yes.  16 MS. MELISSA PRINCE: Like the State and OHA,  17 maybe?  18 MS. ANNELLE AMARAL: Kilakila o Haleakala, they  19 are also representatives.  20 MS. CAROLINE BLANCO: And, also, AURA, that is  21 the -- that would be the recipient of federal funds if the  22 project were -- were approved for funding.  23 And the Institute for Astronomy is also a  24 consulting party.  25 I'm sorry?</p>	<p style="text-align: right;">17</p> <p>1 MS. OHUA MORANDO: Ohua Morando. And I am here  2 as a Maui resident. And I had received a lot of many of  3 the flyers in the beginning, but I wasn't part of this,  4 either I was away or something. But I am very interested  5 in being here and -- and it's nice to meet you. I work at  6 Maui Community College with Na Pua No'eau program.  7 MS. ANNELLE AMARAL: Great. Aloha and welcome.  8 So before, perhaps, we pick up where we left off  9 here, sir, you wanted to make a comment. Is that it?  10 MR. DANIEL KANAHELE: Well, you invited a  11 comment from me, so I --  12 MS. ANNELLE AMARAL: We are all commenting to  13 one another, sharing information, and, hopefully, building  14 on it for the purpose of addressing the issues of  15 avoidance, minimization or mitigation. Yes.  16 MR. DANIEL KANAHELE: Well, my name is Daniel  17 Kanahele. I am, from my father's side, many, many  18 generations on this island. My father was born in  19 Lahainaluna, his father was from here, going back I don't  20 know how far.  21 And we're talking -- you mentioned that you are  22 talking about sacredness. And I believe that there are  23 some places on this Earth that are so special and so  24 sacred that they should never have been -- never be  25 touched. They should be left untouched.</p>

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1 So one question I have is when is something too  
 2 sacred to be built upon? What criteria do you use to  
 3 determine the sacredness of a place before you allow it to  
 4 be changed in any shape or form?  
 5 For me personally, I think what makes Hawaii in  
 6 total a unique place is that it is, first and foremost, a  
 7 Hawaiian place. That is why people come here in the first  
 8 place, because it is a Hawaiian place.  
 9 If you want to go to Japan and learn about the  
 10 Japanese culture, you go to Japan. If you want to go to  
 11 Mexico and learn about the Mexican culture, you go to  
 12 Mexico. But if you want to learn about Hawaii and the  
 13 Hawaiian culture, you come to Hawaii, because Hawaii is  
 14 home to all things Hawaiian.  
 15 Aside from its natural beauty, the thing that  
 16 sets Hawaii apart from any other place in the world is its  
 17 endemic beauty, it's endemic wildlife, history, culture,  
 18 language and heritage.  
 19 Haleakala is a Hawaiian place. There is no  
 20 place like it on this Earth. So is Haleakala a place so  
 21 sacred and so special that it should remain untouched?  
 22 It has been touched already. And there is a  
 23 proposal to -- to, I would say, add more to what is  
 24 already up there.  
 25 And then I would just conclude with this remark.

19

1 There is one danger that we face today. And that danger  
 2 is this. That modern day man brings with him the ability  
 3 to wipe out everything that defined people of culture.  
 4 Thank you.  
 5 MS. ANNELLE AMARAL: Thank you.  
 6 So let me ask the question, then. Daniel, is it  
 7 your position that nothing further should be built up on  
 8 Haleakala? Is that your position? I mean, I see you  
 9 asking the question. I am wondering if you framed it in  
 10 this way because that is your position, there is no way to  
 11 mitigate.  
 12 MR. DANIEL KANAHELE: I would say that I am  
 13 favoring avoidance as an option. I would like to look at  
 14 that as an option.  
 15 MS. CAROLINE BLANCO: If I could ask Daniel a  
 16 question.  
 17 If the Director of the National Science  
 18 Foundation makes the decision based on comments from you  
 19 and others, and the whole record, and all of the studies  
 20 that have been done and so forth -- and certainly your  
 21 comment of avoidance and other people's comments of --  
 22 avoidance will be taken into consideration -- if he  
 23 decides that that is the reason why he would not fund it,  
 24 approve funding, then it doesn't get built. If he  
 25 decides, however, even acknowledging the concerns that

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1 people have and strong feelings they have, that in light  
 2 of all of the circumstances, the whole situation, he  
 3 decides to fund it, one of the things that we can  
 4 accomplish here today for his consideration is a  
 5 mitigation package, some ideas that even though perhaps  
 6 some people may be opposed to it, they might be  
 7 comfortable having some mitigation measures in place for  
 8 the Director to consider if he does decide to agree and  
 9 approve funding for this proposed project.  
 10 MR. DANIEL KANAHELE: Uh-huh.  
 11 MS. CAROLINE BLANCO: So my question to you --  
 12 and also to the other folks who have joined us -- is if  
 13 this does go forward, are there mitigation measures that  
 14 you would like to see in place for the Director to  
 15 consider?  
 16 MR. DANIEL KANAHELE: Well, I can't mention  
 17 anything specifically.  
 18 I will say this. If you come into somebody's  
 19 house -- if you come into my house, and our custom is --  
 20 at my home, you remove your shoes or slippers before you  
 21 come in. Now if everybody in the house honors that  
 22 tradition and that custom, but, still, you come into my  
 23 house with your slippers on and you ignore that, what  
 24 impact do you think that would have on the people of that  
 25 house?

21

1 It's all about respect, respecting people's  
 2 feelings whose house it is.  
 3 And I am one person who lives in this house.  
 4 And there are others here who are from this house, too.  
 5 This is our home. And we have very strong feelings about  
 6 that mountain. That is the highest mountain on this  
 7 island. And for us, as Kanaka Maoli, everything flows  
 8 from the top to the bottom in the spiritual sense and in a  
 9 physical sense. So what happens on the top of the  
 10 mountain affects a lot of things. It affects a lot of  
 11 things.  
 12 So what are those impacts?  
 13 I understand what you are asking me. I don't  
 14 have a specific answer for you. But what I am putting on  
 15 the table for you right now is about respecting the host  
 16 culture.  
 17 MS. CAROLINE BLANCO: And what I am hearing from  
 18 you is that avoidance is your -- your position on this.  
 19 MR. DANIEL KANAHELE: At this point, yes.  
 20 MS. CAROLINE BLANCO: If there are any ideas as  
 21 people start to talk about things, please feel free to  
 22 mention.  
 23 MR. DANIEL KANAHELE: Thank you. Mahalo.  
 24 MS. CAROLINE BLANCO: Thank you.  
 25 MS. ANNELLE AMARAL: Okay. Yes, please.

22

1 MS. CHARLENE DWIN VAUGHN: You made a point  
 2 about whether or not there were laws or regulations that  
 3 prohibited the construction or modification of things  
 4 sacred. There are not. And the process which brings us  
 5 here tonight was a regulation that was a law that was  
 6 passed in 1966, and regulations promulgated since 1979,  
 7 that require federal agencies to take into account effects  
 8 of what they are doing on any property that meet a  
 9 definition that is defined as a historic property. So  
 10 just for the record and for clarification, and I think to  
 11 get us all on the same page for this conversation, there  
 12 is absolutely no law that will prohibit one from  
 13 constructing something at Haleakala. There isn't. And  
 14 that has been the program for 40 years.

15 What we do ask is the federal agencies consider  
 16 the impact of their action on historic properties and take  
 17 into account any comments that may be made during the  
 18 planning.

19 I don't know if there is a state law for Hawaii,  
 20 perhaps there is, but there is no federal law that would  
 21 establish such a prohibition. And I don't think there is  
 22 a state law, either. Which means that we all know their  
 23 place is sacred and special, but somehow there has been no  
 24 legislation that keeps us from touching.

25 MR. DANIEL KANAHELE: Thank you --

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1 MS. CHARLENE DWIN VAUGHN: Charlene Vaughn.  
 2 MR. DANIEL KANAHELE: -- Charlene. Thank you  
 3 for sharing that. Yes.

4 MS. ANNELLE AMARAL: Uh-huh.

5 MS. MIKAHALA HELM: Someone came, too.

6 MS. ANNELLE AMARAL: Oh. Aloha. Did you want  
 7 to introduce yourself?

8 MS. CLAIRE APANA: Hello. Just like this?

9 MS. ANNELLE AMARAL: Any way you want to.  
 10 Whatever way.

11 MS. CLAIRE APANA: Okay. My name is Claire  
 12 Apana. And I am a resident of Maui. I was born here.  
 13 And is that it?

14 MS. ANNELLE AMARAL: And whatever you want to  
 15 share, yes. We welcome you.

16 MS. CLAIRE APANA: Whatever I want to share.  
 17 I would just like to share that I am deeply  
 18 concerned that something that is so deeply a part of our  
 19 culture can be completely overrun by something that I  
 20 don't see as saving -- like there's not an immediate need  
 21 to absolutely have it and it's okay to come and run over  
 22 our culture.

23 I'm sorry that I am late, that I didn't get to  
 24 hear your update.

25 And that is my concern. It is my concern that

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1 this may just be pushed forward by something at a national  
 2 level and that we will have nothing to say even though we  
 3 live here. This has been a part of my life and a part of  
 4 our culture. I just think it's a travesty that we have  
 5 not the power or the voice to say, ha'ule, that is enough  
 6 already.

7 Thank you.

8 MS. ANNELLE AMARAL: Thank you.

9 Claire, we wanted to -- when we opened this up,  
 10 we did point out that no decision has been made about this  
 11 project yet.

12 And tonight's meeting -- there have been 26, as  
 13 I understand, public hearings on this thing, for close to  
 14 three years now. But tonight's meeting is the second of  
 15 what they are calling sort of consultation meetings. So  
 16 this is not a public hearing. It is really trying to get  
 17 from community an idea of what ways can some of the  
 18 concerns of community be addressed with respect to this  
 19 project.

20 And if there are questions still remaining  
 21 unanswered, there are people here who can act as resource  
 22 to answer those questions. But the hope is to sort of  
 23 move towards a place where a Memorandum of Agreement could  
 24 -- could -- an agreement could be reached by parties  
 25 involved, consulting parties involved. So it's very much

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1 a conversation and a dialogue.

2 And thank you for joining us.

3 Okay. Yes.

4 MS. CAROLINE BLANCO: I just wondered if you  
 5 wanted to make any comments?

6 MS. MELISSA PRINCE: Well, I just had a  
 7 question. I know that you were saying -- or somebody said  
 8 that the Director of the National Science Foundation is  
 9 the one that gets to make the final decision. And so I  
 10 was wondering, where is the accountability for him? Like  
 11 I guess it's a man, I am assuming. Who does he answer to?  
 12 Who -- who placed him in that job? Is it an appointment  
 13 from the president or --

14 MS. CAROLINE BLANCO: Yes. It's a presidential  
 15 appointment, a six-year term.

16 MS. MELISSA PRINCE: Oh, okay. And how long  
 17 will that -- his term last?

18 MS. CAROLINE BLANCO: I think he has another two  
 19 years.

20 MR. GIBSON: 2010, it will be up.

21 DR. CRAIG FOLTZ: May I add a little to that?  
 22 This is a -- he makes the decision. But then that  
 23 decision has to be approved by an entity called the  
 24 National Science Board.

25 MS. CAROLINE BLANCO: Okay. Craig, if I could

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1 interject. He doesn't make the decision first and then --  
 2 he makes a recommendation --  
 3 DR. CRAIG FOLTZ: I'm sorry.  
 4 MS. CAROLINE BLANCO: -- to the National Science  
 5 Board.  
 6 DR. CRAIG FOLTZ: That is why I am not a lawyer.  
 7 MS. CAROLINE BLANCO: Then the National Science  
 8 Board, which is also a group of presidential appointees,  
 9 and it will serve terms as well, and they represent  
 10 disciplines, scientific disciplines, a variety of  
 11 different ones, accomplished people and so forth. And  
 12 they will look at the Director's recommendation and then  
 13 either agree with it or not. And if they do agree with  
 14 it, they will then tell the Director, "We agree with your  
 15 recommendation and, at your discretion, you can decide to  
 16 fund this project."  
 17 MS. MELISSA PRINCE: I see.  
 18 MS. CAROLINE BLANCO: So then the Director,  
 19 ultimately -- that is why I short-circuited this to say,  
 20 ultimately, the Director will make a decision one way or  
 21 the other.  
 22 MS. MELISSA PRINCE: All right. Now that is  
 23 clear.  
 24 MS. CAROLINE BLANCO: Unless the National  
 25 Science Foundation decides not to accept the

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1 recommendation.  
 2 DR. CRAIG FOLTZ: Right. But that decision then  
 3 factors into the preparation of a budget which, of course,  
 4 must be appropriated by Congress.  
 5 MS. CAROLINE BLANCO: But the final agency for  
 6 the decision -- for the agency is the Director's decision.  
 7 DR. CRAIG FOLTZ: Right.  
 8 MS. MELISSA PRINCE: Okay. Yeah, I -- having  
 9 attended all those other meetings, I sort of understand  
 10 the arguments that went into where you are now today. And  
 11 it just seems like it's a very tough thing because the  
 12 testifiers at the Hawaiian Homes hall that day -- I forget  
 13 the exact date, but it was 100 percent opposition to the  
 14 building of a 14-story telescope on the top of Haleakala.  
 15 And so, you know, I am disappointed that this  
 16 meeting wasn't really advertised very clearly. But I  
 17 guess it was -- like you said, it's a consultation with  
 18 people who have signed up. So I am not signed up  
 19 officially, so I am just here to observe.  
 20 That is the only comment I have right now.  
 21 MS. ANNELLE AMARAL: Okay.  
 22 MS. CAROLINE BLANCO: Thank you.  
 23 MS. ANNELLE AMARAL: Thank you.  
 24 MS. OHUA MORANDO: I want to add something --  
 25 Ohua Morando. I thought I was just going to do my

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1 introduction, but I guess my concern, too, as I feel for  
 2 the three that spoke before -- I am not from Maui. I am  
 3 from Oahu, born and raised, but my family are from Maui  
 4 and have been here for many years, generations. But I've  
 5 come to love this island as if I was born here. And I  
 6 think that is just how it is when you move from island to  
 7 island. You adapt, because every island is different.  
 8 And in moving here, this was always my favorite  
 9 place. And my favorite place meaning that Haleakala was  
 10 always the most sacred place where I would always want to  
 11 go and be and have my children go and be and see. So this  
 12 is my personal growing up experiences in coming here and  
 13 seeing how Maui has changed. Some of it good; some not.  
 14 But I guess I -- I want to speak same as you,  
 15 sir.  
 16 MR. DANIEL KANAHELE: Daniel.  
 17 MS. OHUA MORANDO: Daniel, that when is enough  
 18 enough, because I feel strongly about that.  
 19 Because I work in a program that services Native  
 20 Hawaiian children, kindergarten through 12th grade, all  
 21 the way through college. And we take them to these sacred  
 22 places. And they learn about their identity, they learn  
 23 about themselves, they learn about who they are, their  
 24 language, their culture. And what saddens me is when we  
 25 take them to these places, places have been built over

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1 these spots and there is only a small place. It's sad  
 2 because of it's not fully there.  
 3 And I am -- I am concerned about Haleakala  
 4 because things have been built there. And now we are  
 5 looking at this and trying to mitigate and avoid and work  
 6 together on how this happens. And I am -- I want to say I  
 7 am avoiding this. I don't want this to happen, you know.  
 8 I want this to stay and not be built.  
 9 MS. ANNELLE AMARAL: Uh-huh.  
 10 MS. OHUA MORANDO: And I do this not for myself,  
 11 my own personal reasons, but I do this for my ohana, the  
 12 generations to come after me. Because if we don't save  
 13 this, we're going to have a heck of a time trying to save  
 14 the rest of our aina. And we can just look at our coral  
 15 reefs and know that. It's not the same.  
 16 So I say, yeah, no.  
 17 MS. ANNELLE AMARAL: Ohua, have you attended  
 18 these public hearings that they had here on Maui?  
 19 MS. OHUA MORANDO: I only went to one.  
 20 MS. ANNELLE AMARAL: Okay.  
 21 MS. MIKAHALA HELM: Just a clarification.  
 22 The 20-plus public hearings you are talking  
 23 about, they were not large community public -- they  
 24 weren't 20-something large community public hearings.  
 25 There were maybe several that were large. The rest were

<p style="text-align: right;">30</p> <p>1 with small groups of people.</p> <p>2 MS. ANNELLE AMARAL: Probably so.</p> <p>3 MS. MIKAHALA HELM: So we have to make sure</p> <p>4 we're clear about that.</p> <p>5 MS. CAROLINE BLANCO: Both formal and informal.</p> <p>6 MS. ANNELLE AMARAL: Okay.</p> <p>7 MS. CAROLINE BLANCO: That's right.</p> <p>8 DR. CRAIG FOLTZ: But there were more than</p> <p>9 several.</p> <p>10 MR. JEREMY WAGNER: It was about a dozen.</p> <p>11 MS. CAROLINE BLANCO: I think this was the 26th.</p> <p>12 MR. MIKE MABERRY: Large public meetings.</p> <p>13 DR. CRAIG FOLTZ: Yeah, we had more than several</p> <p>14 large public meetings.</p> <p>15 MS. ANNELLE AMARAL: And, sorry, but we've had</p> <p>16 two more people just join us. And so I wanted to give</p> <p>17 them an opportunity, also, to invite -- to identify</p> <p>18 themselves and give a small background.</p> <p>19 MS. LIANNA HOROVITZ: Aloha. My name is Lianna</p> <p>20 Horovitz. I grew up here on Maui. And I am here on</p> <p>21 behalf --</p> <p>22 MS. ANNELLE AMARAL: Just speak louder.</p> <p>23 MS. LIANNA HOROVITZ: I am here on behalf of</p> <p>24 (inaudible) and our hula halau, (inaudible). She was</p> <p>25 unable to be here tonight. And we are just very concerned</p>	<p style="text-align: right;">32</p> <p>1 suggestions for maybe trying to help with that, to help</p> <p>2 with practice in a more peaceful way?</p> <p>3 MS. LIANNA HOROVITZ: Well, I think that any</p> <p>4 development, any, any physical structure that is</p> <p>5 constructed up there that has lights and noise, it has an</p> <p>6 impact. So I just don't feel that the community has maybe</p> <p>7 been consulted in a way that feels like we're part of the</p> <p>8 process at all. Even though that there have been these</p> <p>9 meetings, they haven't been done necessarily in a way that</p> <p>10 feels like any input is really welcome, the ones that I've</p> <p>11 attended.</p> <p>12 So I am just here to learn more information</p> <p>13 right now.</p> <p>14 MS. CAROLINE BLANCO: Okay. Thank you.</p> <p>15 MS. ANNELLE AMARAL: I wonder if this woman</p> <p>16 could introduce herself, Daniel.</p> <p>17 MS. JUDY MANCINI: My name is Judy Mancini. I</p> <p>18 am Leanna's mom. And I am also a member of our hula halau</p> <p>19 and a student of Hawaiian language and music. I raised</p> <p>20 all of my four children here on Maui.</p> <p>21 And like my daughter, I am here to get more</p> <p>22 information.</p> <p>23 I'm sorry I missed the first part of the</p> <p>24 meeting. I did attend the Kula Community Association</p> <p>25 presentation many months ago. And I have tried to keep</p>
<p style="text-align: right;">31</p> <p>1 about the development of this mountain that we consider a</p> <p>2 temple and -- and how such a development of the huge solar</p> <p>3 telescope will impact hula, will impact our dance, our</p> <p>4 cultural practices and our community.</p> <p>5 It seems like such a huge development for such a</p> <p>6 small place. And our mountain is so important to us that</p> <p>7 we would really like to see it remain as untouched as</p> <p>8 possible.</p> <p>9 And so I am here to listen and to bring back</p> <p>10 information to exchange.</p> <p>11 Thank you.</p> <p>12 MS. CAROLINE BLANCO: Annelle, I think it might</p> <p>13 be helpful to reiterate a point that was raised at the</p> <p>14 earlier meeting. Access to practice traditional cultural</p> <p>15 practices is not going -- it's not prohibited and it</p> <p>16 wouldn't be prohibited.</p> <p>17 MS. LIANNA HOROVITZ: It is not prohibited, but</p> <p>18 it is impacted. So when we go up there at night and we</p> <p>19 try to have a place to pray, a place to commune with</p> <p>20 nature, it's not even quiet now. It's -- even what is</p> <p>21 there now is disruptive to the sense of serenity of that</p> <p>22 -- that we would like to have there. So it's not a matter</p> <p>23 of access, we know we will be able to get there, it's what</p> <p>24 we get when we arrive there.</p> <p>25 MS. CAROLINE BLANCO: Do you have any ideas or</p>	<p style="text-align: right;">33</p> <p>1 current of what is happening.</p> <p>2 I am very concerned that this just does not seem</p> <p>3 to be the right place for a facility of this size.</p> <p>4 Maui is changing very rapidly. And if I had a</p> <p>5 wider audience, I guess that I would like to ask people</p> <p>6 why they came to Maui in the first place. You know, most</p> <p>7 people who live here came from some other place. And for</p> <p>8 myself, it was because it was an extraordinarily beautiful</p> <p>9 place, untouched, and it had a spiritual essence about it.</p> <p>10 And I think there is an unmeasurable quality</p> <p>11 about the mountain that should not be disregarded. And I</p> <p>12 think that the mountain can remind everybody why they are</p> <p>13 here, period. It is isolated, it's quiet, it's beautiful.</p> <p>14 Any change to the top of the mountain, there's added</p> <p>15 noise, it's visual pollution, and it changes the whole</p> <p>16 essence of what is on the mountain.</p> <p>17 The mountain provides everybody living here with</p> <p>18 an opportunity to be really reconnected with nature and to</p> <p>19 be reminded why we are here. And there aren't a whole lot</p> <p>20 of places left in Hawaii that can do that.</p> <p>21 I think it's absolutely the wrong spot for a</p> <p>22 project of this size. And there -- it's not as though</p> <p>23 there are not other locations.</p> <p>24 I also agree with my daughter that, in general,</p> <p>25 the Hawaiian community, although they may be aware of what</p>

34

1 is planned, they really have not had the opportunity  
2 because, for some, it's not in their nature to come out  
3 publicly like this.  
4 But I will only speak for my halau, not other  
5 halaus. It can't be measured. The quality of what the  
6 mountain offers can't be measured in a scientific way.  
7 And it has a value that can't be measured by science. And  
8 it has something to offer everybody that is of value.  
9 Thank you.  
10 MS. ANNELLE AMARAL: Mahalo. Thank you.  
11 I'm sorry. Your daughter's name?  
12 MS. LIANNA HOROVITZ: Lianna.  
13 MS. ANNELLE AMARAL: Lianna, thank you.  
14 Okay. Any other comments, thoughts, please?  
15 MR. DANIEL KANAHELE: I just wanted to add -- or  
16 comment on Lianna -- what Lianna was saying, you know,  
17 about how the structure of the telescope would affect your  
18 practices.  
19 A halau, is that correct?  
20 Recently, I was turtle -- doing a turtle watch  
21 at Oneloa Beach, also known as Big Beach, on the south  
22 shore. And Big Beach is probably the largest beach and  
23 most prominent of its size on Maui, that it's still almost  
24 completely surrounded by open space and wilderness. So I  
25 was out there with some friends watching over the clutch,

35

1 the nest of the endangered Hawksbill Turtle, and waiting  
2 for the turtles to be born so that we could watch care  
3 over them as they made their way from their nest to the  
4 water.  
5 What made that experience especially poignant  
6 for me was the fact that it's so dark out there, there's  
7 no light pollution. You can look at the night sky and see  
8 all the stars so clearly, more clearly than maybe most  
9 places that have no lights. You can see Sagittarius, you  
10 could see Maui's Fishhook, also known as Scorpius, and in  
11 between, of course, is the galaxy of the Milky Way. You  
12 can see the spiral arm so clearly. It was gorgeous.  
13 It was perfect except for one thing. On the far  
14 south end of the beach, there's a floodlight. There's a  
15 home, privately-owned. The rest of the property around  
16 Oneloa Beach is State -- well, it's owned -- it's public  
17 land except for one piece of property with a floodlight on  
18 it. And as small as it was, it distracted from the  
19 quality of that experience. It distracted from what I was  
20 seeing up in the sky above.  
21 But just as an importantly, it prevents the  
22 honu, the Hawksbill Turtle, from coming up on the beach on  
23 that end to lay its eggs. Because if there is lights, the  
24 turtle will not come up. And so it had that impact, too.  
25 So I am relating that to what Lianna is sharing,

36

1 how something like that can take away from your  
2 experience, your -- in her case, her cultural practice. A  
3 light at the end of a very, very dark beach can have an  
4 impact. And, obviously, can have impact on our native  
5 wildlife and on native habitats.  
6 For us, as Kanaka Maoli, we have, as one of our  
7 cultural values, malama aina, which is to cherish and take  
8 care of that which takes care of us. So that which takes  
9 care of us can continue to take care of us.  
10 Anything that impacts not only our spirituality,  
11 but our native habitats, our native wildlife, impacts us  
12 as a people.  
13 Why? Because, unfortunately, so much that is  
14 endemic to Hawaii, so much that is Hawaiian is endangered  
15 of being lost or has been lost already. So we are even  
16 more protective of whatever is still left in terms of  
17 everything that is Hawaiian.  
18 You name it, practically everything is  
19 endangered. Monk Seal, endangered; turtle, endangered;  
20 dryland forest, endangered. The list goes on and on and  
21 on.  
22 So I just wanted to kind of add on to what she  
23 was saying.  
24 MS. ANNELLE AMARAL: Let me ask you a question.  
25 In the reports that we've done, we've identified species,

37

1 native species that will be endangered by the siting of  
2 this?  
3 DR. CHARLIE FEIN: We have identified -- Charlie  
4 Fein, environmental consultant. We have identified the  
5 endangered species that are -- that populate the site, and  
6 have spent 18 months in consultation with U.S. Fish and  
7 Wildlife Service to obtain a biological opinion which  
8 includes all kinds of conservation measures.  
9 Those conservation measures include monitoring  
10 of the site with many video cameras. Also, measures  
11 preventing construction during nesting periods for the  
12 Petrel. It includes observation for hoary bats. It  
13 includes monitoring for Silverswords, so that, should a  
14 Silversword appear, it cannot be displaced.  
15 I wanted to comment, there was -- that was a  
16 moving discussion. I have been at that beach and seen  
17 that light. And I know who owns that property.  
18 MR. DANIEL KANAHELE: I do, too.  
19 DR. CRAIG FOLTZ: Okay.  
20 DR. CHARLIE FEIN: But I wanted to comment at  
21 this point that with respect to the observatory area, with  
22 respect to Haleakala observatories, almost all, with the  
23 exception of one or two, of those astronomical operations  
24 are nighttime operations. And the one thing that  
25 astronomers dislike more than anything else is light. So

38

1 it is very dark up there.

2 And I have scarred elbow from the time I broke

3 it, in 1983, tripping over the pavement. It is extremely

4 dark at the summit. The night sky is the biggest asset

5 that that site has, or one of the biggest assets.

6 So with respect to noise, we have noted that the

7 observatories do have some functional operational noise.

8 We made measurements. Those things are discussed in the

9 Draft Environmental Impact Statement.

10 But with respect to the light, the intent is to

11 keep that site as dark as possible at all times.

12 MR. DANIEL KANAHELE: It's not so much that I

13 was making light of the light. It was that the point I

14 was making that there was something there, whether it was

15 light or a building, that was -- that was the problem.

16 That was what was impacting.

17 What she was referring to was her cultural

18 ability to practice the culture, the hula.

19 And then in terms of native species, it's not so

20 much the native species that are important, it's the

21 native habitat. Because without the habitat, you cannot

22 have the species. The habitat has to be intact in order

23 for the species to have a place to live.

24 So I am not so much worried about, say, the

25 Wiliwili tree because that is a special interest to me or

39

1 the Awikiwiki, which is in the dryland forest. I am more

2 concerned that the habitat is kept intact, kept whole and

3 kept healthy. So for me that is more -- more important

4 than the actual individual species. Because without the

5 habitat, you cannot have the native species.

6 MS. ANNELLE AMARAL: Okay. You wanted to

7 comment --

8 MS. CAROLINE BLANCO: I did.

9 MS. ANNELLE AMARAL: -- Caroline. Then I will

10 come here.

11 MS. CAROLINE BLANCO: I just wanted to make sure

12 that our focus doesn't get too off track. Because this

13 particular meeting is with regard to the National Historic

14 Preservation Act which talks about impacts to historically

15 significant properties. Other statutes like National

16 Environmental Policy Act and the Draft Environmental

17 Impact Statement, as prepared, pursuant to that Act -- and

18 there will be a final one -- takes into consideration

19 other types of impacts, wildlife impacts, species, and, of

20 course, the species takes into consideration other

21 habitats and endangered species.

22 But the National Historic Preservation Act,

23 which gives rise to this meeting tonight really deals with

24 impacts to historic resources.

25 MS. LIANNA HOROVITZ: I'm sorry.

40

1 MS. ANNELLE AMARAL: I will come down here, and

2 come to you, Lianna.

3 Please identify yourself for the --

4 MS. JOYCLYNN COSTA: Joyclynn Costa.

5 I just wanted to comment on one thing he said

6 about if a Silversword came up, then they would know not

7 to displace it. But as what Daniel said, they will never

8 have a chance to be there, so it will never be displaced,

9 if you have a building there.

10 I wanted to ask. The people who are wanting to

11 even consider Haleakala, before they came here, did they

12 -- did they educate themselves as to what they are coming

13 to, who they are coming to?

14 Because we can speak as much as we want to about

15 our historical, our cultural, our spiritual. And to me,

16 it's almost going to be like, blah, blah, blah, blah,

17 blah, in their ears, unless they truly learned it first,

18 to understand it, so that when we do speak to them, they

19 know what we're saying to them.

20 Up until they learn it themselves -- and that is

21 what I have been learning for myself. I can go and sit in

22 the classroom and it will be all Greek to me until I get

23 it. And so I want to know how deep they have gotten it.

24 Because I can sit in a room and speak for hours on end,

25 and they can be looking at all of this, what we are

41

1 telling them, but if they have never gotten it, then they

2 don't get it.

3 MS. CAROLINE BLANCO: I think maybe it's awfully

4 hard to answer that question, but what I can say is that

5 certainly the Foundation has heard many comments such as

6 the ones that have just been made here and heard strong

7 opposition to -- to the mountain because of its

8 significance. And I don't think there's any question

9 about the -- the strong feelings that people have. And

10 certainly there's a respect, strong respect for those --

11 those -- those feelings that people have and the positions

12 that they take. And that certainly will be considered in

13 making the final decision.

14 I wouldn't venture to guess that -- I wouldn't

15 suggest -- I don't think it would be appropriate for me to

16 say how -- does the Director understand the sacredness of

17 the mountain in the same way you do or somebody else does.

18 I think that is a very difficult question to answer.

19 However, I can say that I certainly will give it

20 tremendous respect because of the comments that have been

21 made throughout the process, throughout the years, where

22 this has come up.

23 MS. JOYCLYNN COSTA: The reason why I ask is, to

24 me, that is first and foremost in order -- in order for

25 you to entertain our comments and our spirituality and our

42

1 culture, I would think that you would need to study up on  
 2 it and understand it.

3 And the reason why I asked that, too, is because  
 4 I wonder if anybody has asked the mountain. Has anyone  
 5 actually gone there that wants to consider this and truly  
 6 become one with that mountain and feel that mountain, be  
 7 in that mountain, and know exactly what that mountain is?

8 You know, my heart right now is pounding as I am  
 9 saying this. We as Kanaka Maoli have already given. It's  
 10 not that we don't give. We -- we want to welcome  
 11 everybody. That is part of our nature. And so we want to  
 12 invite you to come here. But it shouldn't be on somebody  
 13 else's terms. The mitigation should come from us, not  
 14 you. The -- the ideas should come from us, not you. The  
 15 mountain belongs to us, not you.

16 So how can it be that I am going to sit here and  
 17 just give you my comments, and you will consider it and  
 18 then let us know what you decide, when the mountain is us?

19 We are Hawaii. We are not Hawaiians. We came  
 20 from this soil.

21 I had a comment once from a ho'o haole, because  
 22 he is from -- he is actually Iranian, and is proud to be  
 23 American. And it's sad for me because he should know his  
 24 culture and be proud of who he is, not where he think he  
 25 is from now. We -- and he told me this comment. He said,

43

1 you folks should be lucky that you -- that they invented  
 2 boats, because if it wasn't for the invention of boats, or  
 3 for your canoes, you wouldn't be here. So I said, "No,  
 4 you don't understand. Do you know what the Kumulipo is?"

5 Does anyone of scientific know the Kumulipo?

6 MS. ANNELLE AMARAL: It's been discussed.

7 MS. JOYCLYNN COSTA: Okay. Now, he didn't know.  
 8 And I said, "In a Kumulipo, we are evolved from this  
 9 Earth. Do you understand evolution?" And he said, "Well,  
 10 yeah." I said, "Then, in the Americas or in the Asias or  
 11 in the Europes, did boats bring them or did they evolve?  
 12 Did every single human on this Earth arrive at their  
 13 destination with a boat?"

14 So now we got to go deeper and understand who  
 15 you folks addressing. And that is what I want to get at.  
 16 I want to know who you are really addressing, or is it --  
 17 is this just superficial.

18 And it may be cynical on my part, but because of  
 19 the amount that we've given -- my family has given -- my  
 20 great grandfather, my grandmother's father, was taken to  
 21 Kalaupapa. He was a sheriff of Nahiku. His land base was  
 22 wanted. So a bounty was put on his head.

23 He was put into Kalaupapa. And upon his death,  
 24 they did his autopsy. And he had no leprosy. So why do  
 25 you think he was there? He had no leprosy.

44

1 My grandmother was raised as an orphan because  
 2 her mother went, because she didn't trust the man that was  
 3 picking her husband up. So she wanted to go on this boat  
 4 and take care of him, thinking that, yeah, he was sick.  
 5 So my grandmother was raised as an orphan.

6 And now you come here to ask us to mitigate our  
 7 Haleakala. How do you do that? If you are coming up with  
 8 that word to me, I need to ask you, how do you do that?

9 How do you mitigate your child? How do you  
 10 mitigate your children?

11 In the Bible, do we cut you in half? This is  
 12 what you are asking us.

13 So I need to know if these people truly  
 14 understand who they are talking to and the history, the  
 15 facts of Haleakala.

16 You know, people look at it as like mythology.  
 17 It's factual. And I would like them to go into the  
 18 mountain, besides talking here roundtable, and ask  
 19 Haleakala. Because it lives, it truly lives. And they  
 20 going to get their answer if they sincere enough to go in  
 21 there and ask.

22 MS. ANNELLE AMARAL: Thank you.

23 Lianna had her hand up. I'm sorry, I jumped  
 24 here first. She hadn't spoken, so I am going to go to  
 25 Lianna. Then I am going to Charlene.

45

1 MS. LIANNA HOROVITZ: I guess my question really  
 2 is along the same lines, that how does this community  
 3 input --

4 MS. ANNELLE AMARAL: Louder, please.

5 MS. LIANNA HOROVITZ: How does this community  
 6 input matter? Is this already a done deal where what we  
 7 say will not impact, truly, the final decision? Has the  
 8 decision been made? Is it just about mitigating the  
 9 impact of the observatory that has already been decided  
 10 on?

11 And what would you be looking to hear to really  
 12 consider not putting this telescope here? Because all of  
 13 the community meetings that I have attended have been  
 14 vocally opposed to it. And the majority of people who I  
 15 have spoken with in my community have been vocally opposed  
 16 to it.

17 So what would it really take for this project to  
 18 be moved somewhere else is what I want to know. Rather  
 19 than mitigating it, what is it going to really take, what  
 20 would you need to hear or understand in order to say,  
 21 okay, this really isn't the right place for the telescope?

