DEPARTMENT OF PLANNING AND PERMITTING KA 'OIHANA HO'OLÄLÄ A ME NÄ PALAPALA 'AE CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAI'I 96813 PHONE: (808) 768-8000 • FAX: (808) 768-6041 • WEBSITE: honolulu.gov/dpp

RICK BLANGIARDI MAYOR *MEIA*



April 22, 2024

DAWN TAKEUCHI APUNA DIRECTOR *PO'*O

2023/ED-9(ST)

Ms. Mary Alice Evans Director Office of Planning and Sustainable Development Environmental Review Program State of Hawai'i 235 South Beretania Street, Room 702 Honolulu, Hawai'i 96813

Dear Director Evans:

BJECT: H	lawai'i Revised Statutes Chapter 343
F	Revised Ordinances of Honolulu (ROH) Chapter 25
F	inal Environmental Assessment (FEA)
ect: H	lawai'i Fueling Facilities Corporation
	Sand Island Fuel Facility Stormwater and
S	Secondary Spill Containment System Upgrade (Project)
ent: E	Burns and McDonnell (Jeremy Jewell)
downer: [Department of Transportation, State of Hawai'i
ation: 6	Sand Island Access Road – Kalihi Kai
Map Keys: 7	I-2-025: 020 and 021
ermination: F	-inding of No Significant Impact (FONSI)
ect: F Sent: E downer: E ation: 6 Map Keys: 7 ermination: F	Hawai'i Fueling Facilities Corporation Sand Island Fuel Facility Stormwater and Secondary Spill Containment System Upgrade (Pro Burns and McDonnell (Jeremy Jewell) Department of Transportation, State of Hawai'i S Sand Island Access Road – Kalihi Kai I-2-025: 020 and 021 Finding of No Significant Impact (FONSI)

With this letter, the Department of Planning and Permitting (DPP) hereby transmits the FEA and FONSI for the above referenced Project, which is located in the Special Management Area in the Honolulu District, on the Island of O'ahu. Please publish this finding in the next edition of *The Environmental Notice*.

Based on the significant criteria outlined in Title 11, Chapter 200.1, Hawai'i Administrative Rules, the DPP has determined that the preparation of an Environmental Impact Statement is not required. The FEA adequately discloses and describes relevant environmental impacts and responds to comments received during the required public comment period for the Draft Environmental Assessment. Ms. Mary Alice Evans April 22, 2024 Page 2

We have uploaded an electronic copy of this letter, a complete Environmental Review Program electronic publication form, the FEA, and the FONSI to your online submittal site.

Should you have any questions, please contact Steve Tagawa, of our Land Use Approval Branch, at (808) 768-8024 or via email stagawa@honolulu.gov.

Very truly yours,

Dawn Takeuchi Apuna Director

cc: Department of Transportation, Airports Division Burns and McDonnell (Jeremy Jewell)

From:	webmaster@hawaii.gov
То:	DBEDT OPSD Environmental Review Program
Subject:	New online submission for The Environmental Notice
Date:	Monday, April 29, 2024 1:48:27 PM

Action Name

Hawaii Fueling Facilities Corporation Sand Island Facilities Stormwater and Secondary Spill Containment Upgrade Project

Type of Document/Determination

Final environmental assessment and finding of no significant impact (FEA-FONSI)

HRS §343-5(a) Trigger(s)

• (1) Propose the use of state or county lands or the use of state or county funds

Judicial district

Honolulu, Oʻahu

Tax Map Key(s) (TMK(s))

(1)1-2-025:020; (1)1-2-025: 021

Action type

Applicant

Other required permits and approvals

Grading and building permits

Discretionary consent required

Special Management Area Major Permit

Approving agency

Department of Planning and Permitting, City and County of Honolulu

Agency contact name

Steve H. Tagawa

Agency contact email (for info about the action)

stagawa@honolulu.gov

Email address or URL for receiving comments

DPP@honolulu.gov

Agency contact phone

(808) 768-8024

Agency address

650 South King Street Honolulu, Hawaii 96813 United States <u>Map It</u>

Applicant

Hawaii Fueling Facility Corporation

Applicant contact name

Jason Maga

Applicant contact email

Jason.maga@signatureflight.com

Applicant contact phone

(808) 833-3291

Applicant address

3201 Aolele Street Honolulu, Hawaii 96819 United States Map It

Is there a consultant for this action?

Yes

Consultant

Burns & McDonnell

Consultant contact name

Jeremy Jewell

Consultant contact email

jjewell@burnsmcd.com

Consultant contact phone

(816) 601-4919

Consultant address

833 Bishop Street, Suite 2150 Honolulu, Hawaii 96813 United States <u>Map It</u>

Action summary

The EPA-mandated upgrade to the secondary spill containment and storm water management system is for the Applicant's jet fuel storage facility at 6 Sand Island Access Road. The 8.4-acre facility, initially built in the 1960s, consists of 16 aboveground steel storage tanks, with a total capacity of 45 million gallons, is the sole supply of jet fuel for the Daniel K. Inouye International Airport. Jet fuel is transported to this facility via pipelines from the refinery in Kalaeloa (formerly Campbell Industrial Park). The Project involves soil excavation, new asphalt pavement & spray-on coating of exposed areas, 31 collection inlets, 4 lift stations with sump pumps and an above-ground oil-water separator. The site is on State-owned DOT land, which triggers the preparation of an EA per Chapter 343. The FONSI determination allows the SMA application to be accepted for processing by the Department of Planning and Permitting, with decision-making by the Honolulu City Council.

Reasons supporting determination

The preparation of the Environmental Impact Statement is not required as the proposed Project will not have a significant effect on the environment pursuant the criteria set forth in HAR, Section 11-200.1-13.

Attached documents (signed agency letter & EA/EIS)

- 23ED9HFFC.FONSIltr.pdf
- <u>23ED9HFFC.FEA_.pdf</u>

Shapefile

• The location map for this Final EA is the same as the location map for the associated Draft EA.

Action location map

• HFFCLocation.zip

Authorized individual

Steve H. Tagawa

Authorization

• The above named authorized individual hereby certifies that he/she has the authority to make this submission.



Final Environmental

Assessment

Hawai'i Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project 6 Sand Island Access Road Honolulu, Hawai'i

PREPARED FOR



Hawai'i Fueling Facilities Corporation Burns & McDonnell Engineering, Inc.

DATE 28 March 2024

REFERENCE 0682737



SIGNATURE PAGE

Final Environmental Assessment

Hawai'i Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project 6 Sand Island Access Road Honolulu, Hawai'i ⁰⁶⁸²⁷³⁷

Michile Jome

Michele Barlow Partner-in-Charge

Janet Liver

Janet Liver Project Manager

Marcelino (Achie) Reyes Senior Consultant

Environmental Resources Management, Inc. 500 Ala Moana Boulevard Suite 7400 Honolulu, Hawai'i 96813 T +1 808 521 4404

© Copyright 2024 by The ERM International Group Limited and/or its affiliates ('ERM'). All Rights Reserved. No part of this work may be reproduced or transmitted in any form or by any means, without prior written permission of ERM.



CLIENT: Hawai'i Fueling Facilities Corporation Burns & McDonnell Engineering, Inc. PROJECT NO: 0682737 DATE: 28 March 2024 VERSION: 01

CONTENTS

1.	PROJECT SUMMARY			
2.	PROJECT DESCRIPTION, PURPOSE AND NEED, AND ENVIRONMENTAL ASSESSMENT PROCESS			
2.1	PROJECT LOCATION			
2.2	FACILITY DESCRIPTION BACKGROUND	2		
2.3	FACILITY HISTORY	8		
2.4	PURPOSE AND NEED	9		
2.5	2.4.12015 Spill and Response2.4.2United States Environmental Protection Agency OrderPROJECT DESCRIPTION	10 14 15		
2.6	PUBLIC INVOLVEMENT AND AGENCY COORDINATION	17		
	 2.6.1 Environmental Protection Agency 2.6.2 Department of Land and Natural Resources 2.6.3 Kalihi Palama Neighborhood Board No. 15 	17 17 18		
3.	ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION	18		
3.1	PHYSICAL ENVIRONMENT	18		
3.2	 3.1.1 Climate 3.1.2 Geology, Soil, and Geologic Hazards 3.1.3 Hydrology, Flood Zone, and Sea Level Rise 3.1.4 Flora and Fauna 3.1.5 Air Quality 3.1.6 Noise 3.1.7 Scenic Resources 3.1.8 Hazardous Substances, Toxic Waste, and Hazardous Conditions SOCIOECONOMIC AND CULTURAL 	18 19 23 24 25 26 29 30		
3.3	3.2.1 Socioeconomic 3.2.2 Cultural and Historic Resources INFRASTRUCTURE	30 30 31		
3.4	 3.3.1 Utilities 3.3.2 Roads and Parking SECONDARY AND CUMULATIVE IMPACTS 	31 32 32		
4.	POSSIBLE ALTERNATIVES	33		
4.1	NO ACTION			
4.2	SLURRY WALL IMPROVEMENTS			
4.3	STORMWATER SYSTEM UPGRADES (PREFERRED ALTERNATIVE)	34		
5. 5.1	REQUIRED PERMITS AND APPROVALS CITY AND COUNTY OF HONOLULU	34 34		
5.2	STATE OF HAWAI'I	34		



5.3	FEDERAL	35		
6. 6.1	CONSISTENCY WITH GOVERNMENT PLANS AND POLICIES HAWAI'I STATE PLAN	35 35		
6.2	O'AHU GENERAL PLAN AND ZONING	35		
6.3	HAWAI'I STATE LAND USE LAW	36		
6.4	HAWAI'I COASTAL ZONE MANAGEMENT PROGRAM	36		
6.5	PRIMARY URBAN CENTER DEVELOPMENT PLAN			
6.6	REVISED ORDINANCES OF HONOLULU	41		
	6.6.1Chapter 21: Land Use Ordinance6.6.2Chapter 25: Special Management Areas6.6.3Chapter 26: Shoreline Setbacks	41 42 42		
7.	DETERMINATION, FINDINGS, AND REASONS	43		
7.1	ANTICIPATED DETERMINATION	43		
7.2	FINDINGS AND SUPPORTING REASONS	43		
8.	REFERENCES	46		

APPENDIX A USEPA AOC DKT NO. OPA-311-09-2021-001 AND PRIOR SMA PERMITS

APPENDIX B GRANT OF NON-EXCLUSIVE EASEMENT BOE-002

APPENDIX C HFFC TANK BOTTOMS SCHEDULE MODIFICATION APPROVAL

APPENDIX <u>AD</u> PRELIMINARY CONSTRUCTION DRAWINGS

APPENDIX BE COMMENTS IN RESPONSE TO EARLY CONSULTATION AND DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS AND RESPONSE LETTERS

APPENDIX EE LETTER TO STATE HISTORIC PRESERVATION DIVISION

LIST OF TABLES

TABLE 1 HFFC SAND ISLAND FACILITY ABOVEGROUND STORAGE TANKS 5

LIST OF FI	IGURES	
FIGURE 1	PROJECT LOCATION	3
FIGURE 2	PROJECT SITE	4
FIGURE 3	SYSTEM MAP OF FUEL TRANSFER PIPELINES	8
FIGURE 4	FEMA FLOOD ZONE AND SEA LEVEL RISE	22



ACRONYMS AND ABBREVIATIONS

Acronyms	Description
AQI	Air Quality Index
ASIG	Aircraft Safety International Group, Inc
AST	aboveground storage tank
bgs	below ground surface
ВМР	best management practice
<u>C-EHMP</u>	Construction Environmental Hazard Management Plan
CZM	Coastal Zone Management
dBA	<u>A-weighted</u> decibel
DLNR	Department of Land and Natural Resources
DPP	Department of Planning and Permitting
DOT	Department of Transportation
ERM	Environmental Resources Management, Inc.
HAR	Hawai'i Administrative Rule
HDOH	Hawai'i State Department of Health
HFFC	Hawai'i Fueling Facilities Corporation
HNL	Daniel K. Inouye International Airport
HRS	Hawai'i Revised Statutes
IES	Island Energy Services
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OSV	oil stop valve
OWS	oil-water separator
PENCO	Pacific Environmental Corporation
<u>PVC</u>	polyvinyl chloride
<u>ROH</u>	Revised Ordinances of Honolulu
SCADA	Supervisory Control and Data Acquisition System
SFS	Signature Flight Support, LLC
SHPD	State Historic Preservation Division
SI Facility	Sand Island Fuel Facility
SMA	Special Management Area
SWPPP	Stormwater Pollution and Prevention Plan
MDZ.	