22 MS. ANNELLE AMARAL: Okay.

23 MS. CAROLINE BLANCO: First of all --

24 MS. ANNELLE AMARAL: Yes.

25 MS. CAROLINE BLANCO: -- I will try to answer

<p style="text-align: right;">46</p> <p>1 part of that, at least.</p> <p>2 There has been no decision made. And I want to</p> <p>3 clarify that we have said that at every juncture, that</p> <p>4 there really has been no decision made. And there won't</p> <p>5 be until this process is completed and then the National</p> <p>6 Environmental Policy Act process is completed.</p> <p>7 And then it will go through this procedure that</p> <p>8 we talked about with the National Science Foundation</p> <p>9 Director making a recommendation to the National Science</p> <p>10 Board, if he decides to make that -- you know, he might</p> <p>11 decide not to. There is always that possibility. And</p> <p>12 then the step with the National Science Board, depending</p> <p>13 on what they decide to do and ultimately the Director.</p> <p>14 So no decision has been made.</p> <p>15 When the Director takes into consideration --</p> <p>16 before making a decision, he is going to take into</p> <p>17 consideration all of the views that have been said so far,</p> <p>18 as I mentioned earlier, and, also, look at other interests</p> <p>19 involved as well and the scientific integrity of it, or</p> <p>20 the importance of it, the scientific community. There are</p> <p>21 various communities that also have differing interests as</p> <p>22 well. And so he has to look at the entire picture. And</p> <p>23 based on the entire administrative record that's taken</p> <p>24 place through all of these processes and to listen to</p> <p>25 everything that has been said before making a decision.</p>	<p style="text-align: right;">48</p> <p>1 MS. ANNELLE AMARAL: Okay. I wonder if I can</p> <p>2 come first to Charlene, who had her hand up. And before I</p> <p>3 come to Daniel, I need to see if anyone else wants to</p> <p>4 speak before you speak again. Okay. Then I will come to</p> <p>5 you.</p> <p>6 So please Charlene.</p> <p>7 MS. CHARLENE DWIN VAUGHN: We're here pursuant</p> <p>8 to a regulatory process that clearly states that Native</p> <p>9 Hawaiians and Native Americans who have identified a</p> <p>10 property of religious and cultural significance must</p> <p>11 communicate what that means.</p> <p>12 So I hear you saying, you know, do we</p> <p>13 understand, have you been to the mountain, have you</p> <p>14 communicated with it, has it spoken to you. Maybe yes;</p> <p>15 maybe not.</p> <p>16 But for the purposes of this conversation, we're</p> <p>17 looking to people who are Native Hawaiians and who hold</p> <p>18 this property to be a sacred place to tell us why this is</p> <p>19 a good idea, or why it's not a good idea or, more</p> <p>20 importantly, what it is that we need to understand about</p> <p>21 this whole process that perhaps flying in here for a week</p> <p>22 we missed.</p> <p>23 MS. JOYCLYNN COSTA: Well, okay. In what part</p> <p>24 of this conversation is a Kanaka Maoli? I like to know in</p> <p>25 what part does a Kanaka Maoli play? Because you</p>
<p style="text-align: right;">47</p> <p>1 MS. LIANNA HOROVITZ: So the money that has been</p> <p>2 already allocated by the National Science Foundation,</p> <p>3 where has that money gone to the project?</p> <p>4 MS. CAROLINE BLANCO: Sure, I can explain it.</p> <p>5 There are two proposals.</p> <p>6 The first one was a design and development</p> <p>7 proposal. We are still continuing to fund that. Design</p> <p>8 and development of the proposed ATST Project doesn't</p> <p>9 result in construction of it. It results in design.</p> <p>10 And the second proposal is the one that is for</p> <p>11 construction. That was in 2004. It is that proposal that</p> <p>12 triggered requirements under federal statutes for the</p> <p>13 National Science Foundation to engage in environmental</p> <p>14 compliance reviews. One of which is this Section 106</p> <p>15 process.</p> <p>16 So there has been no decision on the</p> <p>17 construction proposal. And there won't be until the steps</p> <p>18 that I have just set up.</p> <p>19 MS. LIANNA HOROVITZ: What is the timeline for</p> <p>20 this?</p> <p>21 MS. CAROLINE BLANCO: The timeline for this</p> <p>22 is -- I believe it's next spring or so. Probably go</p> <p>23 before the -- the Director will make his recommendation</p> <p>24 early in the spring. And -- and then the decision process</p> <p>25 will go forward one way or the other.</p>	<p style="text-align: right;">49</p> <p>1 identified us as a Native Hawaiian, yeah.</p> <p>2 MS. CAROLINE BLANCO: Yeah.</p> <p>3 MS. JOYCLYNN COSTA: That is by --</p> <p>4 MS. CHARLENE DWIN VAUGHN: By law.</p> <p>5 MS. JOYCLYNN COSTA: -- federal understanding of</p> <p>6 us. But who we are is Kanaka Maoli first. We are the</p> <p>7 host culture. So in what part can Kanaka Maoli now have a</p> <p>8 voice in this?</p> <p>9 MS. ANNELLE AMARAL: I think it's the same as</p> <p>10 Native Hawaiian.</p> <p>11 MS. PUA AIU: The law identifies Native Hawaiian</p> <p>12 organization. That is what the law identifies and that is</p> <p>13 how this process is run.</p> <p>14 MS. JOYCLYNN COSTA: So as Kanaka -- if I</p> <p>15 identify myself as a Kanaka Maoli, you'll change my</p> <p>16 identity to a Native Hawaiian?</p> <p>17 MS. PUA AIU: Yes.</p> <p>18 MS. ANNELLE AMARAL: Identified as Native</p> <p>19 Hawaiian.</p> <p>20 MS. CAROLINE BLANCO: Yes.</p> <p>21 MS. ANNELLE AMARAL: Yeah.</p> <p>22 MS. CHARLENE DWIN VAUGHN: Why are we changing</p> <p>23 it? Do we need to change it?</p> <p>24 MS. JOYCLYNN COSTA: Yes.</p> <p>25 MS. CHARLENE DWIN VAUGHN: Okay.</p>

<p style="text-align: right;">50</p> <p>1 MS. JOYCLYNN COSTA: Definitely.</p> <p>2 MS. ANNELLE AMARAL: Jason.</p> <p>3 MR. JASON JEREMIAH: I just wanted to kind of</p> <p>4 comment on like we're going through consultation process</p> <p>5 and we're trying to retrieve information from Native</p> <p>6 Hawaiian organizations, individuals, ohana, you know. And</p> <p>7 that is part of the new native -- new policy with the ACHP</p> <p>8 and consulting Native Hawaiians.</p> <p>9 Just my thoughts on going through consultation</p> <p>10 process like this is, you know, from an agency</p> <p>11 perspective -- and you got to look in the other person's</p> <p>12 shoes. Like when Native Hawaiians give up information, we</p> <p>13 shouldn't come right back -- an agency shouldn't come</p> <p>14 right back with a response. Maybe we should think about a</p> <p>15 response that is given, a response going back to a Native</p> <p>16 Hawaiian individual organization, making time to come up</p> <p>17 with the best response. Sometimes it seems like a Native</p> <p>18 Hawaiian individual says something from their heart, you</p> <p>19 know, from their own breath, and, right away, we have a</p> <p>20 response. That maybe -- maybe it might take a day, two</p> <p>21 days, to let that -- let that thought kind of go through</p> <p>22 your head and process that information. And that is the</p> <p>23 kind of disturbing thing when -- when our office looked at</p> <p>24 the timing of the consultation meetings.</p> <p>25 We had two consultation meetings, one this</p>	<p style="text-align: right;">52</p> <p>1 may come to you, you know, when you wake up tomorrow</p> <p>2 morning or it may come to you, you know, a few days from</p> <p>3 now. And you are like, oh, yeah, now I kind of understand</p> <p>4 where, you know, she was coming from.</p> <p>5 And same thing on the side of a Native Hawaiian</p> <p>6 or our agency, too, is, you know, we may understand what,</p> <p>7 you know, the project manager or the scientist or other</p> <p>8 agency, or even the Native Hawaiian individual that is</p> <p>9 sharing the information.</p> <p>10 You know, all I wanted to express was that it</p> <p>11 may take some time.</p> <p>12 MS. ANNELLE AMARAL: Okay. So let me see. Who</p> <p>13 -- I'm sorry. That was you, Claire, that had your hand</p> <p>14 up. Yes? Sorry.</p> <p>15 MS. CLAIRE APANA: I feel a great disconnect in</p> <p>16 this room. And I'm sorry I was not here earlier. I just</p> <p>17 found out about it, so I ran up here.</p> <p>18 I feel this gentleman's excitement over this</p> <p>19 project, because it really is excitement -- in the face of</p> <p>20 all the things we're saying, his excitement is so great</p> <p>21 that he would -- it could go negate everything that we</p> <p>22 have to say. So I am wondering, what do you consider</p> <p>23 history? Because this is about history today, right?</p> <p>24 MS. PUA AIU: Shall we go through ours? That</p> <p>25 would probably be best.</p>
<p style="text-align: right;">51</p> <p>1 afternoon and one tonight, which turned into one in the</p> <p>2 same meeting.</p> <p>3 My thoughts were that the new people that</p> <p>4 couldn't make the meeting from 1:00 to 4:00 today came in</p> <p>5 here and we had to do a lot of refreshing instead of -- I</p> <p>6 mean, I am just looking at the agenda. And I was assuming</p> <p>7 the 6:00 to 9:00 meeting was going to go through, you</p> <p>8 know, National Science Foundation kind of going over the</p> <p>9 project. So that, you know, everyone has a fair shot if</p> <p>10 they are in a consultation process.</p> <p>11 So I mean, my main kind of ideas that I am</p> <p>12 trying to share with the group is just, you know, it may</p> <p>13 take a while to kind of understand where people are coming</p> <p>14 from.</p> <p>15 MS. ANNELLE AMARAL: Let me understand you,</p> <p>16 Jason. If, however, a direct question is asked, it's</p> <p>17 appropriate to answer questions, right?</p> <p>18 MR. JASON JEREMIAH: Right.</p> <p>19 MS. ANNELLE AMARAL: Because sometimes what I am</p> <p>20 hearing is confusion about process. And certainly to</p> <p>21 answer a direct question is appropriate. What you are</p> <p>22 speaking to is sort of -- some -- I don't know -- mystical</p> <p>23 sort of communication, don't react right away.</p> <p>24 MR. JASON JEREMIAH: Yeah. I am just saying,</p> <p>25 all the information we're gathering tonight, you know, it</p>	<p style="text-align: right;">53</p> <p>1 MS. CHARLENE DWIN VAUGHN: The letter.</p> <p>2 MS. CLAIRE APANA: Because I see a disconnect.</p> <p>3 MS. PUA AIU: This is kind of a structured</p> <p>4 process, yeah. And I don't know if we should go over the</p> <p>5 structured process.</p> <p>6 MS. CAROLINE BLANCO: One of the reasons why we</p> <p>7 didn't go through the entire agenda is because --</p> <p>8 MS. PUA AIU: Originally.</p> <p>9 MS. CAROLINE BLANCO: -- a few minutes after</p> <p>10 6:00, there were only one or two people that were new to</p> <p>11 the room. And we thought we would summarize. And this</p> <p>12 was something we all discussed.</p> <p>13 MS. PUA AIU: Because there was too few of you.</p> <p>14 But now that there is more --</p> <p>15 So I am Pua Aiu, I am the Administrator of the</p> <p>16 State Historic Preservation. This is Nancy McMahan, the</p> <p>17 Deputy SHPO. And this is Hinano Rodrigues, he is the</p> <p>18 cultural historian here on Maui.</p> <p>19 Let me just, from my point of view, and they can</p> <p>20 add in, go through a little bit of what 106 means from our</p> <p>21 perspective. A 106 consultation looks at cultural and</p> <p>22 historic properties. And it's structured in a fairly</p> <p>23 lineal sense to try to get at a memorandum of agreement.</p> <p>24 And that is -- we -- we probably won't get to a Memorandum</p> <p>25 of Agreement today or maybe tomorrow, but eventually that</p>

54

1 is the goal, is to get to some kind of agreement.  
2 In this particular situation, we have -- most of  
3 the people are saying avoidance, in which case avoidance  
4 you would have a very short Memorandum of Agreement  
5 because there's -- that is all you would agree on.  
6 But if you were to go further, you would need to  
7 talk about either minimization or mitigation.  
8 When you do a 106 consultation, one of the first  
9 things you do is you define the proposed area of effect.  
10 So let me talk about that.  
11 In 2006, our office sent the letter and we had  
12 some questions about the proposed area effects. So we  
13 looked at the crater district and we believed that the  
14 crater -- the crater is a historic district. It has a  
15 site number. It's in the state inventory of historic  
16 places. It's on the National Register of Historic Places.  
17 The Park road is significant.  
18 And the Park people were here earlier today for  
19 those of you who weren't here.  
20 And the Park road is significant under Criterion  
21 A, which in the would be in association with the  
22 development of the National Park System, and Criterion C  
23 for its association with the rest of the park design and  
24 early entry of development, circa 1930.  
25 There's bridges and box culverts on it that are

55

1 important as well. So that is one of the first things  
2 that is going to be affected, is the road.  
3 We looked at the use of significant impact on  
4 historic and cultural resources. And it was as  
5 referencing only irrevocable losses of said resources.  
6 And we thought that might be too high of a -- of a bar.  
7 And we thought this threshold should be lower given input  
8 from community about the traditional cultural property.  
9 We also believe that the -- that the cumulative  
10 impacts of the project have not been addressed regarding  
11 mitigation. And that is kind of why we are sitting here  
12 today. And that there are significant impacts to the  
13 traditional cultural property, which is what you all are  
14 talking about.  
15 So those are -- those are our basic comments.  
16 And that, for us, kind of defines where we need to go.  
17 So there is, basically, a road. And there's a  
18 traditional cultural property which is important to Native  
19 Hawaiians and to their practices. That is kind of the  
20 framework of what we can talk about from our point of  
21 view.  
22 MS. JOYCLYNN COSTA: Can you explain that one  
23 part about lowering the bar?  
24 MS. PUA AIU: Oh, we were reviewing the request  
25 for comments on the Draft Environmental Impact Statement.

56

1 So it said that the proposed action -- no. Sorry. Wrong  
2 one.  
3 MS. JOYCLYNN COSTA: Irrevocable.  
4 MS. PUA AIU: Definition for significant impact  
5 is referencing only irrevocable losses of said resources  
6 and is not appropriate in these circumstances. The  
7 implication is that if impact does not result in an  
8 irrevocable loss, it is less than significant.  
9 In the case of the Haleakala summit area, we  
10 believe that threshold to be lower given the community  
11 input regarding the significance of this traditional  
12 cultural property. So -- and I believe we're there. I  
13 believe we reached an agreement on that, that -- that the  
14 threshold is not irrevocable loss.  
15 MS. JOYCLYNN COSTA: It shouldn't have to be  
16 just irrevocable.  
17 MS. PUA AIU: No. It should be impact. So an  
18 -- for example, if you can still go up there, but you got  
19 to hear noise, that is an impact. It's not an irrevocable  
20 impact, because it just is kind of inconvenient and makes  
21 the experience less or -- I mean, you can characterize it  
22 how you want, but it's not an irrevocable impact because  
23 it doesn't mean you can't go there. It doesn't mean you  
24 can't see the sunrise or sunset, but it's an impact. And  
25 it may or may not be a significant impact. That is what

57

1 we are arguing. So this is kind of the framework of what  
2 we are talking about.  
3 MS. JOYCLYNN COSTA: Who has the jurisdiction of  
4 that mountain?  
5 MS. PUA AIU: Depends on where you are talking  
6 about. The Park Service has a lot of jurisdiction, the  
7 National Park Service, because it's a national park.  
8 But, yeah, the part that the -- yeah.  
9 MR. MIKE MABERRY: May I?  
10 MS. ANNELLE AMARAL: Michael has something.  
11 MR. MIKE MABERRY: There are some 27 different  
12 public and private agencies that have responsibilities for  
13 property above 6,000 feet elevation. The area that is  
14 being discussed for this proposed project is 18 acres  
15 which is under the University of Hawaii and the management  
16 of the Institute for Astronomy.  
17 MS. JOYCLYNN COSTA: How did they acquire that?  
18 MR. MIKE MABERRY: Executive order. It would be  
19 -- it was under DLNR prior to being put under the  
20 university.  
21 MS. MIKAHALA HELM: Excuse me.  
22 MS. ANNELLE AMARAL: Yes, Mikahala.  
23 MS. MIKAHALA HELM: Just for clarification, it's  
24 on ceded land?  
25 MR. MIKE MABERRY: Yes. Yes. But for that

<p style="text-align: right;">58</p> <p>1 matter, so is the National Park.</p> <p>2 MS. ANNELLE AMARAL: Thank you.</p> <p>3 MS. JOYCLYNN COSTA: So what effect does the</p> <p>4 Supreme Court decision of January 31st --</p> <p>5 MR. MIKE MABERRY: When a Native Hawaiian</p> <p>6 government is formed and takes over all ceded lands, then</p> <p>7 they will have control of this 18-acre area as well.</p> <p>8 MS. JOYCLYNN COSTA: So what effect does this</p> <p>9 injunction have for now? Nothing?</p> <p>10 MR. MIKE MABERRY: No, ma'am.</p> <p>11 MS. JOYCLYNN COSTA: No, ma'am, what?</p> <p>12 MR. MIKE MABERRY: I don't believe it -- as far</p> <p>13 as I know -- you will have -- I would recommend talking to</p> <p>14 the governor's office. But as far as the university with</p> <p>15 regards to its day-to-day operations, it doesn't at the</p> <p>16 moment.</p> <p>17 MS. JOYCLYNN COSTA: It doesn't what?</p> <p>18 MR. MIKE MABERRY: I am probably the wrong</p> <p>19 person to answer that.</p> <p>20 MS. PUA AIU: I believe the injunction affects</p> <p>21 sales.</p> <p>22 MS. JOYCLYNN COSTA: I'm sorry?</p> <p>23 MS. PUA AIU: I believe the injunction affects</p> <p>24 sales, the sale of ceded land.</p> <p>25 MR. MIKE MABERRY: We cannot sell the property,</p>	<p style="text-align: right;">60</p> <p>1 MS. NANCY McMAHON: They are a managing --</p> <p>2 MR. MIKE MABERRY: We'll talk about that.</p> <p>3 MS. NANCY McMAHON: -- entity?</p> <p>4 DR. CRAIG FOLTZ: It could -- it would be --</p> <p>5 MS. ANNELLE AMARAL: Okay. The court reporter</p> <p>6 has just stopped writing because --</p> <p>7 MR. MIKE MABERRY: Sorry.</p> <p>8 MS. ANNELLE AMARAL: -- I've counted at least</p> <p>9 four voices. She only wrote what I said, but -- all</p> <p>10 right.</p> <p>11 What was the last question that we heard that</p> <p>12 Michael was trying to answer and Craig was trying to</p> <p>13 answer?</p> <p>14 MS. CLAIRE APANA: I have another one. Ask</p> <p>15 after I've heard my answer?</p> <p>16 MS. ANNELLE AMARAL: Okay. So --</p> <p>17 MS. CLAIRE APANA: I asked the question about</p> <p>18 what is the history.</p> <p>19 MS. ANNELLE AMARAL: What is the -- I didn't</p> <p>20 quite understand that question. What is the history of</p> <p>21 the land, is that what you are asking?</p> <p>22 MS. CLAIRE APANA: Well, I am trying to figure</p> <p>23 out why we are not -- we don't seem to be communicating.</p> <p>24 I mean, I see people speaking and --</p> <p>25 MS. PUA AIU: History of the process or history</p>
<p style="text-align: right;">59</p> <p>1 anyhow.</p> <p>2 MS. PUA AIU: Cannot sell the --</p> <p>3 MS. NANCY McMAHON: If DLNR were to sell the</p> <p>4 piece to another entity --</p> <p>5 MR. MIKE MABERRY: Right.</p> <p>6 MS. NANCY McMAHON: That is when it would</p> <p>7 have --</p> <p>8 MR. MIKE MABERRY: One of the adjacent property</p> <p>9 owners like von Tempsky property or Haleakala --</p> <p>10 MS. NANCY McMAHON: So we're holding it in</p> <p>11 trust. If you can think of it, the State is holding it in</p> <p>12 trust. But they are -- there is no governing body that is</p> <p>13 over-sighting that. And DLNR has the lease to them.</p> <p>14 MR. MIKE MABERRY: No. No, we do not have a</p> <p>15 lease.</p> <p>16 MS. NANCY McMAHON: It's executive order.</p> <p>17 Executive order, sorry. Executive order. And that is --</p> <p>18 MR. MIKE MABERRY: We lease.</p> <p>19 MS. CAROLINE BLANCO: And you lease out to --</p> <p>20 MR. MIKE MABERRY: We lease to the Army Corps of</p> <p>21 Engineers, we lease to Las Cumbres Observatory.</p> <p>22 MS. CAMILLE KALAMA: So in this case, the lease</p> <p>23 would be to --</p> <p>24 DR. CRAIG FOLTZ: AURA.</p> <p>25 MR. MIKE MABERRY: Probably not.</p>	<p style="text-align: right;">61</p> <p>1 of what we are talking about?</p> <p>2 MS. CLAIRE APANA: And you are looking for</p> <p>3 something. So I just want to make a comment. And that is</p> <p>4 as far as history, the numerous times that this Federal</p> <p>5 Government has come in and taken over and taken things</p> <p>6 from the Hawaiian culture, Hawaiian people. This would be</p> <p>7 one more huge time that they would be coming in, sticking</p> <p>8 that dagger in and just twisting it again. This would be</p> <p>9 one more time. This is not the time to be doing that.</p> <p>10 This is not the time to be doing that. You have been</p> <p>11 making your own history.</p> <p>12 MS. ANNELLE AMARAL: Okay. When you were asking</p> <p>13 that question, and with us miscommunicating, I was going</p> <p>14 to say probably because we need a break. We have been at</p> <p>15 this for a while. So can we take a brief break for the</p> <p>16 sake of the facilitator and the court reporter? Ten</p> <p>17 minutes.</p> <p>18 Thank you.</p> <p>19 (Recess, 7:34 p.m. to 7:50 p.m.)</p> <p>20 MS. ANNELLE AMARAL: We're going to move into</p> <p>21 now the last hour of our discussion.</p> <p>22 This evening, more than this afternoon, we have</p> <p>23 heard the speakers that have come this evening sort of</p> <p>24 speak with some -- in a very adamant way about -- about</p> <p>25 avoidance and about the sacredness of this site. So I</p>

<p style="text-align: right;">62</p> <p>1 guess what I kind of need, knowing that this is the last  2 hour we are going to be together, that what I kind of need  3 from all of you is you have a number of people gathered  4 here this evening, people from the National Science  5 Foundation, people from the national historic --  6 MS. CHARLENE DWIN VAUGHN: Advisory Council on  7 Historic Preservation.  8 MS. ANNELLE AMARAL: Advisory Council. People  9 from the Department of Land and Natural Resources, State  10 Historic Preservation Office. What -- I guess -- and, you  11 know, OHA is here as well. What is it that you would like  12 to communicate? Given your knowledge of this place and  13 your knowledge of the projected project, what is it that  14 you need to go on record to communicate, then, to the  15 people gathered here this evening? I guess if we could at  16 least start there and then build from there.  17 Because the idea of, I guess, trying to move  18 people towards is there anything that we can do to  19 mitigate impact, it doesn't seem to be moving very far.  20 So, instead, perhaps the next question is, then what is  21 the special knowledge that you want to communicate to some  22 of the signatories that are gathered.  23 MS. LEIOHU RYDER: I would like to say -- I  24 would like to share this with you.  25 MS. ANNELLE AMARAL: I need you to identify</p>	<p style="text-align: right;">64</p> <p>1 these islands. But we are here and we are voicing no  2 more.  3 Thank you.  4 MS. ANNELLE AMARAL: Please identify yourself.  5 MS. JUDY MANCINI: Judy.  6 And I would just like to piggyback on what she  7 has just said. I guess from the moment that I came into  8 the room, I had this sense that it's kind of, you know,  9 science against the Native Hawaiian culture.  10 And I just wanted to add, I am not Native  11 Hawaiian, but I don't think you have to be Native Hawaiian  12 to feel the same connection and the same love for the  13 place in which you live. And I know many, many other  14 people that feel the same way.  15 MS. ANNELLE AMARAL: Thank you.  16 Yes. Identify yourself.  17 MS. JOYCLYNN COSTA: Joyclynn Costa.  18 I want to say, in 1993, when the Apology Bill,  19 Public Law 103-150, was offered to the identified in that  20 document as Native Hawaiians, but also described as people  21 of precontact, 1778, I want to clarify that my identity  22 doesn't come from outside. My identity comes from who I  23 am. And I would appreciate to be identified who I am,  24 which is a Kanaka Maoli, and not identified by an alien  25 source to say that I am a Native Hawaiian. I do not</p>
<p style="text-align: right;">63</p> <p>1 yourself.  2 MS. LEIOHU RYDER: Leiohu Ryder.  3 I would like you, as you have participated from  4 a national level, as an adviser -- and you have assisted  5 us greatly in clarifying some of this process. And I wish  6 for you to share some of the -- to share the idea that  7 spirituality cannot be mitigated for this unique spiritual  8 resource of our beloved land, that holds the testimony and  9 the future of many generations that is blended with my DNA  10 from my bones, have been resurrected and mixed in the aina  11 of this land. You cannot mitigate spirituality and create  12 the -- the cultural, spiritual, environmental desecration  13 upon the beloved mother, upon Pele, the flesh and bones of  14 these islands.  15 MS. CHARLENE DWIN VAUGHN: Okay. Thank you.  16 MS. LEIOHU RYDER: And for 50 years, desecration  17 has happened. So when they say where was the voice of the  18 native people, you tell them that we are here.  19 MS. JOYCLYNN COSTA: Uh-huh.  20 MS. LEIOHU RYDER: And we will not stand for any  21 more dishonoring of our beloved mother of this sacred aina  22 that feeds us spiritually and connects us to the stars.  23 We know the science of this. We are aware of  24 many, many things that we have chosen to go underground  25 because of the cultural genocide that has taken place in</p>	<p style="text-align: right;">65</p> <p>1 recognize that identity.  2 But I will appreciate the Public Law 103-150 for  3 its entirety and accept it, especially the part where the  4 president of the United States, as well as his entire  5 Congress, by saying that we never relinquished our  6 national lands nor our sovereignty. And that I accept  7 wholeheartedly.  8 And with that understanding, then I give you no  9 permission to use our mountain in any form or fashion  10 without our consent.  11 MS. ANNELLE AMARAL: Thank you.  12 Any other comments, thoughts?  13 MS. CLAIRE APANA: I would like to go on record  14 in a second.  15 MS. ANNELLE AMARAL: Claire.  16 MS. CLAIRE APANA: I would like to say I agree  17 and support that position that Ms. Costa just stated.  18 MS. ANNELLE AMARAL: Claire, tell me your last  19 name again.  20 MS. CLAIRE APANA: Claire Apana.  21 MS. ANNELLE AMARAL: Thank you. Thank you.  22 Pua.  23 MS. PUA AIU: I think -- I don't want to tell  24 you how to do your job.  25 MS. ANNELLE AMARAL: No, please tell me.</p>

66

1 MS. PUA AIU: I think you need to say, in number  
2 -- in the black.  
3 MS. ANNELLE AMARAL: Yes.  
4 MS. PUA AIU: That she said she -- you know,  
5 somehow put up there how opposed she is to the project.  
6 MS. ANNELLE AMARAL: Okay.  
7 MS. PUA AIU: That needs to be part of the  
8 record.  
9 DR. CRAIG FOLTZ: It's in the court reporter's  
10 record.  
11 MS. PUA AIU: Okay. But --  
12 MS. ANNELLE AMARAL: Thank you. And I do  
13 apologize. I am trying to listen and catch up, but I am  
14 not as good at this as the stenographer is. And she  
15 certainly will get the words that I have missed. But  
16 thank you for pointing it out.  
17 It doesn't bother me at all, by the way, if you  
18 correct me. Just don't try and catch my spelling because  
19 I am always going to misspell when I am standing up here.  
20 Any other thoughts, something --  
21 MS. LEIOHU RYDER: Question.  
22 MS. ANNELLE AMARAL: Yes, Leiohu.  
23 MS. LEIOHU RYDER: Leiohu Ryder.  
24 In the history of the National Science  
25 Foundation, or its associates, building facilities,

67

1 telescopes, there was mention of, you know, a life -- life  
2 of a project. Historically, do you have any examples that  
3 we can read of a lifetime -- you know, you built a project  
4 and that there were memorandums of agreement and that you  
5 agreed to remove what was done? Is there -- okay.  
6 DR. CRAIG FOLTZ: Okay.  
7 MS. LEIOHU RYDER: That was brought up today,  
8 you know, 50 years and then we will take it all down and  
9 make it look pretty like it was before. And I am only  
10 asking this question because from -- from the experiences  
11 of my forefathers, any kind of agreement with the federal  
12 government has never been kind to those of this -- of this  
13 land.  
14 DR. CRAIG FOLTZ: I understand.  
15 MS. LEIOHU RYDER: And it continues to be that  
16 way.  
17 DR. CRAIG FOLTZ: I understand why you would ask  
18 that question.  
19 MS. LEIOHU RYDER: Yeah. So --  
20 DR. CRAIG FOLTZ: We do have centers, for  
21 example, which are not facilities of this scale, that are  
22 established with a finite lifetime, five years, renewable,  
23 for another five, and then they go away. There are  
24 programs on this island that are part of a center like  
25 that.

68

1 With respect to astronomical facilities --  
2 MS. LEIOHU RYDER: Only to astronomical --  
3 DR. CRAIG FOLTZ: No. Let me go on. That  
4 wasn't the end of the sentence, there was a comma. This  
5 would be a precedent-setting memorandum.  
6 MS. LEIOHU RYDER: Oh, okay. We have precedent.  
7 DR. CRAIG FOLTZ: This would be the first time  
8 it has been done. It is not something that is taken  
9 lightly. And it is something that if it is written in an  
10 MOA, that signatories to that MOA can hold our feet to the  
11 fire, or their representatives after their death. I won't  
12 be here when this telescope is --  
13 MR. MIKE MABERRY: May I --  
14 MS. ANNELLE AMARAL: Michael.  
15 MR. MIKE MABERRY: -- make a point of  
16 clarification?  
17 MS. ANNELLE AMARAL: Mike.  
18 MR. MIKE MABERRY: Mike Maberry.  
19 For those of you who aren't familiar with this  
20 site that is being discussed, the -- what is considered  
21 the preferred site is a disturbed site, previously  
22 disturbed site. The alternative site is a previously  
23 developed site. Okay. So neither one of these sites are  
24 pristine. So you wouldn't actually want it returned to  
25 the condition that it's in now. If you are looking at

69

1 something in an MOA, you want it returned to a --  
2 DR. CRAIG FOLTZ: A natural state --  
3 MR. MIKE MABERRY: A natural state.  
4 DR. CRAIG FOLTZ: -- as defined by someone.  
5 MR. MIKE MABERRY: Right.  
6 MS. LEIOHU RYDER: Okay. This is Leiohu Ryder.  
7 Then I further state that we move to remove  
8 whatever is up on that mountain as part of the agreement,  
9 all of it.  
10 MS. ANNELLE AMARAL: Say that again, Leiohu.  
11 MS. LEIOHU RYDER: I said that I -- for the  
12 record, I want to state that we move to remove all of the  
13 activities on those 18 acres of land.  
14 DR. CRAIG FOLTZ: Just so --  
15 MS. LEIOHU RYDER: Everything.  
16 DR. CRAIG FOLTZ: As a point of clarification.  
17 None of those facilities up there are currently supported  
18 by the National Science Foundation.  
19 MS. LEIOHU RYDER: Yes. But if -- if -- if AURA  
20 is going to get the lease from the State of Hawaii via the  
21 -- the Astronomy, then that has to come into play with  
22 relationship and regards to the -- the ceded lands issue,  
23 the spirituality issue, the right to practice religion as  
24 we see it. That will all come into play.  
25 MS. ANNELLE AMARAL: I think what I am hearing,

70

1 Leiohu -- and correct me if I am wrong -- but the National  
2 Science Foundation can only talk about that project that  
3 is under their jurisdiction, they cannot speak for all the  
4 other projects up on the mountain. So you would have to  
5 speak to someone else about that.  
6 I am not sure who, but --  
7 MS. LEIOHU RYDER: The Parks?  
8 MS. ANNELLE AMARAL: Okay.  
9 MS. MIKAHALA HELM: Wait a minute. I'm sorry.  
10 Mikahala Helm.  
11 Mike, didn't you say that it is under UH and  
12 your program that you lease out the land to the different  
13 entities? And so it should be in your control to know how  
14 long that lease is and when that could be taken back and  
15 when it could be returned to its natural state.  
16 MR. MIKE MABERRY: Yes, we could. We could put  
17 terms and conditions in leases so that that would be --  
18 that would be a requirement.  
19 Just so that you know, though, under  
20 conservation district rules right now, at the end of a  
21 project term, if you vacate the site, you must return it  
22 to its natural condition.  
23 MS. MIKAHALA HELM: I'm sorry. It's puzzling  
24 because how is it that Reber hasn't been returned to its  
25 natural --

71

1 MR. MIKE MABERRY: Because it predated --  
2 MS. MIKAHALA HELM: -- condition?  
3 MR. MIKE MABERRY: It's a preexisting  
4 non-conforming structure that is actually a historic site.  
5 It's actually on the registry, believe it or not.  
6 MS. MIKAHALA HELM: Uh-huh.  
7 MS. CHARLENE DWIN VAUGHN: But if we were to  
8 agree to such an arrangement, it would have to be  
9 negotiated as part of Section 106. And I guess my  
10 question then would be who would enforce this? You are  
11 talking about long-term compliance over the years. How  
12 would this be enforced?  
13 MR. MIKE MABERRY: I'm sorry. If --  
14 MS. CHARLENE DWIN VAUGHN: If an arrangement was  
15 made to take properties back to their natural state --  
16 MR. MIKE MABERRY: Right.  
17 MS. CHARLENE DWIN VAUGHN: -- as the leases  
18 expire, how would --  
19 MR. MIKE MABERRY: If it's under 106, then it  
20 would be under that document.  
21 MS. CHARLENE DWIN VAUGHN: But NSF is gone, they  
22 are out of here, once this agreement -- we're talking  
23 long-term down the road --  
24 MR. MIKE MABERRY: No. Okay. AURA -- correct  
25 me if I am wrong, but AURA would be the entity that would

72

1 be responsible for constructing and operations.  
2 MS. CHARLENE DWIN VAUGHN: Okay.  
3 MR. MIKE MABERRY: But NSF would own the  
4 building. So NSF would be the entity that would be  
5 responsible.  
6 DR. CRAIG FOLTZ: We put enough money in escrow  
7 at an appropriate time.  
8 MR. MIKE MABERRY: Yeah.  
9 MS. CHARLENE DWIN VAUGHN: Okay.  
10 DR. CRAIG FOLTZ: And signatories to the MOA, as  
11 it designates -- for example, OHA was a signatory -- 50  
12 years pass, they say, wait, you signed up for this, take  
13 it back. And the NSF would comply.  
14 MS. ANNELLE AMARAL: I am --  
15 MS. NANCY McMAHON: I think what I heard, and  
16 this is a --  
17 MS. ANNELLE AMARAL: Nancy.  
18 MS. NANCY McMAHON: This is a possible  
19 mitigation. Part of the MOA is no more projects by NSF up  
20 there for -- after 50, and the agreement is this project  
21 will be taken down in 50 years. In addition, all the  
22 other structures built up there are all to come down, too,  
23 at the end of 50 years. Is that what I heard, correct?  
24 MR. MIKE MABERRY: Within the State. Because --  
25 I apologize. This is Mike.

73

1 Within Kolekole, there are other structures,  
2 towers and facilities, that are not under the control of  
3 the Institute for Astronomy or the University of Hawaii.  
4 MS. NANCY McMAHON: Right. But you are going to  
5 be a signatory to the MOA, if there was one.  
6 MR. MIKE MABERRY: I have -- we have no -- again  
7 --  
8 MS. NANCY McMAHON: Only to the land that you  
9 are responsible for?  
10 MR. MIKE MABERRY: Yes.  
11 MS. NANCY McMAHON: I was trying to clarify  
12 that, too. She asked that question. What is under your  
13 control is that the institute -- the University of Hawaii  
14 then will also have to renegotiate whatever leases --  
15 everything will end, there will be no more nothing.  
16 DR. CRAIG FOLTZ: That may not be acceptable.  
17 MS. NANCY McMAHON: But it's a proposal.  
18 MR. MIKE MABERRY: That is a proposal.  
19 MS. NANCY McMAHON: It's a proposal that is up  
20 there.  
21 MS. CHARLENE DWIN VAUGHN: That is what we are  
22 talking about.  
23 MS. NANCY McMAHON: She is trying give you some  
24 other options here, to tell you that this is something  
25 that they would look at.

74

1 MS. CAROLINE BLANCO: So if I can sort of pare  
 2 back what I have been hearing to be sure that I understand  
 3 it. Is the proposal that whenever any existing lease --  
 4 let's say the Air Force or whoever else is up there, when  
 5 that lease ends, it would be returned to its natural state  
 6 with no more future developmental allowed, is that what I  
 7 was hearing, or just returned to the natural state? I am  
 8 not sure.

9 MS. LEIOHU RYDER: Yes. Yes.

10 MS. CAROLINE BLANCO: I want to be sure we're  
 11 all talking about the same thing.

12 MS. LEIOHU RYDER: Yes. But the reason why I  
 13 brought that up is because it was brought up earlier, you  
 14 know, when we said the life of a project. That is why I  
 15 asked the question, do you have an example of this. And  
 16 he is saying this will be the first.

17 MR. WARREN SHIBUYA: That's right.

18 DR. CRAIG FOLTZ: The first astronomical --

19 MS. LEIOHU RYDER: Astronomical. But, see, it's  
 20 federal.

21 DR. CRAIG FOLTZ: That is --

22 MS. LEIOHU RYDER: You are still attached to the  
 23 Federal Government.

24 DR. CRAIG FOLTZ: But I am not the Federal  
 25 Government.

75

1 MS. LEIOHU RYDER: No, you are not. But through  
 2 this contract, this subcontract, this sublease, this 106,  
 3 this specific objective, you are all linked in a series of  
 4 wanting to develop the sacredness of this sacred, unique  
 5 one-of-a-kind consciousness of our spirituality on Maui.

6 So when I -- when I -- it kind of awakens me  
 7 because I have experienced the desecration of Kahoolawe  
 8 and the -- the mismanagement and -- and we still are not  
 9 able, because it's not in its pristineness prior to what  
 10 that land went through. There is Makua. There is Pearl  
 11 Harbor. And there's countless other -- not just  
 12 astronomical, but we are talking federal sites that the  
 13 appendages, the internal organs of these sacred islands in  
 14 the Pacific Rim, the blood of many of us has been  
 15 compromised, with a capital C. And so you must understand  
 16 that we are not -- we are -- spirituality to us is a life  
 17 force. All things are sacred on this land.

18 Yes, we have an astronomy facility from the  
 19 University of Hawaii up there and the Star Wars and the  
 20 military and all top secret things that are putting  
 21 humanity at risk on these islands as well as the sea. All  
 22 of that, that we are not supposed to know about, but we  
 23 know.

24 MS. JOYCLYNN COSTA: Uh-huh.

25 MS. LEIOHU RYDER: And so -- and so I implore

76

1 you that this is not just a kind of consultation. This is  
 2 an invitation to really go into the bowels of the  
 3 ancestral traditions of not just Hawaii, but the  
 4 indigenouness of Earth herself. And to maybe learn  
 5 something of science from an indigenous perspective  
 6 related to the relationship of beingness with the sun.

7 DR. CRAIG FOLTZ: Thank you.

8 MS. LEIOHU RYDER: So that is why I brought that  
 9 up.

10 MS. ANNELLE AMARAL: I need, however, to come  
 11 back to what is being -- what is being discussed, what is  
 12 being proposed. So I need a focus.

13 And that is Caroline's question, is the  
 14 proposal, when all leases end, that the responsibility is  
 15 to return them to the natural state beyond NSF.

16 MS. NANCY McMAHON: I just want to answer. I  
 17 think -- well, it's how -- the question was how much --  
 18 it's for the cultural people here, how much have they lost  
 19 already. But the issue is how much do you want to do this  
 20 project and what are you willing to give up on your end.  
 21 So that is the proposal.

22 MS. ANNELLE AMARAL: I think, though, what I  
 23 heard earlier was one of the mitigation measures that was  
 24 suggested was the 50-year time limit and then return to  
 25 the natural state. And I didn't -- I mean, that is on the

77

1 table already and being proposed. But this one is all,  
 2 all --

3 MS. NANCY McMAHON: All.

4 MS. ANNELLE AMARAL: -- structures.

5 MS. NANCY McMAHON: I heard her say all.

6 MS. ANNELLE AMARAL: Not those projects under --

7 MS. NANCY McMAHON: Everybody.

8 MS. ANNELLE AMARAL: -- NSF, but those that are  
 9 under the jurisdiction of University of Hawaii. Yes?

10 MS. NANCY McMAHON: I think that is because  
 11 there are several signatories to the proposal that are  
 12 stakeholders, although there are a number of other owners  
 13 up there. But the major ones that have impacted the  
 14 summit has been the Park Service, has been the University,  
 15 has been the Air Force, has been the State. All these  
 16 players are going to have signatures to a very important  
 17 document that, in the long-term, has a bigger role.

18 MS. CAROLINE BLANCO: If I can clarify, though.  
 19 The Air Force and some of the other organizations, they  
 20 have not at all been involved in this.

21 MS. NANCY McMAHON: I know.

22 MS. CAROLINE BLANCO: And the Park Service has.  
 23 And just to make sure folks understand the Park  
 24 Service's role, if funding is approved, there will be  
 25 construction trucks, commercial vehicles going through the

78

1 Park road. And so there is a regulation that requires a  
 2 Special Use Permit for the Park to issue. And they need  
 3 to issue the permit because that is the only access up to  
 4 the summit. So we're working with them now with regard to  
 5 how that permit would be issued and how environmental  
 6 compliance would be handled with that. So that is their  
 7 role in this.  
 8 I just wanted to be sure folks knew about that.  
 9 MR. JEREMY WAGNER: So all the Park facilities  
 10 and everything is --  
 11 MS. NANCY McMAHON: That could be a stipulation  
 12 on the MOA. That could --  
 13 MS. CLAIRE APANA: Red Hill, right?  
 14 MS. NANCY McMAHON: Could we get -- but I think  
 15 it was good -- this is a different direction we're going  
 16 right at this moment.  
 17 MR. JEFF BARR: Oh, yeah.  
 18 MS. PUA AIU: But, you know what --  
 19 MS. NANCY McMAHON: And it's a big picture.  
 20 It's a very big picture for all of us, if we want to go  
 21 there.  
 22 MS. PUA AIU: And I think that the science  
 23 people in this room are sitting there going, well, you  
 24 cannot do that. But, hello, I mean, these people have  
 25 been sitting here for all day now saying you're asking us

79

1 for a lot. So I think it's a fair thing to put on the  
 2 table --  
 3 MS. CAROLINE BLANCO: I don't think that was the  
 4 feeling of the folks here.  
 5 MR. WARREN SHIBUYA: No.  
 6 MS. CAROLINE BLANCO: It is a big idea. We are  
 7 open to all of them.  
 8 MS. NANCY McMAHON: That is a big compromise  
 9 from their side, from what they left it, to saying -- and  
 10 it's sort of like when the bombing stopped on Kahoolawe,  
 11 the tradeoff, the bigger -- the -- you know, and the  
 12 healing hasn't -- it won't heal everything, but it will --  
 13 for the people in this room, their grand kids, in 50  
 14 years, it might. But it is a big picture. But at least  
 15 we're moving somewhere and I appreciate it. Thank you for  
 16 putting that on the table. I think that is -- it gives  
 17 everybody something to think about.  
 18 MS. LEIOHU RYDER: But I am still on avoidance.  
 19 MS. NANCY McMAHON: And that is fine to be that  
 20 way.  
 21 MS. ANNELLE AMARAL: Jeremy.  
 22 MR. JEREMY WAGNER: Jeremy Wagner.  
 23 Nothing focuses the mind like an end date. And  
 24 I am a project manager. I deal with milestones and end  
 25 dates all the time. And so it's not a surprise. Kiope

80

1 Raymond and I had a discussion about this two years ago.  
 2 MS. ANNELLE AMARAL: I -- sure.  
 3 MS. JAMIE FERNANDEZ: I have a question.  
 4 MR. JEREMY WAGNER: It was a -- an idea about  
 5 mitigation, the sunset clause on a project like this.  
 6 MS. OHUA MORANDO: Ohua Morando.  
 7 I guess I want to go on record to -- I guess to  
 8 say that I want to replicate what Leiohu had said about  
 9 you can't mitigate spirituality. And we are looking at  
 10 what we are going to say and how it's all going to be  
 11 written up. And it's going to go to all these different  
 12 people who are not going to be from here, who come from a  
 13 science perspective.  
 14 And we know right now that science is the -- the  
 15 route of education, because I am in education. And  
 16 science is career paths towards science, to natural  
 17 resource management, to all of these careers. But what we  
 18 are finding is that the cultural component of learning  
 19 these so-called fields weighs more, and heavily more,  
 20 towards indigenous cultures here in Hawaii, our Hawaiian  
 21 cultural identity. You take that away, you just got the  
 22 books and the academics. But when you add the culture to  
 23 it, it's stronger. It becomes real. It becomes part of  
 24 who they are at that academic science level.  
 25 So I want to go on record as saying, is science

81

1 going to weigh more on deciding this through? Because our  
 2 cultural identity is that, is the deciding factor. And I  
 3 want that to be -- I want that to be stated, our spiritual  
 4 cultural identity.  
 5 And we are saying no, we are saying avoidance,  
 6 because we don't want to lose that. We don't want that to  
 7 be brushed aside as unimportant. Because in our education  
 8 programs, that is very important, that's deep.  
 9 MS. ANNELLE AMARAL: So, Ohua, how, then, do you  
 10 bring in the -- or do you balance, then, with the cultural  
 11 piece here in this decision, if we are talking about the  
 12 end of 50 years?  
 13 MS. OHUA MORANDO: You are talking about that's  
 14 gone through, that it's passed, right?  
 15 MS. ANNELLE AMARAL: What?  
 16 MS. OHUA MORANDO: You are talking mitigation.  
 17 MS. ANNELLE AMARAL: I was following this train  
 18 of thought and you talked about the culture piece. I am  
 19 trying to figure out how I weave that into that.  
 20 MS. OHUA MORANDO: I am saying that we can't  
 21 mitigate the spirituality and make science versus the  
 22 cultural indigenous identity, and deciding in this group  
 23 who is going to be looking over what we've said. Because  
 24 it's going to go to director, it's going to go to all  
 25 these different people reading what we have said.

82

1 My point is if they don't understand how we  
 2 feel, which is what was mentioned earlier, they don't know  
 3 what it is.  
 4 MS. ANNELLE AMARAL: Yeah.  
 5 MS. OHUA MORANDO: They are deciding at a whole  
 6 different level again, which is what Joyclynn said.  
 7 MS. ANNELLE AMARAL: Yeah.  
 8 MS. OHUA MORANDO: So I want to make sure that  
 9 that is what we are saying as -- as Kanaka Maoli and  
 10 Native Hawaiians. That is what we are saying, is can't  
 11 mitigate. No.  
 12 MS. ANNELLE AMARAL: Okay. So you don't agree  
 13 with --  
 14 MR. ED LINDSEY: I have something to say.  
 15 MS. ANNELLE AMARAL: Could you identify  
 16 yourself, please, sir?  
 17 MR. ED LINDSEY: My name is Ed Lindsey.  
 18 I am for avoidance at all costs. Some things  
 19 just cannot be mitigated.  
 20 How do you mitigate your grandchild? How do you  
 21 mitigate your ancestry?  
 22 It cannot be mitigated. Because you guys are  
 23 just talking about things, objects. Here we are we  
 24 talking about something that goes deeper than objects. We  
 25 are talking about aloha.

83

1 When we talk about the sky and the Earth and  
 2 things, there are living, breathing entities that cannot  
 3 be mitigated.  
 4 Can a church be mitigated to destroy it? Cannot  
 5 mitigate that.  
 6 Can you go around and dig up your ancestors',  
 7 your grandma, your grandpa, graves and mitigate it? Not  
 8 unless if it's for the benefit of the whole, the entire  
 9 community, and everybody said, well, then you have to give  
 10 a little.  
 11 But these kinds of things cannot be mitigated.  
 12 I take you back to the Kumulipo. I don't know  
 13 if you guys are aware of the Kumulipo. That is the  
 14 Hawaiian chant of creation.  
 15 MS. ANNELLE AMARAL: It's been mentioned.  
 16 MR. ED LINDSEY: Written by Stone Age people  
 17 without a written language --  
 18 MS. ANNELLE AMARAL: Uh-huh.  
 19 MR. ED LINDSEY: -- memorized over 2,000 lines.  
 20 Yet, they constructed something where they talk about sky  
 21 father, Wakea, Earth mother, papa. And how, when these  
 22 two entities interact with each other, you have life.  
 23 Sky father, that includes all the things that  
 24 you guys want to study. But it's taken holistically.  
 25 When you take things apart, the whole is greater than the

84

1 sum of its part.  
 2 And what you trying to do -- when I say it's not  
 3 -- you cannot mitigate these kinds of things. So when you  
 4 have the interaction of the sky and the Earth working  
 5 together, you have the development -- you go and do  
 6 science -- now of microorganism going onto the coral,  
 7 going onto the fishes, going onto the shellfish, going  
 8 onto the sea mammals, going onto the plants on Earth. And  
 9 all these things happen at night without light. Now, this  
 10 is part of the Kumulipo, the creation chant.  
 11 When it goes on to that -- and still man hasn't  
 12 come yet. All these things have been created and man  
 13 still hasn't come yet.  
 14 Now, when the plants, the birds and other things  
 15 on land have been created, then guess who came after that?  
 16 Man.  
 17 And all of these creations, all this creation  
 18 things are all related. And who is tied to the coral and  
 19 who is tied to Earth and the sky? We are.  
 20 So what you trying to do is say, well, we can  
 21 just take this part, commoditize it and to this mental  
 22 part and try to fix things up, but Hawaiian thinking don't  
 23 go that direction. It's a holistic thing. We are  
 24 connected to everything. And it's when these things are  
 25 destroyed and they are off balance, then we're in trouble.

85

1 What is proposed to be done on top of Haleakala  
 2 is one of the things that will cause a big puka, a hole,  
 3 in the creation scene of what our -- our ancestors. And  
 4 we represent those ancestors. There's something bigger  
 5 than what the minds can think.  
 6 And to say who can mitigate it, I don't -- I  
 7 want to use strong language but I think that is baloney.  
 8 You cannot mitigate these kinds of things.  
 9 And when you stop toying with all the facts and  
 10 you're going to do all these kind of things like that, 50  
 11 years, oh, no, we can't do that, that is all baloney. You  
 12 are causing a crack, a big, big crack in the ethos of the  
 13 Hawaiian creation.  
 14 Now, if you think you're greater than that and  
 15 you want to do that and you want to huhu everything, well,  
 16 you know, you guys go ahead and you're gonna do what you  
 17 gonna do, but expect a fight. Expect a fight. We are not  
 18 going to allow you to try to mitigate those things that  
 19 cannot be mitigated. Sorry.  
 20 You talking about the Kumulipo. This Kumulipo  
 21 was established before the theory of evolution. And that  
 22 is who you are talking to right here. That is who we  
 23 represent.  
 24 And don't try to make monkeys out of us.  
 25 MS. ANNELLE AMARAL: Okay. Yes.

86

1 MS. JOYCLYNN COSTA: Joyclynn Costa.  
2 I recently went to Oahu for a church convention.  
3 I was invited there by PAM. And --  
4 MS. LEIOHU RYDER: What is PAM?  
5 MS. JOYCLYNN COSTA: Pacific Asian Ministry.  
6 So I went there because there were going to be a  
7 lot of people of culture there. And I thought, wonderful,  
8 I can learn the other side of the globe.  
9 Well, I got to meet Mr. and Mrs. Buffalo from  
10 the Lakota Tribe. And they have the same type of  
11 spirituality and connection as we do.  
12 And more times than not we are misunderstood  
13 about -- that we are pagans and that we -- and that we  
14 pray to gods and we -- no. We respect the gifts that was  
15 given to us through our heavenly Father.  
16 Because none of us made the ground we stand on.  
17 It was given to us. And the only job we really had is to  
18 take care of it. Because your wealth will be measured in  
19 how you took care of it. And the wealth is going to be  
20 measured not by the point of a pen, but by the hard work  
21 of your hands.  
22 And these Lakota Indians told us, in that  
23 convention, if every man, woman and child was to drop dead  
24 on this Earth this minute, poof, no more human existence,  
25 Mother Nature will survive. The minute Mother Nature is

87

1 no longer, man cannot. And this is what we trying to tell  
2 you folks.  
3 There is a time that you going to have to  
4 realize Mother Nature is superior to every one of us.  
5 Superior. We are not the dominant. We are not the  
6 superior. We are not the all-knowing. We are not the  
7 all-seeing. We're not the all-we-got-to-go-find-it. Ask  
8 her, she give, but you got to take care. You've got to  
9 take care.  
10 And if every man, woman and child dropped dead  
11 today, she would be a better world. Sorry. Because we  
12 have our human nature, yeah.  
13 Hawaii was never one -- and I am talking about  
14 the people, Hawaii -- that had to take. We never took  
15 anything. We were people of giving. We gave to the  
16 waters, we gave to the pohaku, we gave to the streams, we  
17 gave to the fish, we gave to the sky, we gave to the wind  
18 that blew. We gave. We gave praise, we gave thanks, we  
19 gave.  
20 And because of what we gave, we received. There  
21 was nothing that we needed to take. We were never of need  
22 and want. We were of receiving. And so, for that, we,  
23 were grateful and we kept giving.  
24 And so now you sit here and ask us, you want us  
25 to give you some more. We gave. We've given you

88

1 everything that we got.  
2 And so how did you take care of what we gave you  
3 so far? That is what I want to ask. How have you taken  
4 care of everything that have been given to you so far?  
5 I want a report card on that.  
6 MS. ANNELLE AMARAL: Okay. Any further  
7 comments, thoughts?  
8 Jason.  
9 MR. JASON JEREMIAH: Jason Jeremiah.  
10 I just wanted to put on the record that OHA, the  
11 Office of Hawaiian Affairs, strongly opposes the telescope  
12 project.  
13 MS. JOYCLYNN COSTA: Mahalo.  
14 MR. JASON JEREMIAH: We've written letters, our  
15 last letter on June 10, 2008, expressing our opinions  
16 about the opposition towards the telescope project.  
17 And, you know, we don't speak for all Native  
18 Hawaiian organizations or beneficiaries, but I believe the  
19 record will speak after tonight that those who attended  
20 this consultation, this discussion, about the telescope  
21 project, that a vast, vast majority oppose the project  
22 based upon their spiritual beliefs of Haleakala.  
23 And to put it into a context, it's like putting  
24 a telescope on a national historic landmark in 49 states.  
25 Haleakala, just as Mauna Kea and a lot of our special

89

1 mountains in Hawaii, are our cultural landmarks for our  
2 Hawaiian people.  
3 And I just wanted to express that feeling. And  
4 that is kind of where we come from as Native Hawaiians.  
5 MS. ANNELLE AMARAL: Okay. Thank you.  
6 MS. CHARLENE DWIN VAUGHN: Point of  
7 clarification.  
8 I think your June 10th letter talks about  
9 opposition, but then went on to say, if this had to go  
10 forward, you would want some type of community benefits  
11 package assigned to it. And that is where I think people  
12 in my agency got lost.  
13 MR. JASON JEREMIAH: Right.  
14 MS. CHARLENE DWIN VAUGHN: Because we didn't  
15 understand that transition.  
16 MR. JASON JEREMIAH: So to clarify, we do not --  
17 our position is that we do not want to see the project go  
18 forward.  
19 MS. CHARLENE DWIN VAUGHN: Okay.  
20 MR. JASON JEREMIAH: If it, in fact, does go  
21 forward, then we would look for some type of benefit, you  
22 know, if the project had to go forward.  
23 MS. ANNELLE AMARAL: So then you --  
24 DR. CRAIG FOLTZ: We understand. Thank you.  
25 MS. OHUA MORANDO: Looking at it as mitigation.

90

1 MS. ANNELLE AMARAL: Mitigation.  
 2 MS. OHUA MORANDO: Is that how you are looking  
 3 at it, because you are saying no in the beginning?  
 4 MR. JASON JEREMIAH: Right.  
 5 MS. OHUA MORANDO: And at the end, if it goes  
 6 through, then it's a mitigation?  
 7 MS. CHARLENE DWIN VAUGHN: That is how the  
 8 letter basically --  
 9 MS. OHUA MORANDO: Sound and looked?  
 10 MR. ED LINDSEY: I would say --  
 11 MS. OHUA MORANDO: It's a no first.  
 12 MR. ED LINDSEY: -- we don't want anything.  
 13 MS. CHARLENE DWIN VAUGHN: You don't want  
 14 anything?  
 15 MR. ED LINDSEY: No, we don't.  
 16 MS. CHARLENE DWIN VAUGHN: Okay.  
 17 MS. OHUA MORANDO: I just want to make a  
 18 comment.  
 19 MS. ANNELLE AMARAL: Okay. You wanted to --  
 20 MS. OHUA MORANDO: Because we're going to end  
 21 soon, right?  
 22 MS. ANNELLE AMARAL: 9:00, we're going to end.  
 23 MS. OHUA MORANDO: I want to make a quick  
 24 comment.  
 25 Ohua Morando.

91

1 You know, we're talking and we're saying, okay,  
 2 50 years, 50 years, 50 years. Right? Like it's just a  
 3 number thrown out, as Uncle is saying. But take a look  
 4 around this room. Who is going to be here 50 years?  
 5 MS. MIKAHALA HELM: Charlie, you got a pill?  
 6 MS. OHUA MORANDO: That is just my first thing  
 7 that I wanted to say is, like, who is going to be here in  
 8 this room 50 years. Because I know my kids are going to  
 9 be here, my grand kids going to be here. And we are  
 10 making decisions based on the next generations.  
 11 And, you know, maybe we should have the kids  
 12 come in and say, "Do you want this built on Haleakala?"  
 13 Because they are going to be the ones here. And they are  
 14 going to look at what we are doing and what we have done.  
 15 And they are going to say, "How come you didn't do  
 16 anything about it," or, "why did you do that?"  
 17 MS. JOYCLYNN COSTA: Uh-huh.  
 18 MS. OHUA MORANDO: So I want to make that on the  
 19 record. It's like we might be here, but we might not be  
 20 physically walking and being able to think and talk, but  
 21 our kids and grand kids will be.  
 22 MS. ANNELLE AMARAL: Any other thoughts,  
 23 concerns, issues, you want to raise? If not, I am going  
 24 to move you all to some final statements and then we're  
 25 going to bring this to a close, yeah.

92

1 MS. OHUA MORANDO: That was mine.  
 2 MS. MIKAHALA HELM: I did want to --  
 3 MS. ANNELLE AMARAL: No pressure. Go ahead,  
 4 Mikahala.  
 5 MS. MIKAHALA HELM: I just want to ask a  
 6 question and then just share some mana'o.  
 7 And my question would be -- just if maybe Mike  
 8 or Craig or Charlie, someone, if you could just explain --  
 9 where the east ahu is, yeah.  
 10 And in this proposed ATST, I would like to ask,  
 11 so that everybody has a clear picture -- because I went up  
 12 there and visited it, and I know -- but how close is the  
 13 proposed ATST would be to the east ahu, if it's in the  
 14 second site, as well as the Reber, which is not far away?  
 15 Can you tell how close it would be?  
 16 MR. MIKE MABERRY: Okay. For those of you who  
 17 weren't in the earlier meeting, just so that you  
 18 understand, because it hadn't been discussed this evening,  
 19 the west-facing ahu was given as an asking for forgiveness  
 20 for not consulting in the past and for projects that were  
 21 built.  
 22 During talks with the Billy Fields and his crew,  
 23 who built the west-facing ahu, when we discussed the  
 24 possibility of future development based on our long-range  
 25 development plan, they asked what -- what might be

93

1 considered. And we mentioned this project. And they  
 2 asked us to show them where it would -- it could possibly  
 3 be, what the preferred sites were. Well, preferred and  
 4 the alternative site. We went to the preferred site again  
 5 because the alternative site is already developed. It's  
 6 completely developed. We went to that site. They chose  
 7 the spot on the far edge of the puu, of the cinder cone,  
 8 the far southeast edge. And they took stones from the  
 9 proposed project area and made the ahu.  
 10 And so I will turn to Jeff Barr. And,  
 11 hopefully, he can -- I've stalled enough to give him time  
 12 that he has looked at it and can give us a distance.  
 13 MR. JEFF BARR: I don't actually have -- I am  
 14 Jeff Barr, the architect for the ATST project. And I  
 15 don't actually have the exact number for you. But it's  
 16 approximately -- from the side of the enclosure, the tall  
 17 structure, the south side of the tall structure that  
 18 telescope is inside of, it's probably 60 or 70 feet away  
 19 to the east-facing ahu. Something like that.  
 20 MS. MIKAHALA HELM: 60 or 70 feet from the ahu?  
 21 MR. JEFF BARR: Yeah. That's not an exact  
 22 number. That is just --  
 23 MS. MIKAHALA HELM: No. But I know it's very  
 24 close.  
 25 MR. JEFF BARR: It's close.

94

1 MS. MIKAHALA HELM: Because when you go and  
2 visit it, you just turn around behind your back.  
3 MR. JEFF BARR: That is exactly right.  
4 MS. MIKAHALA HELM: And the Reber Circle is  
5 across that little street. So it's very close.  
6 So this is personalized, what we're talking  
7 about that the ATST stands for. And so I still remain for  
8 avoidance, and that the NSF choose the no-build option.  
9 And I think our kupuna explained very clearly about why we  
10 feel so strongly about this.  
11 And, you know, I know that this has a lot of  
12 political backing already. And so although we read in the  
13 papers that the decision has not been made by NSF, you  
14 know, we do realize that this has some of the Congress  
15 backing already, perhaps urging. I don't really know all  
16 the networking. But we feel very strongly that this is  
17 enough and that there is no price to the sacredness of  
18 Haleakala.  
19 And if you look at mitigation of what is being  
20 proposed, particular programs to help Hawaiians, students  
21 and all that, I totally believe in that. But when you  
22 look at the attacks that our people have faced every day  
23 in court, what is the guarantee that there would be help  
24 for our children and that that, too, would not be  
25 attacked? And so, you know, we stand strongly and we hope

95

1 you take the message back.  
2 Mahalo.  
3 MS. ANNELLE AMARAL: Mahalo.  
4 MS. LIANNA HOROVITZ: Lianna Horovitz.  
5 I would like to add one final word for the  
6 record. That I am not Native Hawaiian, but I have grown  
7 up here and I have chosen to bring my children back here  
8 to be raised here. And I personally feel I have so much  
9 to learn and to share with my own children from the Native  
10 Hawaiian people that that I live here with and how  
11 important it is to me as a non-Hawaiian person that these  
12 sites in the sacred places be preserved. And that as much  
13 I cannot speak from a Native Hawaiian perspective because  
14 that is not who I am, I can only speak for who I am, and I  
15 can say that I would like the message to go back to  
16 Washington that there are people who live here and  
17 appreciate and respect and want to learn and perpetuate  
18 the Hawaiian culture because it is important. And it is  
19 the majority of the people who live here and it is of  
20 vital importance. So I would really like that message to  
21 go back.  
22 Thank you.  
23 MR. ED LINDSEY: My grandson, who will be 58  
24 years old when this thing finishes -- and I will have to  
25 explain to him what was going on -- said these words --

96

1 MS. ANNELLE AMARAL: Ed Lindsey.  
2 MR. ED LINDSEY: "Grandpa, no can make 'em. No  
3 can make it."  
4 Mahalo.  
5 And he understood very well what has happened.  
6 In addition, the permitting for the heavy truck  
7 vehicles going up Haleakala, there are many, many  
8 historical bridges that have been built. I don't know if  
9 that has been brought up -- has that been brought up?  
10 DR. CRAIG FOLTZ: Yes.  
11 MS. CAROLINE BLANCO: Yes.  
12 MR. ED LINDSEY: And the viewplains, has that  
13 been brought up?  
14 DR. CRAIG FOLTZ: Yes.  
15 MR. ED LINDSEY: Okay. Scratch that.  
16 Insanity of it, has that been brought up? It's  
17 insane. Put that on. It's insane.  
18 And I know I am stepping on a lot of people's  
19 feet, some big cheese's feet. My answer to that is too  
20 bad.  
21 You have no shame to destroy our places. And we  
22 have no shame to say no.  
23 Money cannot buy the reefs. Money cannot buy  
24 our heritage. Money cannot buy who we are.  
25 MS. JOYCLYNN COSTA: Amen.

97

1 MS. ANNELLE AMARAL: I would like to give the  
2 agencies an opportunity, if you have anything that you  
3 want to add to this, otherwise --  
4 MS. CHARLENE DWIN VAUGHN: I would just like to  
5 thank people for their candor and their honesty and their  
6 sincerity in trying to share with all of us what Haleakala  
7 means to them. And I think that hearing it directly from  
8 people who have spiritual connection, historical  
9 connection, gives us a context of we will go back and look  
10 at this from a lot of different perspectives. So thank  
11 you for taking the time to come and share.  
12 Even though we might not understand it fully, I  
13 think we get the gist of the comments.  
14 MS. ANNELLE AMARAL: Mahalo.  
15 Pua.  
16 MS. PUA AIU: State has no comment.  
17 MS. ANNELLE AMARAL: I'm sorry?  
18 MS. NANCY McMAHON: We're listening.  
19 MS. ANNELLE AMARAL: Please.  
20 Caroline.  
21 MS. CAROLINE BLANCO: I guess I would just like  
22 to say, on behalf of National Science Foundation, I echo  
23 Charlene's comments and thank you all very, very much for  
24 taking the time to convey your thoughts in such a careful  
25 and sincere way.

1 And I've written down notes. I will certainly  
2 be looking over the transcript. And our group will be  
3 conveying all of these important thoughts and conveyed  
4 with the strength that it's been conveyed today to the  
5 decision-makers.

6 And, again, thank you so much.

7 MS. ANNELLE AMARAL: Any further comments, any  
8 thoughts?

9 Then come, let's join hands and do a closing  
10 pule.

11 (Meeting Adjourned at 8:44 p.m.)  
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1 CERTIFICATE  
2  
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4  
5  
6

7 I, TONYA MCDADE, a Court Reporter of the State  
8 of Hawaii, do hereby certify that the proceedings  
9 contained herein were taken by me in machine shorthand and  
10 thereafter was reduced to print by means of computer-aided  
11 transcription; that the foregoing represents, to the best  
12 of my ability, a true and accurate transcript of the  
13 proceedings had in the foregoing matter.

14 I further certify that I am not an attorney  
15 for any of the parties hereto, nor in any way concerned  
16 with the cause.  
17

18 DATED this \_\_\_ day of \_\_\_\_\_, 2008.  
19

20 *Signature on File*

21 \_\_\_\_\_  
22 Tonya McDade, RPR, CRR, CBC  
23 Hawaii CSR #447  
24  
25

## **APPENDIX D**

### **TRANSCRIPTS – DEIS PUBLIC COMMENT MEETINGS**

- (1) Cameron Center, September 27, 2006**
- (2) Hannibal Tavares Community Center, September 28, 2006**
- (3) Kula Community Center, September 29, 2006**



5

1 more than 30 individuals went into the draft environmental  
 2 impact statement, and it would be impractical for all of  
 3 those individuals to be here tonight. So there may be some  
 4 questions, if there are questions, that we cannot answer  
 5 tonight.

6 Also, the draft environmental impact statement is,  
 7 as it's called, a draft. And we are aware that it can  
 8 contain errors, we also know that there will be differences  
 9 of opinion about the content and the conclusions, and we  
 10 encourage everybody to participate in the public comment  
 11 process in order to explore those.

12 So, allow me to introduce the individuals that are  
 13 here with us this evening. Craig Foltz. Craig is  
 14 representing the National Science Foundation and is the  
 15 program officer for this project; Jeremy Wagner, the project  
 16 manager from the National Solar Observatory; Jeff Barr, the  
 17 project architect; Professor Jeff Kuhn from the University  
 18 of Hawaii Institute for Astronomy; Mike Maberry, Assistant  
 19 director of the Institute for Astronomy; Bijan Gilanshah,  
 20 office of the general counsel of the National Science  
 21 Foundation. These folks are here and available to answer  
 22 questions about the project.

23 We have brought materials, but that's not what  
 24 this is about. It's about your comments directly related to  
 25 the draft environmental impact statement which was published

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6

1 on September 8th. Remember, you have several more weeks to  
 2 comment on the document. If you have not received one and  
 3 wish to, you can sign up for a document. We've provided it  
 4 in either hard copy or on a CD. It's also available on the  
 5 web site listed outside. The web site for the Advanced  
 6 Technology Solar Telescope.

7 With that, I'm going to introduce our facilitators  
 8 for the evening. They will present the ground rules for the  
 9 discussion and will then open the floor for public comments.

10 David.

11 MR. BRASS: My name is David Brass, and I'm a  
 12 facilitator with Mediation Services of Maui. And Cheri  
 13 Nashiwa and I will be facilitating the testimony tonight.  
 14 Our role is to create an atmosphere where it's possible for  
 15 everyone to speak their concerns in a way that allows for  
 16 all voices to be heard.

17 One of the things that we're going to be doing is,  
 18 based on the number of people who signed up and our guests  
 19 who are possible late arrivals, we've determined a time  
 20 limit to testimony. If that is insufficient for you to  
 21 speak what you need to speak, as Dr. Fein mentioned, there's  
 22 the opportunity to write testimony, there's also two more  
 23 meetings coming up tomorrow night and Friday night.  
 24 Hopefully, there will be opportunities for you to cover the  
 25 points that you are concerned about through those different

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7

1 venues.

2 As he had mentioned also, if you are not  
 3 comfortable coming up and speaking into the microphone but  
 4 you have something you want to be part of the record of this  
 5 meeting, feel free to write it down, give it to Cheri or I,  
 6 and we will read it into the mic for you.

7 The purpose of the microphone and the structure  
 8 that we have imposed is to insure the court reporter, who is  
 9 here, can get the information that's being given so that it  
 10 does get incorporated into this process.

11 So, again, we're just here to facilitate the  
 12 process. We're not connected with any of the players that  
 13 are here. We're here in the same way that we're in a  
 14 regular mediation in the community to facilitate  
 15 communication. I will have Cheri go over the ground rules  
 16 -- I'm sorry, we do have an agenda, and it's a very loose  
 17 agenda. We're in the opening right now. Cheri will go over  
 18 the ground rules, and we'll go directly into comments from  
 19 the group. If you have not already signed up on the sign-up  
 20 sheet, we're going to be reading the names off of that and  
 21 go in the order that people have signed up. So please sign  
 22 up on the sign-up sheet if you would like to speak.

23 We'll be taking a break at 8:00 for about five  
 24 minutes to give the court reporter a break from recording,  
 25 another break at 9:00, and then we're going to wrap up at

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8

1 about 9:50 because we need to be out of here at 10:00.

2 MS. NASHIWA: Again, my name is Cheri. We're  
 3 going to go over the ground rules now, and this is for the  
 4 process of making comments. We ask that all cell phones be  
 5 turned off or on silent mode because they are distracting.  
 6 Of course, you need to sign up if you wish to speak, because  
 7 David will be announcing the names. Also, when you do come  
 8 up to speak, the court reporter asked that you state your  
 9 name before making your statement. One person speak at a  
 10 time. That also is because the court reporter is recording.  
 11 And if there's more than one person speaking, she basically  
 12 stops recording, because she can't get both people.

13 Speak into the microphone slowly and clearly. Use  
 14 respectful language and tone, and again the time limit is  
 15 four minutes with the one minute wrap-up. And what will  
 16 happen is I'll be standing next to the speaker next to the  
 17 microphone, I'll be timing the speaker, and when your four  
 18 minutes are up, I'll flash you the yellow card that means to  
 19 wrap up your comment within a minute.

20 MR. BRASS: Do we have the sign-in sheet? I'm  
 21 going to ask that you bear with me. I may mispronounce a  
 22 name. That's another reason to make sure that you state  
 23 your name when you get up to the mic so that the court  
 24 reporter has an opportunity to capture that information.

25 MR. MEDEIROS: I have a question. Before you

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9

1 start with the comments -- my name is Bill Medeiros, and are  
 2 the next two meetings at 7:00? The letter of September 1  
 ^ states the meeting is at 6:00. Will you clarify the time  
 for the next two meetings?  
 5 MR. BRASS: I will give that to the people who  
 6 called --  
 7 MR. FEIN: Yes, Bill, originally the time was  
 8 6:00 p.m.; but three weeks ago, we noticed that we had a  
 9 conflict. Unfortunately, some of the publications carried  
 10 6:00 p.m. We sent out dozens of post cards and reposted it  
 11 in the media as 7:00 p.m. for all three nights.  
 12 MR. MEDEIROS: My next question is, was it  
 13 coincidental that you planned these meetings during the time  
 14 of Maui's biggest event, the County Fair?  
 15 MR. FEIN: These meetings were planned in  
 16 conjunction with publication of the DEIS, the draft  
 17 environmental impact statement, if you are familiar with the  
 18 state process, which I'm sure you are, goes through the  
 19 Office of Environmental Quality Control. It's accepted on a  
 20 certain date, published on a certain date, that begins the  
 21 clock, and public comment period then begins for 45 days.  
 22 These meetings need to be held within that period of time.  
 23 Because we have individuals who come from Washington D.C.,  
 24 Tucson, and so on, we had a very narrow window of choice.  
 25 And these three days are actually the only time that these

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10

1 gentlemen are available. As of Friday, they are in  
 2 different parts of the world.  
 3 Unfortunately, the timing is such that the fair is  
 4 this week, but that's another reason for having three  
 5 meetings. There's no requirement in the law to have three  
 6 meetings, but if an individual or a group cannot make one  
 7 meeting, then we had two others to provide an opportunity  
 8 for them. If you are going to the fair on all three nights,  
 9 you are going to be eating a lot of food and having a good  
 10 time.  
 11 MR. MEDEIROS: Well, a lot of people in the  
 12 community participate in the fair. They not only attend,  
 13 but they have other obligations at the fair.  
 14 MR. FEIN: That's one of the problems with living  
 15 in a small community like this. Any time you schedule a  
 16 meeting, as a member of a nonprofit, I've gone through this  
 17 many times. We have had public meetings for various  
 18 presenters, and it turns out to be the same night as some  
 19 other big event. There's not much we can do about that.  
 20 A VOICE: That indicates to me that it's biased  
 21 towards the proponents of the system rather than the  
 22 community.  
 23 MR. FEIN: I'm sorry, I don't understand your  
 24 question.  
 25 A VOICE: I know that the members of the Hawaiian

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11

1 language community, the people who are involved in  
 2 preserving the culture are heavily involved in the fair  
 3 every year. And so you are saying that the only time you  
 4 can schedule it was at the convenience of the proponents of  
 5 this project, but not at the convenience of the people who  
 6 care about Maui.  
 7 MR. FEIN: I assure you that as with every other  
 8 meeting that we have scheduled, all other nine meetings,  
 9 there were individuals who said exactly what you did, and I  
 10 can only assure you that we picked the only dates available.  
 11 A VOICE: This is the biggest event on Maui every  
 12 year.  
 13 MR. FEIN: This one is?  
 14 A VOICE: Yes. I would suggest that we have  
 15 another series of meetings on this.  
 16 MR. FEIN: Thank you.  
 17 MS. NASHIWA: I forgot to make one more  
 18 announcement. There is media present. They are either  
 19 audio recording. We normally see an AKAKU camera here, just  
 20 to let you know, these people are open to the idea that for  
 21 confidentiality reasons, if you do not want to be recorded,  
 22 you can ask them to turn off their recorders.  
 23 MR. BRASS: So if that is your feeling, you can  
 24 just state that at the beginning of your testimony if you  
 25 prefer not to be recorded. We're just going to go on into

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12

1 the testimony portion. As I said, I may mispronounce your  
 2 name. Hopefully, I will get close enough that you will  
 3 recognize it. Haumea Hanakahi.  
 4 HAUMEA HANAKAHI: Aloha kakou, I would like to  
 5 open just in recognition. (Hawaiian language was spoken)  
 6 I come recently from the big island, and I've made  
 7 Maui my home now. I thank all the people that are here  
 8 tonight from the community as well as from across the ocean.  
 9 And I thank you for your open hearts and minds in hearing  
 10 our comments tonight. I think it's important for all of us.  
 11 There's a lot at stake, and I think that coming from the big  
 12 island where we have dealt with issues with Maunakea for  
 13 many years, I come with a bit of a bias because I come with  
 14 some experience. And so I want to share some of my concerns  
 15 about this project.  
 16 The first thing that we found on the big island,  
 17 many of us, is that we have to begin with a pule. The pule  
 18 is filled with respect, and it's remembering that the maunas  
 19 are not ours. That's not the ground of mankind. The maunas  
 20 are the realm of akua. And so as we give that back to akua  
 21 in recognition and acknowledgement, then that changes  
 22 everything, and it gives it to akua to decide what is right  
 23 and what will happen.  
 24 And so I pray that everyone in their hearts may do  
 25 that and share that with others that they love and others

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13

1 that are on this land. We have an internal knowing about,  
 2 what I call, the realm of the Gods. And to arrogantly go  
 3 and build upon a land that has always been considered sacred  
 4 is a desecration. Period. Hawaiians have always held  
 5 education as a noble endeavor, and this is not about  
 6 astronomy. This is a land use issue.