CLIENT: Hawai'i Fueling Facilities Corporation Burns & McDonnell Engineering, Inc. PROJECT NO: 0682737 DATE: 28 March 2024 VERSION: 01

Acronyms	Description
USEPA	United States Environmental Protection Agency



CLIENT: Hawai'i Fueling Facilities Corporation Burns & McDonnell Engineering, Inc. PROJECT NO: 0682737 DATE: 28 March 2024 VERSION: 01

1. PROJECT SUMMARY

Proposed Project	Hawai'i Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project				
Applicant	Hawai'i Fueling Facilities Corporation 3201 Aolele Street, Honolulu, Hawai'i 96819 (808) 833-3291				
Approving Agency	City and County of Honolulu Department of Planning and Permitting				
Agent	Burns & McDonnell				
Project Location	Sand Island Fuel Facility 6 Sand Island Access Road Honolulu, Hawai'i 96819				
Тах Мар Кеу	1-2-025:020, 1-2-025:021				
Ownership	State of Hawai'i Department of Transportation Airports Division				
Lot Area	8.4 acres				
Zoning	I-3 Waterfront Industrial District				
Special District	Not applicable				
State Land Use	Urban				
State Designation	Special Management Area				
Existing Land Use	fuel storage facility (Industrial)				
Proposed Action	Improvements to the stormwater system				
Alternatives	 No action alternative Increasing depth of slurry wall 				
Chapter 343, Hawai'i Revised Statutes Trigger	Special Management Area Major Permit (wholly within Special Management Area)				
Total Project Cost	\$9MM total installed construction cost				
Project Schedule	The Project is anticipated to commence construction in the first quarter of 2025 and is anticipated to be completed in the third quarter of 2026. A construction period of 18 months is anticipated.				
Permits that may be	 City and County of Honolulu 				
Required	 Building Construction Permit Special Management Area Permit 				
	Hawai'i Department of Health				
	 Construction Environmental Hazard Management Plan approval Subsurface Aeration & Ventilation approval 				
	Department of Health Clean Water Branch				
	 National Pollutant Discharge Elimination System Construction Stormwater General Permit General Permit Authorization Discharges Associated with Construction Activity Dewatering 				
Anticipated Determination	Finding of No Significant Impact				



2. PROJECT DESCRIPTION, PURPOSE AND NEED, AND ENVIRONMENTAL ASSESSMENT PROCESS

2.1 PROJECT LOCATION

The Hawai'i Fueling Facilities Corporation (HFFC) Sand Island Fuel Facility (the "Site" or "SI Facility") is located at 6 Sand Island Access Road, Honolulu, Hawai'i (<u>Figure 1</u>). It is approximately 200 feet east of the Ke'ehi Lagoon Small Boat Harbor, which is connected to Mamala Bay and the Pacific Ocean. The SI Facility is entirely within the Special Management Area (SMA) but was built in the early 1960s prior to the enactment of the Shoreline Protection Act and establishment of the SMA in 1975. The Sand Island Fuel Facility Stormwater System Upgrade Project ("Project" or "Proposed Action") consists of upgrades to the existing stormwater system. The "Project Site" includes the area within the fenced industrial site of the SI Facility and the location of the stormwater discharge pipe that will extend approximately 100 feet outside of the fenced facility (Figure 2).

2.2 FACILITY DESCRIPTION BACKGROUND

HFFC owns both the SI Facility and the Airport Facility, which are located on land leased from the Department of Transportation <u>Airport Division</u> (DOT<u>A</u>). HFFC has contracted Signature Flight Support (SFS) to manage and operate both these fuel facilities on <u>O'ahu</u>, as well as the other HFFC fuel facilities on the other islands of Hawai'i.

The HFFC SI Facility receives, stores, and together with the HFFC Airport Facility, distributes jet fuel to <u>the Daniel K. Inouye International Airport (HNL)</u>, also known as Honolulu International <u>Airport</u>. <u>The HFFC Airport Facility SI Facility</u> is the sole supplier of jet fuel to HNL and any interruption in the operation of the SI Facility would significantly impact the <u>operation of HNL and</u> <u>subsequently the</u> domestic and international travel industry and the Hawai'i economy in general.

Jet fuel is received at the SI Facility <u>via underground pipelines</u> from tanker ships berthed at the Honolulu Harbor Pier 51 <u>via an 18</u>" diameter underground pipeline and. The 3,944-foot-long <u>18</u>inch diameter pipeline from Pier 51 to the SI Facility crosses the Kalihi Channel on the west side of the Sand Island Bridge. Jet fuel is also received via petroleum pipelines and on-island from Par Hawai'i Refinery <u>as well as and</u> Island Energy Services Refinery located <u>at Barber's Point</u> on the west side of O'ahu. <u>The SI Facility is subdivided into Lots 2, 3, and 3.5 containing a total of 16</u> large capacity aboveground storage tanks (ASTs) with a total capacity of approximately <u>42</u> million gallons of jet fuel. Lot <u>2</u> contains seven ASTs, while Lots <u>3</u> and <u>3.5</u> contain a total of nine ASTs. The SI Facility is equipped with a secondary containment system comprising a concrete perimeter wall, gravel covered berm, and a <u>6</u>-foot-deep underground containment slurry wall. In addition, an <u>8</u> foot deep by 600 foot long interceptor trench was installed between the <u>SI Facility</u> and the Ke'ehi Lagoon Small Boat Harbor in 2016 (Environmental Resources Management, Inc. [ERM] 2023). Jet fuel from the <u>SI Facility is piped to the Airport Facility approximately 1.5 miles west of</u> the <u>SI Facility, via underground pipeline crossing Ke'ehi Lagoon</u>.



FIGURE 1 PROJECT LOCATION





FIGURE 2 PROJECT SITE





In January of 2015, a leak in the bottom of Tank 2 released approximately 42,000 gallons of jet fuel into the subsurface soil and groundwater at the Site. Due to the weight of the spilled fuel and tidal fluctuation at the Site, the spilled fuel was not completely contained by the existing slurry wall and a small amount of the spilled fuel migrated offsite towards Ke'ehi Lagoon (ERM 2020). Approximately 32,500 gallons of product was recovered onsite and another approximately 2,000 gallons was recovered offsite.

<u>The offsite migration of the released jet fuel towards Ke'ehi Lagoon revealed that the underground</u> perimeter slurry wall was inadequate to provide an impermeable secondary containment system to effectively contain an uncontrolled release within the boundary of the SI Facility. To mitigate the potential for future spills from impacting Ke'ehi Lagoon, HFFC installed an underground interceptor trench between Lot 2 and Ke'ehi Lagoon in 2016.

The SI Facility is situated on a reclaimed area west of the former Kapalama Military Reservation and approximately 1.5 miles southeast of the Daniel K. Inouye International Airport (HNL). It occupies approximately 8.4-acres of land owned by the State Department of Transportation Airport Division and is divided into three lots, Lot 2, Lot 3, and Lot 3.5. The Site topography is generally flat with ground surface elevations ranging from approximately 4 to 10 feet above mean sea level. Ke'ehi Lagoon is located approximately 200 feet west of the Site and tidally influenced groundwater is encountered at approximately 4 feet below ground surface (bgs).

The Airport Fuel Facility is equipped with 10 large capacity ASTs with a limited capacity of 7,430,058 gallons. The Airport Fuel Facility manages the distribution of jet fuel at HNL through an underground hydrant system. With the 24/7 nature of flight operations at HNL, the continuity of air service is highly dependent on an uninterrupted supply of on-time, on-specification jet fuel. Passengers and shippers depend on the fuel supply industry for global connectivity, and the airlines in turn depend on a fragile supply chain. Due to the limited storage capacity of the Airport Fuel Facility and to minimize disruptions on the jet fuel supply chain, the SI Facility was developed with 16 breakout tanks with a total jet fuel storage capacity of 45,415,636 gallons to serve as the storage terminal for the Airport Fuel Facility. Breakout tanks are tanks used to relieve surges in an oil pipeline system or to receive and store oil transported by a pipeline. The storage capacities including dimensions of the aboveground storage tanks (ASTs) at the SI Facility are listed in Table 1 below.

AST ID	<u>Capacity</u> (gallons)	<u>Nominal</u> <u>Shelf Height</u> <u>(feet)</u>	<u>Nominal</u> <u>Diameter</u> <u>(feet)</u>	<u>Construction/Shell</u> <u>Type</u>	<u>Roof Type</u>
<u>Tank</u> <u>1</u>	5,659,066	<u>47.4</u>	<u>142.2</u>	Field-erected, butt welded, non-insulated	Permanent Cone
<u>Tank</u> 2_	<u>2,867,381</u>	<u>47.0</u>	<u>102.0</u>	Field-erected, butt welded, non-insulated	Permanent Cone
<u>Tank</u> <u>3</u>	2,920,348	47.5	<u>102.1</u>	Field-erected, butt welded, non-insulated	<u>Permanent</u> <u>Cone</u>

TABLE 1 HFFC SAND ISLAND FACILITY ABOVEGROUND STORAGE TANKS



PROJECT DESCRIPTION, PURPOSE AND NEED, AND ENVIRONMENTAL ASSESSMENT PROCESS

<u>AST</u> ID	<u>Capacity</u> (gallons)	<u>Nominal</u> <u>Shelf Height</u> <u>(feet)</u>	<u>Nominal</u> <u>Diameter</u> <u>(feet)</u>	<u>Construction/Shell</u> <u>Type</u>	<u>Roof Type</u>
<u>Tank</u> <u>4</u>	2,959,485	47.5	102.1	Field-erected, butt welded, non-insulated	Permanent <u>Cone</u>
<u>Tank</u> 5_	2,937,777	47.6	<u>102.1</u>	Field-erected, butt welded, non-insulated	Permanent <u>Cone</u>
<u>Tank</u> <u>6</u>	<u>2,920,825</u>	47.5	<u>102.0</u>	Field-erected, butt welded, non-insulated	<u>Permanent</u> <u>Cone</u>
<u>Tank</u> <u>7</u>	2,865,441	47.1	<u>102.0</u>	Field-erected, butt welded, non-insulated	Permanent <u>Cone</u>
<u>Tank</u> <u>11</u>	2,842,759	59.5	90.0	Field-erected, butt welded, non-insulated	Permanent <u>Cone</u>
<u>Tank</u> 12	1,702,370	59.2	70.0	Field-erected, butt welded, non-insulated	Permanent <u>Cone</u>
<u>Tank</u> <u>13</u>	<u>2,851,812</u>	60.0	90.0	Field-erected, butt welded, non-insulated	<u>Permanent</u> <u>Cone</u>
<u>Tank</u> <u>14</u>	2,794,832	60.1	90.1	Field-erected, butt welded, non-insulated	Permanent <u>Cone</u>
<u>Tank</u> 15	<u>1,125,201</u>	<u>49.5</u>	<u>62.0</u>	Field-erected, butt welded, non-insulated	Permanent Cone
<u>Tank</u> <u>16</u>	3,519,811	<u>50.0</u>	<u>110.0</u>	Field-erected, butt welded, non-insulated	Permanent <u>Cone</u>
<u>Tank</u> <u>17</u>	3,530,013	50.0	<u>110.0</u>	Field-erected, butt welded, non-insulated	Permanent Cone
<u>Tank</u> <u>18</u>	1,108,646	50.0	<u>62.0</u>	Field-erected, butt welded, non-insulated	Permanent <u>Cone</u>
<u>Tank</u> 19	<u>2,809,886</u>	<u>60.0</u>	<u>89.9</u>	Field-erected, butt welded, non-insulated	<u>Permanent</u> <u>Cone</u>
<u>Total</u>	45,415,653	=	=	=	=

The SI Facility is enclosed by a concrete perimeter retaining wall and a 6-foot subsurface slurry wall that serves as the secondary fuel-containment in case of a worst-case fuel spill. The subsurface slurry wall was installed in 2008 along the perimeter of the SI Facility to minimize or prevent the offsite migration of spilled fuel into Ke'ehi Lagoon in the event of a release. The subsurface slurry wall design was based on an engineering investigation, which stated that, in the event of a catastrophic fuel release, the fuel would percolate through Site soils until it reached the depth of groundwater at which point it would migrate horizontally. Due to the relatively low density of fuel, it was determined that the spilled fuel would "float" on the water table, migrate horizontally until it encountered the slurry wall, and thus become contained within shallow soils inside the Site perimeter. The slurry wall was designed to account for tidal fluctuations and/or changes in groundwater levels due to a potential depression of the water table caused by the



pressure applied by the fuel perched above the water table. Portions of the secondary containment wall near the fire foam building utilize an earthen berm on top of the slurry for fuel containment.