7 Hawaii is tired of hearing about astronomers  
 8 behaving badly, whether it's on Maunakea or Haleakala. So I  
 9 open this in the hopes that truly we can make this kakou and  
 10 inclusive. Make it something that we truly can reach out to  
 11 each other's hearts about because truly we don't want to  
 12 stop education, stop exploration. Polynesians were  
 13 exploring these vast ocean by the same science of which you  
 14 desecrate our mountain with. We were exploring the oceans  
 15 at the time of when Christ was born.

16 We have a long history at this, and we did it and  
 17 navigated in using the stars and the planets and the winds  
 18 and all the omens in nature. And so to go and build upon  
 19 land and destroy life in the name of searching for life out  
 20 there makes no sense at all. I'm very concerned about the  
 21 water issues here. I'm concerned that we need an absolutely  
 22 comprehensive study. Hydrology study of our water tables  
 23 here.

24 On the Maunakea issues when we asked to over and  
 25 over again is there mercury being used up here? Is it

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14

1 spilling into the land? Is it going into possibly our water  
 2 table? We were told over and over again, No. No. No.  
 3 However, in court documents, it came out that yes, mercury  
 4 was used. It's used to replace the mirror to dissolve the  
 5 old one and replace it with the new. I don't have all the  
 6 terminology for it, but it's used in every observatory.

7 So what's the disposal process there? Where does  
 8 this go? It used to go on Maunakea right into the ground.  
 9 We also don't have a complete listing of hazardous  
 10 materials. Where is the complete list? Where is the plan  
 11 of where this goes? Who takes care of this? Does it go  
 12 into our oceans then, our endangered reefs where we get our  
 13 fish from, where we feed our children? These are concerns  
 14 that need to be addressed.

15 As far as mitigation, it's a real concern that the  
 16 fox may be guarding the hen house once again. As on  
 17 Maunakea, we had proponents coming up with a plan of how to  
 18 manage the mountain. It doesn't really make sense for the  
 19 fox to decide how to manage the mountain. And so by  
 20 providing a cultural monitor, simply having someone of  
 21 Hawaiian blood standing there watching as land is desecrated  
 22 does not mitigate anything. We need to have a much more  
 23 comprehensive plan that is approved by the communities and a  
 24 nonbiased board.

25 And then my last question to you is, is this a pan

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15

1 star (phonetic) project? Is this related? Because if you  
 2 think that eventually you will not have to address national  
 3 policy, EPA policy, that's not true. This cannot fall under  
 4 national security because of the changing climate and  
 5 politics and the face of the public. We won't allow it. So  
 6 if you are planning on this just going ahead in the name of  
 7 national policy, it won't happen.

8 MR. BRASS: I'm going to ask you to wrap up your  
 9 testimony.

10 HAUMEA HANAKAHI: I appreciate that. My last  
 11 comment and concern is that Maunakea, we heard a lot of  
 12 assertions, a lot of claims without the evidence have backed  
 13 it up. And we were not the only ones that felt that way as  
 14 a community. The courts backed us up. The courts found  
 15 that there was no evidence for this assertions we were  
 16 given. And the court's have --

17 MR. BRASS: In order to allow other people to  
 18 speak, perhaps there will be time at the end.

19 HAUMEA HANAKAHI: That's all I have to say.  
 20 Mahalo.

21 MR. BRASS: I can't quite -- Keahi Bustamente. If  
 22 you could state your name at the beginning so the court  
 23 reporter has it correctly.

24 KEAHI BUSTAMENTE: Aloha. I'm Keahi Bustamente.  
 25 Some quick things. That thing -- that is so stupid and

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16

1 disrespectful to say I got a time limit. You guys should be  
 2 sitting on the floor.

3 I just wanted to talk about the environmental  
 4 impact statement. As a Hawaiian, I believe that I came  
 5 from the stuff that that mountain came from. That the  
 6 creatures, the koa, the ohi'a, the weke'ula I came from  
 7 that. When I look at that, I'm going to look at that, and  
 8 I'm going to see that. You are probably missing one  
 9 important species on there. That guy right there, those two  
 10 guys. And I'm sure if I went and looked at other area EISs,  
 11 I'm going to find the same thing.

12 And the last thing -- I love science, biology, and  
 13 astronomy and all of this. I love that, and that's why I  
 14 believe that everything I just said is true.

15 MR. BRASS: Foster Ampong.

16 FOSTER AMPONG: Aloha. Good evening. My name is  
 17 Foster Ampong, born and raised and presently residing on the  
 18 island of Maui. Normally, I would just speak from my na'au,  
 19 from my gut, because that's the way we speak the truth. But  
 20 I had to write this down today. And so I've already  
 21 submitted it in the comment box. So there's documentation  
 22 on what I'm going to be articulating and expressing tonight.  
 23 Also, I would like all of you to know that on behalf of Na  
 24 Kupuna O Maui, Patty Nishiyama, who couldn't make it today,  
 25 have also submitted written comments. Myself as an

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17

1 individual, an independent, and I parallel the feelings and  
 2 the views of Na Kupuna O Maui, and we oppose the  
 3 construction or building development of the ATST on  
 Haleakala.

4 I feel that this proposed project will exasperate  
 5 (sic) adverse effects presently plaguing our community and  
 6 the environment socially, culturally, and at the very core  
 7 of our existence, spiritually. Mind you, what I'm speaking  
 8 tonight I am very sincere about, and I hope that you all  
 9 listen not only with your ears or your minds, but listen  
 10 with your heart. Please.

11 Upon review of the DEIS, which was provided by the  
 12 National Science Foundation, the proposed sites other than  
 13 Haleakala, such Bear Lake, California, and La Palma, Canary  
 14 Islands, Spain have been determined and documented to be  
 15 second and third best, i.e., alternative sites respectively.  
 16 I have and continue to support the pursuit of knowledge in  
 17 all areas of education. The necessity to further study and  
 18 understand the science of our sun and the effect it has upon  
 19 us must continue.

20 However, the balance of our ecosystem relative to  
 21 the studies and pursuit of knowledge must not be discounted.  
 22 And I'm talking about the psychological, the emotional, and  
 23 especially the spiritual elements of our community in every  
 24 way a very important part of this ecosystem that I'm  
 25

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18

1 referring to.

2 The mind, the psychology, the body, the emotions,  
 3 the soul, our spirituality. In every person upon this planet  
 4 is essentially part of this delicate balance. A balance  
 5 which must be maintained. I believe to achieve this  
 6 balance, the psychological, emotional and spiritual concerns  
 7 of the community must be seriously weighed in equally and  
 8 without prejudice or bias. It seems the scientific  
 9 objectives can still be met at Bear Lake or La Palma.  
 10 Together with the fact that the development of the ATST  
 11 facility here on top of Haleakala will only exasperate (sic)  
 12 negative conditions the community presently are addressing  
 13 here on Maui. No more time or money should be put into  
 14 selling this proposal to the community of Maui.

15 To imply Haleakala is the only location to  
 16 achieve your objectives is misleading. It is the same as  
 17 saying you need to reach Maui from California today. You  
 18 insist on flying first class, but there are no -- but there  
 19 are only coach seats available. Would you choose not to get  
 20 to your destination because you will sit nowhere else other  
 21 than first class? Or, would you be willing to accept the  
 22 next available seat and reach your destination? And that  
 23 may not be -- I probably could come up with a better  
 24 analogy, but please, in closing, from one soul to the many  
 25 souls here, be considerate and sensitive to the people of

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19

1 Maui. But, more importantly, be sincere about it. Thank  
 2 you.

3 MR. BRASS: A reminder, if you would like to speak  
 4 tonight, if you can sign up on the sign-up sheet, I believe  
 5 there's still one outside, and that way we'll insure that  
 6 everyone has an opportunity to speak. The next speaker is  
 7 Dan Sutie (sic).

8 DAN SYTZE: Sytze. Aloha kakou. I didn't -- when  
 9 I said my comments earlier, I did not mean to say that your  
 10 time is not important. Please excuse me if I -- I know our  
 11 emotions are high here because there are strong feelings  
 12 here. When the speakers are saying aloha kakou, kakou means  
 13 between all of us. That includes you. And I say that in  
 14 the same spirit.

15 I'm working in the field of science. I'm a  
 16 technologist, I work in the homeland security arena. I'm  
 17 sympathetic with the interest of science in understanding  
 18 the world we live in as are many Hawaiians who some of the  
 19 most astute scientists I know are of Hawaiian ancestry. I  
 20 think we could learn a lot from them.

21 I have a couple of comments about the impact  
 22 statement. One is on the issue of environmental justice.  
 23 And when it comes to the environment in Hawaiian thinking --  
 24 I'm obviously Caucasian, so all I can do is tell you what I  
 25 have learned from my Hawaiian friends and my teacher and the

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20

1 kupunas and the older people of Hawaii. Aloha aina is --  
 2 that's like part of the religion. That's part of the  
 3 spirituality. It's love of the land, caring for the land.  
 4 Captain Cook classified the Hawaiian people as the world's  
 5 greatest ecologists. And we have a mountain here that is  
 6 revered. It's known throughout Polynesia and considered  
 7 sacred throughout Polynesia from all over. This is like the  
 8 Sistine chapel of the Hawaiians. And so when I look at the  
 9 statement, the environmental impact statement, and it says  
 10 that there's no environmental justice issues here. I  
 11 question the very foundation. And I don't know how much you  
 12 all are familiar with the history of Hawaii, but if you  
 13 aren't, I would really suggest there's a play up at Iao  
 14 theater in Wailuku, Friday, Saturday Sunday night. It's  
 15 called the Queen's Story. It's Queen Liliuokalani who was  
 16 overthrown illegally by the United States government. And  
 17 there's a lot of injustice that's gone on here both  
 18 environmental and political and there's been cultural  
 19 genocide that's happened here. And I think anybody who  
 20 walks into this environment without taking that seriously  
 21 and calls the environmental justice issue irrelevant is  
 22 going to be walking on really shaky ground.

23 The other thing about the environmental impact is  
 24 I was raised in an aerospace family. I noticed one of the  
 25 contractors is Lockheed. My father worked for Lockheed for

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21

1 almost 40 years, and he worked next to the blue cube, which  
2 was a Satellight tracking facility for the U.S. military.  
3 And it was pretty well known to all of us. And I worked in  
4 Silicon Valley. It was pretty well known that we were  
5 pretty much at ground zero in the event of the hostilities  
6 with the Soviet Union at that time. I think the intelligent  
7 estimates I heard about said we have redundant weapons  
8 targeted at us. And if this is a military operation up  
9 here, I'm not taking a stand for or against what you are  
10 proposing doing or for or against what is happening up there  
11 right now, but I'm just saying that if that is a military --  
12 especially an offensive military type of operation up there,  
13 that there's going to be nuclear weapons targeted at it, and  
14 that should be taken into account in the environmental  
15 impact statement. Thank you very much.

16 MR. FOLTZ: Could I make a response? My name is a  
17 Craig Foltz, I'm an astronomer, and I do work with the  
18 National Science Foundation. I'm not a solar astronomer.

19 First of all, a question came up with respect to  
20 Pan Star. This project is unrelated to this project. This  
21 project is not designed to do any space surveillance nor is  
22 it designed to look toward potentially hazardous objects.  
23 And I have said this before in the past, and I'd stake my  
24 reputation on it, that this is an academic telescope. This  
25 is aimed at understanding the sun. That is academic. It

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22

1 doesn't mean it -- it does not have importance to us in  
2 terms of our civil lives. But there is nothing about the  
3 ATST that is in any way related to any present or future  
4 weapon system.

5 MR. BRASS: A reminder for people who came in  
6 late, if you would like to testify, there's a sign-up sheet  
7 on the table. We ask that you sign up so that we can assure  
8 that everyone has an opportunity to speak.

9 MIKAHALA HELM: Aloha kakou. My name is Mikahala  
10 Helm. And I will be submitting my written testimony in  
11 response to the DEIS prior to the -- by the mailing  
12 deadline.

13 This evening, I felt this was important to mention  
14 certain things, particularly some concerns that I have. And  
15 this is about the DEIS process as well as the Section 106  
16 process. I have participated, I'm a consultant, Section 106  
17 consultant, and I have participated in the March and May  
18 Section 106 meetings. And, to my surprise, the assistant  
19 general counsel who had received all of our comments,  
20 especially the bulk of us who were proposing avoidance to  
21 not build this 14-story telescope on Haleakala, it was a  
22 very big surprise to me that Carleen Nunez (phonetic) who  
23 had taken our testimony and who had been there was then  
24 changed, and we welcome you this evening.

25 My concern is that many people came out. Many of  
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23

1 our people came out to testify. And if you look at the DEIS  
2 in its pendency, it lists that distribution list. And it  
3 appears that all these post cards and whatnot are mailed to  
4 all of these people, and I know who they are. However, many  
5 of the Hawaiian people are coming out because word of mouth  
6 to these Section 106. That's why you remember that the May  
7 Paukukalo meeting was much larger than the March because we  
8 had time to get the word out personally of what is happening  
9 proposed to Haleakala.

10 My concern is this: The meetings that are held --  
11 that are scheduled today or tomorrow or the next day, I  
12 don't know which days you are having Section 106 meetings,  
13 are limited to those who have submitted avoidance  
14 proposals -- not avoidance, I'm sorry. The exact opposite.  
15 Mitigation and minimization proposals. My concern is where  
16 is the voice that you continue to hear this evening? Where  
17 is the voice in that DEIS, besides small little sentences,  
18 that say the consultation occurred?

19 There's stenographic recordings of all of this  
20 numerous testimony, oral testimony, which is what many of us  
21 do against this telescope. They want avoidance. Why do we  
22 want avoidance? Because Haleakala is precious, and it is  
23 an integral part of us as Hawaiians and to our culture.  
24 When I read in the DEIS, page 239, no action alternative  
25 would limit solar astronomy to current technology and delay

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24

1 critical observation of tests, etcetera. However, the price  
2 to our Hawaiian people for the impact on our culture and our  
3 personal identity would be devastating.

4 And so my concern -- I hope you will address  
5 this -- is with how this whole DEIS comment period is being  
6 addressed, the sincerity in getting our community's input  
7 both from Section 106 for Hawaiians and non-Hawaiians alike,  
8 then I think that we need to be sure that in the  
9 environmental impact statement that these are clearly listed  
10 there. The oral testimony and everything must be listed  
11 there to show the depth of concern and support for avoiding  
12 this telescope on Haleakala.

13 In addition, I would like to also express my  
14 concern that this meeting -- I understand, Charlie, you said  
15 they can only come on this particular time. But for our  
16 community, this particular evening has at least two major  
17 meetings, one is the super ferry and one is this. So from  
18 mauka to makai we are being affected. And this is the  
19 public comment period and our County fair? When you wonder  
20 do they go every night and eat? What it is is these  
21 families are invested in this for their clubs or schools to  
22 make money and to support the county fair. So I just ask  
23 that you please, please really be sincere and set up the  
24 process, so that our people -- our people's voice is heard  
25 and that the avoidance proposals from everyone is taken to

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25

1 heart and acted upon. Thank you very much.  
 2 MR. BRASS: Don Kanahele; is that right?  
 3 DON KANAHELE: You got the last name right. Aloha  
 4 kakou. My name is a Daniel Kanahele. I'm a member of the  
 5 Maui community. I would like to say aloha to the Maui ohana  
 6 that's here and also to our visitors. And those who had  
 7 made this possible this evening, I'm grateful to be able to  
 8 participate in the process and to add my two cents.  
 9 I appreciate the science of astronomy. I own a  
 10 mean telescope, and I pull it out from time to time, and I  
 11 gaze into the heavens. I live in south Maui, so the east  
 12 night skies is the brightest from where I live. And, of  
 13 course, that sits right over Haleakala. So I appreciate the  
 14 benefits, the science of astronomy. I guess what I do not  
 15 appreciate is maybe the selection of Haleakala as a place to  
 16 build another telescope. I guess one of the reasons why I  
 17 don't is because I think that we have been very generous to  
 18 the community of astronomers throughout the world in opening  
 19 up our places to telescope and we see that.  
 20 On Maunakea, there are many, many telescopes that  
 21 have been built up there, and now we see perhaps the  
 22 potential for another telescope to be several telescopes to  
 23 be built on Haleakala. So, at this point in time, speaking  
 24 from that part of me that's connected to the aina, which  
 25 means the land or that which takes care of us, I don't feel

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26

1 comfortable about the selection of Haleakala because of the  
 2 importance of that mountain as well as other mountains here  
 3 in the Hawaiian islands have to the people that live here.  
 4 Not only to the Hawaiians by blood but the Hawaiians at  
 5 heart.  
 6 So for us this is something that is disconcerting.  
 7 It's very serious. Maui is a popular place for many, many  
 8 reasons and to many, many people. And the impact of that  
 9 popularity is felt in many areas by those who live here.  
 10 There's a tremendous impact and, I guess, from my  
 11 perspective I'm concerned about the cultural impact by those  
 12 who live here and those who have been connected to these  
 13 islands for many, many generations.  
 14 So, as a member of the community, I would like to  
 15 add my two cents and say that I do, at this time, oppose the  
 16 building of any telescopes on Haleakala. Thank you very  
 17 much.  
 18 MR. BRASS: Napahu (sic) Dizon? Sorry, I screwed  
 19 up your name.  
 20 NAPAHU DIZON: Aloha kakou. My name is Albert  
 21 Napahi Dizon. I'm a sixth generation. Any time that  
 22 somebody poke a hole in the aina, I cry. Every time when  
 23 they try to build, whether it's for water and now another  
 24 telescope, it hurts me inside because I am of this land. I  
 25 am a kanaka maoli. I'm born of this land. And to build

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27

1 something up there where only the Gods live, we Hawaiians  
 2 know when the Gods out there, yeah, we know it's only for  
 3 the Gods, not to put another telescope. A'ole, which means  
 4 no.  
 5 I'm against, I'm opposed of this because there's  
 6 always recognition for astronomers who went to school.  
 7 There's no respect for the kupuna who has the gifts. All I  
 8 hear about is your astrologers with big kine' certificate  
 9 for going school. What about the kupunas that wen' learn  
 10 from the kupunas. A lot of Hawaiian innate mana come from  
 11 within yourself, the stars. Every year we go to Pukuola  
 12 (phonetic) on the big island. And we see the Kawaihae  
 13 (phonetic) we see them at Kawaihae (phonetic). It sits up  
 14 right in the middle of the stars. What I'm trying to say is  
 15 leave the stars for the kanakas. You guys don't have the  
 16 pule, sometimes you don't even have the respect of the  
 17 place. Sometimes even now you still don't have respect for  
 18 the people. Some of you guys do, but not all. Every time  
 19 there's a hole drill for water, we cry. Because every time  
 20 the drill is going in, once it hit salt water, the land dry  
 21 up. Everything dies.  
 22 The Hawaiian, when he was born before the kumulipo  
 23 before time, he took care of the land. Now, the land is  
 24 going back. We're not taking the land. We're not taking  
 25 care of the environment all around us. DLNR, the ocean,

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28

1 everything is falling down in Hawaii. It's just like that  
 2 Amazon. There's no Amazon anymore. The Amazon jungles, the  
 3 new city is right here. You damaging Hawaii nei by building  
 4 more of these things. And it's not for us. We don't get  
 5 the recognition that we were born to have. Yet you guys use  
 6 the Hawaiian culture every single day of my life, 56 years,  
 7 that's all I've been hearing. Everybody else get the gift,  
 8 the money. Kanakas no more nothing. But the culture, the  
 9 spiritual and ke akua and that's all we live there for. Ke  
 10 akua, there's a triangle that we go by. Ke akua, ohana,  
 11 aina. You understand the triangle of life in the kanaka's  
 12 life, you ain't never going to understand us. By building  
 13 more of these things that is not even for us. I'm sorry,  
 14 but no can. I oppose. Mahalo.  
 15 MR. BRASS: Jonah Kamakahiikaika o'kalani Kapu.  
 16 This will be the last speaker before the break.  
 17 JONAH KAPU: I no need the microphone. Aloha  
 18 kakou. My name is Jonah Kamakahiikaika o'kalani Kapu. I'm  
 19 the seventh generation. I'm from Lahaina. I might be on  
 20 the west side and this thing might be on the east side, but  
 21 I still get something for say.  
 22 When this environmental impact draft was started,  
 23 was there one kupuna, was there one kanaka with you guys who  
 24 said or who actually gave you guys one -- like, one brief  
 25 thing about what you guys doing right now? Was there? I

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29

1 mean, not anybody moved from Maui in eight years living in  
 2 Maui eight years ago who moved from the mainland. Not that.  
 ~ People from the aina, people from pili koko, the blood.  
 Right there, my uncle, who came on before, right  
 5 now he is a makua. Pretty soon he might hala, and we got to  
 6 be the next generation for stand up. Because this right  
 7 now, what if the thing get passed? What, next two years  
 8 after that going have one other one coming up, one other one  
 9 coming up just like Maunakea.  
 10 Come on now, why you guys no just build it on  
 11 Maunakea? Get four or five of them over there. No need one.  
 12 I no like drive around Maui looking at Haleakala and all  
 13 you see is this big white ball. Come on now. I been on big  
 14 island, I seen Maunakea, and it's like I just like broke  
 15 that. I no care about this. Why you guys like learn about  
 16 the sun for? I mean, come on now. I know the thing stay  
 17 affecting our environment and affecting the world a lot; but  
 18 still yet, that's not you guys' responsibility.  
 19 E ke akua like this happen, so be it. Maybe he's  
 20 trying for tell us that this world gotta change already,  
 21 because right now, now get this, we stay dealing with  
 22 development, come on now. How much more issues we're going  
 23 to have to fight for just so you guys finally need one slap  
 24 behind your head from our kupunas telling you guys to wake  
 25 up. Right now this is not pono.

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30

1 Like what auntie said about the mercury and stuff  
 2 like that, where is that all going to go? Maunakea, they  
 3 said they get one place for go but, no, straight into the  
 4 mountain. Come on now. We seen you guys. We wen' fight  
 5 against with you guys already. We know how you guys play.  
 6 I say one thing, but then when this come, all of a sudden  
 7 you guys going to go into an opposite direction. Us we keep  
 8 one straight line. No wander off. We stay pono. We stay  
 9 righteous.  
 10 This right now, like I said, it isn't pono. What  
 11 going happen to my keiki and the next generation coming  
 12 after me? What will happen to them? I mean, the aina is  
 13 already dying. What now? Our mountains going die? The sky  
 14 going die, the ocean. I mean, come on now.  
 15 So much damned messed up things in the ocean  
 16 killing our reefs, killing our fish. Now we gotta go Burger  
 17 King, Dairy Queen. That's the new monarchy, Burger King and  
 18 Dairy Queen. That's not funny. You think I not scared? I do  
 19 anything for my people. I stand for this land because I die  
 20 for this land. If I have to, I will. That's all I gotta  
 21 say. Mahalo.  
 22 MR. BRASS: We'll take a five-minute break to give  
 23 the court reporter a chance to wrap. A reminder that if you  
 24 would like to speak and you have not signed up in the  
 25 sign-in sheet, please sign up on the sheet outside on the

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31

1 table. If you would like us to read your testimony, feel  
 2 free to see Cheri or I to read it for you or you can submit  
 3 written testimony.  
 4 (Recess at 7:57 p.m.)  
 5 MR. FEIN: I'm going to -- I would like to start  
 6 the process again. Before we continue with the public  
 7 testimony, there is one response that we would like to make.  
 8 As we did with the issue of military involvement and pan  
 9 stars, there needs to be a clarification about mercury  
 10 because it certainly was an issue on the big island. I'm  
 11 going to ask project architect Jeff Barr to say a few words  
 12 about that.  
 13 JEFF BARR: I would like to talk briefly -- I  
 14 don't want to take much of your time. There were two  
 15 speakers that addressed the issue about the potential  
 16 hazardous material, mercury in particular. There's no  
 17 mercury associated with the ATST at all. That is not an  
 18 issue. All the hazardous materials that are part of it,  
 19 it's not a long list, but all the hazardous materials, as  
 20 EPA defines them, are included in the list in the draft EIS;  
 21 so it is available. It specifically is about the mirror  
 22 cleaning and stripping process. The first speaker, the lady  
 23 who talked about that, is absolutely right. That's where  
 24 most of the chemicals get used and all of the effluent, all  
 25 of the wash water and the water that comes off of that that

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32

1 has any chemical containment at all in it will be contained  
 2 and stored and transported off the site and disposed of in a  
 3 proper way. It won't be disposed of on Haleakala. So  
 4 that's all I wanted to say.  
 5 MR. BRASS: We're going to continue with people  
 6 who have signed up: I apologize if I misread your name.  
 7 A VOICE: I would like to ask for clarification on  
 8 that. You said contained and stored and disposed of.  
 9 Where?  
 10 MR. FEIN: All hazardous waste in this state is  
 11 handled through a transporting storage and disposal facility  
 12 that is licensed to handle that material. In other words,  
 13 any facility on this island or anywhere in the state that  
 14 produces hazardous waste is under the same requirement to  
 15 manage it and dispose of it in the federally certified  
 16 manner that this material would be.  
 17 FOSTER AMPONG: I think for me I would need to be  
 18 reassured with specifics. When you say properly contained  
 19 and disposed of by private contractor, where exactly --  
 20 what is it contained in? Is it a 55-gallon barrel? Is this  
 21 going to be trucked down to Kahului, put on a barge, and  
 22 removed from the state? Is it going to be trucked down two  
 23 miles in the summit and stored -- I think what we want to  
 24 hear is the specific, something definitive about the  
 25 hazardous material, how it's going to be removed, and where

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33

1 it's going to be moved to. So to say that it's going to be  
2 properly disposed of is really -- it doesn't leave room for  
3 any assurance for us.

MR. FEIN: The material will be stored in  
5 certified containers. There are containers that are  
6 appropriate for each kind of hazardous material. Those  
7 containers are placed in an area that has containment, so  
8 that any containers that were to leak would, in fact, leak  
9 into the containment area and be held in that area.

The hazardous material that becomes hazardous  
10 waste after use is stored in the certified containers. They  
11 would be taken down the mountain. It is, in fact, shipped  
12 to Oahu. There's a facility on Oahu, Campbell Industrial  
13 Park, that manages most of the hazardous waste for the  
14 state, and they are licensed to do so.

All of that handling must be done by people who  
15 are licensed to handle it, transport it. You can't just put  
16 it on a truck. It has to be put on a vehicle that's  
17 certified to carry that.

FOSTER AMPONG: Is this explanatory in the DEIS?  
20 Is this in writing in the environmental impact statement?

JEFF BARR: You are right. It says a statement  
22 such as properly disposed of.

FOSTER AMPONG: You understand my point, that it's  
24 pretty vague.

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34

JEFF BARR: I understand your point.

FOSTER AMPONG: I can say -- it's the same thing,  
2 but I could go in the back of my yard and throw it down the  
3 mountain, and then I can turn around and say, hey, I  
4 properly disposed of it. It's not in my property. It  
5 rolled into yours.

MR. FEIN: I appreciate that because that is  
8 something that was handled too generally in the DEIS and  
9 needs to be further explained and it will be. And your  
10 input --

FOSTER AMPONG: And please don't be offended, but  
12 for over 150 years well into 200 years, foreigners, haoles  
13 have come to our island and told us, hey, we promise you  
14 this. We guarantee you this. And look at what is happening  
15 to us now? So we need some honest, sincere, definitive  
16 explanations in the DEIS, period, before you go any further,  
17 or just cut your losses and go to Bear Lake.

MR. FEIN: Thank you very much.

MR. BRASS: We're going to continue with  
20 testimony. Again, I apologize if I misread your name. The  
21 next speaker is Richard McCarty.

RICHARD McCARTY: Aloha. My name is Richard  
23 McCarty, and mahalo to everybody that came and spoke. I  
24 need to talk about this from a little different slant, and I  
25 fully respect all of the ideas that have been brought before

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35

1 you up until now.

Sometimes very bad things can happen by mistake.  
2 Sometimes very bad things can happen by inadvertence.  
3 Sometimes very bad things can happen because details are  
4 looked into. And things like this can especially happen in  
5 areas where we don't really understand what's happening. We  
6 don't really understand the culture, the ecology, and we  
7 don't, for some reason, want to take the time to learn.

A good example of this is, is some years ago some  
9 people from back there came and brought goats to the island  
10 of Molokai thinking this is going to be great. We're going  
11 to help these people eat. But the scientists that figured  
12 that out forgot one thing. Goats, by their nature,  
13 procreate, and now that island is overrun with goats. The  
14 goats are eating all of the native habitat, and they are in  
15 a terrible mess over there.

Now, I notice in your -- I apologize I have a  
17 chronic problem with my throat, and I'm not able to clear  
18 it, but I noticed in your page 36 under cultural resources  
19 you admit and acknowledge you know this. The cultural  
20 resources of Kolekole date back more than a thousand years  
21 and are an integral part of the Hawaiian culture, both past  
22 and present. In ancient times, commoners could not even  
23 walk on the summit because it belonged to the Gods. This  
24 was a time when people knew, maybe a lot of what you are  
25

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36

1 trying to figure out about the stars and the heavens, they  
2 figured out how to navigate without telescopes, and they  
3 figured out that this was a sacred place where they  
4 shouldn't even walk.

I want to share a life experience I had with you.  
5 I think you'll identify with this, and I hope you'll take it  
6 to heart. I hope you take your scientist hats off, I mean  
7 no disrespect, I was a math major, when you think about  
8 this. I was talking to a Hawaiian friend mine and he was  
9 telling me about all these cultural disrespects and so  
10 forth. I was there, I got on my soap box and said, You  
11 gotta do this, you gotta do this. And he says, Why should I  
12 do anything? And I said, It's unfair. He looked at me in  
13 the eyes and he said, Well, isn't that your problem, not  
14 mine? And that's what the people here are talking to you  
15 about. This is your problem to show respect for this area.  
16 And to think about what is happening. Throughout history,  
17 if somebody wanted to desecrate a culture, what would they  
18 do? They would tear down the statues of their heroes,  
19 they'd go into their sacred spots and desecrate them.  
20 Because once you take that away, the culture is gone.

They can't survive, once you take the special  
22 areas away and the things that are important to a culture.

So I would ask you to please join me. This is our  
24 problem. We need to do this. I am embarrassed that the

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37

1 good Hawaiian people have to come in here and talk and tell  
2 you that they have been hurt. We know that. Let's do  
3 something about it. Let's leave this site alone. Thank  
4 you.

5 MR. BRASS: Kalei Kaio.

6 KALEI KAIO: (Opening testimony was given in the  
7 Hawaiian language.)

8 Aloha to our friends and foes. Aloha. I don't  
9 say that lightly. A fool is one who disrespects, doesn't  
10 listen, doesn't adhere to what I have said many times  
11 before. So if I come here and I sound angry, I am. I'm  
12 burning up inside. It's not the first time. I know how to  
13 go on. This is part of a large major campaign which have  
14 been perpetrated on my people for generations. Other native  
15 peoples have been pissed on and shit on across the islands,  
16 across the Pacific, across north America, across the world  
17 since the time of that great supposed European explorer  
18 Columbus. Looking for gold, god and glory, who cut off the  
19 hands of the native, who sicked his maddening dogs on the  
20 women and children for the sake of science.

21 That's your history. That's the history of our  
22 peoples that we have had to endure, and we still endure.  
23 But the good news is we still resist. As long as we resist,  
24 we're going to live. Now, history is the people's memory.  
25 And without a memory, man is the motive to the lower

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38

1 animals. So I'm here to share a little bit about history.  
2 I know we're shot down to four minutes, so I'll  
3 try my best. History-wise from the kumulipo, like I just  
4 shared, when we look at the stars above, I know my ancestors  
5 over a thousand generations kealiiwahilani (phonetic) came  
6 from the heavens above, of the heavens above, the stars  
7 above, and made it with La'ila'i (phonetic) and I descend  
8 from that geneology through the kumulipo. I am the stars.  
9 Other great kupuna: Pele, Maui, Poliahu (phonetic) had all  
10 come and lived upon Haleakala, this akua, land of the Gods.

11 Let's talk a little bit about history. Because  
12 when I look at your culture reports it sounds like, man,  
13 some people missed some classes or courses here. There's a  
14 bunch of history that was just ignored. 1842, President  
15 Taylor recognizes the Hawaiian independence of the Hawaiian  
16 kingdom. 1843 joined by the European countries, the  
17 European powers of France and England. And so Hawaii became  
18 part of what is called a family of nations. That's part of  
19 history. 1893, we have the armed invasion of U.S. marines  
20 upon this soil to take control of our Hawaiian kingdom.  
21 1894, same American businessmen a bunch of supremacist racists  
22 with armed guns imprisoned our queen in her own palace, and  
23 then made claim to these national lands of our people.  
24 That's in 1984. The treaty of annexation and they failed.  
25 Check your own history. There is no treaty of annexation to

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39

1 these islands, although supposedly this U.S. great  
2 constitution, Section 2, Subsection 2 says you must have  
3 two-thirds of the senate ratify the treaty of annexation  
4 which does not exist. 1898, they throw forth a resolution,  
5 checkout your history, entitled the treaty of annexation  
6 which made claims to the national lands of the Hawaiian  
7 kingdom, which the republic of Hawaii, through its 3,000  
8 citizens, pass over these lands that they made claims to the  
9 United States in 1900 the Organic Act.

10 Well, the supposed territory Hawaiian affairs then  
11 become what is called -- or try to portray themselves  
12 what's called the State of Hawaii. And in 1960, the first  
13 supposed governor of the state of Hawaii, Quinn, then does  
14 what? With executive order opens up what now becomes  
15 science city at the top of Haleakala. But you see the  
16 truth is we know that land is our land. There is no -- I  
17 challenge NSF do one title insurance deed, find out how does  
18 the State of Hawaii through executive order -- they don't  
19 have title to the land. That's why the DLNR manages as part  
20 of -- they have no title to those lands. So they have  
21 unlawful control of these lands.

22 What the NSF is funding right now is exactly the  
23 continuation of this kind of mentality that somehow the  
24 haole world had some kind of right to what is not theirs  
25 because their science says so.

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40

1 Well the truth is, put your paper down. If you  
2 got the title, put your paper down and I will walk away  
3 forever. I won't challenge it. But I must, and I have to  
4 challenge. If I know my history, I have to stand and speak  
5 the truth, because that is the truth. And no matter how  
6 much lies you can put, I don't care if you have \$180,000,000  
7 it don't cover the truth, because our people will fight.

8 MR. BRASS: We will provide an opportunity at the  
9 end.

10 KALEI KAIO: Our people will fight. Let me just  
11 finish by saying this, go ahead do what you gotta do. I've  
12 been in this world long enough to understand. We will have  
13 to fight like Maunakea. We will have to fight. We will  
14 have to struggle. If it means civil disobedience, that's  
15 what it's going to take. And if NSF wants to put their face  
16 back in this process, go ahead. It's nothing new. The same  
17 kind of science blew up in the 1950s, same kind of  
18 mentality. Whole islands disappeared from the face of this  
19 earth because of science. That's your people.

20 So for me, the younger people speaking over here,  
21 because they're alive. (Testimony given in Hawaiian  
22 language). We're going to endure. We'll endure by  
23 resisting. What is wrong is wrong. What is right is right.  
24 And for God's sake, fair week. This is obvious. This is  
25 obvious to us. This is not coming from the community. This

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41

1 is obvious to us. There's an attempt here supposedly to  
 2 keep the community out of here. All you had to do was go to  
 3 the last meeting at Paukukalo. We had three times more  
 4 people there. Thank you.

5 MR. BRASS: I'm sorry, I'm unable to read the  
 6 first name of the next speaker, but the last name is  
 7 Hashino. Remember to state your name when you come up.

8 NAMEAINA HOSHINO: No worry. Aloha. My name  
 9 Nameaina (phonetic) Hoshino. (Hawaiian Language was spoken)  
 10 for you guys to coming over here (Hawaiian language was  
 11 spoken). This place Haleakala is house of the sun. You  
 12 guys like look at the sun? What that prove to you, brah?  
 13 Proving nothing. This place is a sacred place, brah. And  
 14 what the thing going do for our culture, huh? If I stay  
 15 sailing out there, I stay looking at that place, hey, I  
 16 think going throw me off, because us we used to look at the  
 17 stars, not this telescope.

18 You know how pissed off it makes us, huh? This  
 19 thing, I no can see this thing passing because we get hard  
 20 times already, this developing. Our water issues, us, we no  
 21 can sustain right now. Even Molokai get hard time with  
 22 water problems. This thing, this going be poho. I'm going  
 23 to try stop everything in my power for stop that thing from  
 24 being built.

25 You guys, we call you guys invasive. You guys not

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42

1 from here. This is our kuleana. This is our land. You  
 2 guys no can respect 'em, you guys go home to the United  
 3 States or Bear Lake or whatever that place is called. You  
 4 can build your telescope up there. Everything I seen on  
 5 that book, all that passing of weather, all that, that's all  
 6 for nothing that. That's all for nothing. I look in you  
 7 guys eyes, okay, see this precaution going happen, we have  
 8 some more kanakas come here, they going tell you the same  
 9 fricking thing. They going tell you the same thing. You  
 10 guys no more right for build up there. This is our aina.  
 11 Mahalo.

12 MR. BRASS: Vicki McCarty.

13 VICKI McCARTY: Aloha kakou. My name is Vicki  
 14 McCarty. I stand before you very humble, and I address you  
 15 respectfully. I understand you've come from a long way, far  
 16 away. I came from Lahaina. You've not had any meetings in  
 17 Lahaina. You've ignored places on this island that have  
 18 much to say about this telescope. You've been dismissive  
 19 here this evening about families and communities and  
 20 organizations that wait all year to raise money for their  
 21 families and for their clubs and for their keiki at the  
 22 fair. That tells me you don't understand. You don't  
 23 understand this community, and you don't understand what is  
 24 at stake here. Shame on you. It's a sacred place. It is a  
 25 sacred place. It is a sacred place.

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43

1 Your own literature describes it as a sacred  
 2 place. If you look at Section 9, 9.1 in the very first line  
 3 you have a statement that says there are specific spill  
 4 emergency plans for hazardous waste. That tells me that  
 5 there's a possibility that hazardous waste will spill. This  
 6 is a sacred place. What gives you or anyone the right to  
 7 interfere with the cultural practices and the sacredness of  
 8 this site? What gives you the right to put an emergency  
 9 spill plan in place and perhaps deny all of the children  
 10 that will come after us to enjoy this sacred place? Shame  
 11 on you. Shame on all of you.

12 Your answer is to compromise. Your answer is to  
 13 mitigate. That is not acceptable. Not here, not now, not  
 14 ever. You have other choices. You have other places you  
 15 can go. Your own literature speaks to those other places.  
 16 There is only one Haleakala. Build your telescope somewhere  
 17 else. We will not go away, we will not be silent, we will  
 18 not forget. This is a sacred place. Mahalo.

19 MR. BRASS: Walter Kanamu.

20 WALTER KANAMU: I wanted to be last. I may take  
 21 more than four minutes. Aloha kakou. The last meeting I  
 22 went to for this telescope proposal I spoke from the na'au.  
 23 This time I have a little bit palapala to share with you  
 24 folks, but it's still from the na'au. I wrote some brief  
 25 things here.

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44

1 Over a thousand years ago a group of explorers set  
 2 sail in search of paradise. After voyaging for several  
 3 thousand miles, the call they heard became a reality. These  
 4 explorers knew they were blessed to have found paradise as  
 5 well as paradise was blessed to be found by these explorers.  
 6 For hundreds of years, they lived as one. The explorers  
 7 knew there was life in the air, life in the stones, life in  
 8 the trees, life in the winds and the leaves, life in the  
 9 plants and the birds, the waves and the seas. They took  
 10 care of everything that feeds. They were my ancestors.

11 Today, we trample over native plants just because  
 12 our shoes don't know the difference. We fail to experience  
 13 the soft cushion under our feet that the native understory  
 14 affords us. We never notice the cooling sensation of soft  
 15 mud that's oozing up between or toes as we pass near a  
 16 gentle stream of water. We never take time for walk the  
 17 forest and enjoy the playful game of the i'wi and apapane  
 18 as they battle over ownership of a certain ohia and koa  
 19 tree. We never notice the tiny droplets that form and run  
 20 down the koa tree as the thick moisture filled clouds pass  
 21 through the trees.

22 We never worked the lo'i of the kalo lehua during  
 23 harvest and witness the blood that flows from the hau when  
 24 the la'au is cut or broken off. We never sit in the surf  
 25 and call the waves that take us riding along with them and

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45

1 give us pleasure. We never take time to lie alone in a lava  
 2 tube and wonder who was there before us and listen to hear  
 3 their voices. We never stop under a keawe tree with the  
 4 full moon above us and notice the leaves and branches like  
 5 arteries and veins of the heart pumping life through the  
 6 tree and returning it back to the aina. We never give our  
 7 mana to those we touch so they feel and experience our  
 8 essence.  
 9 We never give, yet we call ourselves Hawaiian.  
 10 When it's time to kick off the shoes and walk the aina, live  
 11 each step and feel with all that surrounds you, hear what  
 12 you always see, and touch what you've always heard. If we  
 13 do not see life in everything around us besides ourselves  
 14 we're not Hawaiian.  
 15 This book is called Kuli Kaumana (phonetic) it's  
 16 from the University of Hawaii. And what I just spoke to you  
 17 I read and it's in this book.  
 18 (Hawaiian language spoken.) Ua mau ke ea o ka aina  
 19 i ka pono, ua mau ke ea o ka aina i ka pono, ua mau ke ea o  
 20 ka aina i ka pono. You guys understand that? That is our  
 21 motto, the Hawaiian motto, the state motto. Do you know what  
 22 it means? Does anybody here know, braddah, what does it  
 23 mean?  
 24 Literally, the life of the land is perpetuated in  
 25 righteousness. Not only in righteous but by the righteous.

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46

1 You see, from long time ago, I believe akua led the  
 2 Hawaiians to this land. God led the Hawaiians to this land.  
 3 He gave this land to the Hawaiians knowing that they were  
 4 the people that would malama aina and aloha aina. And  
 5 that's why we're here today, because we are going to malama  
 6 aina and aloha aina.  
 7 Ua mau ke ea o ka aina i ka pono I have a 501 C3,  
 8 and I was wondering when you folks were going to call me.  
 9 The 501 C3 is called life. It's a first native Hawaiian  
 10 organization dedicated to the perpetuation and preservation  
 11 of native flora and fauna. And guess what? Your whole  
 12 southern boundary 7,000 acres is mine. I have the lease for  
 13 7,000 acres of that land. Did you guys know that? From the  
 14 summit down to 3,500 feet of Kahikinui, Hawaiian homelands,  
 15 belongs to life living in this forest ecosystem. And I  
 16 received -- at the last meeting I introduced myself as just  
 17 a Hawaiian kanaka. Today I'm introducing myself as the  
 18 lessee for the land that abuts your boundary. Make sure you  
 19 stay on your boundary now, and I want to see that. I want  
 20 to see all the boundaries all drawn out because I went  
 21 through your entire draft and it was very vague.  
 22 MR. BRASS: In order to allow the people that have  
 23 signed, could we ask you to hold the rest of your comments.  
 24 There will be opportunity to sign up to speak again if  
 25 everyone has spoken.

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47

1 WALTER KANAMU: Anybody want to let me continue  
 2 or --  
 3 A VOICE: You can continue. We don't mind.  
 4 MR. BRASS: We have about four more people. If  
 5 they can speak, then we'll take a break, then you can sign  
 6 up to speak again.  
 7 WALTER KANAMU: You got people here from Lahaina,  
 8 you got people here from Wailuku, Kahului, Hana. In your  
 9 draft statement, in your picture, you don't have one picture  
 10 depicting Kahikinui right below you. Right on your border.  
 11 There's nothing. Of course, they are going to have a hard  
 12 time seeing it from Maalaea, Kahului. Hey, brah, I'm right  
 13 on your border. All of my people are going to be -- when  
 14 you get one spill, when your sewer system overflows, when  
 15 your hydraulic leaks, all of that stuff is going to affect  
 16 me. That's my border right where you are. Did you check  
 17 that? Do you know that? I don't think so. Living  
 18 indigenous forest ecosystems. Okay, I'm letting you know  
 19 that now. In the statement that you have, one thing that  
 20 stands out the most to me, no significant affect. In your  
 21 entire proposal it says that everything you do will not have  
 22 a significant affect. Well it's already affecting, and you  
 23 have not even started. Ua mau ke ea o ka aina i ka pono the  
 24 life of the land is perpetuated in righteousness. It is  
 25 alive and my organization life will preserve and perpetuate

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48

1 it. Mahalo.  
 2 MR. BRASS: Brianna Welker.  
 3 BRIANNA WELKER: I understand that I have to use  
 4 the microphone for you to be able to record, but excuse my  
 5 rudeness in saying that I don't care. What I have to say  
 6 tonight is not for a permanent record. It's for you four  
 7 who are sitting in front of us today. Because there is a  
 8 huge thing that's lost in translation on paper. And that's  
 9 the passion of everyone who stands before you. We're not  
 10 going to be able to take that home on paper. You are the  
 11 only people that are going to take that home.  
 12 So I challenge you to look at me not with furrowed  
 13 brows but really look at me. Not me personally. Everyone  
 14 who is here now. Everyone who talked here tonight. And  
 15 understand where they are coming from. Not here where they  
 16 are coming from, but try to feel it. Try to think of  
 17 something that makes you half as passionate as all the  
 18 people in this room. Anything. And think about how many  
 19 people who share that part of themselves with you. It's  
 20 amazing you are so -- you should feel so blessed that  
 21 somebody is willing to share that with you. Aside from the  
 22 personal, everyone in this room can articulate better than I  
 23 can the spiritual, the Hawaiian significance of Haleakala.  
 24 But to me it does. I can feel it. I am not kanaka maoli,  
 25 but I was born here. This is my home. I can feel it up

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49

1 there. So the very last thing that I would challenge you to  
2 do is go to Haleakala. Don't go to the site of your  
3 telescope. Go to the mountain that these people are talking  
4 about. I don't care how long you are here for. Find the  
5 time for it. And maybe, just maybe, you'll begin to  
6 understand what these people are talking about.

7 MR. BRASS: Bill Medeiros.

8 BILL MEDEIROS: Aloha kakou. My name is Bill  
9 Kauakea medeiros. And I would like to make significance of  
10 the fact that when we give our Hawaiian names there is  
11 significance and legacy in our names. My Hawaiian name  
12 comes from Hana. It is part of the name of a rainfall in  
13 Hana, part of the Hana chant, which is the noe noe ua kea  
14 ohana (phonetic), which is the misty white rain of Hana.  
15 And my Hawaiian name is also the name of my mother and my  
16 father.

17 And I say kahumai (phonetic) to the ohana and the  
18 people in the back because my kupuna always told me not to  
19 face my back to people; but in this situation, there's no  
20 alternative.

21 I was born in Hawaii and raised in the ahupuaa of  
22 Hana and Keanae. I am kanaka maoli, our ohana traced our  
23 ancestry and our geneology through the Piilani blood line.

24 My mother and grandmother were kanaka maoli and  
25 their first language was Hawaiian. I was fortunate as a

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50

1 very young person to accompany my mother on many trips as  
2 she visited the kupuna of our villages.

3 And I remember as a child of about six years old  
4 going with my mother to speak to a kupuna. And, of course,  
5 she only spoke in Hawaiian to her, and so I was not  
6 privileged to understand most of it. But she did relate to  
7 me later that this kupuna who died at 106 in the 1950s was a  
8 chanter for some of our Kamehameha alii. She spoke to my  
9 mother about many things. And when things were kapu, things  
10 were of sacredness, she would not pass on that information  
11 to my mother. And those things included where alii were  
12 buried and so forth.

13 We were taught by our kupuna to respect our aina,  
14 our sacred places where there was kapu, and to respect the  
15 kuleana that we carry.

16 We were also taught to protect and be good  
17 stewards of the aina, of the land. I ask you, as you  
18 consider this project, that you need to respect the Hawaiian  
19 people and the culture of these islands. We as Hawaiians  
20 plan for seven generations so that we can leave a legacy for  
21 our children and grandchildren seven generations down the  
22 road.

23 We were taught by our kupuna to also keep our  
24 aina, our land, as natural and undisturbed as possible.  
25 Hawaiians were great astronomers, environmentalists and

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51

1 conservationists. My ohana, my wife and I, promote the  
2 importance of education. But not all education is found in  
3 textbooks. Our education in our Hawaiian people most of  
4 that knowledge was passed on from our ancestors. Hawaiians  
5 did not have books because Hawaiian was not a written  
6 language. The knowledge was committed to memory, and that  
7 knowledge was passed down from generation to generation such  
8 as the kumulipo that was mentioned, the oli and the mele.

9 On the alterative sites that you list on your EIS  
10 sacred places, not very many places have host cultures that  
11 protect their places that have been passed on from our  
12 ancestors. Science is not an exact discipline. Just take  
13 the story of the mongoose in Hawaii. The mongoose was  
14 brought to Hawaii to kill the rodents that were in the cane  
15 fields. But science did not figure that the mongoose was up  
16 at day and the rat was asleep, and the rat came out at night  
17 and the mongoose was asleep. So the mongoose became a pest  
18 in Hawaii, and we never got rid of the rodents.

19 So you can see why people are very suspicious of  
20 science and of people that declare that what they say is  
21 exactly true. I was part of the defense system. I worked  
22 for the United States Air Force, and I was certified in  
23 secret clearances. And I would say -- I'm going to wrap it  
24 up. I would say that for the proponents of this project  
25 that say that there's nothing connected to a defense system,

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52

1 I would say that even if it was, you would not know that or  
2 you would not be an authority to disclose that information.  
3 So we cannot believe that as being absolutely true.

4 So what I say is respect the voices of the  
5 Hawaiian people, our ancestors and our aumakua, and I join  
6 with the rest of them as I say that I oppose this project.  
7 Mahalo.

8 MR. BRASS: Verna Nahulu.

9 VERNA NAHULU: My name is Verna Kaiulani Nahulu.  
10 I'm a school teacher, retired elementary school teacher, and  
11 I would like to present a different perspective than has  
12 been stated here tonight. I would like to represent the  
13 children. There are so many things that we don't know  
14 because in some way we were held back to our parents' and  
15 grandparents' past. I would like to see our children claim  
16 their future. There is so much that I see of the solar  
17 telescope being up on Haleakala. And I am in touch, and I'm  
18 a Pele channeler. I am in touch with her. She is in favor  
19 of education on Haleakala. And she has asked me to do  
20 everything I could to bring this to a possibility for the  
21 children. There is -- our ancestors were really close to  
22 the sun, and they learned everything about the sun, and they  
23 taught the children everything they knew about the sun. But  
24 there was even more that they didn't know yet that we have  
25 an opportunity to bring to the children who are our children

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53

1 here today.  
2 For instance, many of us do not know that the sun  
3 has a 27-day rotation system. And why don't we know it?  
4 Because we were never told. There is the powerful  
5 gravitational force of the sun that we never knew because we  
6 were never told. We were held to our past and to our  
7 grandparents' past. I would like to see us let go to the  
8 children of today and tomorrow and to be able to learn even  
9 more. We have solar technology today that is giving us the  
10 power we need, giving us inventions that we need. I would  
11 like to see the children move forward, and I personally  
12 consider the ATST a blessing and a gift to Maui and to our  
13 country.

14 I know that there are resistances to this, and I  
15 respect everything that has been spoken tonight. But there  
16 are even more to be said, and there is the children to  
17 consider. The children have the future, and we are not part  
18 of their future. The children's future belongs to them and  
19 their children. And I would like to see the ATST as an  
20 opportunity for them to learn about the sun that all of us  
21 have no idea about yet. But the children can take that  
22 information and soar with it.

23 I am a native Hawaiian, and this is my mana'o.  
24 There are no children here to speak for their future. And  
25 this is why I am here. I am here to speak for their future.

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54

1 I liken this to -- most of the resistances are to the  
2 outside of the structure. It is like having a beautiful  
3 ukulele that plays incredible music and criticizing the case  
4 of the ukulele. When we look inside, we can see the  
5 benefits that is produces.

6 This structure is sitting -- I'm wrapping up --  
7 this structure is sitting behind -- it's a 143-foot  
8 structure that sits right behind the air force telescope and  
9 that telescope is 120 feet up. So 143 feet ATST will be  
10 peaking up like the roof will be seen. 256-foot windmills  
11 are sitting on the mountains way above 143-foot ATST.  
12 Eighteen of these windmills are up on the mountain, 260-foot  
13 each.

14 So I consider that this ATST is a sacred gift  
15 personally. It is a sacred gift to the children, and I am  
16 completely in favor. As a native Hawaiian, I am completely  
17 in favor of this: to learn what we do not even know. Thank  
18 you.

19 MR. BRASS: That ends the list of people who have  
20 signed up to speak. So what we're going to do now is take  
21 another five-minute break, give the court reporter a chance  
22 to rest her fingers. And if you would like to speak again,  
23 or if you have not had a chance to speak and would like to  
24 speak, please sign up on one of the sign-up sheets outside.  
25 We'll have about 45 minutes to gather additional testimony.

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55

1 (Recess at 8:57 p.m. )

2 MR. BRASS: One last chance, if you would like to  
3 sign up to speak, and then Cheri and I will figure out how  
4 many minutes each of the speakers who signed up will have.

5 We have four people who -- five people who have  
6 signed up to speak. Anyone else who would like to speak for  
7 the first time or again? We have about 40 minutes left  
8 before we need to start wrapping things up. So we're going  
9 to give each person about eight minutes to speak, and we  
10 appreciate your cooperation with the time limits. It's the  
11 only way we can figure out to give an equal chance for  
12 people to speak.

13 The first speaker is Kapali Keahi.

14 KAPALI KEAHI: I wanted to speak last, but that's  
15 okay. That's everybody. Anyway, aloha kakou to the ohana  
16 over here and the kupunas from this area aloha no. My name  
17 is Kapali Keahi, I'm from Lahaina. I never read the EIS,  
18 but I no really read EIS. To tell you the truth, like, what  
19 I know is, like, we always confronted with developments that  
20 is really not in our best interest and not in our favor. So  
21 we always shoot 'em down from the get go. And mainly we  
22 like see things happen the way we want it to happen. And  
23 right now, it's not a good time for you guys. It's never  
24 going be. As long as that flag is waving, it's never going  
25 be one good time for you guys. And we can say this now in

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56

1 this day and time because, well, your predecessors, your  
2 ancestors wen' shut our people up. And the only reason why  
3 America is here is because of the military.

4 I mean, anything that goes on on our island,  
5 period, is by virtue of the military being here. If it is  
6 not, by our consent. So, frankly, you guys no belong here.  
7 Okay. All right. Is that all right with you, huh? Is that  
8 all right? Is it? I asking you guys something, brah. Is  
9 that all right with all of you? You no care? That's what I  
10 thought. That's what I thought. What I thought was you was  
11 going to look at me blankly and not respond at all, because  
12 that's the same thing your kind has done to my people all  
13 along: ignoring the wishes of the kanaka and going ahead  
14 with your own desires, foreign desires.

15 We no need you guys. We no need you guys. One  
16 house cost \$800,000 over here. You think we worried about  
17 what the sun is doing? Huh? We know what the sun can  
18 afford us. Naturally, we know already what the sun can  
19 afford us. Brah, what you guys doing? You guys not doing  
20 nothing for us. Nothing. Nothing that we already know. I  
21 really don't see what impact, positive or negative, this  
22 development will eventually do to our social well-being.  
23 But, right now, I mean, already get stuff up there and that  
24 never do nothing for us anyway. And, in fact, instead of  
25 adding stuff on, we should be taking stuff off. And, well,

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57

1 frankly, just you guys should just go back to where you come  
2 from and stay there. Thank you. Aloha everybody. Aloha.

MR. BRASS: Kamaile Kekahua.

KAMAILE KEKAHUA: Aloha. I wanted to be the first  
5 one to speak but that's okay. I thought I wen' sign up  
6 first. Are you familiar with Pele?

MR. FOLTZ: To some extent.

KAMILE KEKAHUA: To the extent as in she's a deity  
8 of the volcano on the island of Hawaii. Well, this is  
9 actually a sharp rebuke to what was mentioned before. And  
10 for the life of me -- first of all, I have to say that I'm  
11 going to speak for those children that are not here.  
12 Because (Hawaiian language spoken). I am a child of this  
13 land of my ancestors and I'm also a child of my  
14 predecessors.

I mentioned Pele because for the life of me I  
17 cannot understand how it is that Pele is for education in a  
18 way where she would allow and want for a structure that is  
19 15 stories tall to be built right on top of what exactly she  
20 is.

Earlier, I was talking to Keahi, and we were  
22 talking about something else, and he was saying, Well, it's  
23 not like they are Gods. And, you know what, a lot of times  
24 scientists that have come to Hawaii have tried to play  
25 exactly that role as a god, to dictate the ways that we do

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58

1 things instead of learning exactly from that ancient wisdom  
2 that was here prior to any kind of impact to Hawaii.

Scientists have brought their foreign concepts  
4 here, some have worked, a lot hasn't. However, that does  
5 not mean that some would be a 15 or 14-story tall building  
6 right on top of Haleakala. And the question is: Who is it  
7 for? As it was earlier mentioned, is it for us? Because it  
8 is not for us. It is not for the Hawaiian people. It is  
9 not for the Hawaiian people of different ethnicities. We're  
10 Hawaiian, but I'm Hawaiian something else, something else,  
11 something else. I come from many backgrounds. However, we  
12 speak from our Hawaiian core, because this is where we are  
13 from. And I just have to end too with saying I resist, I  
14 resist for my generation, I resist for my son's generation,  
15 and I resist as a keiki.

MR. BRASS: Foster Ampong.

FOSTER AMPONG: Aloha again. I felt compelled and  
18 very important for me to get on the record and, excuse me,  
19 the sister before me made the -- please I know this is going  
20 to sound anal and technical, but this is the kind of thing  
21 that I do. For the record, so you hear it verbally from me,  
22 those opposing the ATST tonight who have already spoken up  
23 until me, have been 15 against it. There was only one  
24 person that supported the construction. And I feel very  
25 strongly and deeply that it's important that all of you

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59

1 understand that.

2 So tonight, when the meeting is concluded, you  
3 will know 99 percent of the people that spoke out tonight  
4 are against the ATST being built on Haleakala. And that  
5 should weigh very heavily on your next -- on the final EIS  
6 draft. That's number one.

The other thing I wanted to share with you is that  
8 you heard many people speak tonight, the young, the opio,  
9 you heard our makua Kaio, Mr. Kanamu. You heard them say ua  
10 mau ke ea o ka aina i ka pono, the life of our land is  
11 perpetuated in righteousness. But understand for us kanaka  
12 maoli, it goes a lot deeper than just those words. The  
13 those words were spoken back in 1845 when Admiral Thomas  
14 from the British government had to return the government and  
15 the authority and the sovereignty sovereignty of the  
16 Hawaiian kingdom to Kaukeuli (phonetic) and forgive my  
17 frankness, some idiot before him invaded the kingdom  
18 unlawfully. And as Kalekoa had stated, and he progressively  
19 and accurately explained to you chronologically how the  
20 Hawaiian kingdom, my ancestors, were recognized throughout  
21 the world as an independent sovereign state completely. And  
22 he also mentioned and articulated for you that today, the  
23 State of Hawaii, who claims to have title by way of that  
24 executive order in 1960 to have title to that land doesn't  
25 have it completely. I'm sure, if you, being an attorney, a

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60

1 man of law, would research the facts you would discover  
2 this. Granted the State of Hawaii would never admit  
3 this, right now as we have in the past and we are currently  
4 and we will be in the future, we kanaka maoli will stand up  
5 and fight for our rights, for our land, for our identity.

To sum it up, what all these people were  
7 expressing to you so eloquently, even though you heard many  
8 of them with their passion and some of them had eha, and  
9 rightfully so, the ill feelings because of the injustices  
10 and atrocities that were committed to our kupunas. And that  
11 was passed on from generation to generation up until now.  
12 Even as we speak, these crimes are still being committed.  
13 You had cultural genocide and spiritual genocide and future  
14 genocide. The theft of our identity. Not only our land,  
15 but imagine a whole race of people suffering the Stockholm  
16 Syndrome right now. A clinical condition, and you probably  
17 recognize this made famous, the Patty Hearst case back in  
18 the '70s, a whole people suffering the Stockholm Syndrome  
19 thinking that the only way we would survive from today's  
20 world is to agree and cooperate with our captors.

On one hand, I can speak and articulate myself on  
22 one level. Right now, I'm giving you everything from my  
23 na'au. Need to take heed of what has been said and spoken  
24 tonight. Even for the young men who showed their feelings,  
25 that's passion. Yes, they are angry; yes, they are hurt.

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61

1 But don't discount them. They are speaking from their  
 2 heart, from their soul. Kalekoa very educated man, well  
 3 respected. He spoke from his na'au. That's his soul.  
 4 Now, we want you to speak to us, okay? And I got  
 5 to tell you this in all honesty and fairness. You guys  
 6 screwed up the way you guys arranged and scheduled this  
 7 meeting completely. And, for the record, let's not mince  
 8 words, let's cut to the chase. You guys screwed up. In the  
 9 future, talk to the people from Maui. Don't be afraid to go  
 10 out to the rest of the community to listen to what they  
 11 really feel, what they really think, and what they have to  
 12 say. Go back to Paukukalo, go to kula, go to Haiku, go to  
 13 Hana, go to Lahaina, go to Kihei. Come to Olowalu where I  
 14 live. Only get maybe ten or 20 people, but I guarantee you  
 15 we all show up.  
 16 Listen to the people. Take the effort. Be  
 17 sincere. Don't schedule meetings like you have on this --  
 18 I understand you had some challenges, but I'm pretty sure  
 19 you all can overcome that. So I will end with that. And,  
 20 again, don't build this thing on Haleakala. Go to the other  
 21 two sites, the second and third alternative sites that I  
 22 earlier mentioned. Thank you.  
 23 MR. BRASS: I apologize for not being able to say  
 24 this. The last name is Kamakawiwaole.  
 25 KAHO'OKIPA'OLU'OLU KAMAKAWIWAOLE: Aloha kakou.  
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62

1 My name is Kaho'okipa'olu'olu Kamakawiwaole. And I just  
 2 wanted to share a little perspective because actually I'd  
 3 rather talk to you guys. I had a busy day these past couple  
 4 of days, actually yesterday. Just to give you a short  
 5 brief, I just came from the north western Hawaiian island  
 6 monument meeting. Last night I was at the Haleakala  
 7 meeting upcountry, and here I am here rushing over here.  
 8 This afternoon I had a luncheon with the Maui high-tech park  
 9 and discussing the air force facilities up there.  
 10 Just a little bit of background, obviously I'm  
 11 born and raise, maybe not obviously to everybody, but I'm  
 12 born and raised in Hawaii, retired air force 20 years. So I  
 13 have seen at least 20 countries in my lifetime. And in my  
 14 own fantasy way, I would like to believe that in all of my  
 15 travels, I liken myself to Kawika Kalakaua, because he went  
 16 out and he got educated by being with other people of  
 17 different cultures. So I just wanted to share my mana'o of  
 18 where I'm coming from. I have seen other countries and  
 19 other cultures. I have been living with people of different  
 20 cultures.  
 21 The virtue of my name Kaho'okipa'olu'olu, means to  
 22 welcome and comfort, a keeper of comfort. And that's  
 23 important to me as a Hawaiian because, one, I believe my  
 24 kupuna had given me that name. It's something that's  
 25 selected to us as a culture. Names are not just -- name  
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63

1 the keiki Bob. It's something that is thought out in the  
 2 Hawaiian culture. Not to make light of things, but my point  
 3 is that in our culture things are done purposefully. Any  
 4 way, that's my short mana'o.  
 5 One thing that I gathered in all of these meetings  
 6 that I have been to, is I seen the power that is needed for  
 7 the air force telescope. The power production that's needed  
 8 is massive. Estimated ten percent of Maui's electricity to  
 9 run that one. This one is way bigger. Way bigger. Much  
 10 bigger. That makes me a little nervous because, yes, we do  
 11 have the windmills but my mana'o on that is that's a  
 12 sustainable type of energy. So I have a little bit of a  
 13 different spinoff on that. But what we're looking at is a  
 14 structure here that the power production of it, and don't  
 15 get me wrong, in the air force I worked avionics. I know  
 16 what is power. I worked on big aircrafts that needed a lot  
 17 of power. Our national guard has a new C-17, the latest and  
 18 the greatest aircraft in the world. And, believe me, that  
 19 jet has power. So that's a concern for me.  
 20 The other thing is, I just came from the north  
 21 western Hawaiian island meeting and what kills me is to  
 22 compare it to the Haleakala meeting that I was there last  
 23 night. The bottom line is all of these people are trying to  
 24 do something to save things, something now. It's a reactive  
 25 situation now, because all of them know from the start the  
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64

1 destruction that has happened. And I'm not saying that it's  
 2 because of all outsiders. A lot of it may have had to do  
 3 with us. Maybe as Hawaiians we need to be more educated and  
 4 better educated to take care of our own aina. I say that  
 5 because, like I said, I've been around the world and I know  
 6 get choke guys smarter than me. But I also realize,  
 7 especially come from the north western Hawaiian monument.  
 8 All of a sudden everybody is like, whoa, we gotta save  
 9 Hawaii. And for those of you who don't know, the north  
 10 western Hawaiian island that's 140,000 square miles we gotta  
 11 save. That's a big place from Las Vegas to Dallas. They  
 12 made that comparison.  
 13 So why are we going to do something -- my mana'o  
 14 is, why we going build this thing and then years from now  
 15 we're going to say, you know, we gotta save Haleakala. Now  
 16 the president gotta go make a monument for something to  
 17 happen? I'm very opposed to this building for that reason.  
 18 I understand the technology. Believe me. I worked in  
 19 advanced avionics, fiberoptics, what have you. I worked on  
 20 the U-2 spy planes. So I know about technology, and I  
 21 appreciate technology. I truly do. But this is just wrong.  
 22 And you talk about the keikis and stuff, yeah. That's  
 23 exactly what we're here for. It's for the keikis. And I  
 24 don't want to wait for the president whoever gotta go sign  
 25 one palapala saying now Haleakala is a monument. Now we  
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65

1 going to do something about it. That's far gone already.  
 2 Far gone. Mahalo.  
 ~ MR. FEIN: Thank you. I appreciate that input. I  
 would like one of our visitors to respond to that issue of  
 5 ten percent of Maui's power will be used by that facility.  
 6 That's something -- that's the kind of information that  
 7 ends up being in the media, and it is not accurate.  
 8 Jeff, would you mind?  
 9 JEFF BARR: I don't know how much power.  
 10 MR. KUHN: 140 megawatts.  
 11 JEFF BARR: The peak power potential, if you turned  
 12 on every sautering iron and lighting in the place and  
 13 operating a miracle facility at the same time, it would be  
 14 one megawatt. We hope to keep that down to something like  
 15 600 kilowatts, which would be basically 60 percent of that  
 16 in order to keep our own power flows down. I honestly don't  
 17 know how much the air force uses, but I believe it's  
 18 approximately that same range. So just overall, that's the  
 19 perspective.  
 20 A VOICE: That's less than half a percent?  
 21 JEFF BARR: Less than half a percent.  
 22 A VOICE: I think you referred to something I said  
 23 earlier about stripping of the mirrors that the mercury that  
 24 is generated from that. You said that won't be happening.  
 25 Can you explain how it will not be happening if that's the

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66

1 technology that's released up until now?  
 2 JEFF BARR: The chemicals that are -- the first  
 3 place what they are stripping off the mirror will be  
 4 aluminum. So that would be the primary metal that will be  
 5 contained and transported off the mountain and disposed of  
 6 properly. Again, we need to define that better. But I  
 7 don't think mercury is used in the stripping process, at  
 8 least not in the cleaning and stripping.  
 9 Mercury has been used in the past for telescopes  
 10 for bearings and, in some cases, for the mirror itself. And  
 11 none of that is intended to be used for ATST. So I don't  
 12 believe mercury is. And, again, I might be ill-informed on  
 13 this, but I don't think -- I'm an architect. I'm not an  
 14 expert on the subject. But from what I understand, what we  
 15 have put into the EIS, and there was another point made that  
 16 we would say one thing and do another thing, that's not  
 17 true. What we say in the EIS we really are bound to do.  
 18 And the chemicals that we know of that are hazardous are  
 19 listed, and we've described in detail how we intend to treat  
 20 them.  
 21 A VOICE: Are you familiar with what substance  
 22 you'll be floating the mirrors on?  
 JEFF BARR: They really won't be floating in a  
 24 sense -- there are hydrostatic bearings for the entire  
 25 telescope which would be floated on oil. And that system is

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67

1 described in the EIS. The mirror will be supported on an  
 2 optic system that I'm not qualified to talk about. But it  
 3 won't be floating. It certainly won't be floating on  
 4 mercury.  
 5 MR. KUHN: Advanced technology for making mirror  
 6 no longer -- what you are speaking about is from the old  
 7 days. We used to take a bag of mercury that was used to  
 8 support the mirror because the mercury was heavy -- it  
 9 won't happen. (Inaudible). It uses electronic actuators and  
 10 motors.  
 11 MR. FOLTZ: I'm the former director of the  
 12 telescope. It uses a six and a half meter mirror and the  
 13 secondary mirror at the top is half the size of this. The  
 14 actuators that one uses can be dramatic where they are  
 15 powered by air cells. It could be hydraulic, which is a  
 16 concern. And in our telescope, it was such a concern that  
 17 we would not use hydraulics, not because of spills but for  
 18 other reasons due to contamination.  
 19 You can also use motors, you can use things that  
 20 are called PAs of stacks, and these are crystals.  
 21 Basically, what you need to do to support a mirror these  
 22 days -- the mirror will go on the telescope in an optical  
 23 sense is floppy. It will not hold its shape if you just put  
 24 your hands under it and picked it up.  
 25 What you need to do is to sense the shape of the

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68

1 mirror to a thousandth of an inch, which is like something  
 2 like a thousandth of the diameter of a human hair. You  
 3 sense that and you correct the mirror. As Dr. Kuhn said,  
 4 the actuators are on the back. This is not new technology  
 5 -- it's modern technology. This is not advanced  
 6 technology. But this is technology that's well worked out.  
 7 The mirror support system are clean. They are clean in a  
 8 sense of producing very little waste, and the mirror  
 9 stripping is an issue that needs to be dealt with. It is  
 10 dealt with -- it's dealt with on telescopes around the  
 11 world. I'm not saying there have not been problems in the  
 12 past, but the regulations are tight, and we will describe  
 13 them more clearly. I hope that helps.  
 14 A VOICE: Being familiar with the stripping  
 15 process, is there still mercury involved in that?  
 16 MR. FOLTZ: No. We (inaudible) -- it's much more  
 17 difficult to contain the fluids when you are in the  
 18 telescope. We do not use mercury salts. The surface is  
 19 aluminum. As Jeff said, typically you use a dilute acid,  
 20 you wash very well, you use detergent, we wash very well,  
 21 you dry very well, and you collect everything. We have  
 22 never had -- this was a telescope in southern Arizona.  
 23 There's no mercury on the scene. That's not to say there  
 24 aren't telescopes -- particularly very old telescopes that  
 25 did use mercury. There was telescopes that -- this

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69

1 telescope will not. We would not make the decision to build  
2 such a design.  
3 A VOICE: Do you know if the air force --  
4 MR. FOLTZ: I don't know anything about the  
5 telescope. I defer to Jeff. No. According to that.  
6 A VOICE: But on Maunakea they have it?  
7 MR. FOLTZ: I'm not an expert on the telescope on  
8 Maunakea. I have used it, but I'm not an expert on their  
9 design. So I would be remiss if I said absolutely not. You  
10 probably know better than that I. But this is a new  
11 telescope. Mercury is a hot button element. Say mercury,  
12 don't put that in the design. It's like we're not going --  
13 don't do that. It's stupid.  
14 A VOICE: You understand our concern because we  
15 were told over and over again that there was no mercury  
16 being used, and then we found out in the documents it was  
17 not only used but it had leached into the ground.  
18 MR. FOLTZ: I understand that, and I don't know  
19 that in detail, and I'm not in any way disputing what you  
20 are saying, nor am I trying to soft pedal your concern. You  
21 have every right to be concerned. And all I could say is  
22 where the spill -- I pledge to you, if you personally want  
23 to go up and inventory the chemicals, and I'm still working  
24 for NSF, if someone in this room wants to go see whether  
25 there are weapon systems in that building, I'll make sure

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70

1 you go up.  
2 MR. BRASS: We have two people in the back row  
3 that had questions. We have a question.  
4 A VOICE: Again, I meant no disrespect. But in  
5 all of those years they were using mercury, all of those  
6 many years they were using it, they were telling us that  
7 there was no problem. They were telling us that it was  
8 safe. They were telling us it was the newest technology  
9 available at the time, and we had no worries. Now, we're  
10 hearing that this is a newer more progressive technology,  
11 and I respect that. I'm not equipped to discuss the  
12 technology. But we no longer believe you when you tell us  
13 there are no worries and there are no problems.  
14 Again, this is not the place to experiment. This  
15 is not the place to find out about this technology. This is  
16 not the place to use this technology. This is a sacred  
17 place.  
18 MR. BRASS: We have one more in the back row. You  
19 have a question?  
20 A VOICE: The questions that I have I feel are  
21 very relevant. It doesn't take away from my position, my  
22 stance and my testimony tonight. I want to address this to  
23 the counsel. Did I hear correctly when you said that the  
24 mirror, the lens, is six meters?  
25 MR. FOLTZ: No, this is a four meter. The

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71

1 telescope that I was the director of was a six and a half  
2 meter telescope, a nighttime telescope.  
3 A VOICE: This is four meters?  
4 MR. FOLTZ: This is four meters.  
5 A VOICE: You are looking at the sun, right, so  
6 four meters is big in diameter. So is this telescope going  
7 to be used to capture or absorb the sun?  
8 MR. FOLTZ: Would you like me to explain why it  
9 has to be that size?  
10 A VOICE: No, no, no. For the point I'm getting  
11 at is it's okay. You telling me it's four meters that's  
12 fine. But I'm kind of looking at it where you are looking  
13 at the sun, you want to build this telescope to study the  
14 sun, but then I'm not a scientist --  
15 MR. FOLTZ: I understand.  
16 A VOICE: But the sun has a lot of power. So  
17 looking at it through a magnifying lens is one thing, but  
18 what it's telling me also is that you could also capture the  
19 power and that lens could be used as well to do that.  
20 MR. FOLTZ: You could make this telescope -- I'm  
21 not being disrespectful. You could make it a solar hot --  
22 A VOICE: That's my point. Now I can get to the  
23 point in question that I have. Will this facility or any  
24 other facility that you may build in the future be used to  
25 capture or harness the sun's power?