There are seven ASTs in Lot 2 and nine ASTs in Lots 3 and 3.5 at the SI Facility. Average throughput at the facility is approximately 1.0 million gallons per day. The SI Facility is fenced and has a gated entrance manned 24-hours per day, 7-days per week. The facility is also equipped with several surveillance cameras positioned at various locations within the facility. Entry to the SI Facility is limited to authorized personnel only.

The jet fuel from the SI Facility is transferred to the Airport Fuel Facility through the following pipelines:

- From the SI Facility, two 6-inch and 10-inch diameter pipelines run north along Sand Island Access Road towards Auiki Street. The pipelines turn left to the La Mariana Restaurant where the La Mariana pipeline valve pit is located.
- From the La Mariana valve pit, underwater 8-inch and 10-inch diameter pipelines cross Ke'ehi • Lagoon towards the Grey Line Terminal valve pit northwest of the SI Facility.
- From the Grey Line Terminal valve pit, two 6-inch and 10-inch diameter pipelines run along • southern Aolele Street towards the Airport Fuel Facility.

HFFC monitors the content of breakout tanks at the SI Facility and the transfer of jet fuel in the pipelines using the supervisory control and data acquisition (SCADA) monitoring system at the Airport Facility Control Room and at the SI Facility Control Room. The approximate locations of the pipelines are shown below on Figure 3, which was taken from the Hawai'i Fueling Facilities Corporation Facility Response Plan for the Sand Island Fuel Facility (ERM 2021).





FIGURE 3 SYSTEM MAP OF FUEL TRANSFER PIPELINES

2.3 FACILITY HISTORY

The Airport Fuel Facility, located on Aolele Street, was constructed in the years between 1952 and 1968 to support the expansion of the Daniel K. Inouye International Airport (HNL), which was named Honolulu International Airport at the time, and to serve as the main supplier of jet fuel. The Airport Fuel Facility was originally equipped with eleven aboveground storage tanks (ASTs) to provide jet fuel for both private and commercial aircraft (Environmental Data Resources Inquiry 6987425.8). During the same period, the SI Facility, located along Sand Island Access Road, was developed to house several large capacity breakout tanks for the storage of jet fuel in support of the Airport Fuel Facility operation. A 1968 aerial photograph of the SI Facility shows four breakout ASTs located at the south end of the facility. Five more ASTs were constructed on Lot 2 of the SI Facility by 1975, and an additional four ASTs were constructed by 1992 to support the fast-growing travel industry (Environmental Data Resource Inquiry 6867649.8). By 2004, all 16 breakout ASTs with a total capacity of 44,124,400 gallons of jet fuel had been installed for the purpose of ensuring continuous supply of jet fuel to HNL (Environmental Data Resource Inquiry 6867649.8).



Five previous SMA Permits (one Major and four Minor SMA Permits) have been obtained throughout the Site's history. These permits include:

- <u>1985 SMA-61 (Major): Approved by the City Council on October 23, 1985 (Resolution No. 85-354) allowed the construction of eight new ASTs and one foam pump house to the existing nine-tank facility. According to the SMA application, four of the existing steel tanks were built by Texaco in 1967 on then Lot 2. Those four tanks had total storage capacity of 8.82 million gallons (210,000 barrels). About the same time, Shell Oil Co. built the five other existing steel tanks on then Lot 3, with a total storage capacity of 16.55 million gallons (394,000 barrels) with room to spare. The application also stated that during the fuel shortages of 1970's, the Applicant HFFC, a consortium of airlines, purchased the existing fuel storage facility from Shell Oil and Texaco (see Appendix A).
 </u>
- 2. <u>1999 SMA-30 (Minor): Approved by DPP on April 19, 1999 allowed construction of a lab</u> <u>structure (document not available).</u>
- 2004 SMA-63 (Minor): Approved by DPP on September 24, 2004 allowed the installation of a below grade steel pipeline from the Airport facility, as well as above ground meters and a valve station (document not available).
- 2016 SMA-20 (Minor): Approved by DPP on May 12, 2016 allowed the installation of four replacement transfer pumps, flow transmitters, and a 339-square-foot power distribution center (See Appendix A).
- 5. <u>2019 SMA-42 (Minor): Approved by DPP on December 31, 2019 allowed various</u> <u>maintenance and system upgrades, and a new 280-square-foot power distribution system in a</u> <u>prefabricated modular unit (see Appendix A).</u>

2.4 PURPOSE AND NEED

Under the Administrative Order on Consent, Docket No. OPA-311-09-2021-001, issued by the United States Environmental Protection Agency (EPA) (see Appendix A), HFFC and Signature Flight Support, LLC (SFS) are responsible for enhancing the secondary containment of the facility so that it is sufficiently impervious to contain any discharged oil until clean-up can occur. Secondary containment enhancements within the facility will be achieved through the combination of installation of new asphalt pavement sections for drive paths, an industrial spray-on coating for all areas throughout Lots 2, 3, and 3.5, and improvements to the storm drainage system. No modification to the existing dike walls <u>is needed</u>, and enhancement of the secondary containment of the above ground storage tanks with new tank bottoms is underway and scheduled to be complete by 2028. This Environmental Assessment addresses improvements to the storm drainage system and secondary containment of the SI Facility.

Due to the quantity of fuel stored at the SI Facility and the proximity to Ke'ehi Lagoon, an uncontrolled release could cause "Substantial Harm" to the environment¹. The proposed enhancements to the SI Facility are necessary for improving secondary containment systems such

¹ 40 CFR Appendix C to Part 112 – Substantial Harm Criteria. A facility that has the potential to cause substantial harm to the environment in the event of a discharge must prepare and submit a facility-specific response plan to EPA. The SI Facility is in compliance with this requirement.



that potential impacts to the environment and public health are mitigated in the event of fuel release. <u>Further detail is outlined below in Section 2.5, Project Description, as multi-tiered</u> <u>engineering measures to mitigate a potential release.</u>

2.4.1 2015 SPILL AND RESPONSE

In January of 2015, an inventory discrepancy on the 2,867,381-gallon Tank 2 was noticed during a routine monitoring of the ASTs and pipelines through the SCADA system. Tank 2 was emptied and inspected on 21 January 2015 where jet fuel was discovered under the tank bottom after cutting floor "coupons." Based on inventory reconciliation, it was estimated that 42,000 gallons of jet fuel were released to the soil below the tank. Upon discovery of the release on 21 January 2015, regulatory notification and emergency response, including delineation and recovery efforts, were undertaken immediately to protect public health and the environment. The jet fuel release was reported on 21 January 2015 to the United States Coast Guard National Response Center (Report No. 1106276) and the Hawai'i Department of Health (HDOH) Hazard Evaluation and Emergency Response office (Incident Report No. 20150121-1411). In this document, the leaked fuel is referred to as jet fuel or product. As a result of the spill, the United States Environmental Protection Agency (USEPA) identified the following alleged violations:

- <u>Count 1: Violation of 40 C.F.R. Section 112.7(c), promulgated pursuant to Section 311(j) of the CWA, 33 U.S.C. Section 1321(j), because the Spill Prevention, Control, and Countermeasure Plan did not provide for a containment system capable of containing oil and constructed so that any discharge from a tank at the Facility would not escape the containment system before cleanup occurred.</u>
- <u>Count 2: Violation of 40 C.F.R. Section 112.8(c)(2), promulgated pursuant to Section 311(j) of the CWA, 33 U.S.C. Section 1312(j), because the secondary containment system at the Facility could not contain the entire capacity of the largest single container with sufficient freeboard to contain precipitation and because diked area was not sufficiently impervious to contain discharged oil.</u>

As a preventive measure and to protect the water of Ke'ehi Lagoon, a 600-foot-long offshore oil spill containment boom and absorbent sweeps were installed along the shoreline frontage of Ke'ehi Lagoon Harbor. Daily inspections of the shoreline along the harbor were conducted by Pacific Environmental Corporation (PENCO) and later by Aircraft Safety International Group, Inc. (ASIG) personnel to check for any oil sheen in the water and inspect the integrity of the containment boom. The containment boom was installed on 26 January 2015 and removed in July 2016 after installation of an underground interceptor trench between the Ke'ehi Lagoon Harbor and Lot #2.

In addition to the oil spill containment boom in the harbor, temporary plugs were installed in the drain side of the two swales in the Department of Land and Natural Resources (DLNR) property between the SI Facility and the harbor shoreline. The daily visual inspections of the harbor water since the release in January 2015 showed that no product migrated to any navigable waters.

However, a leak in the bottom of Tank 2 released approximately 42,000 gallons of jet fuel into the subsurface soil and groundwater at the Site. Due to the weight of the spilled fuel and tidal



fluctuation at the Site, the spilled fuel was not completely contained by the existing slurry wall and a small amount of the spilled fuel migrated offsite outside the west perimeter wall of Lot 2 by the DLNR property towards the Ke'ehi Lagoon Small Boat Harbor (ERM 2020). Approximately 32,500 gallons of product was recovered onsite and another approximately 2,000 gallons was recovered offsite.

The offsite migration of the released jet fuel towards Ke'ehi Lagoon revealed that the underground perimeter slurry wall was inadequate to provide an impermeable secondary containment system to effectively contain an uncontrolled release within the boundary of the SI Facility. To prevent a future release from impacting Ke'ehi Lagoon, the USEPA issued an administrative order requiring HFFC to upgrade the containment area of the SI Facility. To mitigate the potential for future spills from reaching Ke'ehi Lagoon, HFFC installed an underground interceptor trench between Lot 2 and Ke'ehi Lagoon in 2016.

2.4.1.1 ONSITE AND OFFSITE FREE PRODUCT DELINEATION

Once it was determined that a fuel release had occurred, delineation of the extent of impacts began promptly on pre-existing monitoring wells at the Site. Between 21 and 25 January 2015, exploratory trenches were excavated, and vacuum extraction/recovery operations were performed utilizing HFFC/ASIG vacuum trucks and vacuum trucks from a waste management company. Approximately 6,700 gallons of jet fuel were recovered at the time. In addition, daily monitoring was performed in these trenches and the existing monitoring wells. HFFC requested site access to the neighboring DLNR property to investigate the migration of the free product. The delineation effort was completed by installing the following onsite and offsite exploratory borings and trenches:

- <u>Fourteen on-facility exploratory trenches (A-O)</u>
- Ten on-facility air-knife boreholes (BH-01 through BH-10)
- Eight on-facility Geoprobe borings (A-1 through A-4 and A-1S through A-4S)
- Eight off-facility Geoprobe borings (D-1 through D-8)
- Forty-three off-facility air-knife borings (DLNR-1 through DLNR-43)
- <u>Seven off-facility air-knife borings along the south road (Road 2) outside and adjacent to the slurry wall</u>

Some of the exploratory borings and trenches were converted into extraction trenches/sumps or monitoring wells and the remaining ones were abandoned. The network of monitoring wells monitored during the spill delineation operation included the following:

- <u>Twenty pre-existing, on-facility monitoring wells and piezometers</u>
- <u>Eight monitoring wells located within the SI Facility perimeter wall, but outside the slurry wall</u> (MW-A1 through MW-A4 and MWA-10 through MW-13)
- Six on-facility monitoring wells (MW-A5 through MW-A9 and MW-A14)
- Five pre-existing, off-facility monitoring wells (OS-1, OS-2, OS-4, OS-5, MW-26)
- <u>Twenty-seven newly installed monitoring wells (MW-D1 through MW-D26 and MW-D16A)</u>



During the emergency spill recovery operations, the borings, trenches, and monitoring wells were monitored daily for the presence of free product, depth of the free product-groundwater interface, and depth of the groundwater where free product was not present.