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72

1 MR. FOLTZ: No.  
2 A VOICE: Do you have other telescopes currently  
3 in operation in the United States or throughout the world?  
4 MR. FOLTZ: Yes.  
5 A VOICE: Next question, has there been any  
6 hazardous or detrimental accidents at any one of these  
7 facilities since their construction?  
8 MR. FOLTZ: I'm sure there have been.  
9 A VOICE: Do you know offhand how severe or the  
10 nature of these accidents?  
11 MR. FOLTZ: Certainly there was a situation where  
12 my officemate was killed by one.  
13 A VOICE: You obviously know where I'm going with  
14 this. When I hear that the lens is going to be so big and  
15 then I think, my God, yeah, we're talking about looking at  
16 the sun, but when I was small I take the magnifying glass --  
17 MR. FOLTZ: And you burned ants, yeah.  
18 A VOICE: It's troubling. It's scary.  
19 MR. FOLTZ: If you would just give me one quick  
20 lesson.  
21 MR. BRASS: We need to wrap it up because we have  
22 one other person signed up to speak.  
23 MR. FOLTZ: The sun comes in, the sunlight is so  
24 far away, the sun leaves -- we're so far away, the rays of  
25 the sunlight are powerful. Here is the sunlight that comes

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73

1 in and hits this mirror, this four and a half meter dish  
 2 concave mirror, which focuses the light, it makes an image  
 3 of the sun up here. So all of that power, and it's about 20  
 4 kilowatts.  
 5 MR. WAGNER: 12.  
 6 MR. FOLTZ: You take ten irons and you plug it in  
 7 your house, you are using 12 kilowatts of power. It's like  
 8 12 irons on your ironing board is about how much energy is  
 9 used. It's not terrible. You don't want to do it. You pay  
 10 for it. You might burn your shirts. But, anyway, up here  
 11 is what is called a heat stop. Its job is to take most of  
 12 that light, collect it, and take the heat away. And it  
 13 takes it away and fluid -- I'm just getting started. The  
 14 heat is eventually dissipated through a chilling system  
 15 which will probably involve nothing else.  
 16 So the heat is taking away the little bit of  
 17 sunlight you are interested in studying. You are looking  
 18 at the small part of a -- it shows in great detail. It  
 19 sends down all the way down to the base, to the instrument.  
 20 So in terms of it's not collecting an enormous  
 21 amount of energy, number one. Number two, all of that  
 22 energy is dissipated within the structure. Yes, it's true.  
 23 If you pointed this at the sun and you stood here or you put  
 24 a piece of metal or a hot dog here, you would heat it very  
 25 quickly, and you would do damage.

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74

1 A VOICE: I really appreciate your candor and your  
 2 honesty. Thank you. So I'm not going to apologize for my  
 3 candor.  
 4 MR. FOLTZ: I don't expect one.  
 5 A VOICE: It still does not give me the confidence  
 6 or the reassurance that an accident could be unavoidable.  
 7 And with your explanation that you lost a colleague and a  
 8 friend and that there are telescopes throughout the world  
 9 and there have been accidents. With all due respect to your  
 10 president, when you say that you guys are being honest and  
 11 truthful, Bush said the same thing. We know, hello, that  
 12 guy lied through his teeth.  
 13 My point is this: Right now, technically, I have  
 14 not heard any factual or confident assurances that this will  
 15 be safe for the general public. And I have --  
 16 MR. BRASS: Can I interrupt you so that we can  
 17 give this one gentleman who signed up a chance to speak?  
 18 A VOICE: Okay. Let me conclude by this. I'm not  
 19 confident. Even more so, I'm even more scared and more  
 20 opposed now than I was two hours ago when I walked in. And  
 21 I don't want nobody hurt. So the safety factor is extremely  
 22 important.  
 23 MR. FOLTZ: I understand. I don't expect you to  
 24 trust me.  
 25 A VOICE: Thank you.

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75

1 MR. BRASS: Last person signed up is Walter  
 2 Kanamu.  
 3 WALTER KANAMU: Hana ho. Back to the book again.  
 4 If you go to Kahikinui right now and a you sit up at 3,000  
 5 or 4,000 feet elevation, and you sit on the aina, and you be  
 6 still and you be quiet and you listen, guess what you can  
 7 hear? Everything that goes on in the observatory. You can  
 8 hear the grinding, you can hear the rumbling in the earth.  
 9 The sounds emitted up there travel all the way down. All  
 10 the way down and affects us. I know you cannot hear it in  
 11 Lahaina or Wailuku or Kahului, but we hear it in Kahikinui.  
 12 All of that the vibrations, everything, go down into our  
 13 aina. And I want to preserve what we have left because  
 14 Haleakala has influenced a lot of my writing.  
 15 As I revealed in one of the writings, I would like  
 16 to share this with you. (Hawaiian language was spoken) That  
 17 means I listen to the voice of my ancestors. They cry out  
 18 to me. Return to the land of your love. Return to the land  
 19 of your God. (Hawaiian language was spoken.) I want to  
 20 look into your eyes he tell me. I want to be close to you  
 21 pili. I want to see your mana and listen to your voice, the  
 22 voice of your heart crying out to me. (Hawaiian language  
 23 was spoken).  
 24 My answer to that is here I am today. Here I am  
 25 today. I will take care of you, the aina. And you take

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76

1 care of me. And that's where I am today. I want to share  
 2 this other one. Manukani is a pu'u right below the  
 3 observatory. I wonder why Hawaiians call it manukani.  
 4 Manukani.  
 5 So I went camping up there by myself. This was in  
 6 1997 when I wrote this one. And I asked akua, why manukani?  
 7 I took my guitar up there -- all of these are songs -- I  
 8 took my guitar up there and I sat there and camped up in the  
 9 mountains, and I asked akua why manukani? The sun went  
 10 down, the moon came up, the moon went and gone, the sun came  
 11 back out and still no answer.  
 12 In search of the meaning, I found myself on top of  
 13 the pu'u manukani. All alone I sat and waited. The reward  
 14 for waiting was the sound of a thousand birds singing,  
 15 chirping, and screeching. Only there were no birds and no  
 16 trees. The Hawaiians call it manukani. Manu is the bird,  
 17 kani is the sound. On top of the pu'u o manukani, looking  
 18 out into the sea on top of the pu'u o manukani the birds  
 19 began to sing to me. At first I'm siting all alone. It  
 20 feels like there's nobody home. The Kona winds come from  
 21 the sea, the clouds are all surrounding me. I feel the  
 22 chill run through my bones. It seems to say, I'm not alone.  
 23 And as the clouds fly over me, I hear the sound of manukani.  
 24 I hear the birds of manukani. The Hawaiians call it  
 25 manukani. On top of the pu'u o manukani looking out into

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77

1 the sea, on top of the pu'u o manukani a makiki screeches  
 2 from the tree, the i'iwi sings to me, the chirping apapane  
 ^ in the trees.

Oh, yeah. One more please. While everybody  
 5 thinks it's funny to say with a laugh of the town will keep  
 6 on laughing, yes keep on laughing, you're going to take us  
 7 all down. Humpty dumpty sat on a wall, humpty dumpty had a  
 8 great big fall. For all the soldiers on the land and all of  
 9 the sailors on the seashore and all of the fighters in the  
 10 sky, tell me is there going to be war? Is there going to be  
 11 war? Humpty dumpty sat on a wall, humpty dumpty had a great  
 12 big fall.

Kahoolawe, Kahakuloa, Kaneohe, Niihau, Pearl  
 14 Harbor, Diamond Head, Bello's Field and Kahuku, Schofield  
 15 Barracks, Moanalua, Barber's Point and Makua, Wheeler Field,  
 16 Punchbowl, Mokuleia, Haleakala. House of the sun or house  
 17 of star wars. Do you want any more? We cannot give you any  
 18 more? Is there going to be war? Humpty dumpty sat on the  
 19 wall, humpty dumpty had a great big fall. It's time for  
 20 action to stop the faction. The desecration of our land.  
 21 We're just like magnets in the ocean attracting missiles  
 22 from all foreign lands.

In the middle of the deep blue sea just set your  
 24 sights on me. Do you want any more? We cannot give you any  
 25 more. Is there going to be war? Humpty dumpty sat on a

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78

1 wall, humpty dumpty had a great big fall. What everybody  
 2 still think it's funny? Hawaiians only want to be free.  
 3 Get back the land do what you can. It's time to help  
 4 yourself be free. It's time for sovereignty.

It's time for sovereignty. I have more from  
 6 Kahikinui. I hope you can see how this land affects my life  
 7 now. And I think it's well worth preserving and  
 8 perpetuating and enough of desecration already. That's all  
 9 I have to say mahalo.

MR. BRASS: We're out of time this evening. I  
 11 want to remind you that up until October 23rd you have the  
 12 opportunity to submit written testimony. There's also a  
 13 meeting tomorrow night in Pukalani starting also at seven  
 14 and in Kula on Friday night also at 7:00 p.m., so those are  
 15 opportunities for you. You have heard the testimony.

A VOICE: I have a question about letting the  
 17 public know is it in the Maui News so the public knows?

MR. FEIN: It's been in the Maui news two separate  
 19 weeks, Haleakala Times, Maui Times.

A VOICE: Did it have 6:00?

MR. FEIN: Seven yes, sir.

A VOICE: I just want to make sure that the  
 22 objections to the timing of this get entered into the public  
 24 record.

MR. FEIN: Everything that we said was entered

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79

1 into the public record that's part of the administrative --  
 2 yes, it is.

A VOICE: Will all of this that's been recorded  
 4 this evening be in the public record? Meaning, that printed  
 5 in the EIS in addition to the Section 106 meetings that were  
 6 not included in the draft?

MR. FEIN: The public record means that whatever  
 8 information is not in the FEIS is available through the  
 9 Freedom of Information Act. A request for the information  
 10 will provide that to you. We cannot put everything into the  
 11 FEIS. We simply mechanically cannot do that. And there's  
 12 no requirement to do it. But everything in the record is  
 13 available to you on request.

A VOICE: How is the decision made when you look  
 15 at the DEIS -- how is the decision made on which testimony  
 16 against the ATST and for supporting the ATST is included?  
 17 Because that's the power --

MR. FEIN: With respect to comments that were  
 19 submitted up to the point of publication, every comment that  
 20 was submitted in favor or against was published in the DEIS  
 21 as part of the -- I don't think we left out any comments.  
 22 There were hundreds, and they are all in the DEIS.

A VOICE: Are you meaning written comments?

MR. FEIN: Written, yes.

A VOICE: The understanding of people who attended

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80

1 the meetings was that it was going to be part of the DEIS.

MR. FEIN: Yes. When I said that, I misspoke at  
 3 that time, at the March 28th meeting. I said that the  
 4 transcript would appear in the DEIS and I misspoke on that.  
 5 It is available through the Freedom of Information Act on  
 6 request and will be provided to anybody who wants it.

A VOICE: Are you saying that if I object right  
 8 now to the fact that all of these people's time that they  
 9 put into saying things tonight is only available to the  
 10 public with -- if I say that that doesn't go into the  
 11 public record. People only know I said that and all the  
 12 other things people said tonight, if they get a lawyer and  
 13 do a Freedom of Information Act request?

MR. FEIN: I'm going to allow the representative  
 15 of the general counsel to --

A VOICE: I think that's outrageous. You are  
 17 wasting our times here.

BIJAN GILANSHAH: Let me clarify. There's pages  
 19 in the transcripts in the DEIS hearings (inaudible) and the  
 20 comments that are made, written comments. (Inaudible) --  
 21 the comments you make get put into the DEIS and addressed  
 22 individually or collectively. For instance, if there's an  
 23 objection to the timing because of the county fair, that  
 24 goes right into the text of the DEIS as an objection noted  
 25 by several commenters where 18 people said X.

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81

1 A VOICE: It goes into the public record --  
 2 (inaudible)  
 3 BIJAN GILANSHAH: -- by people and all comments  
 4 have to be addressed and arranged and similar comments --  
 5 (inaudible).  
 6 A VOICE: This is confusing. It's not a direct  
 7 answer.  
 8 MR. WAGNER: I think there's confusion about the  
 9 difference between a transcript which is translating and  
 10 codifying everything that's said and taking the comments  
 11 then and putting them in the document. I mean, the comments  
 12 about we're concerned about mercury goes into the document.  
 13 All of the words that are said go into the transcript. Does  
 14 that make sense?  
 15 A VOICE: No, that doesn't make sense right now.  
 16 I feel completely confused, and I'm pretty well educated.  
 17 A VOICE: So everything tonight gets transcribed?  
 18 Is this verbatim when it comes out? Is this verbatim?  
 19 THE COURT REPORTER: As much as I can. As much as  
 20 I can.  
 21 A VOICE: You stated that you, not you but the  
 22 other gentleman, stated that in the final EIS, what is said  
 23 here doesn't all get put into the EIS.  
 24 BIJAN GILANSHAH: -- you are saying the verbatim  
 25 transcript. I will double check and make sure that doesn't  

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82

1 happen. I have never seen it. The law requires that every  
 2 substantive comment, everything that was said, substantive  
 3 timing of these meetings, the change in the timing of the  
 4 meetings gets right into the text. The action says it's not  
 5 enough for an agency to take stuff, throw it in the back in  
 6 the appendix, and bury it. It says you have to walk through  
 7 everything that is said and address it. It actually  
 8 increases; otherwise, I assume the rule is there because  
 9 they take it, throw it in the back 400 pages, buried,  
 10 whatever versus addressing each substantive comment, put it  
 11 in, and we have a responsibility to respond to timing,  
 12 County fair. All of that gets in and responded to.  
 13 A VOICE: It seems when you consolidate these  
 14 comments, as you hear it in the evening, it seems -- I'm  
 15 just questioning this that it may be listed in the document  
 16 but not given a weight that the majority of the people  
 17 expressed this particular statement or sentiment. It just  
 18 seems like it's a little comment that that's what was  
 19 mentioned at the meeting. I'm just questioning --  
 20 BIJAN GILANSHAH: This document?  
 21 A VOICE: I'm talking about this DEIS. When you  
 22 talk about Section 106 meetings that we had, and it  
 23 mentions, like you are saying, it seems to (inaudible) more  
 24 than one person saying something, but it doesn't seem to say  
 25 what percentage of them did. If 99 percent of the people  

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83

1 said that, I mean that should make a difference whether  
 2 National Science Foundation makes a decision on funding this  
 3 project or not.  
 4 BIJAN GILANSHAH: That's a good point. When I  
 5 seen it in other documents, often you will see several  
 6 commenters say X. That's a typical EIS document. Several  
 7 many, dah, dah, dah. Let me look at that and see why that is  
 8 standard practice and see what we can do to assess the  
 9 differences. But it is standard practice, and I don't know  
 10 how it developed or -- but it's vague --  
 11 A VOICE: Don't you think it's fair to take the  
 12 transcript, a letter, as a group.  
 13 BIJAN GILANSHAH: I'll look at that too. The  
 14 interesting thing is bury (inaudible) bury stuff. The EPA  
 15 says, don't do that. I want you to insert it into the actual  
 16 text of the document versus just throwing it 300 pages to  
 17 people. It may or may not read page 272.  
 18 MR. BRASS: We need to wrap up. We need to be out  
 19 of here.  
 20 A VOICE: Who is in charge of selecting the script  
 21 that goes in if it's not verbatim? And is that a neutral  
 22 person, or is that a person, a proponent of the project?  
 23 How does that work?  
 24 BIJAN GILANSHAH: It's an agency --  
 25 A VOICE: There's no control on the selective  

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1 script that goes into the record.  
 2 BIJAN GILANSHAH: It's like the draft EIS. We  
 3 will write the final, that's true. We'll have to go through  
 4 -- the control is the law requires it.  
 5 A VOICE: But there's a lot of latitude of what  
 6 you put in.  
 7 BIJAN GILANSHAH: Yeah, it all has to go in.  
 8 A VOICE: You say it doesn't go in verbatim.  
 9 BIJAN GILANSHAH: It doesn't go in verbatim. All  
 10 substantive comments go in.  
 11 A VOICE: But that's selected by somebody.  
 12 BIJAN GILANSHAH: Yes, and if there's anything  
 13 that's vague as to what is or what isn't a (inaudible), we  
 14 would err very much so on -- obviously the issue of the  
 15 county fair, mercury, all of that. It's not in the agency's  
 16 interest to not address all comments. It's just not. The  
 17 law requires it all.  
 18 MR. FEIN: Our permit has expired.  
 19 (Proceedings concluded at 10:03 p.m.)  
 20  
 21  
 22  
 23  
 24  
 25  

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1                                    C E R T I F I C A T I O N  
2 STATE OF HAWAII            )  
3                                    )    S S .  
4 COUNTY OF MAUI            )

7            I, GLORIA T. BEDIAMOL, CSR/RMR 262, Notary Public  
in and for the State of Hawaii, do hereby certify:

8            That the proceedings were taken by me in machine  
shorthand and was thereafter reduced to print under my  
9 supervision by means of computer-assisted transcription;  
that the foregoing represents, to my best ability, a true  
10 and correct transcript of the proceedings had in the  
foregoing matter.

11           I further certify that I am not an attorney for  
any of the parties hereto, nor in any way interested in the  
12 outcome of the cause named in the caption.

13  
14           Dated this 25th day of October, 2006.

15  
16           *Signature on File*

17           -----  
NOTARY PUBLIC, State of Hawaii  
My commission expires: 1/18/08

18  
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**Appendix D(2): Transcripts**  
**DEIS Public Comment Meeting, Pukalani Community Center, September 28, 2006**

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2

3

ADVANCED TECHNOLOGY SOLAR TELESCOPE (ATST)

4

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6

PUBLIC MEETING

7

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9

10 Held at the Pukalani Community Center, Pukalani, Maui,

11 Hawaii, commencing at 7:00 p.m. on September 28, 2006.

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19 REPORTED BY: Lynann Nicely, RMR, CSR No. 354

20

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1 ATTENDANCE

2

3 MEETING FACILITATORS:

4

5 David Brass and Cheri Nashiwa,  
6 Mediation Services of Maui

7 PANEL MEMBERS PRESENT:

8 Dr. Jeff Kuhn - Associate Director of the  
9 University of Hawaii, Institute for Astronomy  
(Oahu)

10 Dr. Craig Foltz - Program Officer with the National  
11 Science Foundation, Washington D.C.

12 Dr. Charlie Fein - KC Environmental (Maui)

13 Jeremy Wagner - ATST Project Manager with National  
14 Solar Observatory, Tucson, Arizona

15 Jeff Barr - ATST Project Architect

16 Mike Maberry - Assistant Director, University of  
17 Hawaii, Institute for Astronomy (Maui)

18 Bijan Gillanshah, Office of the General Counsel of  
19 NSL

20

21

22

23

24

25

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1 DR. FEIN: Good evening and aloha, ladies and  
2 gentlemen. My name is Dr. Charlie Fein. I am the  
3 vice president of KC Environmental Incorporated. KC  
4 Environmental was the preparer of the Draft  
5 Environmental Impact Statement that we are  
6 discussing this evening. I'm going to make some  
7 brief remarks to begin with and then we'll proceed  
8 with the public comment part of the program.

9 There have been quite a few meetings on the  
10 Advanced Technology Solar Telescope already, public  
11 meetings. If you did read the Draft Environmental  
12 Impact Statement, Chapter or Section 5 describes  
13 nine previous meetings, three beginning in July 2005  
14 and other informal and formal meetings that have  
15 been held since. These other meetings occurred with  
16 various organizations, groups, individuals, on Maui  
17 at various times throughout the last 15 months. And  
18 as I said, these are all documented in Section 5 of  
19 the DEIS.

20 So tonight the purpose of this meeting is  
21 specifically to hear comments from the public on the  
22 Draft Environmental Impact Statement for the  
23 Advanced Technology Solar Telescope. Those comments  
24 will be recorded and become part of the  
25 administrative record for this project and

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1 ultimately all comments will be addressed  
2 individually or collectively in the final  
3 Environmental Impact Statement.

4 If you wish to comment, there are several ways  
5 to do so. If you wish to provide vocal testimony  
6 this evening, we ask that you sign up and provide  
7 your name so that you will be called upon in turn to  
8 give that testimony.

9 You can also provide written comments. We have  
10 comment forms at the front of the room. If you wish  
11 to comment on those forms, you write whatever you  
12 choose to write and put it in the drop-off box. You  
13 also have until October 23rd to provide written  
14 comments on the document, the end of the comment  
15 period. And there is one more meeting tomorrow  
16 evening at the same time at the Kula Community  
17 Center and if you wish to attend and provide  
18 comments there, you're welcome to do so.

19 Although there are representatives of the  
20 project here, we respect the comments that we've  
21 received from earlier meetings and we are not  
22 providing presentations this evening. If you direct  
23 your question to any of us, we will respond as  
24 appropriate. However, bear in mind that this  
25 document was prepared in part by more than 30

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1 individuals. They could not all be here this  
2 evening for practical reasons and so there may be  
3 questions that come up that we cannot answer. We  
4 will, however, ultimately answer all the questions  
5 you have.

6 The EIS is a draft. We're aware that it can  
7 contain errors. We also know that there will be  
8 differences of opinion about the content and the  
9 conclusions. And that's why we encourage everybody  
10 to participate in the public comment process.

11 With that, allow me to introduce the  
12 individuals who are here this evening. Craig Foltz,  
13 representing the National Science Foundation, is the  
14 program officer for the project. Jeremy Wagner,  
15 project manager from the National Solar Observatory.  
16 Jeff Barr, the project architect. Dr. Jeff Kuhn,  
17 Associate Director of the University of Hawaii  
18 Institute for Astronomy. Mike Maberry, the  
19 assistant director for IFA here on Maui. And Bijan  
20 Gillanshah, Office of the General Counsel of NSL.  
21 All of these individuals are here to listen to the  
22 comments tonight.

23 Our primary purpose tonight is to hear your  
24 comments on the Draft Environmental Impact  
25 Statement. With that, I'm going to turn the process

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1 over to our mediators who will explain -- or  
2 facilitators, I'm sorry, who will explain the ground  
3 rules for this evening. David.

4 DAVID BRASS: Good evening. My name is David  
5 Brass and this is Cheri Nashiwa. We're both  
6 facilitators with Mediation Services of Maui. And  
7 we are not here as mediators. Mediators work with  
8 parties to help them come up with their own  
9 resolution to a conflict. We're here to provide --  
10 hopefully to provide a safe, respectful environment  
11 that allows everyone to state their comments  
12 regarding the draft environmental impact. We're not  
13 affiliated with any of the parties in this. We're  
14 simply here to create a process that allows everyone  
15 to speak.

16 In order to ensure that everyone who wants to  
17 speak has an opportunity to speak, we are going to  
18 be working with time limits on the speech. So if  
19 you have more to say than can be said within the  
20 time constraints, please take advantage of the other  
21 meeting tomorrow night and also take advantage of  
22 the opportunities for written comments.

23 What I'm going to do now is I'm going to turn  
24 the mike over to Cheri -- I'm sorry, I always forget  
25 about this part. We have an agenda. It's a simple

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1 agenda. We're in this part right now, opening and  
2 ground rules. We're going to take a break at 8:00  
3 and a break at 9:00. Part of the reason for those  
4 breaks is that we have a court reporter here who is  
5 recording all of the proceeds of the meeting and she  
6 needs a break. So we'll take a five-minute break at  
7 8:00 and 9:00.

8 Those are opportunities, if you haven't already  
9 signed up to speak, for you to go ahead and sign up.  
10 After the 9:00 break, we'll collect all the  
11 remaining sign-up sheets and that's what we'll work  
12 with to call your names and have you come up and  
13 submit your comments. So if you haven't signed up  
14 to speak and you would like to speak, please go back  
15 and sign up on one of the sheets. They will bring  
16 then up to us and we'll continue to call names.

17 We do have to close at 9:50 because the county  
18 requires that we be out of here at 10:00, which  
19 means we need to clean up the whole room or the  
20 people who set it up need to clean up the whole room  
21 by 10:00.

22 CHERI NASHIWA: So here are the ground rules  
23 that we will be enforcing tonight. Turn off all  
24 cell phones or put it on silent just because they're  
25 distracting. Again, sign up to speak. One person

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1 speak at a time. And that is again for the court  
2 reporter, she can't type two people talking at one  
3 time. Speak into the microphone, again for the  
4 court reporter, slowly and clearly. Use respectful  
5 language and tone. And time limit is four minutes  
6 with a one-minute wrap up.

7 What's going to happen is you'll be using this  
8 microphone to speak into. At the one-minute wrap up  
9 -- after your four minutes, I will come and stand  
10 next to you and show you the yellow card which means  
11 to wrap it up and you have one minute to wrap up.  
12 That's just for fairness for everyone who wants to  
13 speak tonight.

14 So if we're ready, David will be announcing the  
15 names of the people who signed up. Again, state  
16 your name when you're at the microphone.

17 DAVID BRASS: It's important that you state  
18 your name clearly at the beginning. I will do my  
19 best to read names. I'm not particularly good at  
20 handwritings, so I may mispronounce your name and I  
21 apologize in advance for that.

22 Our first person to speak tonight is Mary  
23 Evanson.

24 MARY EVANSON: Thank you very much for this  
25 opportunity to speak. My name is Mary Evanson. And

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1 I didn't bring my glasses, so I hope I can read  
2 this.

3 Although I was born and raised on Oahu, I came  
4 to Maui often when I was a child. And Maui was  
5 always No Ka Oi, the very best.

6 I have always loved Haleakala and am very  
7 protective of it. There is only one Haleakala on  
8 this planet and it is a very beautiful and spiritual  
9 place for many people and it must be protected  
10 forever.

11 I understand why Haleakala was chosen for this  
12 ATST project and I understand why the university  
13 wants it bad, the prestige that it would bring to  
14 the university. But what is the cost to our small  
15 island and what is the cost to future generations?  
16 This project is so huge, it will change Haleakala  
17 forever. Please, find another place for this  
18 project.

19 I am deeply troubled by the Draft EIS. This  
20 document has many errors and it is printed and  
21 distributed to many individuals, to libraries, and  
22 is on the internet. A document like this should be  
23 checked and double checked and checked once again  
24 before it is posted on the internet. People from  
25 all over the world now can check in and learn all

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1 kinds of erroneous things about this project, about  
2 Haleakala.

3 I really expected more from this document that  
4 has the National Science Foundation logo on the  
5 cover.

6 I just want to bring up a few of the mistakes  
7 or errors that I found in it. This an error that I  
8 brought to the preparer of the documents' a while  
9 ago. This is a map. It has Haleakala Highway going  
10 through Science City. I brought it to their  
11 attention and their response was oh, this came from  
12 the Maui County website. Therefore it must be  
13 right. I don't think so. The fact that he knew  
14 this was wrong and copied it again. Do two wrongs  
15 make a right? No. It may be manini, but it is an  
16 error that should have been corrected.

17 The other error that I found -- I don't know  
18 how many times, I lost track of how many times  
19 Haleakala Crater Road is mentioned. And I also  
20 mentioned this to the preparer sometime ago. There  
21 is no Haleakala Crater Road anymore. There used to  
22 be. But several years ago the Maui Fire Department  
23 felt, for safety concern, Haleakala Highway should  
24 extend from Hana Highway all the way up to the top  
25 of the mountain, and therefore Haleakala Crater Road

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1 is no more.

2 There is mentioned a couple of times ko'a.  
3 Ko'a is a shrine that one finds down on the  
4 shoreline. They're saying there is a ko'a up on the  
5 top of the mountain? I don't think so. I asked two  
6 archeologists about this and they confirmed that no,  
7 probably not. There is some coral up there, but it  
8 has nothing to do with a shoreline.

9 Also, they have the west and east ahu that were  
10 constructed up there. In some places of the Draft  
11 EIS it says they were constructed and others they  
12 were reconstructed, that they were -- this is just a  
13 little example of the errors that I found in the  
14 document. There may be others. I hope not, but I  
15 do not feel comfortable with the document. Thank  
16 you.

17 DAVID BRASS: There is I believe a collection  
18 box for written testimony on the table, so if you  
19 would like to leave your full testimony there, I  
20 would encourage you to do so.

21 The next speaker is Penrod Vladika.

22 PENROD VLADIKA: Good evening and thank you for  
23 this opportunity to speak to everybody here. I'm  
24 vice principal at Kalama Intermediate School. This  
25 is my twenty-first year as an educator in public

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1 schools. I have a degree in geology and a minor in  
2 mathematics, master's in education.

3 Last year I formed an astronomy club at Kalama  
4 Intermediate School and have been very active with  
5 the Haleakala Amateur Astronomers. Rob Ratkowski is  
6 here to represent that group. And also with the  
7 Institute For Astronomy, several astronomers that  
8 have been collaborating with our school and our  
9 students.

10 I'm real excited about this. The kids are real  
11 excited about this. We had our first star party  
12 last Saturday. And I was hoping to show a couple  
13 slides of that. Obviously I'm in favor of the  
14 telescope and the construction of this very  
15 important instrument.

16 I'm in favor of the Pan-STARRS of course also.  
17 And our students are going to be working with the  
18 astronomers and these two instruments in the future  
19 when they're finished with their construction.

20 So, a picture is worth a thousand words. I  
21 brought a few pictures to show you of some images  
22 that some of our students have been -- well, I made  
23 my main point.

24 Anyway, I purchased a solar telescope myself  
25 and I do a lot of solar imaging and it's been a lot

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1 of fun for me and I just wanted to share that with  
2 students. So I bring my solar telephone up to  
3 Kalama. I take it up to the summit for the best  
4 imaging because that's where the best imaging is. I  
5 compare notes with other solar amateur astronomers  
6 from around the world and the imaging from up at the  
7 summit is just suburb. It's just obviously the best  
8 place in the world to do this. And what's so much  
9 fun about that is setting it up there and seeing all  
10 the people come from around the world to ask to look  
11 and see and to experience the joy of discovery. And  
12 that's what it's all about for me is to have this  
13 opportunity for children to learn and to discover.

14 And one of the projects we're really interested  
15 in is with the Pan-STARRS is to find some of these  
16 earth-crossing asteroids that have hit the earth in  
17 the past and had a tremendous impact on life on  
18 earth in the past and we now know that the  
19 possibility of that event happening again is very  
20 real, that's why Pan-STARRS was built.

21 And our students are going to be involved in a  
22 workshop with the IFA here in October to learn how  
23 to use different imaging packages and software to  
24 analyze asteroids and be able to determine their  
25 orbits. So these are middle school students --

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1 sixth, seventh, and eighth grade students. That's  
2 just real exciting for me because my passion is  
3 astronomy also. I taught astronomy for six years to  
4 gifted students in eighth grade in Texas and that  
5 was just an enormously enriching experience for me  
6 and I think for the kids, too. What else can I say  
7 here? I just -- I have one minute? I'm sorry you  
8 can't see the images.

9 I think again I can be here later if anybody  
10 wants to see these. We had about 40 students and  
11 parents come up last Saturday night and look through  
12 a variety of telescopes and got to see things that  
13 they had never seen before.

14 One of my first impressions that got me  
15 involved in astronomy was going to up to Los Angeles  
16 and looking through the 12-inch size refractor that  
17 they had their images of the moon looking at live  
18 viewing of the moon. That first got my interest.  
19 And then going up to Mt. Palomar in San Diego area  
20 and looking at the enormous observatories there.

21 I see there is a unification of science and the  
22 mountain also. It's called the House of the Sun.  
23 You know, to me it's an addition, it's unifying in a  
24 way and it's very spiritual also to me as just an  
25 average citizen. Thank you.

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1           DAVID BRASS: A reminder that if you would like  
2 to speak tonight, there are sign-up sheets back in  
3 the back of the room. Please sign up if you would  
4 like to speak.

5           Our next speaker is Marilyn Parris.

6           MARILYN PARRIS: Aloha. I'm Marilyn H.  
7 Parris, superintendent of Haleakala National Park.  
8 And we are the adjacent neighbor to the  
9 observatories.

10           Established in 1916, Haleakala National Park  
11 houses the last and best opportunity to preserve for  
12 all times a maturing Hawaiian volcanic landscape  
13 which has nurtured and sustained unique biotic  
14 ecosystems and a rich cultural heritage.

15           The park's purpose as established by law is to  
16 preserve the scenic character and associated  
17 Hawaiian culture, while simultaneously providing  
18 educational, inspirational, and recreational  
19 opportunities compatible with preserving the natural  
20 and cultural resources and values within the park.  
21 The significance of the park mission and purpose I  
22 think is validated by our current visitation which  
23 is at 1.7 million a year and our visitation is  
24 growing.

25           Haleakala National Park represents a highly

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1           diverse volcanic, geological and biological habitat  
2           ranging from over 10,000 feet to sea level. It  
3           contains the relatively few intact remnants of a  
4           unique and disappearing Hawaiian biota found nowhere  
5           else in the world and for which has been designated  
6           as part of the world biosphere reserve system.

7           Haleakala National Park includes over 24,000  
8           acres of remote and pristine designated wilderness,  
9           acclaimed for its beauty, serenity, and tranquility  
10          where visitors can temporarily escape from civilized  
11          society. It contains abundant archeological and  
12          historical remains of the pre-European contact  
13          Hawaiian civilization.

14          Haleakala National Park is Maui's number one  
15          tourist destination and an integral part of the  
16          tourist-based island economy.

17          The National Park Service's primary mission at  
18          Haleakala National Park is to ensure these resources  
19          and values remain authentically represented and  
20          available for the enjoyment of all peoples in  
21          perpetuity. The preservation of Haleakala nurtures  
22          the mind, body and spirit of these islands, her  
23          unique environment, and her many peoples.

24          It is the National Park Service's contention  
25          that this Draft EIS falls far short in adequately

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1           evaluating the numerous cumulative impacts to our  
2           resources, our visitor experiences, and our overall  
3           park operations with the construction of this ATST.  
4           Therefore, the National Park Service must strongly  
5           oppose the construction of this facility adjacent to  
6           our boundary based on the information presented  
7           within this Draft EIS.

8                     We will be submitting more detailed  
9           documentations of these omissions, shortfalls, and  
10          our concerns to the National Science Foundation.  
11          Thank you.

12                    DAVID BRASS: Before I call the next person, I  
13          neglected to mention that we have a representative  
14          from the Maui News here who is recording to assist  
15          her in make an accurate report of this meeting. If  
16          you would prefer not to be audio recorded, just let  
17          her know and she'll turn off her recorder.

18                    The next person is Frank Skowronski.

19                    FRANK SKOWRONSKI: My name is Frank Skowronski.  
20          I'm the principal in a very modest tech firm on  
21          Maui, licensed to practice in the state since 1978.  
22          I will leave the spiritual implications to Haleakala  
23          to my others and try to concentrate on the  
24          architecture and structure of the building.

25                    I have a couple questions from the people or to

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1 the people who prepared this statement. And one of  
2 them is that is there some location in the EIS that  
3 does a comparison of the size and scope and scale of  
4 the projected improvement as compared to other  
5 existing structures on the island of Maui? Is this  
6 buried in the EIS or have I overlooked it?

7 SPEAKER: No, we don't have a comparison.

8 FRANK Skowronski: In lieu of that, may I offer  
9 some observations about the size and scale of the  
10 proposed construction.

11 The Maui Medical Group is a well known building  
12 in Wailuku. It's on Main Street and High. It's  
13 seven stories tall. It's 68 feet high. It's about  
14 a 6,000 square foot footprint. As I read your  
15 Environmental Impact Statement, you're proposing to  
16 build a structure that is over twice that size, both  
17 in its height and in its footprint. Is that a  
18 correct characterization?

19 SPEAKER: Yes.

20 FRANK Skowronski: The Maui County office  
21 building, which is on High Street just a half a  
22 block away from the previous building, is an  
23 eight-story structure that's 104 feet tall. It has  
24 a footprint of approximately 10,000 square feet -- a  
25 little over 10,000 square feet. And the proposed

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1 construction that you're asking for on Haleakala is  
2 going to be another four stories taller than that?

3 SPEAKER: Approximately 40 feet higher.

4 FRANK Skowronski: Approximately the same  
5 footprint. Okay. The other structures on Maui that  
6 compare to this -- the Maui Marriott on the  
7 Kaanapali coast is 136 feet tall. This building is  
8 proposed at 143 feet tall. The Alii Towers on the  
9 Kaanapali coast is approximately 142 feet high,  
10 11 stories. The new proposed Maui Hyatt Vacation  
11 Club is proposed at 12 stories, 144 feet high.  
12 Okay. As constructed and as the island exists now,  
13 your proposed construction on Haleakala is going to  
14 be the tallest building that's ever been constructed  
15 on this island. Not the tallest structure -- there  
16 are towers, there is the windmills, there is a  
17 couple of other events that have been constructed  
18 that are taller, but as far as a mass is concerned,  
19 as far as a structure is concerned, this is going to  
20 be the tallest structure ever built in the county.  
21 Is that a fair characterization? Am I missing any  
22 of the buildings? Okay.

23 The County of Maui Building Code allows only a  
24 12-story structure. So if you were to build this  
25 structure any place other than federally owned land,

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1           you would not be able to get a building permit  
2           because you would be too high. But you don't have  
3           to get a building permit to build on this site. Is  
4           that true?

5           SPEAKER: That is correct.

6           FRANK Skowronski: So there will be no county,  
7           state, or federal reviews of the construction  
8           drawings of this proposed construction.

9           SPEAKER: That is incorrect.

10          FRANK Skowronski: Okay. Which -- who --

11          SPEAKER: The State of Hawaii requires all  
12          construction plans to be submitted with a  
13          conservation district use application. Those plans,  
14          blue lines, and all of the construction details  
15          including the construction plan will be reviewed  
16          carefully by the state and become part of the  
17          application process.

18          FRANK Skowronski: But not a building permit.  
19          You will not be applying for a building permit.

20          SPEAKER: That's correct. A county building  
21          permit is not required.

22          FRANK Skowronski: On the Appendix G, there is  
23          a reference to a soil placement area. Can you  
24          explain what the soil placement area is on the top  
25          of -- in the course of this construction?