2.4.1.2 FREE PRODUCT RECOVERY

Product recovery efforts were initiated beginning with two temporary trenches and monitoring wells. The recovery effort was expanded by installing more recovery trenches and sumps. An aggressive extraction program began on 25 January 2015 to recover the jet fuel and reduce the potential for further product migration. Product recovery initially consisted of the use of vacuum trucks to extract jet fuel from temporary trenches. Subsequently, a network of engineered trenches was installed to replace the temporary trenches and an automated recovery system was installed to replace the use of vacuum trucks, as discussed in Section 2.4.1.4, Interceptor Trench Installation.

A total of 14 temporary trenches were completed during the delineation activities. Eight of the trenches (A, B, C, D, F, G, H, and I), located inside the Makai wall along the subsurface slurry wall, were found to contain measurable free product during the initial stage of the recovery operation and were used for product extraction. In addition, four exploratory trenches south of Lot 2 (north of Lot 3.5) were excavated but no product was detected.

<u>As the extent of product migration was determined, the temporary exploratory/recovery trench</u> network noted above was converted to a more permanent recovery system. The recovery network was subsequently converted or replaced by an engineered product recovery trench system consisting of the following:

Engineered Trench System. The onsite engineered extraction trench consists of four segments aligned parallel to the Makai wall from the northwestern corner to the southwestern corner of Lot 2. The extraction trenches were completed to a depth of approximately 8 feet bgs and backfilled with coarse fill to a depth of approximately 2 feet bgs. A fabric liner was placed on top of the backfilled material and the remaining depth of the trench was completed to ground surface with overburden. Extraction sumps were placed within the extraction trenches and spaced approximately 50 feet on center along the length of the trenches. The extraction sumps, consisting of 6-inch diameter screened polyvinyl chloride (PVC) casing, were completed to a depth of approximately 8 feet bgs and backfilled with coarse fill similar to the trenches. This work was initiated on 29 January 2015 and completed in February 2015.

• <u>Recovery Wells. Four recovery wells were constructed within the SI Facility perimeter wall but</u> outside the slurry wall (RW-A1 through RW-A4).

<u>On-Facility Recovery Sumps. Nine on-facility recovery sumps (ES-13 to ES-21) were constructed</u> around Tank 2. ES-13 and ES-14 were located at the northwestern corner of the SI Facility, while ES-15 through ES-21 were located in the immediate area around Tank 2.

 Inside Tank 2 Recovery Sumps. The scheduled replacement of the Tank 2 metal floor provided an opportunity to install a recovery system to extract product from beneath Tank 2. The recovery system around Tank 2 was dismantled and installed inside the tank; the system operated from 25 March 2016 to 27 July 2016. A total of 11, 4-inch-diameter recovery sumps



were installed to a depth of 10 feet below the tank floor. Approximately 1,182 gallons of free product were recovered from beneath Tank 2.

Off-Facility Recovery Sumps. Eleven off-facility recovery sumps (RW D1 through RW-D11) • were constructed in the area west of Lot 2 to recover the offsite jet fuel. These sumps were equipped with submersible extraction pumps.

Automated Extraction System. An automated extraction system was installed to allow for continuous product recovery. This system consists of pneumatically operated product skimmer pumps installed within selected extraction/recovery sumps. These pumps were controlled by a central control box and pump extracted fluids (product only) through a conveyance tubing and manifold system. From the manifold system, extracted fluids from the pumps are routed to one of two holding tanks (one for off-facility wells and one for on-facility recovery). The automated system was activated on 5 May 2015.

By February 2016, approximately 31,362 gallons of product were recovered onsite, and 1,944 gallons recovered offsite (total 33,306 gallons). No additional product was recovered from the offsite wells from the beginning of January 2016 while the amount of fuel recovered from the onsite wells dropped to "0" beginning in March 2016. In addition, 1,182 gallons of product were recovered from beneath Tank 2 from March to July 2016, bringing the total product recovered to approximately 34,488 gallons.

2.4.1.3 TANK 2 INVESTIGATION

As onsite and offsite free product recovery diminished, it was anticipated that some of the jet fuel remained beneath Tank 2 and was slow to migrate towards the recovery trenches. The scheduled replacement of the Tank 2 metal floor provided an opportunity to install a recovery system to extract product from beneath Tank 2. The recovery system around Tank 2 was dismantled and installed inside the tank on 25 March 2016.

To facilitate entry and exit of workers into and out of the tank, an opening/temporary door was cut on the side of Tank 2. Prior to the cutting operation, the air inside the tank was measured to ensure that the lower explosive limit was 0 percent, and a hot work permit was issued by ASIG daily to ensure that all required precautionary measures were met prior to the start of work.

A total of 11, 4-inch-diameter recovery wells were installed inside Tank 2 to a depth of 10 feet below the tank floor using an air knife and a vacuum truck/super sucker. All 11 recovery wells were identical in construction, with a 5-foot-long, 4-inch-diameter, slotted PVC casing and a 5foot-long blank sleeve. An interface probe capable of measuring 0.01-foot increments was used to measure the thickness of jet fuel in the recovery wells and the product thickness was verified using a plastic bailer.

The extraction pumps from ES-14 through ES-21 were used inside Tank 2 with the 200-gallon tote tank, equipped with an automatic shut-off switch to prevent overflow of the recovered fuel. Product recovery was initiated on 25 March 2016 and terminated on 21 July 2016, recovering approximately 1,182 gallons of jet fuel from beneath Tank 2.



2.4.1.4 INTERCEPTOR TRENCH INSTALLATION

To further prevent any migration of fuel from the impacted areas to the lagoon, an interceptor trench was installed between the SI Facility and the harbor shoreline. ERM finalized the design of the interceptor trench with approval from USEPA. Prior to the start of the interceptor trench installation, debris piles located along the proposed trench line were either relocated onsite or disposed of at the landfill. Subsurface clearance by a private utility locator was conducted following a One-Call utility clearing request.

The interceptor trench is located approximately midway between the Makai wall of the SI Facility and the harbor shoreline, on the intermediate DLNR property, and generally runs parallel to the Site. On 23 October 2015, HFFC obtained approval from the Board of Land and Natural Resources to construct the interceptor trench on state land. The executed Grant of Non-Exclusive Easement BOE-002 is attached in Appendix B of this report.

The interceptor trench is equipped with a high-density polyethylene geomembrane liner positioned on the western side of the trench toward the shoreline. Interceptor trench cross barriers, in the form of slurry blockades, were installed at locations spaced approximately every 150 feet along the trench to prevent possible lateral migration of jet fuel along the trench. The blockades are at least 24 inches wide. In addition to the bentonite blockage, a total of 14 monitoring wells were installed along the trench for future jet fuel migration monitoring.

2.4.2 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ORDER

The USEPA issued an Order on 30 January 2015 requiring ASIG and HFFC to submit a work plan for the removal, mitigation, or prevention of a substantial threat of oil discharge to Ke'ehi Lagoon and the Honolulu Harbor, which are hydrologically connected to Mamala Bay and the Pacific Ocean. The Order was performed in accordance with the National Contingency Plan, 40 CFR Part 300 and appropriate Regional Contingency Plan.

On 20 September 2016, the USEPA issued a Notice of Completion Letter stating that the emergency response undertaken by ASIG and HFFC for the 2015 fuel spill at the SI Facility Tank 2 had been completed to the satisfaction of the USEPA. The Notice of Completion Letter also indicated that the USEPA was transferring oversight of future monitoring and cleanup activities to HDOH.

The quarterly free product monitoring at the SI Facility continued under the oversight of HDOH. In July 2018, HFFC submitted a letter to HDOH requesting termination of the long-term monitoring groundwater monitoring due to absence of free product in both offsite and onsite monitoring wells associated with the 2015 spill. The more than two years of monitoring data indicated the absence of free product in all the monitoring and recovery wells including those on the interceptor trench. In addition to terminating the monitoring activity, HFFC also requested that all offsite monitoring and recovery wells be permanently and formally abandoned.

<u>On 7 April 2021, HDOH issued a No Further Action (NFA) determination letter with institutional</u> <u>control to HFFC for the 2015 spill. As part of the NFA, HFFC was required to develop an</u> <u>environmental hazard management plan for the Site. The environmental hazard management plan</u>



was prepared to provide guidance in managing potential hazards from fuel-impacted soil and groundwater at the Site from the 2015 spill and pre-existing contamination in Lot 3/3.5. In addition to the environmental hazard management plan, the land use for the Site was limited to commercial/industrial uses.

In 2021, under the Administrative Order on Consent (AOC), Docket No. OPA-311-09-2021-001, issued by the USEPA, HFFC and Signature Flight Support, LLC are responsible for enhancing the secondary containment of the SI Facility so that it is sufficiently impervious to contain any discharged oil until clean-up can occur. The AOC originally mandated completion of this secondary containment enhancement to be completed within three years of the effective date but the deadline was extended on 29 November 2023 through an approved USEPA modification to allow liner/pavement improvements to extend to 31 December 2028 (see Appendix C – HFFC Tank Bottoms Schedule Modification Approval Letter).

In addition, new double tank bottoms will be required in which existing tanks will install a concrete pad with an impermeable underlayer and a new steel tank floor at the SI Facility. The Tank 1 double bottom was installed prior to the 31 December 2020 AOC deadline, and double bottom installation in Tanks 3, 4, 5, and 15 was completed prior to the 31 December 2024 deadline. The remaining four tanks, 14, 16, 17, and 18, are slated to be complete well before the 31 December 2028 deadline.

It is worth noting that in addition to the requirements laid out in USEPA's AOC, this project and the corresponding Environmental Assessment address improvements to the storm drainage system to address the accumulation of stormwater due to current and future enhanced secondary containment within the SI-Facility.

2.5 PROJECT DESCRIPTION

Improvements to the stormwater drainage system at the SI Facility will include installation of approximately 31 collection stormwater drainage inlets, four larger lift stations with sump pumps, and an aboveground oil-water separator (OWS) (see Appendix <u>DBA</u> – Preliminary Construction Drawings). <u>The planned upgrades to the stormwater drainage system are intended to reduce the potential for standing water within the facility by automatically discharging accumulated runoff.</u> Eight of the stormwater drainage inlets will be equipped with small sump pumps to pump drainage to the remaining inlets, which will gravity drain to the four larger lift stations. The drainage inlets and lift stations will be connected via a network of above and underground drainage pipes which connect the lift stations to the OWS. The stormwater drainage system will be equipped with multiple mitigative measures to prevent possible inundation of the OWS. Primary mitigation measures consist of oil stop valves (OSV) installed at catch basins nearest each larger lift station to control localized spills to each quadrant of the site. Secondarily, the OWS will have integral controls and high-level oil alarms that will automatically shut off the lift station pumps and close the OWS effluent valve. Lastly, the OWS will have an integral hydrocarbon sensor to shut off the entire system should the OWS itself fail.

<u>Due to the location of the SI facility, there is no existing stormwater MS-4 infrastructure in the</u> <u>vicinity and thus the</u> The effluent of the OWS will be connected to a new sampling structure



located outside the containment wall but inside the facility fenced area. This sampling structure will serve as a location for annual testing of the stormwater discharge by public entities. The effluent from the sampling structure will then continue to an existing storm drainage inlet in the graveled parking area on the west side of the SI Facility. HFFC will acquire a 10- by 100-foot easement from the Department of Land and Natural Resources (DLNR) to facilitate construction and installation of the drainage pipe connecting the sampling structure and the existing storm drainage inlet. The stormwater system design as mentioned above (OSVs, OWS alarms and sensors) also includes a float sensor on the discharge of the system to prevent the stormwater pumps from turning on and overflowing in the event of a high tide or backup.

As indicated above, the stormwater drainage system will be equipped with multiple mitigative measures to prevent spilled fuel from leaving the Site including an OSV for controlling localized spills, an OWS that will automatically shut off the lift station pumps and close the OWS offsite effluent valve, and lastly, a hydrocarbon sensor in the OWS that would shut off the entire system should the OWS itself fail.

The proposed upgrade of the storm water drainage system at the SI Facility will trigger the need for the modification of the current SI Facility NPDES permit. Although the new drainage system will be equipped with multiple mitigative measures to prevent oil from migrating outside the facility, the NPDES permit may require a more stringent and frequent monitoring of the storm water effluent discharging into Ke'ehi Lagoon.

Minor grading of the Site will be required to direct the flow of stormwater to the catch basin inlets. <u>There will be approximately 4,500 cubic yards of soil excavated for site preparation of the new</u> asphalt pavement sections throughout the SI facility. Excavated soil during construction will be tested and re-used where possible or properly disposed, <u>see Section 3.1.2</u>, <u>Geology</u>, <u>Soils</u>, and <u>Geologic Hazards</u>, for additional information. The maximum depth of ground disturbance at the Site is estimated to be 5 feet below ground surface during installation of the <u>four</u> lift stations. <u>New</u> aggregate base course will be imported for asphalt pavement section drive paths. The goal for overall grading is to achieve net zero volume to maintain existing secondary containment capacity. Following completion of improvements to the stormwater drainage system, <u>an asphalt liner</u> pavement</u> and industrial spray <u>coating-coated geotextile</u> will be applied to the ground of the SI Facility, thereby increasing the imperviousness of the site surface.

The proposed enhancements will not lead to an increase in fuel storage capacity at the Site. The Project will require Special Management Area Permit approval and a Building Permit from the City and County of Honolulu Department of Planning and Permitting (DPP), and coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. The work will commence following issuance of permits and is anticipated to take 18 months to complete. Prior to project completion, HFFC will update the SI Facility NPDES permit to operate, as well as revise the Spill Prevention, Control, and Countermeasure, Stormwater Pollution and Prevention Plan (SWPPP), and Facility Response Plan to reflect the improvements at the Site.



2.6 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

Notice of the availability of the Draft Environmental Assessment was published in the 8 September 2023 Environmental Notice. Appendix EC contains comments on the Draft Environmental Assessment and the responses to these comments. Modifications to the Environmental Assessment have been made in various places in response to these comments and are denoted by double underlines.

2.6.1 ENVIRONMENTAL PROTECTION AGENCY

The <u>US</u>EPA was consulted during the development of alternatives for improving the secondary containment system and stormwater discharge operations at the SI Facility and approved the proposed Project as documented in Administrative Order on Consent No. OPA-311-09-2021-001 signed May 2021.

2.6.2 DEPARTMENT OF LAND AND NATURAL RESOURCES

Outreach with DLNR with commenced on 11 May 2018, during which the Project was introduced to Meghan Statts, Assistant Administrator, Division of Boating and Ocean Recreation, and Finn McCall, Engineering Branch, Division of Boating and Ocean Recreation. The discussion also addressed the request for a Right of Entry Agreement or Grant of Non-exclusive Easement to allow HFFC and its contractors to access DLNR property to install and maintain on DLNR property the discharge pipe from the Facility to the existing stormwater inlet. During subsequent correspondence, it was identified that DLNR's primary concern was the potential for a discharge of stormwater from the HFFC Facility to flood the adjacent parking lot if the outfall to the Ke'ehi Lagoon became blocked. HFFC clarified that the discharge would be conducted manually, and that a procedure would be noted in operational documents for the stormwater system for operating personnel to halt the discharge and notify proper personnel should a backup be observed. For the initial discharge of stormwater, a flowrate of approximately 3,000 gallons per minute (gpm) for 5 minutes is anticipated followed by a steady flow rate of 600 gpm. The frequency of discharge from the stormwater system was identified as 4 to 6 times per month, with a peak of 8 times during wet months based on historical averages. The average discharge would be 6 to 12 hours in duration, and it was estimated that a 10-year storm event could take 42 hours (2 days) to drain.

To mitigate possible flooding concerns, the current project design has incorporated a float sensor on the discharge inlet to prevent the stormwater pumps from turning on in the event of high tide or possible back-up into the future parking lot. This procedure will also be noted in operational documents for the stormwater system and corresponding SWPPP. The ~3000 gallons per minute (gpm) initial ~5-minute flow rate was based on gravity flow out of a full observation basin that had to be released manually per the original design concept, and the frequency was based on rainfall events large enough to fill the basin and warrant a manual release. With the new design the system will run at a constant 600 gpm flow rate during all rainfall events large enough to fill the lift stations. This will result in frequent but short duration discharges, except for when the pumps must run longer during major rainfall events. The conditions that would shut off the pumps would be any one of the following: OWS high level alarm, OWS effluent sensor oil detection, float sensor in discharge inlet detects high water level, or manual shutoff by the HFFC facility operator.



DLNR also enquired about the status of approval by <u>H</u>DOH of requisite plans. On 16 April 2021, HFFC was verbally informed that DLNR is <u>in agreement</u> <u>okay</u> with the <u>proposed</u> flow rates and frequency of discharge. A Right of Entry Agreement or Grant of Non-Exclusive Easement has yet to be issued <u>but is currently under development and anticipated to be in place prior to start of construction</u>.

2.6.3 KALIHI PALAMA NEIGHBORHOOD BOARD NO. 15

The Kalihi-Palama Neighborhood Board No.15 was consulted during a neighborhood meeting prior to the development of this Environmental Assessment. The community was informed of the Consent Agreement and Final Order issued by the <u>US</u>EPA and proposed scope of work. Burns & McDonnell received a letter of support from the neighborhood board in November 2022, expressing their understanding of the need for this Project and their support (Appendix <u>E</u>). Burns & McDonnell have agreed to provide status updates regarding the installation of the asphalt <u>liner</u> <u>pavement</u> and industrial spray <u>coated geotextile</u>, and to inform the neighborhood board of any incidents during installation whereby the surrounding environment is affected as requested in the letter in support of the Project.

3. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

3.1 PHYSICAL ENVIRONMENT

3.1.1 CLIMATE

The SI Facility is in a region with a mild semitropical climate, characterized by "mild temperatures throughout the year, moderate humidity, persistence of northeasterly trade winds, significant differences in rainfall within short distances, and infrequent severe storms" (National Weather Service 1983). The average yearly rainfall ranges from approximately 25 to 30 inches, with a tendency to be heaviest between October and April.

3.1.2 GEOLOGY, SOIL, AND GEOLOGIC HAZARDS

The SI Facility is located on the Southern coastal plain of O'ahu and is adjacent to Ke'ehi Lagoon Small Boat Harbor. The plain is on eroded flanks of the Koolau Volcano. Land reclamation projects, including dredging operations, have transformed the area over many years into its current state.

The Site is flat, ranging from approximately 0 to 5 feet above mean sea level. The U.S. Department of Agriculture, Soil Conservation Service, classifies this land as "Fill Land, Mixed", Class C. The geology at the SI Facility can generally be divided into three layers. The uppermost layer consists mostly of alluvium, such as silt, gravel, clay, and sand, to a depth of about 4 to 6 feet. Underneath this layer is loose lagoon deposits and gravel (silty and clayey), to a depth of about 20 feet. From approximately 20 to 25 feet in depth is a layer of hard coral. Water drains slowly through the soil due to its high density, porosity, and permeability.

The Site is located within a tsunami inundation zone; an earthquake on or near Hawai'i Island would be the most likely cause of a local tsunami on O'ahu. Tsunamis could also be generated by distant earthquake events. Tsunami alerts are issued in Hawai'i by the Pacific Tsunami Warning



Center using HNL.INFO, social media, mobile phone alerts, outdoor sirens, National Oceanic and Atmospheric Administration (NOAA) weather radio, and TV/radio based on four levels of alert: warning, advisory, watch, and information statement (City and County of Honolulu 2022).

Potential Impacts and Mitigation Measures

The underlying soil and geology at the \underline{sS} ite do not present any geologic hazards that require mitigation as part of the Project.

To address the potential for discovery of fuel contaminated soil, a Site-specific Construction-Environmental Health Management Plan (C-EHMP) will be developed prior to site mobilization. The C-EHMP will provide guidance on soil management and dewatering at the Site, as well as other precautionary measures and best management practices during construction. The C-EHMP will be submitted to HDOH for review and approval.

Prior to the start of grading/excavation work, the surface soil of the SI Facility will be precharacterized for waste disposal to the landfill. Pre-characterization of the surface will be performed based on the HDOH Technical Guidance Manual (July 2023) using multi increment sampling. Results of the pre-characterization will be submitted to PVT Landfill for approval. Precharacterization of the excavated soil will minimize stockpiling of dirt at the Site by trucking the excavated soils as they are generated. An estimated 4,500 cubic yards of soil will be excavated and removed from the site transported during project activities and disposed of at PVT Landfill located on the west side of O'ahu.

No impacts as a result of geology and soil are anticipated and therefore no mitigation measures are proposed. The Project is located in a tsunami inundation zone; as tsunami alerts are issued in Hawai'i by the Pacific Tsunami Warning Center, no additional mitigation measures are required. <u>The project does not include tsunami hazard mitigation measures, as is further discussed in</u> <u>Section 3.1.3 – Hydrology, Flood Zone, and Sea Level Rise.</u>

3.1.3 HYDROLOGY, FLOOD ZONE, AND SEA LEVEL RISE

According to Mink and Lau (1990), the groundwater in the area is within the Kalihi aquifer systems in the Honolulu Aquifer Sector with unconfined, basal hydrology and sedimentary soil (Aquifer Code 30103116) and confined, basal flank soil (Aquifer Code 30103121). The groundwater water table at the Site is a basal, unconfined sedimentary aquifer approximately 4 to 6 feet below ground surface and influenced by tidal fluctuations. The aquifer below the Site is not a source for drinking water and is not considered ecologically important. It has moderate salinity, is considered replaceable, and is highly vulnerable to contamination.²

Currently, the SI Facility has a NPDES permit (HI R80G838) although it does not discharge any stormwater outside of the SI Facility boundary. Infiltration and evaporation are primarily used in

² Basal is used to describe freshwater encountering seawater. An unconfined aquifer is an aquifer whose upper water surface (water table) is at atmospheric pressure and can rise and fall. A confined aquifer is bounded by impermeable or poorly permeable formations, causing it to be under pressure (Mink and Lau 1990).



the existing containment area for removing stormwater onsite. While the SI Facility is near the shoreline of Ke'ehi Lagoon, onsite operations do not impact the water quality of Ke'ehi Lagoon.

The Site is located in an area designated by the National Insurance Flood Program as Special Flood Hazard Area Zone AE, a high flood hazard district subject to inundation by 1 percent annual chance of flood (i.e., the 100-year flood zone) (Figure 43). Insurance requirements for this zone do not apply to the SI Facility as it is not a walled and roofed structure. The Site is also subject to sea level rise and is within the modeled benchmark scenario of 3.2 feet of sea level rise by the end of the century based on passive inundation, coastal erosion, and annual high wave runup (Figure 43).

Sea level rise guidance issued by the City and County of Honolulu Climate Commission in 2018 establishes 3.2 feet of sea level rise as the planning benchmark for most development and considers 6 feet of sea level rise as a planning benchmark for critical infrastructure with expected long lifespans and low risk tolerance (Courtney et al., 2020). The Climate Change Effects chapter of the City and County of Honolulu Multi-Hazard Pre-Disaster Mitigation Plan recommends that City government should plan and determine how to execute public works to protect existing critical facilities and infrastructure and vital economic assets at risk to climate change effects, calling for public works planning and preliminary engineering feasibility studies for options for various locations with developed assets that are not economically feasible to abandon or relocate, including Sand Island access (City and County of Honolulu 2020).

Potential Impacts and Mitigation Measures

In June 2021, <u>the Hawaii Department of Health (HDOH)</u> issued a memorandum discussing concerns posed by climate change and sea level rise on contaminated lands in coastal areas of Hawaii, including petroleum-impacted sites similar to the SI Facility. The memorandum identifies potential impacts of sea level rise to human health and the environment, provides recommendations on steps to address increased hazards from sea level rise, and solicits input on the development of additional guidance, policies, and regulations. Submersion of petroleum contamination from sea level rise and the presence of impervious surfaces creates a strongly anaerobic environment conducible to methane and hydrogen sulfide gas production in the subsurface soil. This creates a significant health and safety hazard as methane is an explosive compound when mixed with the right proportion of oxygen in the presence of a spark or flame, and hydrogen sulfide is flammable and toxic at low concentrations. <u>H</u>DOH recommends considering the implementation of remediation and adding engineering controls to address potential buildup of vapors in the subsurface soil and under structures at petroleum-contaminated sites along the coast (HDOH 2021).