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1           SPEAKER: Yes. I actually have some graphics I  
2 could show you, and it's in the EIS, in the Draft  
3 EIS, showing the locations where -- I can just  
4 verbally describe it might be --

5           FRANK Skowronski: Well, it makes reference to  
6 4,000 cubic yards of cut rock and fill that you will  
7 be moving around on the top of the mountain.

8           SPEAKER: Maybe I should use a microphone. I  
9 would like to actually address some of this stuff  
10 because -- not cutting into your time. But yes,  
11 right, in order to place the building, we have to  
12 create a platform. And at the primary site, that's  
13 going to take about 2,500 cubic yards of removed  
14 material. And it won't be removed off the top of  
15 the mountain. Because of cultural reasons, it has  
16 to be placed there on the mountain. So there are  
17 other areas we've identified where the soil removed  
18 will be placed. Of course, as you know, there will  
19 be additional excavation for foundation and that  
20 soil also will stay on the mountain and also be  
21 placed in one of -- we've identified two locations.

22           FRANK Skowronski: As I understand the soils  
23 report and the proposed construction, the  
24 construction is a double sleeve construction in  
25 which you have an 84-foot diameter concrete mat that

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1 houses the telescope, and then wrapped around there  
2 is another foundation that sleeves over to hold the  
3 enclosure.

4 SPEAKER: Right.

5 FRANK Skowronski: Now, that perimeter footing  
6 is being held up by 123-foot diameter caissons that  
7 go 21 feet into the top of the soil.

8 SPEAKER: You've got it just about exactly  
9 right except for the fact that the caissons will  
10 also be under the mat foundation for the pier as  
11 well. There is a total of 21 caissons and the  
12 average length on those is 16 feet. I think 21 feet  
13 was --

14 FRANK Skowronski: So is the excavation of the  
15 footings and the caissons that are going to be  
16 replaced on top of the mountain in the effect as if  
17 it's a pu'u?

18 SPEAKER: One of the soil placement areas --  
19 and this is not something we invented out of whole  
20 thought -- came out of the scoping meetings. One of  
21 the soil placement areas is what's now referred to  
22 as the Reber Circle site and it previously was a  
23 pu'u or a hill there. And in order to restore that  
24 hill and to actually do some restoration as part of  
25 the project, that was suggested to us by Kapuna

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1 Maxwell that that would be an appropriate placement  
2 of the soil and would actually do some beneficial  
3 reconstruction.

4 DAVID BRASS: Actually, to be fair to everyone  
5 else, could you guys talk later? Get those  
6 questions answered later.

7 FRANK Skowronski: The idea here is that  
8 you're building a 14-story building that you  
9 couldn't possibly build anyplace else on the island  
10 and you're going 21 feet into the soil to hold it  
11 up. And you're building something that is the  
12 largest structure -- tallest structure that's ever  
13 been built on the island and you're putting it on  
14 the highest elevation and the highest parcel that is  
15 buildable on the island at the highest wind force  
16 and this construction warrants an EIS of no  
17 significant impact? Is that the essential  
18 implication of the Draft EIS?

19 DAVID BRASS: Mr. Skowronski, I'm sorry, there  
20 is more people signed up.

21 FRANK Skowronski: I'm sorry. Thank you.

22 DAVID BRASS: The next speaker is Verna Nahulu.

23 VERNA NAHULU: My name is Verna Nahulu. I'm a  
24 retired elementary schoolteacher and I live in  
25 Keokea, Maui. I really -- I'm coming here to

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1 represent the children. And I feel that we are  
2 criticizing the outside of a structure as if we had  
3 a Stradivarius lying inside of a case and we are  
4 criticizing the case when the real value, the real  
5 value is inside. And I feel that ATST is a  
6 Stradivarius. It has so much value for the  
7 children who should be allowed to own their future.

8 And as a native Hawaiian, I see that there is  
9 so much that we were not allowed to learn because in  
10 our time our grandparents kept us tied in with their  
11 past and we were not allowed to go forward into our  
12 own future.

13 For example, the sun has a 27-day rotation  
14 period and we never knew this, although we studied  
15 the sun and skys, we never knew this. And why?  
16 Because certain information is not allowed to the  
17 children because the children are being held to the  
18 past traditions, et cetera. And I am here to say  
19 that it is time for us to allow our children a  
20 forward look at the education that can come from the  
21 ATST. So much is being offered, so much to learn,  
22 to discover, and I don't want the children to be  
23 held back.

24 I've written a book for children under six to  
25 learn physics. I think the children have to begin

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1 learning from the very beginning and my book  
2 introduces the language of physics as well as the  
3 excitement of measurement. And I'm just not -- I'm  
4 in favor of the ATST, obviously, because I don't  
5 think our children have the opportunity for higher  
6 learning here, especially the very young children,  
7 so much as is kept from us.

8 Gravitational force of the sun, we were never  
9 informed of that. And why? Because it is not part  
10 of our grandparents' past. And so much is held away  
11 from us. And my whole presence here is to ask that  
12 the children be allowed the education that comes  
13 from such a structure, from within the structure,  
14 and not be held back any more. And very young  
15 children need to begin very early. There is solar  
16 technology, everything about solar technology is  
17 going on. This is a solar telescope that our  
18 children can learn and discover and should be  
19 allowed the freedom of education. Thank you very  
20 much.

21 SPEAKER: At this point we're going to take a  
22 5-minute break to give people an opportunity to sign  
23 up to speak. So if you would like to speak, I would  
24 encourage you to go back and sign up on one of the  
25 sign-up sheets.

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1           Reminder that there will be another meeting  
2           tomorrow evening at the Kula Community Center at  
3           7:00 and that you may also submit written testimony  
4           until October 23rd. Take a 5-minute break now and  
5           please sign up if you would like to speak.

6           (Brief recess.)

7           DAVID BRASS: At this point no one else has  
8           signed up to speak, so what I would like to do is  
9           give you one last opportunity to sign up to speak.  
10          And if no one wants to speak, then the meeting will  
11          be over for this evening. One last opportunity to  
12          go up and sign up on the sign-up sheet to speak if  
13          you would like to speak tonight. Otherwise, we'll  
14          conclude this meeting.

15          A VOICE: Some people are not coming until  
16          later because it's until 10:00, so they're doing the  
17          fair. So, I mean, because it's set for 7:00 to  
18          10:00, I don't think it's fair to close it up.

19          DAVID BRASS: Why don't we take a longer break  
20          then and wait. And when we've got at least five  
21          people signed up on the sheet, I will call the  
22          meeting back together.

23          (Brief recess.)

24          DAVID BRASS: In case anyone came in after we  
25          went over the ground rules, we ask that you turn off

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1 your cell phone so there are no interruptions. We  
2 ask that you sign up to speak. We do ask you to  
3 speak one at a time because the court reporter can  
4 only record one voice at a time. So if two people  
5 are speaking, she'll miss something. We do ask that  
6 you speak into the microphone slowly and clearly so  
7 the court reporter can capture what you're saying.  
8 It's helpful if you say your name at the beginning  
9 so that she has that as part of the information.  
10 Please use respectful language and respectful tone  
11 in your comments. And there is a time limit of four  
12 minutes and then we'll -- Cheri will give you a  
13 reminder of one minute to wrap up your comments. If  
14 you have more extensive comments that you would like  
15 to make, there is another opportunity to speak  
16 tomorrow night up at the Kula Community Center.  
17 There is also the possibility up until October 23rd  
18 to submit written testimony. So I believe the forms  
19 are on the back table for written testimony or you  
20 can simply write it yourself.

21 Richard Lucas.

22 RICHARD LUCAS: Thank you. My name is Richard  
23 Lucas. I live in Haiku. This is such an exciting  
24 proposal here. You guys are going to be up at the  
25 top of Haleakala in this 14-story building. You're

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1 going to be watching the sun all day long, learning  
2 from the sun, finding all of these great new  
3 discoveries, and yet during your shift when you go  
4 down to the bathroom and you wash your hands and you  
5 turn on the hot water, it's being generated from  
6 burning fossil fuels down from Haleakala because you  
7 can't even put a single solar panel up here like we  
8 do in our houses so we're not burning up as much as  
9 of this carbon in your one little facility.

10 This is your picture here. Thanks for bringing  
11 this. This is a picture of all the clutter on the  
12 top of Haleakala. This is what it looks like. Wait  
13 a minute. This is your facility here, so let's just  
14 take that out for a second. You see all these other  
15 buildings and all of this other activity that's  
16 going on up there. Okay. 500 KVA is the power load  
17 of all of these facilities. Now, ignore all the  
18 other facilities. Look at your one little facility.  
19 670 KVA. You're using one and a third times more  
20 power than all of the other facilities on this  
21 mountain top.

22 And where is that power coming from? Well,  
23 you're expecting Maui Electric to generate it for  
24 you. And where does Maui Electric get their fuel?  
25 They import more oil. We all know what oil has

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1           gotten us into. They are going to import more oil  
2           to give you guys the electricity to exceed the power  
3           requirements of the entire top of this mountain.

4           My question for you is a real simple one. What  
5           is there in your proposal that's going to offset the  
6           amount of carbon that Maui Electric is putting into  
7           the air that we breathe and our kids breathe and our  
8           grandchildren breathe here on this island? What are  
9           you going to do in terms of carbon credits? Are you  
10          going to plant trees? Are you going to pay others  
11          to plant trees? How are you going to offset all of  
12          this additional pollution that you're putting into  
13          our air so that you can run your air conditioners up  
14          here on the top of Haleakala?

15          SPEAKER: Would you like a response?

16          RICHARD LUCAS: Yes, that's why I asked the  
17          question.

18          SPEAKER: The National Solar Observatory  
19          intends to close two observatories, one in Arizona  
20          and one in New Mexico, and so the net will be  
21          reduction.

22          RICHARD LUCAS: And how much of a reduction?

23          SPEAKER: I can get those numbers and we can  
24          address that. But that is our intent is to take  
25          those two operating facilities and close them and

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1           then operate ATST.

2           RICHARD LUCAS: Okay. And so if there remains  
3           a balance, do you have any proposal for offsetting  
4           with carbon credits or other actions to offset the  
5           amount of carbon that's going to be produced into  
6           the atmosphere to power your facility here or power  
7           the difference between your facility here and the  
8           two facilities you're closing?

9           SPEAKER: I'm not sure I follow. I'm not sure  
10          I follow the --

11          RICHARD LUCAS: If you close two facilities and  
12          they amount to 50 percent of the power requirements  
13          of this new facility that you're building, are there  
14          any proposed actions to offset the carbon production  
15          for that 50 percent differential? And if not, are  
16          you willing to at least consider that and look into  
17          that possibility?

18          SPEAKER: Yes, we are willing to consider that.  
19          I would like to ask Jeff, though, to speak to your  
20          specific -- first of all, I wanted to make one  
21          correction when you held up the picture. You put  
22          your hand over -- you put your hand over the  
23          Pan-STARRS telescope. That's actually a photograph  
24          of the facility as it is now. The solar telescope  
25          is not on that rendering.

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1 RICHARD LUCAS: Okay.

2 SPEAKER: But a minor error. The solar  
3 telescope is considerably bigger and does have  
4 significant energy needs because of the cooling  
5 requirements.

6 We've looked briefly at the possibility of  
7 using photovoltaics -- and Jeff Barr may want to  
8 comment on that.

9 JEFF BARR: We have -- I fully admit there is  
10 something a little counterintuitive to have Advanced  
11 Technology Solar Telescope that has a higher than  
12 average power requirement and not take advantage of  
13 solar generated power.

14 We looked into that and we actually had a study  
15 that MECO sponsored, Maui Electric Company  
16 sponsored, on what logical and efficient ways for us  
17 to reduce our power consumption overall, our peak as  
18 well as our sort of overall average use. And they  
19 suggested a lot of alternative technologies and they  
20 looked at the possibility of using solar power. And  
21 in fact, you can see here on the side this refers to  
22 approximately the kind of panels that were available  
23 as a kind of off the shelf.

24 I mean, we really -- even though we're a solar  
25 observatory, studying solar physics, we don't have

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1 any kind of access to any advanced kind of solar  
2 panels that as you say you wouldn't use on your own  
3 house. So basically we have the kind of off the  
4 shelf technology and showing what it would take --  
5 the other thing that I have shown here on this  
6 picture is they're dark. This is a picture of some  
7 solar panels installed on the roof on a hangar in  
8 Pearl City and this is typical. As most everybody  
9 knows who's seen them, solar panels, photovoltaics,  
10 are dark in color. For the same reason we can't  
11 paint the building itself a dark color like the  
12 mountain rock, we can't cover it with these dark  
13 panels without doing more harm than good, requiring  
14 more cooling than the panels would actually provide  
15 themselves in terms of what it would do to the  
16 temperature of the air around the telescope.

17 So we're stuck with the idea of then putting  
18 them in site areas around and maybe taking advantage  
19 of the roof of the utility building and some of the  
20 other areas. This is 2,000 photovoltaic panels  
21 which were the same type referred to in the MECO  
22 study, about 14 feet each, providing 155 watts each,  
23 based on a fairly efficient type of panel. This  
24 amount of site space -- and I've taken some  
25 liberties here. I made this up. This isn't

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1 something MECO generated. If I extrapolate what  
2 they have, how much area would I have to cover in  
3 order to generate enough power to make a significant  
4 difference in terms of the power needed for ATST,  
5 which as you state is a significant number. And you  
6 had it just about right that 670 kilowatts of power,  
7 I can -- what's shown here would generate about half  
8 of that. This would provide something like  
9 330 kilowatts. So we would be halfway to our peak  
10 requirement by covering virtually every area, every  
11 site area and getting pretty darn close to the  
12 petrel burrows and some of the other environmentally  
13 sensitive areas around -- archeological sites and a  
14 lot of other kinds of spaces that it would be  
15 insensitive of us to probably put solar panels in  
16 all these places that I've shown here and it would  
17 require an entirely new EIS, really, because we  
18 would be expanding our footprint by something like  
19 three or four times, as you can see.

20 So the bottom line is that as counterintuitive  
21 as it is, a solar panel is not really an efficient  
22 energy savings alternative for the project and this  
23 was clearly stated in the MECO study and confirmed  
24 by our own investigation into the subject. And as I  
25 say, we may end up doing something, we might do a

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1 kind of a demonstration project of some kind, but  
2 it's a kind of a nonstarter as a rule.

3 RICHARD LUCAS: The MECO study as I see this  
4 dealt with whether or not you could accomplish  
5 energy savings. In other words, save money as  
6 opposed to dealing with the issue that I raised and  
7 that is offsetting the carbon that's being produced  
8 by burning fossil fuels to power up your facility.  
9 I mean, obviously this just creates a bigger problem  
10 by taking up more space up there.

11 SPEAKER: Yes. One of the problems with the  
12 solar cell technology is that when you do a  
13 calculation like that, you're ignoring the energy  
14 that was used to fabricate the solar cells, which is  
15 substantial. And when you take the energy that was  
16 used to fabricate the cells, add it in and compare  
17 it with the energy that's generated by the cells,  
18 there is a loss of 15 percent.

19 RICHARD LUCAS: I understand that. My question  
20 wasn't directed to covering the whole site with  
21 solar cells. My question was directed to carbon  
22 dumping and carbon credits to offset the power usage  
23 that's generated by your site.

24 So I mean you've answered my question, which  
25 was is it something you'll look into. I would

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1 appreciate to see, you know, after you look into it,  
2 what your conclusions are.

3 SPEAKER: This could be included in the final  
4 EIS and we certainly appreciate it.

5 RICHARD LUCAS: I appreciate that. Thank you  
6 very much.

7 DAVID BRASS: Next speaker is Suzanne Burns.

8 SUZANNE BURNS: This has been a real eye opener  
9 for me. I've never been to anything like this  
10 except for the first meeting that we had. You  
11 remember that one, Jim.

12 SPEAKER: Yes, I do. Thank you.

13 Suzanne BURNS: I've been told I've said things  
14 that have touched people at that meeting. I don't  
15 intend to just touch people. So I'm going to try  
16 again.

17 I went up to the top of Haleakala this summer  
18 and I worked at EOS. Now just after the meeting, I  
19 found out I was going to be at EOS and I was really  
20 torn up this whole summer even when I was up there.  
21 I mean, throughout the time I was up there.

22 I don't know if you guys know this, but when  
23 you go on sacred ground, if you are a woman and it's  
24 not one of the three good weeks of the month, then  
25 you don't go. Well, I was up at -- you know what I

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1 mean. We'll leave it. If you work for two months  
2 straight, there is going to be some breaking of that  
3 rule, as a woman. I broke that rule. I needed to  
4 use the bathroom while I was up there, so I broke a  
5 couple more rules. Things you just don't do on  
6 sacred land.

7 I talked to one of my kupuna. It was really  
8 hard for me to continue on the path doing my project  
9 just knowing how much my Hawaiian friends and  
10 relatives felt against it.

11 I didn't realize how special Haleakala was  
12 until I went there. There was a couple scientists  
13 in this room that taught me that as well.

14 So here's something I wrote after my experience  
15 and I hope it does something more than just touch  
16 you.

17 I am Hawaiian and this is my home. I would  
18 like to welcome you to my home if you behave as you  
19 would like any guest in your home.

20 When I come to your home, I will try to learn  
21 your ways and to keep harmony. When something is  
22 meant for me, I will only take enough for me and my  
23 family. I will not diminish your natural resources  
24 or supplies for profit. I will not take what is not  
25 mine to take.

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1           When I come to your home, I will treat your  
2 things with respect. I will not desecrate your  
3 sacred objects, alters and cemeteries. I will not  
4 trespass where I am not welcome.

5           When you show me your hideaways, I will keep  
6 them as our secret so your grandchildren can enjoy  
7 them.

8           I will protect your natural resources by  
9 cleaning up after myself. I will be careful not to  
10 bring things that don't belong in your mountains,  
11 valleys, streams, and oceans. I will be careful not  
12 to disturb nature's sometimes delicate structure. I  
13 will not justify any cause to be great enough to  
14 disrespect your cultural rights or rights as a human  
15 being.

16           I hope we can share and learn from each other.  
17 I hope we can respect each other despite our  
18 religions and despite what we believe.

19           I am a student of MCC. I am a neo budding  
20 scientist. I think I'm shooting myself in the foot  
21 here, you know, cutting some possibilities, but  
22 that's okay because there is always science, you can  
23 go to the second site, you can make it -- push  
24 yourself beyond the limits that you have today and  
25 make it better.

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1           You can have lots of telescopes, but you got  
2           one Haleakala. You got one culture here. There is  
3           one Haleakala. And very few places that are sacred  
4           to us and that one is just deteriorating. So please  
5           think about what I said. And it's not just for you,  
6           Jeremy, it's for everyone. Thank you.

7           DAVID BRASS: Mele Stokesberry.

8           MELE STOKESBERRY: Hello. My name is Mele  
9           Stokesberry and I'm a Kula resident. And I brought  
10          this picture up here to show you and just ask  
11          everybody to think about how big this is. It really  
12          doesn't show in this picture quite how big it is.  
13          It's going to be 143 feet high and 10 -- well,  
14          143.10 feet high.

15          Maybe that number doesn't mean anything to you,  
16          so compare it to this. The telescope will be at the  
17          same height as the top of our county building in  
18          Wailuku and then add -- that's at 90 something feet.  
19          And then add another 44, 50 feet to that at least.  
20          Okay.

21          So this is my statement. I oppose the 143-foot  
22          high ATST being built on Haleakala. There are other  
23          places that it could be built and it's probably a  
24          good project, but I don't think it belongs on  
25          Haleakala. Its tremendous size cannot be placed on

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1 Haleakala without irreversible harm of a very  
2 serious nature to the endangered petrels whose  
3 burrows are all around the proposed site, without  
4 ruinous harms to the view planes, serenity and  
5 sacredness of the mountain, and without as yet not  
6 fully charted harm to the entire summit environment  
7 due to the tremendous amount of excavation and  
8 disturbance that it will entail.

9 Although I am a board member of the Friends of  
10 Haleakala National Park, a group that also opposes  
11 the ATST, I am speaking as an individual. Thank  
12 you. Aloha.

13 KAHOOKIPA OLU KAMAKAWIWOOLE: And I'm back.  
14 Just have a couple more things I was thinking about  
15 last night as I left the meeting that we had in  
16 Wailuku. And according to your EIS, I read a lot of  
17 statements that says your studies, your surveys, and  
18 I'm sure as testimony was last night and probably  
19 tonight before I came, too, there is a lot of  
20 cultural issues and feelings that come out where  
21 this project is concerned. And again to auntie who  
22 described the height and the physicalness of it,  
23 they describe it in the EIS and what they do is they  
24 try to convince you, you know, it is big, it's  
25 massive, and it's white, and you're going to see it

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1 for miles, [inaudible] so that actually all you're  
2 going to see is that little piece on the top. And  
3 that, according to this, is not a severe impact.  
4 It's not a severe impact.

5 Let me demonstrate it another way. Let me try  
6 to analyze it another way. If a man is standing  
7 here and I punch him right in the face, picking that  
8 event, okay. Now, shut off all the lights. It's  
9 pitch black. I'm going to punch him in the face.  
10 He doesn't see it coming, he doesn't see my fist.  
11 Does that change the severity of the impact?

12 Whether it's 140 feet high or whether it's  
13 14 centimeters high, it doesn't belong up there.  
14 Period. End.

15 Also in here I notice that you talk about  
16 mitigation. Why is mitigation even in here? Why  
17 would there be a need to mitigate unless something  
18 was going to be wrong in the first place?  
19 Mitigation, by definition, you need soften it up.  
20 You need to lessen that blow, that impact. Why  
21 would you even add it in here unless there was  
22 something to bring to cause that you would have to  
23 put it in writing to cover your okoles?

24 I find it very disturbing that even in the --  
25 in how you guys describe mitigation, minimize the

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1 impact. How? By trying to fake out the public that  
2 you know what, this big building is not that big,  
3 it's not that white, the visualization that you're  
4 going to see and the height and everything is a  
5 manini thing because of the way it's situated,  
6 you're only going to see this much. Again, I refer  
7 back to my demonstration. Is the height and the  
8 weight and the color really -- is that the issue?  
9 That's not the issue.

10 And even on one of their definitions, avoid the  
11 impact all together by not taking a certain action  
12 or parts of an action, it's right in the EIS. Then  
13 don't take part in the action. Don't do it. And  
14 that's A, that's the option of mitigation. Don't do  
15 it. Don't take the action. It's in your EIS and  
16 yet we're not willing to follow it. It's incredible  
17 to me.

18 Also, I'm not the smartest Hawaiian here and  
19 I'm not the smartest person, I don't claim to be,  
20 but what I like to do when I find myself in issues  
21 and in this kind of debating issues is I like to  
22 surround myself with smart people. And I'm glad you  
23 guys are here because it's incredible how much I've  
24 learned from your EIS. In here you claim to  
25 mitigate the cultural aspects by providing programs.

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1 Programs, in your specific writing, to Native  
2 Hawaiians and women. Now, if I'm not mistaken, and  
3 this is federally funded, unless I'm mistaken. You  
4 guys need to teach me that trick because I'm going  
5 to fight right now with my own [inaudible], my own  
6 Princess Pauahi in her personal monies cannot even  
7 provide for Native Hawaiian programs, the school  
8 that she provided for. She cannot even do that now.  
9 That same federal government is fighting us and  
10 telling us we cannot do that with somebody's  
11 personal money. But yet you guys are a federal  
12 agency saying you guys going to come to Maui and  
13 give us this program. That's incredible because I  
14 need to know that and take it to the Ninth Circuit  
15 Court and tell then you guys are mistaken because  
16 I've got these smart brothers in here that are  
17 promising us this special program for Native  
18 Hawaiians. That's incredible.

19 Technology is going to boom, I believe that.  
20 Like I said last night, I'm a 20-year veteran of  
21 electronics, optic fibers. I love technology. I'm  
22 in a three-year IT program right now with the County  
23 of Maui. Technology is going to happen. I will  
24 embrace it. I love it. But not at the point, like  
25 auntie point out, that you're going to somebody's

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1 house, tell them what's good for them and tell them  
2 we know you're not happy, we got this other thing  
3 we're going to do for you to soften the load.

4 One last thing I want to --

5 SPEAKER: I have something for him real quick.  
6 Is it okay? It was an answer that I found. The  
7 only answer that -- your question about why  
8 mitigation is in here is to make the impact -- the  
9 only thing I could say so far as the mitigation is  
10 to make the significant impact of the potential  
11 impact on the resources and effective environment to  
12 the historic and cultural resources mitigatable to  
13 be less than significant.

14 KAHOOKIPA OLU KAMAKAWIWOOLE: Well, and like  
15 you said, I'm reading right out of Section 1508,  
16 which is quoted in the EIS, and it says right in  
17 here there, it says including avoiding the impact  
18 altogether by not taking a certain action or  
19 actions. Don't take the action to build.

20 DAVID BRASS: At this point that's all the  
21 people signed up so far, so what I would like to  
22 suggest is we take another couple of minute break to  
23 give people a last opportunity to sign up. And this  
24 is a real serious 5-minute break, see if people  
25 still want to speak still and if not, we'll wrap

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2 [Concluded at 9:45 p.m.]  
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C E R T I F I C A T E

STATE OF HAWAII        )

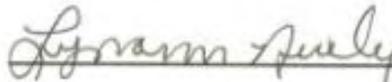
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COUNTY OF MAUI        )

I, LYNANN NICELY, RPR, Notary Public for the State of Hawaii, certify:

That on the 28th of September, 2006, the meeting minutes were taken by me in machine shorthand and were thereafter reduced to print under my supervision by means of computer-assisted transcription; that the foregoing represents, to my best ability, a true and accurate transcript of the proceedings had in the foregoing matter.

I further certify that I am not attorney for any of the parties hereto, nor in any way interested in the outcome of the cause named in the caption. Dated this 10th day of October, 2006.



NOTARY PUBLIC, State of Hawaii

My commission expires: 1/24/2010

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**Appendix D(3): Transcripts**  
**DEIS Public Comment Meeting, Kula Community Center, September 29, 2006**

1                           ADVANCED TECHNOLOGY SOLAR TELESCOPE (ATST)

2   PUBLIC MEETING

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12   PROCEEDINGS

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14   Held at the Kula Community Center, Kula, Maui, Hawaii,

15   commencing at 7:10 p.m. on September 29, 2006.

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24   REPORTED BY:    Rachelle Primeaux,    CSR No. 370

25

1 ATTENDANCE

2

3 MEETING FACILITATORS:

4 David Brass and Cheri Nashiwa, Mediation  
5 Services of Maui

6

7

8 PANEL MEMBERS PRESENT:

9 Dr. Jeff Kuhn - Associate Director of the University  
10 of Hawaii, Institute for Astronomy (Oahu)

11

12 Dr. Craig Foltz - Program Officer with the National  
13 Science Foundation, Washington, D.C.

14 Dr. Charlie Fein - KC Environmental (Maui)

15 Jeremy Wagner - ATST Project Manager with National  
16 Solar Observatory, Tucson, Arizona

17

18 Jeff Barr - ATST Project Architect

19 Mike Maberry - Assistant Director, University  
20 of Hawaii, Institute for Astronomy (Maui)

21 Bijan Gilanshah, Esq., National  
22 Science Foundation, Washington, D.C.

23

24

25

## 1 PROCEEDINGS

2 \* \* \*

3 MR. FEIN: Aloha and good evening everyone, and  
4 thank you for coming this evening. There have been various  
5 public meetings on the Advanced Technology Solar Telescope  
6 before this beginning in July of 2005. In fact, this is the  
7 twelfth public meeting since that time. There have been  
8 meetings with groups like this, formal meetings. There have  
9 been informal meetings. There have been visitations to the  
10 site. There have been meetings with groups at other venues  
11 and so on. So this is really the twelfth meeting for the  
12 public. The purpose of this meeting is different from  
13 earlier meetings. The purpose of this meeting is to hear  
14 comments from the public on the Draft Environmental Impact  
15 Statement. This impact statement was prepared by my  
16 company, and my name is Dr. Charlie Fein. KC Environmental  
17 Incorporated is the company that prepared the document, and  
18 the document was submitted for public review on September  
19 8th. There is a 45-day public comment period of which we  
20 are somewhere in the middle. That public comment period  
21 ends on October 23rd.

22 Everything you say here tonight we submit becomes  
23 part of the administrative record for the project. All  
24 comments will be addressed individually or collectively in  
25 the final Environmental Impact Statement, and that's a

1 matter of law. So anything that you submit will be  
2 addressed and there are several ways to submit comments.  
3 One is by giving oral testimony this evening. The second is  
4 by submitting written comments. We've provided a comment  
5 sheet, or you can prepare comments on your own. You can  
6 submit them tonight. There's a drop box in the back of the  
7 room or you can mail them to either myself at KC  
8 Environmental, and the address is in the back of the room or  
9 to the National Science Foundation. So there are other  
10 opportunities to comment besides this evening.

11           Now, although there are representatives of the  
12 project here tonight, we respect the comments we received at  
13 earlier meetings, and we are not going to be providing  
14 presentations to you this evening on the project. If you  
15 direct a question to one of the individuals here, we will  
16 answer as appropriate. However, I will point out that the  
17 Draft Environmental Impact Statement was prepared by more  
18 than 30 individuals; that is, the contributions of more than  
19 30 individuals went into the document. And as a practical  
20 matter, they cannot all be here tonight and there may be  
21 questions that we could not answer, but we will ultimately  
22 answer all of the questions that are posed. The EIS is a  
23 draft, and I'm going to emphasize that again. It is a draft  
24 document, and we are aware that it may contain errors. And  
25 we know that there will be differences of opinion about the

1 content and conclusions. It is not a final document. It is  
2 a document for the public to review and comment on and  
3 provide input that would be important for the final  
4 Environmental Impact Statement. That's why we encourage  
5 everybody to participate in this process and I'm pleased to  
6 say the participation has been very good during these days  
7 of public meetings.

8           With that, I would like to make a couple of other  
9 comments. First of all, we have a videographer here this  
10 evening. The videographer has nothing to do with the  
11 project or with my company. She's an independent  
12 individual. If you do not wish to have your testimony  
13 videotaped, all you need to do is ask that you not be  
14 recorded and you will not be recorded.

15           MR. RIZZO: Where would this videotape be shown?

16           MS. PRINCE: I'm hoping to submit it to Akaku  
17 Community Television.

18           MR. RIZZO: The whole thing?

19           MS. PRINCE: The whole thing.

20           MR. RIZZO: Thank you.

21           MR. FEIN: Before we continue, I would like to  
22 just introduce the individuals who are here with us this  
23 evening representing the project. First Craig Foltz  
24 representing the National Science Foundation as the program  
25 officer for this project; Jeremy Wagner, the manager for the

1 National Solar Observatory; Jeff Barr, the project  
2 architect; Dr. Jeff Kuhn, Associate Director of the  
3 Institute for Astronomy University of Hawaii; Mike Maberry,  
4 Associate Director for the Institute for Astronomy, and  
5 Bijan Gilanshah with the Office of the National Counsel of  
6 the National Science Foundation. With that, I'm going to  
7 turn this proceeding over to our facilitators who are here  
8 this evening to provide the context for the ground rules for  
9 giving testimony. David.

10 MR. BRASS: Hi, my name is David Brass, and I'm  
11 the facilitator with Mediation Services of Maui. We've been  
12 asked to come to these meetings to facilitate the process of  
13 testimony and ensure that everyone is provided with a safe,  
14 respectful environment to submit their testimony.

15 MS. PRINCE: Hi. Earlier you asked me not to  
16 videotape you, so do you want me to keep the camera on now,  
17 or do you want me to turn it off?

18 MR. BRASS: You can go ahead and videotape me.

19 MS. PRINCE: Okay. Thank you.

20 MR. BRASS: So we're here just to provide the  
21 context for people of a safe environment to make your  
22 testimony. We're going to be following a fairly loose  
23 agenda tonight. We're in the opening part of the agenda.  
24 Cheri is going to be going over the ground rules in a few  
25 moments, and then we'll open up for comments. We ask that

1 you sign up on the signup sheets at the table by either door  
2 if you would like to make comments tonight. We'll take a  
3 break around 8:00. Part of the reason for that is to give  
4 the court reporter an opportunity to rest her fingers, and  
5 it's also an opportunity for people who haven't signed up  
6 yet to make comments to do so. And then we'll go back and  
7 receive more comments.

8 We'll take another break at 9 to see if there's  
9 anyone else who would like to sign up to make comments. And  
10 then if there are more people to make comments, we will  
11 continue to receive comments until about 9:50. And we'll  
12 need to close by 9:50 so that we have time to -- for the  
13 staff that set up the room to clean up the room and be out  
14 of here by the agreed upon time, which is 10:00. So I'm  
15 going to turn the mic over to Cheri to go over the ground  
16 rules.

17 MS. NASHIWA: Okay. The ground rules that we'll  
18 be following tonight and that I plan to enforce is that we  
19 ask that all cell phones be turned off or be on silent. You  
20 must sign up to speak, and David will be announcing the  
21 names to call you up to make your statement. One person  
22 speak at a time, and of course, that's because of the court  
23 reporter is recording, and she can only type one person  
24 speaking. Speak into the microphone slowly and clearly.  
25 Use respectful language and tone, and just to be fair to

1 everyone in the room, we will be doing -- we'll be allowing  
2 four minutes of comment plus a one-minute wrapup. So what's  
3 going to happen is you'll be standing at that middle mic.  
4 After that four minutes, I'll come stand next to you and  
5 show you this yellow card to wrap up. And after that one  
6 minute, I'll ask you to stop. I guess we can get started.

7 MR. BRASS: I'll apologize in advance if I  
8 mispronounce your name. I'll do the best that I can. The  
9 first commenter is Warren Shibuya.

10 MR. SHIBUYA: Good evening, National Science  
11 Foundation, National Solar Observatory, KC Environmental,  
12 Inc., and University of Hawaii Institute for Astronomy, I'm  
13 Warren Shibuya. I'm retired. Mahalo for this opportunity  
14 to testify on the Advanced Technology Solar Telescope  
15 project proposal for the siting on the summit of Haleakala,  
16 Maui. I listened to numerous testimonies and tried to find  
17 a possible workable arrangement amongst various very valid  
18 community interests and concerns and comments as reflected  
19 in the EIS.

20 Tonight I present four proposals for public and  
21 ATST consideration and hope that this begins a positive  
22 dialogue and working discussion amongst us. I do not  
23 represent any interest group, but I serve on Maui's General  
24 Plan Advisory Committee to develop plans to 2030.  
25 Unfortunately, these four points do not fix injustices, but

1 provides a heading toward a workable win-win for almost  
2 everyone. First of all, I ask NSF, NSO, UH-IOA, which is  
3 the Institute for Astronomy and state, contribute to and  
4 subscribe to a work force development program on Maui and  
5 hire Maui residents to work on the ATST project, not only  
6 the usual OJT, which is on-the-job training, but  
7 programming, educational funding, supporting studies of  
8 mathematics, physical and gaseous sciences, solar physics,  
9 thermal and plasma dynamics, engineering and Hawaiian  
10 culture.

11 This proposal needs joint community, state and  
12 business support; state to provide land facilities and  
13 faculties to create a four-year university Hawaiian college  
14 of sciences, technology and engineering on Maui emphasizing  
15 close partnership with ATST and NSF. Secondly, ATST is to  
16 employ Maui residents as much as possible and develop ATST  
17 work force to a close working relationship amongst NSF, NSO,  
18 UH, state, Maui County and contributions from private and  
19 business partners, startup organizations to manage  
20 development and implement plans, coordinating funds for  
21 construction and staffing needs, everyone's buy-in and  
22 long-term commitment to making this proposal and ATST  
23 project work for everyone. No one group can do it alone.  
24 All mentoring and bootstrap type programs needs everyone's  
25 involved commitment.

1           Thirdly, as initially suggested by Uncle Charlie  
2 Maxwell, ATST establish a Maui solar and Hawaiian cultural  
3 center featuring staff multimedia facilities and systems to  
4 share information, educate and ignite the passion and  
5 encourage Maui students getting needed skills and seek ATST  
6 employment. This cultural center informs the Hawaiian  
7 culture through programs, explanation of online solar images  
8 and solar disturbance impact on earth and satellite  
9 communications, our environment and even astronauts in space  
10 and customized curriculum or presentations for residents,  
11 students educators and visitors.

12           Maui solar and cultural center would proudly share  
13 ancient Polynesian navigational ohana concept and malama  
14 aina skills, accomplishments and beliefs. Four, ATST adopt  
15 and enter in written contract a sunset for the ATST  
16 structure and program. Suggest at least four cycles with  
17 each cycle is 23.5 years each cycle for a total of  
18 approximately 90 years. This sunset clause is precedent  
19 setting and requires ATST to remove ATST structures and  
20 restore use of summit grounds to original sacred  
21 configuration. Also asking UH Institute for Astronomy to  
22 remove most of remaining historical radio telescope  
23 structure used in the early 1950's by UH professor Dr. Grote  
24 Reber.

25           With consent and job science surveillance by

1 appointed Hawaiian members, you can then find yourselves  
2 site 5443 would be restored to its original pu'u, which is  
3 24 feet higher than what it is today. ATST excavation  
4 surcharge would fill this.

5 Also, as I testified earlier, Hawaiian names or  
6 nomenclature would replace all nonHawaiian streets, road  
7 facility names, currently posted at the Haleakala summit.  
8 Please support these proposals and allow them to happen for  
9 everyone. Mahalo for your patience and understanding.

10 MR. BRASS: I forgot to mention that if you are  
11 more comfortable having one of us, Cheri or I, read your  
12 testimony, you're welcome to write something and hand it to  
13 us at any time and we'll be happy to read it for you  
14 tonight. The next commenter is Mary Evanson.