To mitigate potential impacts from sea level rise at the SI Facility associated with the buildup of subsurface gas, the Project will include the installation of a passive subsurface venting system via vertical perforated pipe that will allow oxygen into the subsurface to promote aerobic degradation of methane and allow subsurface gases to vent to open atmosphere. This design feature, <u>which</u> was approved by HDOH on 1 November 2023, will be similar to that installed at the former Shell



Honolulu fuel distribution terminal located at 789 North Nimitz Highway, Honolulu (AECOM Technical Services, Inc. 2020).

The scope of this project is to improve stormwater infrastructure to address ponding within the facility and enhance secondary containment per the USEPA AOC (Appendix A). The sea level rise design referenced in this Environmental Assessment is based solely on the HDOH Sea Level Rise memorandum regarding potential future accumulation of methane gas under the proposed containment pavement. The overall impact of a 3.2- to-6-foot sea level rise at the facility is beyond the scope of this project. However, it is worth noting the SI Facility has a concrete containment dike wall around its perimeter. The minimum top elevation of the wall is 8.19 feet Mean Lower Low Water.

The tsunami hazards for the facility are discussed in Section 3.1.2 Geology, Soils, and Geological Hazards. Although a tsunami could damage the Site infrastructure and create inundation, the stormwater structures at the SI Facility are classified as Tsunami Risk Category II. Per the 2018 International Building Code and the Hawaii State Building Code, only Risk Category III and IV structures are subject to tsunami design requirements. This project does not include any modifications to Risk Category III or IV structures. The risks to the facility by a tsunami will not be affected by this project. Therefore, there are no proposed tsunami hazard mitigation measures.

HFFC has indicated it is not aware of any long-term plans by DOT to relocate the SI Facility.



FIGURE 4 FEMA FLOOD ZONE AND SEA LEVEL RISE





3.1.4 FLORA AND FAUNA

The 8.4-acre Site is within a highly disturbed industrial area approximately 200 feet east of Ke'ehi Lagoon, which is connected to Mamala Bay and the Pacific Ocean. It is in close proximity to navigable waters and entirely within the SMA.

A biological resource desktop review was conducted to assess the biological setting and potential to occur for special-status species and sensitive biological resources. This analysis was conducted by reviewing a 5-mile search radius of applicable databases including:

- U.S. Fish and Wildlife Service's Information, Planning, and Conservation System (IPaC) database
- U.S. Fish and Wildlife Service, Pacific Islands Office Critical Habitat database
- The Division of Forestry and Wildlife's threatened and endangered plant species maps

Based on the desktop review, no threatened and endangered species have potential to occur within the Project Site and there is no overlapping U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration (NOAA) designated Critical Habitat.

A field-based survey of the Project Site and Biological Survey Area (Figure 2) was conducted on 12 May 2023. Terrestrial flora found at the Project Site include common native and introduced species associated with highly disturbed ruderal areas. These include:

- Shepherd's needles (*Biden alba*)
- Indian marsh fleabane (*Pluchea indica*)
- Saltgrass (Distichlis spicata)
- Bur bristlegrass (Setaria adhaerens)
- Coastal sandalwood (Santalum ellipticum)
- Saltwort (*Batis maritima*)
- White leadtree (*Luecaena leucocephala*)
- Bitter melon (*Momordica charantia*)
- Kerosene tree (*Cordia subcordata*)
- White bougainvillea (*Bougainvillea glabra* `alba')
- Rubber vine (*Cryptostegia grandiflora*)
- Singapore plumeria (*Plumeria obtuse*)
- Prostrate globe-amaranth (*Gomprena celosioides*)
- Sea purslane (Sesuvium portulacastrum)
- Fringed passionflower (*Passiflora sp.*)
- Swollen fingergrass (Chloris barbata)
- Rattlebox (Sesbania punicea)
- Red mangrove (*Rhizophora mangle*)
- Seaside heliotrope (*Heliotropium curassavicum*)



- Croton gold dust (Codiaeum variegatum)
- Catsear (*Hypochaeris radicata*)
- Several ornamental tree species

There were no onsite observations within the Biological Survey Area (Figure 2) of plant species considered to be sensitive or listed threatened or endangered, or otherwise considered to be rare or special by the State of Hawai'i or federal government.

Terrestrial fauna observed within the Biological Survey Area include the following species:

- Common Myna (*Acridotheres tristis*)
- House finch (*Haemorhous mexicanus*)
- House sparrow (Passer domesticus)
- Java sparrow (Padda oryzivora)
- Rock pigeon (Columba livia)
- Spotted dove (Spilopelia chinensis)
- Zebra dove (Geopelia striata)

Common transient seabirds may be present along the shoreline and boat harbor areas; however, the Project Site and adjacent shoreline are not characteristic of quality nesting habitat. Cats and rodents may also inhabit the area based on the location of adjacent lots, areas, and the Ke'ehi Lagoon Boat Harbor.

Potential Impacts and Mitigation Measures

As no threatened and endangered species were identified as having potential to occur within the Project Site and there is no overlapping U.S. Fish and Wildlife Service or NOAA designated Critical Habitat, no impacts to special-status species are anticipated as a result of the Project. Furthermore, the work is being performed within a disturbed industrial site that is currently operational. No mitigation measures are proposed.

3.1.5 AIR QUALITY

The State maintains three air monitoring stations on Honolulu, one of which is on Sand Island approximately 1.6 miles southeast of Ke'ehi Harbor and the Project Site. Air quality in the area of the proposed Project is generally good according to the U.S. Air Quality Index (AQI) standards. The AQI readings are aggregated from the main pollutants found in the air, both in Honolulu and worldwide, with ones such as nitrogen dioxide, sulfur dioxide, ozone, carbon monoxide, and the two main forms of fine particles, PM2.5 and PM10 being used to calculate the overall U.S. AQI reading. Air quality on Honolulu is primarily affected by fumes and emissions given off by vehicles, including motor vehicles travelling on nearby roads and aircraft activity at the nearby HNL approximately 1.5 miles west from the Project Site, across Ke'ehi Lagoon. Other sources of air pollution would be emissions from the Honolulu power plant approximately 1.9 miles southeast of the Project area and natural volcanic emissions causing volcanic smog from Kilauea on the island of Hawai'i. Volcanic smog concentrations are primarily dependent on the amount of volcanic gases



emitted from a volcano, the distance from the source vent, and the wind direction and conditions on a given day.

Potential Impacts and Mitigation Measures

Construction activities will result in short-term impacts to air quality. Construction activities may temporarily increase emissions related to the use of construction vehicles and equipment. Preparation of the construction site, ground disturbance, grading, and building and construction will likely create short-term particulate emissions. Implementation of best management practices (BMPs) will minimize construction-related impacts in the vicinity of the Site. All construction activities will be in compliance with the Department of Health Hawai'i Administrative Rules (HAR) Title 11, Chapter 59, Ambient Air Quality Standards and the requirements of HAR §11-60.1-33, Fugitive Dust. Construction equipment will utilize technology and standards that meet State and Federal air quality requirements. The Project will not result in any changes to the operation of the SI Facility, therefore long-term impacts on air quality are not anticipated.

3.1.6 NOISE

Ambient noise level in the Project area is consistent with an urban setting and predominantly influenced by the combined noise levels of vehicular traffic travelling on public roads, recreational activity at the nearby harbor and marina, and human activities related to the various nearby commercial uses along the shoreline of Ke'ehi Boat Harbor adjacent to the Project Site and the Honolulu Harbor and associated shipping yards east of the Project Site. Other ambient noise is associated with aircraft overflight connected to HNL approximately 1.5 miles west of the Project Site, across Ke'ehi Lagoon. No sensitive receptors are located in close proximity to the Project Site.

Impacts and Mitigation Measures

The Project may result in audible noise impacts in localized areas generated by construction vehicles, heavy equipment, and impact tools not generally associated with daily operations at the Project Site and may affect neighboring properties. However, construction noise will be temporary and short-term, and no sensitive receptors are in proximity to the Project Site. Mitigation of Project-related activities to inaudible sound levels will not be practical due to the nature of planned Project activities and equipment to be used. The ambient noise will periodically increase in the proximity of the Project work areas due to the necessary operation of construction equipment (e.g., trucks, equipment, generators, compressors, etc.). Temporary construction-related increases in sound levels will cease upon the completion of the Project.

The Project will comply with <u>H</u>DOH Administrative Rules, Title 11, Chapter 46 "Community Noise Control" regulations. The <u>H</u>DOH Community Noise Rule specifies that the maximum permissible sound level in industrial areas is 70 decibels (dBA) during both daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.), at or beyond the property line. Noise levels are not to exceed 70 dBA more than 10 percent of the time within any 20-minute period, and the maximum permissible sound level for impulsive noise is 10 dBA above the maximum permissible sound level (i.e., 80 dBA). In cases where the construction sound level exceeds or is expected to exceed the <u>H</u>DOH's


maximum permissible noise levels, the contractor will obtain a noise permit from the <u>H</u>DOH. Additionally, the contractor will obtain a Community Noise Variance from the <u>H</u>DOH should construction be required during the variance hours defined as starting before 7:00 a.m. and after 6:00 p.m., Monday through Friday, or before 9:00 a.m. and after 6:00 p.m. on Saturdays, or at any time on Sundays and holidays. It will be the contractor's responsibility to obtain the permit and comply with the permit conditions.

3.1.7 SCENIC RESOURCES

The Project Site is located in an industrial area adjacent to the Ke'ehi Lagoon and the Ke'ehi Boat Harbor. Partial views of the mountains of Keaiwa Heiau State Recreation Area to the north are obstructed by power lines, utility poles, and storage tanks. The view to the east is generally obstructed by storage tanks and allows for only a partial view of the mountains of the Kalihi Valley. To the east of the Project Site is the Sand Island Access Road and the Kapalama Container Terminal. The Project Site does not contain any sites that are considered significant for their scenic character in the O'ahu General Plan. Representative photos of the site and surrounding area are provided below.

Potential Impacts and Mitigation Measures

There are no anticipated impacts on visual resources after completion of the Project. The Project does not propose the building, installation, or construction of any structure that would change the existing view plane. No significant short-term or long-term impacts on visual resources are anticipated during construction of the proposed Project as all proposed work will occur at surface or subsurface level.





Photo 1. View to the north outside of the west side of the SI Facility



Photo 2. Obstructed view to the west toward Ke'ehi Harbor from inside the SI Facility.





Photo 3. View to the west toward Ke'ehi Harbor.



Photo 4. View to the south outside of the west side of the SI Facility.



CLIENT: Hawai'i Fueling Facilities Corporation Burns & McDonnell Engineering, Inc. PROJECT NO: 0682737 DATE: 28 March 2024 VERSION: 01



Photo <u>65</u>. View to the east from outside of the west side of the SI Facility obstructed by tanks.

3.1.8 HAZARDOUS SUBSTANCES, TOXIC WASTE, AND HAZARDOUS CONDITIONS

The SI Facility has a total of 16 ASTs for storing jet fuel. In addition, there are underground pipelines transferring jet fuel from Pier 51 crossing the Kalihi Channel, and from the SI Facility to HNL crossing Ke'ehi Lagoon (ERM 2021). Jet fuel is a hazardous, combustible liquid containing ingredients such as kerosene, benzene, and toluene. Jet fuel is classified by the Department of Transportation as Class III Packing Group III, a flammable liquid with a flash point between 23 and 60 degrees Celsius (73 to 140 degrees Fahrenheit). When released into the environment, jet fuel can contaminate soil, groundwater, and waterways. It is toxic to aquatic organisms and humans, with the potential to cause organ damage, irritation, and other health hazards. Unless the jet fuel is contaminated or changed, it is not considered hazardous waste if properly disposed (ERM 2020).