15 MS. EVANSON: Thank you for this opportunity to be  
16 here this evening. Tonight I'm going to be speaking for the  
17 Friends of Haleakala National Park. My name is Mary  
18 Evanson, and I'm the vice-president of the group. This is a  
19 draft that we will be handing in tonight, and then there  
20 will be a final that we will mail in before the end of the  
21 comment period. The Friends of Haleakala National Park  
22 strongly oppose its locating the Advanced Technology Solar  
23 Telescope project on Haleakala. This project will adversely  
24 change the summit of Haleakala forever causing irrevocable  
25 loss of natural, cultural and scenic resources negatively

1 impacting the significance of Haleakala National Park.

2 Another site should be given priority for the  
3 ATST. The Friends ask that the no action alternative be  
4 selected for Haleakala, and we challenge the draft EIS's  
5 assumption that significant impacts to the natural and  
6 cultural resources can be mitigated. We reject the  
7 conclusion on Page 4-12 that impacts to the endangered  
8 Hawaiian petrel and the 'ua'u are less than significant.  
9 There is no evidence that suggests that construction noise,  
10 vibration or human proximity will not impact the 'ua'u  
11 nesting sites. The fact that mitigations are proposed on  
12 Page 4-81 supports the credibility of our assertion. We  
13 reject the conclusion of Page 4-6 to 4-8 that construction  
14 and operations related impacts are significant but mitigable  
15 to less than significant impacts.

16 Native Hawaiians in written and verbal comments  
17 have overwhelmingly stated that the construction and  
18 operation of ATST constitute significant impacts and that no  
19 mitigation the draft EIS provides will compensate for the  
20 defilement of the cultural and spiritual values this project  
21 represents. It is clear to the Friends that the majority of  
22 native Hawaiians prefer the no action alternative. The  
23 mitigations proposed on Pages 4-79 and 4-80 have been  
24 derived from the Cultural Resource Evaluations and  
25 Traditional Practices reports of January 2006.

1           This document was commissioned by the promoters of  
2 the ATST, and as a result, lacks credibility as an unbiased  
3 expression of the thinking of the native Hawaiians. Even  
4 the principal author has stated opposition to this project  
5 and was motivated to propose token mitigation feeling the  
6 project was a done deal based on his past experience.

7           The Friends believe that the ATST promoter should  
8 listen foremost to the native Hawaiians who are unaffiliated  
9 with the Institute for Astronomy. We understand the  
10 project's funding source, the National Science Foundation,  
11 has not yet conducted the required senior review, and  
12 furthermore, it will not be available to the public until  
13 November. The Friends would like to know why the public  
14 comment period closes before this review has been disclosed.  
15 Thank you very much.

16           MR. BRASS: Leslie Bruce.

17           MR. FOLTZ: May I respond very briefly? My name  
18 is Craig Foltz. I'm the program officer and the facilities  
19 lead for the Division of Astronomical Sciences at the  
20 National Science Foundation. The senior review that you  
21 referred to, Mary, is absolutely unaffiliated this with  
22 project. It is a review of our current facilities with an  
23 eye towards how we move into the future. The  
24 recommendations of that review do not bear in any way on the  
25 recommendation or not, to fund this or not. And the

1 deadline for this submittal was set, and it was actually set  
2 before the release date, before the release date for the  
3 senior review was set. But thank you for your comments.

4 MR. BRASS: Leslie Bruce.

5 MS. BRUCE: Good evening. My name is Leslie Ann  
6 Bruce. I was born on Maui, and when I was a child, my  
7 father provided bamboo for his structures. I presently am a  
8 resident of Hana, and I represent only myself this evening.  
9 I'm a retired teacher and writer who currently serves on the  
10 General Plan Advisory Committee of Maui County. This  
11 proposed use of Haleakala summit for another telescope is  
12 undesirable, culturally offensive and ethically  
13 questionable. It's undesirable because it is a further  
14 covering of our mountain's open space and special  
15 viewsapes. It destroys our sense of place. It is  
16 culturally offensive because it further intrudes on our  
17 sacred Hawaiian aina.

18 Haleakala, as we all know, has mythological  
19 significance of the highest value. It is a storied place  
20 for the island 's namesake, Maui, who has Pan Pacific  
21 importance to many Polynesian cultures in addition to  
22 Hawaiian culture. People I know on the island, including  
23 myself, feel hurt, offended and invaded by outsiders'  
24 intrusions on our wahi pana, our sacred places, that lose  
25 their pristine character and cultural significance by being

1 used for large, obtrusive structures that obliterate the  
2 emptiness we value so highly on our mountaintop.

3           The NSF proposal is ethically questionable because  
4 it imposes on Hawaiian people, Hawaiian culture and the  
5 singularly important place on Maui that should suffer no  
6 more intrusions. NSF should decide to do what is best for  
7 Haleakala. Please choose the action -- no action  
8 alternative and move your Advanced Technology Solar  
9 Telescope elsewhere. Thank you for this opportunity to  
10 share my manao with you.

11           MR. BRASS: Melissa Prince.

12           MS. PRINCE: Good evening, my name is Melissa  
13 Prince, and I'm the one videotaping the meeting tonight. I  
14 do a lot of government meetings. I do it for free usually.  
15 I just want to give you all an idea of what I go through.  
16 This week on Wednesday night, there was a meeting for the  
17 Superferry at the Wailuku Community Center, so I managed to  
18 get there. I wanted to be here for this meeting tonight --  
19 that night, but it was conflicting. You had the same  
20 meeting on the same night. And also the County Fair is  
21 happening this weekend. And then Thursday night the Akaku  
22 board was having an important meeting. They were getting  
23 ready to hire a new CEO.

24           For those of you who are following the free speech  
25 arguments that are going on, our channel has been under

1 heavy attack. We are worried that we could lose our right  
2 to speak out, and so I attended that meeting. So now I come  
3 up here on Friday night and I come up here to take the  
4 meeting, and I'm asked not -- you know, to turn off the  
5 camera. And from what I understand, if it's a public  
6 meeting in a public place, I have a right to record it.

7           However, personally I will turn off the camera if  
8 somebody feels uncomfortable. I will do that. But thank  
9 you for those of you who have spoken allowing me to tape.  
10 And I just want to make it clear. Somebody was saying that  
11 the last tape that I turned in with this commentary at the  
12 Hawaiian Homes hall, I turned in the middle portion of the  
13 whole meeting, and they said, well, you took it out of  
14 context. I just want you to all know I try not to do that.  
15 I don't want to even edit. To tell you the truth, I don't  
16 have time to edit. I do so many government meetings, they  
17 can go on for hours. I'm not getting paid for this. So I  
18 apologize for taking out the middle portion, but I felt like  
19 that was where most of the public testimony was. So I  
20 turned it in.

21           And then I turned in the third thing a few weeks  
22 later. And I haven't even yet turned in the first hour, so  
23 I will try to do that. But I just want you all to know I  
24 try not to manipulate the footage if I can. You know, but  
25 lately just to let you all know, heads up, Akaku has been

1 rejecting some of my tapes saying that the audio is too low  
2 and because I don't have a fancy computer at home to do my  
3 own editing. It's hard to get to Akaku. I can't always get  
4 the audio backup, so I've had two things rejected. You  
5 know, the Navy is planning to increase testing and training  
6 in Hawai'i waters. I went there and taped that. That was  
7 rejected because the audio was junk. And then the U.S.  
8 Interior Department was here, the Hawaiian director was  
9 here. That was rejected because the audio was too low.

10 I mean, you know, I'm trying. I'm trying to get  
11 the news out because Maui News doesn't always carry these  
12 things. So I'm just trying to stay as neutral as possible.  
13 I'm a little upset right now because I'm tired. I was in  
14 Wailuku this morning, ran home to Haiku and I'm up here now,  
15 so I am wiped out. Okay. Thank you. That is all.

16 MR. BRASS: Verna Nahulu.

17 MS. NAHULU: Good evening, my name is Verna  
18 Kai'ulani Nahulu. I'm a retired elementary school teacher,  
19 a member of the Kula Board of Directors and a chairperson of  
20 the street-naming commission. I am a native Hawaiian living  
21 on the Hawaiian homestead in Keokea, so I am a native  
22 Hawaiian who is strongly in favor of the ATST. There are no  
23 children here to give their testimony, and so I feel that  
24 I'm partly representing the children in Maui. There is so  
25 much to learn from -- from new technology in our world

1 today, that an island way out in the Pacific, sometimes we  
2 don't have the facilities, we don't have enough of the  
3 educators that are in the mainland at other schools. I have  
4 taught in Hawai'i as well as the mainland. We are sometimes  
5 left out. Our children are sometimes left out of  
6 information going on nationally, and we're out here, so we  
7 don't get all of the information that we need.

8           Now, here comes ATST. They are a great source of  
9 information and can share their discoveries, their  
10 knowledge, and I feel that the ATST is a great blessing and  
11 a gift to our children, our children's future and our  
12 children's education. I feel personally that there are a  
13 lot of things that I didn't learn as a child from my  
14 grandparents because they were concerned that we should be  
15 more connected to their past. I feel today that our  
16 children should own their future and that we should not hold  
17 them back to our past, that they should speed on ahead.

18           They belong to the world of tomorrow and they  
19 should be able to speed on ahead with knowledge that the  
20 ATST can provide here as well as knowledge of other  
21 facilities like the ATST. I don't think we should negate  
22 their contribution. I think we should -- it should all be  
23 included here and as far as my native brothers and sisters  
24 are concerned about the sacredness and the -- our native  
25 culture's advanced gods, goddesses and all the people that we

1 also learn from. I'm a channeler of Pele. And very, very  
2 early on, I asked her what's your take on the ATST. And she  
3 says I am strongly in favor of it. She said do everything  
4 you can to have them be installed at the summit because I  
5 feel that Haleakala is for education. For those people who  
6 feel that Pele's home is in Haleakala, Pele's home is in  
7 Halemaumau.

8 She asks me to come to Halema'uma'u for  
9 conferences there and that is where she resides. She said  
10 Haleakala is for the education of people and the children  
11 here. So in wrapping up, I would like to say that my  
12 Hawaiian ancestors felt it was so important to know about  
13 the sun, to know about the stars and to know the skies,  
14 because when we traveled throughout the Pacific, through  
15 Easter Island, to Tahiti, to far places, okay, to far  
16 places, that it was necessary to know about the sun.

17 Why we are keeping this knowledge away from our  
18 children today, I do not know. So I just want to come and  
19 say that the ATST is like a Stradivarius violin in a case,  
20 and we are criticizing the case instead of looking inside  
21 the case and seeing that there is something of great value.  
22 Thank you for listening.

23 MR. BRASS: Next we have written testimony from  
24 Mele Stokesberry submitted by e-mail. The 143-foot high  
25 Advanced Technology Solar Telescope, ATST, that is proposed

1 to dominate the top of Haleakala with a 40-foot deep  
2 excavation under it must not be built at this location.  
3 It's tremendous size cannot be placed on the summit of  
4 Haleakala without irreversible harm of a very serious nature  
5 to the endangered petrels whose burrows are all around the  
6 proposed sites.

7           The ATST would also cause ruinous harm to the  
8 viewplanes, serenity and the sacredness of the mountain and  
9 its yet not fully characterized harm to the entire summit  
10 environment due to the huge excavation and disturbance it  
11 will invade. There are other acceptable sites in the world  
12 for this telescope. The location is an intrusive structure  
13 in the middle of a national park in the middle of an area of  
14 archeological importance and fragile habitat of endangered  
15 species and on the summit of a mountain sacred to the host  
16 cultural people. It's just bad ecology and bad politics.

17           Although I am a board member of the Friends of  
18 Haleakala National Park, a group that also opposes the ATST,  
19 I am submitting this testimony as an individual. Mele  
20 Stokesberry, Kula, Maui.

21           The next commenter is Dick Mayer.

22           MR. MAYER: Thank you very much. I'm  
23 vice-president of the Kula Community Association, but I'm  
24 not speaking today on behalf of the association. We will be  
25 submitting our comments separately before the deadline. I'm

1 also on the General Plan Advisory Committee for Maui County,  
2 and we will also be looking at this area. It's part of our  
3 overall plan over the next six months to a year. At your  
4 scoping meetings, I made a number of comments, wrote them  
5 down. Unfortunately you made replies or you had replies in  
6 your draft to many of the people who submitted comments that  
7 day or subsequently. My comments were left without your  
8 reaction, your comment, and I think that is something that's  
9 negligent on your part.

10 I made, for example, the comment that at the  
11 scoping meetings you were saying that the height of the  
12 telescope would be 92 feet, and you repeatedly on several  
13 occasions during the meeting left that impression. You also  
14 left that impression with Maui News and did not correct it  
15 in due time with the Maui News. And finally, we find out  
16 it's not 92 feet, which would have been lower than the  
17 present facility up there, but it's 143 feet high. And I  
18 think that has mislead the public and maybe has lulled the  
19 public into thinking it's a smaller facility than it  
20 actually is. To compound the problem, the photos which were  
21 taken of the facility were aerial photos, which made the  
22 building and the site and the impact of the buildings much  
23 smaller impacts in some respects. The photos were taken  
24 from an angle such that it looked like the top of the  
25 building was far below the summit of Haleakala when, in

1 fact, the top of this telescope would be approximately 100  
2 feet higher than anything else on the top of that mountain.  
3 It will look like the nipple on the top of a breast if you  
4 can imagine the analogy there sticking up quite bit above  
5 the summit of the mountain, 100 feet taller than the top of  
6 the mountain.

7           What I didn't see in looking through the draft  
8 were a description of the impact on Haleakala National Park  
9 and the visual element at the top of that mountain. We have  
10 somewhere in the order of 2 million people a year going to  
11 the summit of Haleakala in this building with it's site A  
12 and B is going to be right in the face of these people.  
13 It's a very bright object up there, and it's certainly going  
14 to be a visual -- in the visual viewplane. You have some  
15 photos up there that simulate it, but it doesn't give I  
16 think the true impression of how big this building will be  
17 right near the very summit of the mountain.

18           You also have only looked at areas within the  
19 18-acre site as if that's the only area on Haleakala that  
20 you looked at. You looked all over the world and then  
21 decided to stay only within that 18-acre area, which is very  
22 close to the national park, the national treasure of the  
23 United States. And I'm speaking on areas not related to the  
24 concerns of Hawaiians and their cultural history, because I  
25 think those have been very well documented, but rather from

1 the viewpoint of the general public of the United States  
2 that comes to Hawai`i and people around the world who come  
3 to Maui as one of our major tourist sites to enjoy the  
4 tranquility, the beauty, the scenes, the views, the  
5 sunrises, the sunsets on top of Haleakala and have this  
6 facility put right in their face very close across that  
7 little divide rather than looking at other sites on top of  
8 the mountain maybe a mile away from the summit  
9 three-quarters of a mile away, further to the south, maybe  
10 dropping it to down to 9,800 feet so it wouldn't stick above  
11 the top of the mountain.

12           The community plan for upcountry Maui calls for a  
13 master plan of the summit. The university did a master plan  
14 only of their 18 acres. There is a strong need to have a  
15 master plan that will integrate the use of the top of that  
16 mountain by the Air Force, the University of Hawaii, the  
17 Hawaiians, who wish the preserve the cultural qualities of  
18 the top of the mountain -- I'll keep going, thank you -- as  
19 well as the national park and the various telescopes up  
20 there. That master plan is called for in the community plan  
21 of this county, which is the law of this county. So until  
22 that master plan is done, I believe this is jumping ahead in  
23 the timetable of what needs to be done unless the federal  
24 government with their \$180 million they claim for this  
25 project wishes to help us do that master plan so that we can

1 site the facility properly. And I thank you very much.

2 MR. FEIN: I'm going to briefly respond to two  
3 items. The first was the incorrect reporting by the Maui  
4 News in our very first scoping meeting of the height of the  
5 telescope at 92 feet. That was an error. The figures that  
6 we brought, the graphics that we brought correctly showed  
7 the 143-foot structure. And it was unfortunate that it was  
8 misreported. There was a correction. Unfortunately, those  
9 kinds of things do get stuck in the public eye.

10 Secondly, this building is not -- would not be 100  
11 feet taller than anything on the summit. The advanced  
12 electrooptical system or AEOS telescope is 120 feet above  
13 ground level. This telescope would be at maximum 23 feet  
14 taller than that, although in a different location on the  
15 summit. So, in fact, it would be 23 feet taller than that  
16 building if they were both at the same ground level, which  
17 they are not. I just wanted to make those comments.

18 MR. MAYER: I believe some of that was incorrect.  
19 At the scoping meeting, several people asked the question on  
20 the height of the building, and it was stated at the  
21 meeting, not in the Maui News, that the height of the  
22 building was 92 feet. And many people left that meeting  
23 thinking it was 92 feet. The diagrams behind correctly said  
24 143 feet, but the individuals conducting that meeting  
25 repeated 92 feet several times.

1 MR. BRASS: Suzanne.

2 MS. BURNS: Hello, my name is Suzanne Burns. I  
3 wanted to comment in regards to what auntie just said. I'm  
4 sorry, I didn't get your name.

5 MS NAHULU: I'm Verna.

6 MS. BURNS: I know it's hard to stand up alone and  
7 so I appreciate your strength, but you spoke on behalf of  
8 Pele, which I don't understand because I don't have that  
9 ability, so I won't go further than that. But you spoke on  
10 behalf of children. A lot of people that are doing things  
11 for the children right now are at the Fair and that's why  
12 they're not here talking. And I talked to the kids at my  
13 college and nobody is interested in going and studying this.  
14 They like the stars, but this is for the sun.

15 MS NAHULU: Elementary school kids?

16 MS. BURNS: Yes.

17 MS NAHULU: Not college kids?

18 MS. BURNS: And when they grow up, they would  
19 probably still like to enjoy Haleakala, the ones I talked  
20 to. So if you can get those kids to back you up, please. I  
21 have no more right now. Thanks.

22 MR. BRASS: Kaho'o Kamakawiwo'ole.

23 MR. KAMAKAWIWO'OLE: Aloha, I'm Kaho'o  
24 Kamakawiwo'ole, and I just have a couple of comments.  
25 Again, I was thinking about the keikis and all this new

1 advanced technology is going to provide them. You know, we  
2 already have the Faulkes Telescope north up there, and it's  
3 interesting to me as I study more about this that the  
4 Faulkes, the capabilities of this telescope can be done  
5 remotely. In fact, a lot of the information is being sent  
6 all the way back and controlled by the United Kingdom. I'm  
7 sure that if we could borrow that technology, if we don't  
8 have it already, we could position this scope wherever it  
9 needs to be other than Haleakala, funnel all of that data  
10 back to all of the State of Hawai'i DOE and the kids can  
11 control it and see what it's like.

12           And with all that federal money that you have,  
13 take the whole class from Hawai'i to wherever this other  
14 location is. That's the best education we can give our  
15 keikis is get them off of Maui and see how other people are  
16 doing business. That is a whole other education the kids  
17 are not going to get here. My second comment is just that I  
18 think in reading the EIS, it's very shortsighted. As uncle  
19 has stated already right before I walked in, it only is  
20 looking at the po'o, only at the top of what they call what  
21 they're trying to include in this EIS. The fact of the  
22 matter is Haleakala has been and is known to be a sanctuary,  
23 if you will, and I don't mean -- I mean sanctuary in a sense  
24 of a church sanctuary, a sacred sanctuary. And please, we  
25 cannot, we cannot allow it to be a sanctuary like a reserve

1 sanctuary. We don't want to go there. We're there now with  
2 the northwest Hawaiian islands.

3           And one of the things that I brought back from  
4 having discussions about our monument now is that the idea  
5 is to bring the monument to bring the islands to the  
6 children, because we can't take the children to the islands,  
7 it's so devastated already. And I don't want to see the day  
8 when I can only talk about and show pictures of Haleakala  
9 and being on the summit to my kids. I want to take them  
10 there and not have to rely on having to bring pictures to my  
11 kids and my grandkids. Thank you.

12           MR. BRASS: At this point, we're going to take a  
13 short break. And this is an opportunity to sign up if you  
14 haven't already. It's about 8:00, so we'll take a break  
15 now, and if you would like to testify, please sign up. And  
16 we'll reconvene in about five to ten minutes.

17           (Recess taken.)

18           MR. BRASS: We're going to come back together now  
19 if you could return to your seats. If you want to continue  
20 your conversation, if you could step outside so the people  
21 in the room can hear. I believe we're going to start with a  
22 response to one of the last comments from one of the project  
23 representatives.

24           MR. BARR: My name is Jeff Barr, and I'm the  
25 project architect. I'm the person who made the original

1 presentation Mr. Mayer referred to regarding the height of  
2 the telescope and the building. And this is from memory and  
3 I'm pretty certain of it, but I pointed out at that time  
4 that the center of the telescope, the center of the mirror  
5 was at 92 feet, which is 28 meters above the ground and that  
6 was required for seeing reasons, for clearance of the  
7 imaging of the telescope. And I also pointed out that the  
8 building was higher than that, and it was required to --  
9 it's dimension was determined by rotational and maintenance  
10 requirements of the telescope.

11           And again, I mean if there's one moment I could  
12 relive, it would be to make it clearer. The slide that I  
13 had up also had the 143-foot dimension on it, but again, it  
14 probably could have been clearer. And I certainly should  
15 have made that clearer in the beginning. And when I saw  
16 that in error in the paper, we made a correction as quickly  
17 as we can as Charlie pointed out. But again, I don't -- I'm  
18 almost certain that I did not say that the building was only  
19 92 feet all, although I did make it clear that the building  
20 height was set by the telescope height, which was 92 feet,  
21 so I just wanted to add that.

22           MR. FEIN: And we would also like to respond  
23 formally to the question as to why not put this facility in  
24 the saddle area.

25           MR. MAYER: Let me phrase the question.

1 MR. FEIN: Go ahead, Dick.

2 MR. MAYER: I took the liberty of grabbing one of  
3 your things here. This is the significant criteria for this  
4 decision, and one of the things is the visual impact and  
5 there are several other things of that sort on here. I'm  
6 asking the question why put it right in the face of the two  
7 million tourists and local residents who go up to that the  
8 top of that mountain who want to enjoy the views of the  
9 natural environment? It's really right in their face. Air  
10 Force did it. That doesn't mean this one should also do it.

11 And I'm asking why only that 18-acre site was  
12 looked at and why a site a half-mile to the south in the  
13 saddle was not seriously looked at or evaluated or commented  
14 on in this EIS. It seems if it would be put down there, it  
15 would be around two or 300 feet elevation lower. I don't  
16 know how much effect that would have on the solar  
17 observations. And it would certainly take it out of the  
18 face of most of the people who go up to the top of that  
19 mountain.

20 MR. WAGNER: I'll respond to that. Hello, my name  
21 is Jeremy Wagner. I'm the project manager for ATST.  
22 There's several questions there, and I'll try and answer  
23 them as best I can. The 18 acres, and Mike you might want  
24 to address that, but the 18 acres was set aside by executive  
25 order for observatory purposes. A long range development

1 plan was produced by IFA-U of H, which was reviewed by the  
2 public. And it included two sites in the long range  
3 development plan for a telescope like ATST potentially.  
4 When we looked at sites around the world, we identified  
5 sites that could be potentially good sites for a telescope  
6 with requirements like ATST. And the site up on Haleakala  
7 within that 18 acres which was identified for observatory  
8 purposes was considered, okay.

9           Putting the telescope outside of that in the  
10 saddle presents a number of issues. One, whether or not you  
11 can actually build a telescope there. It isn't a site that  
12 is commensurate with the requirements for this telescope  
13 because it is down in a saddle. And in order to meet the  
14 science requirements, the observing requirements for ATST,  
15 you have to be up out of the ground layer. You have to be  
16 up out of the disturbed air that comes out across the  
17 surface of Haleakala. And so if you went into the saddle,  
18 it is lower, but the telescope would actually have to be  
19 significantly higher and essentially the same height that it  
20 is at the top based on my assumptions about rotors, wind  
21 produced rotors coming off of the top of the mountain, based  
22 on the trade winds. And so it actually doesn't help  
23 telescopes there because it's not a good site for  
24 telescopes, for example.

25           That's why the telescopes end up being situated on

1 ridges upon the top of the mountains typically, okay. It is  
2 also more visible -- this is my understanding based on the  
3 viewplane work that's been done -- a saddle position is much  
4 more visible to the communities down below. That's one of  
5 the reasons -- we've looked at the alternate site and the  
6 primary site, the B site up on Haleakala Observatory and  
7 there's a trade there between how visible they are. Because  
8 the Reber circle site, which is the alternate site, is  
9 higher and more visible. The Mees site is lower and less  
10 visible because it's further away from the ridge. It's  
11 blocked by the Air Force facility. It's blocked by the  
12 ridge itself, so there's a trade between those two sites,  
13 which were identified in the long range development plan for  
14 the 18.166 acres, which was identified by the executive  
15 board for observatory purposes on Haleakala. And I hope  
16 that helps.

17 MR. MAYER: But you didn't look down there at all.  
18 You didn't do any testing. That low area, it's very broad.  
19 It's not like you're sitting there in a little canyon.  
20 You're in a very broad area, and you could put it further  
21 away from the edge of the hill. And the point I'm making is  
22 it looks at all the alternate sites, 180 sites around the  
23 world, and you only looked at the 18-acre site right in the  
24 face of everybody who is up there.

25 MR. WAGNER: I'm not an eco expert, but there is a

1 reasonably issue. There are many, many sites which can  
2 be considered unreasonable because you couldn't consider  
3 building there. And so there are many, many sites in the  
4 world, but they won't support the requirements for the  
5 telescope, and they're not reasonable to build. The top of  
6 the Sears Tower, for example, you could put a telescope up  
7 there, but it's not reasonable, nor is it a good site.  
8 Haleakala, I mean Uncle Charlie told me once, and he's not  
9 here, but Uncle Charlie told me once that it took us years  
10 of studying -- I mean I'm a haole, I'm a mainland haole --  
11 and it took me years of study to figure out what Hawaiians  
12 knew, that Haleakala is an excellent site to observe the  
13 sun.

14 MS NAHULU: May I respond?

15 MR. BRASS: If you have a question.

16 MS NAHULU: I would like to respond. Short. I've  
17 been to Haleakala. In order to see Science City, I have to  
18 go up further to the 10,000-foot level to see Science City.  
19 I have never, ever had those telescopes in my face. I have  
20 looked down to the summit with the pu'us and everything. I  
21 do not see Science City. It is in the back. I see only the  
22 summit below me, and I've been up there many times. So I  
23 think it is a mistake saying that it is in our face because  
24 it certainly is not. I have to go up to Science City to see  
25 those things, and I do. Thank you.

1 MR. WAGNER: Thank you.

2 MR. BRASS: Thank you. Our next commenter will be  
3 Michael Howden.

4 MR. HOWDEN: My name is Michael Howden. I live in  
5 Kula, and I've lived on Maui in Kaupo and Ulupalakua for  
6 close to 40 years now. I really come to share my manao in  
7 terms of relative to my training as a haumana with Papa  
8 Henry Auwai, Lahau Lapahau and the Hawaiian culture. One of  
9 the things I noticed in beginning to read this report that  
10 pu'u kolekole was considered a place of prayer and inner  
11 attunement. And I've got to say that for all of us who love  
12 this mountain and who have been touched by it, it doesn't  
13 matter in my heart whether you have ku'oko'a, but how you  
14 receive it.

15 And I find the -- I find this incredible that this  
16 European scientific mindset would want to impose upon a  
17 sacred landscape what can only be considered in spiritual  
18 terms really a monstrosity. This is a place of prayer.  
19 It's a place sacred for ceremony. And I think at some  
20 point, this madness toward building and accumulation and the  
21 carelessness with which this is approached in terms of  
22 imposing on this landscape something that would be not only  
23 cultural desecration, but an aesthetic and spiritual  
24 desecration. And I don't -- I don't see this obviously  
25 simply as a native Hawaiian issue. I see it as a community

1 issue and really in some senses a metaphor for Maui's  
2 destiny, whether we simply become concerned so much with  
3 externals or whether what Maui has been and what Hawai`i has  
4 been in terms of a place of healing and a place of prayer  
5 and of great inner nourishment or whether we just go onward.

6 I mean we don't know how to live on the earth.  
7 We're -- you know, I work on the -- I'm a member of the  
8 Board of Water Supply for Maui County, and the issues before  
9 us are really like the poisoning of the water sources. And  
10 when we look at that as a board, then we have to look at,  
11 well, what kind of agriculture do you have on top of these  
12 water resources and what are the health effects of all this.  
13 And you can't look at it as just one thing. And I don't  
14 think that -- you know, I mean I admire what I've learned  
15 from science. But I think science has been very impersonal  
16 and amoral. And science has also produced what the Hopis  
17 call the gourd of ashes, the nuclear weapons, which threaten  
18 life on earth, all life on earth.

19 And we just keep on doing this when there are  
20 people who are homeless, people who are dispossessed. I  
21 mean we're not looking at what the needs of our community  
22 are, and we're just going on toward this madness. Thank  
23 you.

24 MR. BRASS: Do you have your written testimony  
25 ready? That's all the people who have signed up so far to

1 speak. So what we're going to do is we're going to take  
2 another break for about ten minutes and give you an  
3 opportunity to sign up to speak if you wish.

4 (Recess taken.)

5 MR. BRASS: We're going to come back together now.  
6 If you would like to speak and haven't, please sign up and  
7 do so. We have one speaker signed up so far. Frank Rizzo.

8 MR. RIZZO: Good evening, aloha everyone. I just  
9 want to say a couple of things. I've been to a number of  
10 these meetings. I've had a unique opportunity over the last  
11 20 years of accompanying hundreds of school children from  
12 Maui up to the observatories. And as far as school field  
13 trips go, kids are kind of giddy. But what I've seen many,  
14 many times are just a small group of these children that are  
15 very excited and just really in awe of what's going on up  
16 there at the different facilities. And I just think it's an  
17 important thing. I believe that this is a great  
18 opportunity.

19 It's opportunity knocking at the door to have a  
20 facility like this. How appropriate, a solar observatory  
21 state-of-the-art up at the house of the sun. I've heard a  
22 lot of testimony from a lot of different people. To make a  
23 long story short, the thing that really kind of gets me  
24 though is listening to a lot of the Hawaiian people that  
25 have been showing up at all these meetings and they're very,

1 very disturbed that this is going to be going on sacred  
2 land. And I can relate to that. And to me, I've got mixed  
3 emotions on that. I think that would be very disrespectful.

4 I don't know enough about Haleakala to know how  
5 much of the mountain is sacred. Is it the whole mountain?  
6 Is it just the area around the national park? Is it certain  
7 sections? I don't know that, so I guess I am just going to  
8 end it here. I am in favor of it. If it could go in an  
9 area around the summit that is respectful to the Hawaiian  
10 people, if that could be pursued, I think that would be a  
11 great thing for everybody.

12 I know people are concerned what it looks like.  
13 It's an observatory. It's going to look like an  
14 observatory. You talk about ugly buildings. The County  
15 building is an ugly building. And somebody else was talking  
16 about Haleakala National Park keeping it, you know, pristine  
17 and just experiencing Haleakala National Park. I wish the  
18 park lady was here, because I would tell them to get rid of  
19 the bike tours and that would really clean up Haleakala  
20 National Park. But anyway, I'm in favor for it. I think  
21 it's a great opportunity. If it could be done in harmony  
22 with the community, mostly with the Hawaiian people, I think  
23 that would -- you know, it's a challenge, but if that can be  
24 done, I think it would work out. And thank you everybody  
25 for your time.

1 MR. MAYER: Are you a teacher?

2 MR. RIZZO: I'm not a teacher, no. I have  
3 accompanied, yes, hundreds of children up there for over 20  
4 years.

5 MR. MAYER: In what capacity?

6 MR. RIZZO: Photography, taking photographs of  
7 these people and just, you know, listening to a lot of them.  
8 And, you know, it's just -- like I said, it's a school field  
9 trip. You get 20 to 30 kids, but there's 2 or 3 kids in the  
10 group that are asking all the questions. They're very  
11 excited, "Can I come back up?" My minute still going there.  
12 I'm wrapping it up, by the way. I've been to too many of  
13 these things already. A lot of the local children really  
14 express interest and they're pleased to know that they can  
15 get a great education here, especially that they don't have  
16 to go to the mainland. They can stay with their families.  
17 They can get the education that they want and have got an  
18 opportunity to do some fantastic science, some great  
19 technology and something really worthwhile here in Hawai'i.

20 And I don't know, that's just kind of -- I've got  
21 a young son and he's interested in science. And aside from  
22 aesthetics and all that other stuff, you do want to kind of  
23 keep the observatories together. Yeah, it's huge. It's 140  
24 feet and whatever it is, but today I was driving around the  
25 island. And I was looking up at the summit all day today,

1 and it was cloudy and you can't really see it. And when  
2 it's not cloudy, you've got that shiny AEOS dome up there.  
3 It is what it is. People don't want it looking like Mauna  
4 Kea. I guess enough said. I just wanted to pass along the  
5 children aspect of it, you know, the local community here,  
6 because there is an interest with the local people, the  
7 local children that I've seen that, you know, they're  
8 excited about what's going on over here.

9 And, you know, they don't have to go to the  
10 mainland to do something like that. They can do it here.  
11 Anyway, thank you.

12 MR. FEIN: There is nobody else signed up this  
13 evening, but we have this room until 10:00. So we are not  
14 going to leave right now. There's still an opportunity to  
15 speak if you wish to sign up. Did you have --

16 MS. BURNS: Can I just make a request?

17 MR. FEIN: Yes.

18 MS. BURNS: Suzanne Burns. I know this might be  
19 farfetched, but because the meetings are set up at the same  
20 time as the Superferry and the Fair, I mean you can see the  
21 difference in the showup. Could you please -- I mean I know  
22 that I talked to -- is it Shannon? Sharon, sorry. And I  
23 know this is the only time that you all could make it down  
24 here. And I know there's going to be a lot of people who  
25 have some questions. So maybe you all can't make it, but

1 it's for us to speak, so if you could please think or  
2 consider setting up a time where we could in a Hawaiian  
3 community. You know, this is not -- not a lot of Hawaiians  
4 live up here. So please consider it before the 23rd, just  
5 let them speak. Is that a possibility? I know you guys  
6 went out, and this is what, the ninth session?

7 MR. FEIN: Yeah, the twelfth.

8 MS. BURNS: Twelfth session I know.

9 MR. FEIN: The comment period that ends on the  
10 23rd means that you can submit any question you want up to  
11 that point. And it will be responded to as quickly as we  
12 possibly can.

13 MS. BURNS: So it's going to be responded to -- we  
14 can write until the 23rd, and then we'll have a response?

15 MR. FEIN: Yes.

16 MS. BURNS: Can we write again in response to your  
17 response?

18 MR. FEIN: You can write 100 times if you wish.

19 MS. BURNS: Okay. And it will all go into the  
20 record?

21 MR. FEIN: Yes, that's correct.

22 MS. BURNS: Is this going to go on Akaku?

23 MS. PRINCE: I hope so.

24 MS. BURNS: Last chance, everybody, write for the  
25 23rd, 23rd of October.

1           MR. FEIN: I probably should clarify that one  
2 thing. If, for example, let's say you do write 100 times,  
3 let's just use that as an example, and each time you say I  
4 would like -- I would like NSF to consider building this  
5 facility on the moon, and you do that 100 times, we will  
6 respond to it collectively, not, you know, each time. There  
7 is a -- you know, that is the question, and we will respond  
8 to the question, but not 100 times.

9           MS. BURNS: Well, I wasn't planning on dragging  
10 anything out.

11          MR. FEIN: No.

12          MS. BURNS: Thank you,

13          MS. MONRO: I don't usually speak in front of  
14 people. My name is Sharon Loando Monroe. But I just wanted  
15 to let you know, Suzanne, that you're welcome to take all of  
16 the public comment sheets tonight since this is the last  
17 meeting and please distribute it to anybody you want to and  
18 they can submit it back to us, okay.

19          MS. BURNS: Thank you.

20          MR. BRASS: So my understanding is that at this  
21 point, we're going to kind of take a break again. And the  
22 representatives will still be here to answer questions and  
23 if anyone else should sign up to provide comment, then we'll  
24 receive that comment as well.

25          MR. MAYER: I made a comment during the break that

1 I need to make publicly on the record. The photos, the  
2 pictures that are taken, the two of them that are again  
3 aerial shoots are the same misleading type of photos -- it  
4 gives you a nice dissection of the whole area. And that's  
5 fine, but the true pictures that we need to have are  
6 pictures taken from ground level from the observatory at the  
7 summit of Haleakala. In the draft document, there's some  
8 photos there, but when the public comes out and meets, they  
9 see those. And certainly these are so much better quality  
10 than are in the publication.

11 The original photos of pictures or diagrams that  
12 are in the draft and eventually in the final should be from  
13 ground level from the summit at the highest point there,  
14 what would the tourists, the two million tourists a year  
15 that go up there actually see. That would be one thing.  
16 And the second thing is I would like to know what the impact  
17 would be on the national park and on the experience in the  
18 national park of this observatory and the collective  
19 assemblage of observatories that are being built up there.  
20 Thank you.

21 MR. BRASS: Okay. So we're going to go into a  
22 break, and please feel free to sign up if you would like to  
23 if you haven't had a chance to make a comment and you would  
24 like to or talk to any of the representatives here.

25 I'm just checking in with everyone to find out if

1 anyone else would like to sign up to make comments this  
2 evening. Last call. Okay. So it appears there's no one  
3 else who would like to provide comments, so we're going to  
4 go ahead and close the meeting tonight. Thank you for  
5 coming.

6 (The meeting ended at 9:25 p.m.)

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C E R T I F I C A T I O N

I, RACHELLE PRIMEAUX, Notary Public for the State of Hawaii, certify:

That the proceedings contained herein were taken by me in machine shorthand and were thereafter reduced to print under my supervision by means of computer-aided transcription; that the foregoing represents, to the best of my ability, a true and accurate transcript of the proceedings had in the foregoing matter.

I further certify that I am neither attorney for any of the parties hereto nor in any way concerned with the cause.

Dated this 13<sup>th</sup> day of Oct, 2006.



NOTARY PUBLIC, State of Hawaii

My commission expires 6/14/08

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