There has been one reported significant leak at the Site. During this release in 2015, approximately 42,000 gallons of jet fuel leaked from the bottom of Tank 2. While the majority of the jet fuel was contained within the property boundary of the SI Facility, some of the released jet fuel migrated below the underground perimeter slurry wall and towards Ke'ehi Lagoon. The Pipeline and Hazardous Material Safety Administration issued a Notice of Proposed Safety Order (Reference No. CPF 5-2015-6002S) after the 2015 spill. The safety order outlined requirements that HFFC needed to incorporate at the Site to prevent future spills, such as upgrading tanks and inventory control procedures (ERM 2023). As part of the updated Spill Prevention, Control, and



Countermeasure Plan, response procedures were developed to protect the environment and public health in the event of another significant release.

During construction of the Project, hazardous substances used onsite will be limited to fuel and lubricants for construction equipment.

Potential Impacts and Mitigation Measures

Implementation of the stormwater system upgrade will improve secondary containment measures at the SI Facility and minimize the potential for a future hazardous spill to migrate offsite should one occur. During construction activities, the contractor will be required to comply with all applicable State regulations regarding work with hazardous materials. No additional mitigation measures are required.

3.2 SOCIOECONOMIC AND CULTURAL

3.2.1 SOCIOECONOMIC

The approximate population for the Kalihi-Palama area in 2021 was 39,966 and the median household income was \$54,524, based on the City and County of Honolulu DPP Annual Report on the Status of Land Use on O'ahu for Fiscal Year 2021. In 2021, the total amount of housing units in Kalihi-Palama was 5,083. The predominant race is Asian alone (~62 percent), followed by Native Hawai'ian and Other Pacific Islander alone (~20 percent), and two or more races (12 percent) (City and County of Honolulu DPP).

Potential Impacts and Mitigation Measures

The Project will have a beneficial effect on the economic and social welfare by providing shortterm construction employment. The Project is not expected to have a long-term impact on the socioeconomic characteristics of the Kalihi-Palama District as there will be no long-term increase in employment at the SI Facility. Additionally, the Project will neither add nor remove housing. The proposed work will help protect the health characteristics of Kalihi-Palama District by improving containment systems and preventing potential adverse impacts to human and environmental health.

3.2.2 CULTURAL AND HISTORIC RESOURCES

A topographic map from 1928 shows the location of the SI Facility to be offshore in the waters of what is now the Ke'ehi Boat Harbor, indicating it is located west of the original shoreline. This area is unlikely to contain cultural resources as it is man-made land that was created using dredged material from the nearby ocean. Five fishing ponds are depicted on the 1928 map with the closest to the SI Facility being either Auiki Pond or Ananoho Pond; however, both of these ponds were filled during World War II and an Army port and warehouse complex was built over. As the SI Facility is west of these ponds, excavations for the Project will not pose a risk to the pond walls if they are still intact.

The SI Facility is first depicted on land in 1953, suggesting that it is located on land that was created by reclamation projects that enlarged "Sand Island". One of these reclamation projects



included the creation of a seaplane channel immediately west of the SI Facility. Aerial imagery from the period does not depict any permanent structures on the newly created land and the area appears sandy. In contrast, by 1968, the area had been industrialized and a recreational pier as well as storage tanks are immediately obvious in the surrounding area. This trend continues and intensifies up to the modern day with the SI Facility currently surrounded by paved areas, suggesting the original soil horizon has been thoroughly disturbed and historic-era cultural resources are unlikely to occur. Additionally, a field inspection for the creation of a shipyard immediately west of the SI Facility in 2006 included a Site visit that recorded soils as fill and the surrounding area as thoroughly impacted. Any non-paved soils were recorded as fill with some coral noted. Similarly, the Environmental Impact Statement for Kapalama Container Terminal Project 50 feet east of the Facility came to a similar conclusion, noting that archaeological studies in the surrounding area have had limited results with major finds located along the pre-contact coastline.

As the Facility is located west of the pre-contact shoreline and currently consists of fill with much of the area covered with pavement, a cultural survey of the area will not provide any additional insight into the surrounding area or potential impacts of the proposed work activities. As such, in accordance with HAR §13-284-5, a letter was submitted to the State Historic Preservation Division (SHPD) on 5 June 2023 requesting concurrence from SHPD that the Project will have no historic properties affected and a cultural survey is not required (Appendix <u>FC</u>). The response from SHPD will be submitted to DPP upon receipt.

Potential Impacts and Mitigation Measures

There are no known historic or cultural resources at the Project Site and the location is unlikely to contain cultural or historic resources as it is man-made land that was created using dredged material. Nonetheless, in the unlikely event that any cultural or historic remains or other potentially significant subsurface resources are encountered, HFFC will require its contractor to immediately halt construction activities and notify SHPD of the discovery. <u>Subsequent work shall proceed only upon an archaeological clearance from the State Historic Preservation Division, Department of Lands and Natural Resources.</u>

3.3 INFRASTRUCTURE

3.3.1 UTILITIES

Electrical service is currently provided to the Site by the Hawai'ian Electric Company. Potable water is provided by the Honolulu Board of Water Supply. The SI Facility Response Plan developed by ERM states that liquid waste or wastewater generated during a spill recovery operation, will be transported for recycling at the HFFC Airport Facility with approval from the <u>H</u>DOH.

Recovered wastewater generated during water drawdown at the SI Facility is transferred to the HFFC Airport Facility and discharged into an underground OWS. The OWS effluent discharges into two holding tanks (Tank 111 or 113) and is treated through bioremediation using a submersible aerator system. The wastewater is tested for contaminants prior to discharging it into an underground injection well, in compliance with the HFFC Underground Injection Control Permit.



The recovered fuel from the OWS is collected into Tank 114 to be sold as "off-spec" fuel to local vendors.

Small amounts of non-combustible solid waste generated during spill recovery operation and remediation, is stockpiled onsite for aeration. The solid waste is tested prior to disposal or re-use onsite. Disposal of fuel-impacted soil during a significant spill recovery operation is arranged <u>thru</u> <u>through</u> Pacific Environmental Corporation who serves as the Oil Spill Removal Organization for HFFC.

Potential Impacts and Mitigation Measures

No new utilities will be required at the Site and no adverse impacts to the existing utilities are anticipated; therefore, no mitigation measures are prescribed.

3.3.2 ROADS AND PARKING

The SI Facility is primarily accessed via Sand Island Access Road or Hawai'i Route 64, a stateowned, north-south, four-lane road that stretches from Nimitz Highway (Hawai'i Route 92) to the entrance of Sand Island State Recreation. The posted speed limits at Sand Island Access Road range from 25 to 35 miles per hour. As of 2019, the Hawai'i Department of Transportation measured the average daily traffic count at the Sand Island Access Road at approximately 19,000 vehicles (Innergex Renewable Energy 2021).

Access to the SI Facility is limited to authorized personnel only. Visitors to the Site are required to be escorted at all times and contractors doing work at the Site are required to have a Transportation Worker Identification Credential card. The SI Facility parking lot is in the northeast corner of Lot 2 adjacent to the SI Facility's main entrance.

In terms of fire department access to the SI Facility, the Site is adjacent to the west side of the Sand Island Access Road and can be accessed from this road. The existing driveways provide access to within 150 feet of the buildings onsite; no portion of the facility is 150 feet from a 20foot-wide access drive. No changes to facility access will occur as part of this project. Fire hydrants exist along both sides of Sand Island Access Road in the vicinity of the SI Facility. No changes to the existing fire water supply will occur as a result of this project. Additionally, the SI Facility contains a Fire Foam Building that houses a fire suppression system.

Potential Impacts and Mitigation Measures

The proposed storm drainage system upgrade at the SI Facility may temporarily increase traffic on Sand Island Access <u>FR</u>oad due to construction vehicles and equipment accessing the Project Site. No long-term impacts to traffic will occur as the storm drainage system upgrades will not affect operations at the SI Facility. No mitigation measures are prescribed.

3.4 SECONDARY AND CUMULATIVE IMPACTS

Secondary impacts of a project are indirect effects on the environment, such as population growth or change in land use, that may occur in the foreseeable future. Cumulative impacts occur when



the individually limited impacts from past, present, and future local projects combine to have collectively significant impact.

No secondary impacts or cumulative impacts are anticipated as the work will be performed at an existing facility and is limited to enhancing the existing secondary containment and stormwater drainage systems without an increase in the fuel storage capacity. As noted above, enhancement of the secondary containment of the tanks at the SI Facility is underway and scheduled to be complete by 2028, consistent with the Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the <u>US</u>EPA. A search of the City and County of Honolulu DPP website on 15 June 2023 for projects open for public input did not identify any projects in the vicinity of the SI Facility, although there are plans to pave the parking lot at the Ke'ehi Small Board Harbor at some point in the future.

Personnel performing the proposed work will be from the local area or other parts of Hawai'i. This work will not change the intended function of the SI Facility, nor include or promote construction of new housing units or businesses. Therefore, the Project is not expected to cause any long-term increases in population or traffic in the area.

4. POSSIBLE ALTERNATIVES

4.1 NO ACTION

A "No Action" alternative would mean that no improvements are undertaken at the SI Facility. This alternative would not help to improve the existing stormwater drainage systems and secondary containment facilities. Without improvements, the SI Facility will continue to pose a potential threat to wildlife, natural resources, and public health. Additionally, the HFFC and SFS would fail to comply with the agreed-upon actions outlined in the Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the <u>US</u>EPA. By violating the terms of agreement in the Consent Agreement, the HFFC and SFS may be subject to civil penalties per day of violation following the day performance is due.

4.2 SLURRY WALL IMPROVEMENTS

The slurry wall improvements alternative would involve improving the existing underground slurry containment wall at the SI Facility that is part of the Spill Prevention, Control, and Countermeasure Plan for the Site. The slurry wall is a vertical hydraulic barrier made up of concrete mix with bentonite suspension, and improvements would need to comply with standards for depth and Quality Assurance / Quality Control as provided in the Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the <u>USEPA</u>. The optimum depth for the upgrade would be based on geological data of the Site, the existing slurry wall design, and subsurface geotechnical information. A treatability study specific for the Site would determine the best mixture ratios of concrete, bentonite, and reagents (if any). Additionally, implementation of the slurry wall upgrade would require defining any subsurface, aerial, or access interferences. Other considerations that could impact the alignment or construction of the wall include presence of utilities, bedrock or irregular surfaces, existing cap impacts, and waste soil and water management and disposal requirements.



This alternative was proposed to the <u>US</u>EPA; but after thorough consideration, it was not selected due to potential complications during construction.

4.3 STORMWATER SYSTEM UPGRADES (PREFERRED ALTERNATIVE)

The proposed Project consists of upgrading the stormwater system through the installation of an asphalt <u>liner pavement</u> on roads used for driving and industrial coating on all other areas throughout Lots 2, 3, and 3.5, and installing improvements to the storm drainage system at the SI Facility. The Project complies with the Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the <u>US</u>EPA.

5. REQUIRED PERMITS AND APPROVALS

5.1 CITY AND COUNTY OF HONOLULU

Permit/Approval	Agency
Building Construction Permit	Department of Planning and Permitting
Special Management Area Use Permit	Department of Planning and Permitting
Electrical Permit	Department of Planning and Permitting
Mechanical/Plumbing Permit	Department of Planning and Permitting
Civil Engineering Branch (CEB) Plan Review	Civil Engineering Branch
Grading Permit	Civil Engineering Branch
Site Development Permit	Civil Engineering Branch
Stockpiling Permit	Civil Engineering Branch
Special Management Area Use Permit	Honolulu City Council

5.2 STATE OF HAWAI'I

Permit/Approval	Agency
Community Noise Permit	Department of Health
Construction Environmental Hazard Management Plan approval	Department of Health
Subsurface Aeration & Ventilation approval	Department of Health
С-ЕНМР	Department of Health Hazard Evaluation and Emergency Response Office
Sea Level Rise Certification	Department of Health Hazard Evaluation and Emergency Response Office
DCAB	Department of Health Disability and Communication Access Board
Stormwater Management Plan: Construction Site Runoff Control Program	Department of Transportation Airports



Permit/Approval	Agency
Construction Connection Discharge Surface Runoff Permit	Department of Transportation Airports
Design Review Checklist – Projects Greater Than One Acre	Department of Transportation Airports
Tenant Improvement Plan Approval/Permit to Perform Work on State Airport Property	Department of Transportation Airports

5.3 FEDERAL

Permit/Approval	Agency
FAA 7460 Notifications	Federal Aviation Administration
FAA 7460 Notifications - Construction	Federal Aviation Administration
Construction Stormwater General Permit	National Pollutant Discharge Elimination System c/o <u>H</u> DOH Clean Water Branch
General Permit Authorizing Discharges Associated with Construction Activity Dewatering	National Pollutant Discharge Elimination System c/o <u>H</u> DOH Clean Water Branch

6. CONSISTENCY WITH GOVERNMENT PLANS AND POLICIES

6.1 HAWAI'I STATE PLAN

The Hawai'i State Planning Act, Hawai'i Revised Statute (HRS) §226-3, provides a guideline for the long-range development of the state. The plan was adopted in 1978 and was most recently amended in 1991. The theme of the plan involves three overarching principles: individual and family self-sufficiency, social and economic mobility, and community or social well-being. This Project is in alignment with the goals and objectives of the Hawai'i state plan by improving upon facility objectives to protect environmental well-being and public health.

6.2 O'AHU GENERAL PLAN AND ZONING

The O'ahu General Plan is a comprehensive policy document outlining the city's objectives and policies for the long-range development of the island. The most recent version was adopted in December 2021. It is divided into 11 subject areas based on public needs and governmental functions and aims at helping decision making regarding land use and development. Based on the proposed scope of work, the following sections are most applicable:

<u>Natural Environment and Resource Stewardship, Objective A, Policy 6</u>: "Design and maintain surface drainage and flood-control systems in a manner which will help preserve natural and cultural resources."

<u>Natural Environment and Resource Stewardship, Objective A, Policy 7</u>: "Protect the natural environment from damaging levels of air, water, carbon, and noise pollution."



The SI Facility is in land designated as Waterfront Industrial District (I-3) by the County. This designation includes facilities that are necessary for the efficient operation and performance of port functions, as stated in Sec. 21-3.130 of the Honolulu Code of Ordinances.

6.3 HAWAI'I STATE LAND USE LAW

As stated by the State Land Use Commission, pursuant to HRS §205-2, there are four land use categories in the state of Hawai'i: Urban, Rural, Agricultural, and Conservation. The SI Facility is located on land designated as a State Urban District (Hawai'i Statewide GIS Program 2022). Urban land districts are currently in urban use and are expected to have urban growth in the future. The surrounding area is developed and predominantly industrial use. The Project is in alignment with this land use designation and there are no proposed changes to the current land use.

6.4 HAWAI'I COASTAL ZONE MANAGEMENT PROGRAM

Hawai'i's Coastal Zone Management (CZM) Program, established pursuant to Chapter 205A, HRS, as amended, is administered by the State of Hawai'i, Office of Planning and Sustainable
Development. The CZM Act involves a system of permits, including the SMA use permit, to manage development within coastal areas and encourage public participation. For the City and County of Honolulu, the SMA permit process is administered by the Department of Planning. The CZM program outlines management objectives centered around 10 areas: 1) Recreational
Resources; 2) Historic Resources; 3) Scenic and Open Space Resources; 4) Coastal Ecosystems;
5) Economic Uses; 6) Coastal Hazards; 7) Managing Development; 8) Public Participation in
Coastal Management; 9) Beach Protection; and 10) Marine Resources. All lands within the State of Hawai'i fall within the CZM area. As described below, the proposed Project is consistent with several of the objectives of the CZM program.

Recreational Resources

Objectives. Provide coastal recreational opportunities accessible to the public.

Policies. Improve coordination and funding of coastal recreational planning and management; and

Provide adequate, accessible, and diverse recreational opportunities in the CZM area by:

- 1. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
- 2. Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;
- 3. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
- 4. Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;



- 5. Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;
- 6. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;
- 7. Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and
- 8. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of Section 46-6.

While the SI Facility is within the SMA, it is not a recreational resource, and the secured facility is not accessible to the public. The proposed Project will not affect access to surrounding recreational opportunities within the SMA, including the Ke'ehi Lagoon and Small Boat Harbor. Improvements to the stormwater system address potential sources of pollution and is therefore consistent with recreational objectives. Failure to incorporate the proposed improvements could result in damage to nearby recreational resources in the case of another jet fuel release. As such, improvements proposed by the USEPA order are imperative for the protection of local recreational resources.

Historic Resources

<u>Objectives</u>. Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies. Identify and analyze significant archaeological resources;

Maximize information retention through preservation of remains and artifacts or salvage operations; and

Support state goals for protection, restoration, interpretation, and display of historic resources.

No known historic resources would be endangered by the Project. Burns & McDonnell shall require its subcontractor to comply with all State and County rules and laws pertaining to historic preservation. Construction activities will be halted and SHPD will be notified in the event any unanticipated archaeological or historic sites are encountered.

Scenic and Open Space Resources

<u>Objectives</u>. Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies. Identify valued scenic resources in the coastal zone management area;

Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;



Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

Encourage those developments that are not coastal dependent to locate in inland areas.

The Project involves upgrading a stormwater system within an existing fenced industrial facility consisting of work primarily below ground and at ground level. As such, the Project will not diminish coastal scenic view areas or open space resources.

Coastal Ecosystems

<u>Objectives</u>. Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

<u>Policies</u>. Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

Improve the technical basis for natural resource management;

Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

The Project is not expected to disrupt or degrade coastal water ecosystems. <u>Without implementing</u> <u>the proposed improvements, coastal ecosystems will continue to face potential threats that could</u> <u>cause substantial harm, such as water pollution and harm to marine species and ecosystems.</u> Burns & McDonnell's subcontractor will be responsible for implementing a stormwater management plan and controlling runoff that can transport loose soil, excess nutrients, and other pollutants. A NPDES permit will be required to comply with BMPs during construction.

Economic Uses

<u>Objectives</u>. Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies. Concentrate coastal dependent development in appropriate areas;

Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:



- 1. Use of presently designated locations is not feasible;
- 2. Adverse environmental effects are minimized; and
- *3.* The development is important to the State's economy.

The Project involves upgrading an existing stormwater system within an existing industrial site and does not involve new coastal development; therefore, the policies pertaining to coastal economic development do not apply.

Coastal Hazards

<u>Objectives</u>. Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

<u>Policies</u>. Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;

Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

Prevent coastal flooding from inland projects.

Coastal hazards are not expected to be exacerbated by the Project. The Project includes the installation of improved onsite drainage systems that address the quality of stormwater leaving the Site, which would help to reduce nonpoint source pollution <u>and reduce potential hazards to</u> <u>coastal life, such as another jet fuel spill.</u>

Managing Development

<u>Objectives</u>. Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

<u>Policies</u>. Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development; Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

The Project does not impact or influence the development review process. The environmental review process includes opportunities for public participation and comments pertaining to a variety of issues and topics including coastal resources and hazards.

Public Participation

<u>Objectives</u>. Stimulate public awareness, education, and participation in coastal management. <u>Policies</u>. Promote public involvement in coastal zone management processes;



Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and

Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

The environmental review process provides public participation opportunities.

Beach Protection

<u>Objectives</u>. Protect beaches for public use and recreation.

<u>Policies</u>. Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;

Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

Minimize the construction of public erosion-protection structures seaward of the shoreline.

Public access to beach areas will not be affected by the Project. The Project does not involve the construction of erosion-protection structures seaward of the shoreline.

Marine Resources

<u>Objectives</u>. Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

<u>Policies</u>. Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

The Project involves improving an existing stormwater system at an industrial facility and does not involve the use or development of marine and coastal resources. <u>The proposed actions will protect</u> resources by mitigating the impacts of a potential worst-case discharge by improving the containment capabilities of the Site infrastructure.



6.5 PRIMARY URBAN CENTER DEVELOPMENT PLAN

The Primary Urban Center Development Plan (PUCDP) was adopted by the City and County of Honolulu in 2004 per Section 6-1509 of the Revised Charter of the City and County of Honolulu 1973 that outlines the requirements for development plans. The PUCDP was developed to be used as a framework to support long-term detailed planning at the neighborhood level for the Primary Urban Center, one of the eight planning areas in Honolulu. The Primary Urban Center extends across Oahu's southern shore from Waialae-Kāhala to Pearl City and extends inward from the shoreline to the Koolau mountain range. According to map A.5: Land Use Map PUC – Central of the PUCDP, the SI Facility falls within an area proposed as "Major Parks and Open Space." However, because the existing structures at the SI Facility were constructed in 1968, prior to the development of the PUCDP, the existing zoning (I-3 Waterfront district) applies until the area is officially rezoned. Additionally, the proposed upgrades are necessary to implement the requirements of the U.S. EPA AOC Dkt. No. OPA-311-09-2021-001 (Appendix A) and are consistent with the PUCDP's various planning goals and objectives.

6.6 <u>REVISED ORDINANCES OF HONOLULU</u>

The Revised Ordinances of Honolulu (ROH) are a set of local laws regulating activity within the <u>City and County of Honolulu. The proposed project at the SI Facility is in compliance with the</u> <u>applicable chapters, as discussed below.</u>

6.6.1 CHAPTER 21: LAND USE ORDINANCE

Chapter 21 of the ROH regulates land use to encourage development in compliance with land use policies. As discussed in Section 6.2 O'ahu General Plan and Zoning, the SI Facility is on land designated as Waterfront Industrial District (I-3) by the County. Development standards within land designated for industrial uses include:

- 1. <u>Within the industrial districts, permitted uses and structures shall be as enumerated in</u> <u>Table 21-3.</u>
- 2. <u>Within the industrial districts, development standards shall be as enumerated in Table 21-3.5.</u>
- 3. Additional development standards.
 - a. <u>Transitional height setbacks. Where a zoning lot adjoins a zoning lot in a residential,</u> <u>apartment, apartment mixed-use, or resort district, the residential, apartment, apartment</u> <u>mixed-use, or resort district height setbacks shall be applicable at the buildable area</u> <u>boundary line on the side of the industrial zoning lot (see Figure 21-3.5).</u>
 - b. <u>Street setbacks. In the I-2 and I-3 districts, on zoning lots adjacent to a street, no portion of a structure shall exceed a height equal to twice the distance from the structure to the vertical projection of the centerline of the street (see Figure 21-3.7).</u>

The proposed SI Facility is in accordance with the permitted uses for I-3 Waterfront Industrial Districts defined in Chapter 21. The square footage of the SI Facility (~366,000 square feet) exceeds the minimum lot area (7,500 square feet) defined in the development standards for Industrial Districts. The subject zoning lot does not adjoin a zoning lot in the IMX-1 Industrial Mixed-Use District. Rather, the adjoining lots are 1-3 Waterfront Industrial District lots, therefore,



no transitional height setbacks are required. The existing ASTs meet the street setback previously described.

6.6.2 CHAPTER 25: SPECIAL MANAGEMENT AREAS

The SMA, established by the Honolulu City Council in Chapter 25 Article 2 of the ROH, is the area of the island of O'ahu designated from the mauka boundary to the shoreline and the islands within 3 miles offshore from O'ahu. All development within the SMA must be reviewed under Chapter 25 and comply with the rules and regulations set forth to control development within the SMA. The SI Facility is located entirely within the SMA, therefore a Special Management Use Area permit is being obtained from the Honolulu City Council. Conditions for development within the SMA are as follows:

- <u>All exterior lighting on a shoreline must be shielded during construction and operation to</u> <u>reduce the possibility that seabirds and other life forms may become disoriented and harmed</u> <u>by the lighting.</u>
- <u>All landscaped areas, landscaping, and irrigation on or for any shoreline must be contained</u> <u>and maintained within the property boundaries of origin, and may not:</u>
 - <u>Be planted, watered, and maintained so that they act as a shoreline hardening barrier,</u> <u>such as naupaka, particularly if they alter or interfere with the natural beach processes;</u>
 - Extend seaward of the shoreline as depicted on the current certified shoreline survey for the shoreline lot, or, in the event there is no current certified shoreline survey for the lot, seaward of the presumed shoreline; and
 - Extend into any adjoining beach access right-of-way, public or private.

No exterior light fixture is directed to specifically shine outside the property boundary and toward the shoreline and ocean waters. Instead, all existing exterior lighting along the perimeter of the site points inward toward the site. The perimeter exterior lighting is LED and utilizes a Type IV distribution which results in minimal backlighting and therefore minimal light pollution outside of the SI Facility property boundary. The proposed project will not create any impacts related to exterior lighting. As such, no mitigation measures are proposed.

6.6.3 CHAPTER 26: SHORELINE SETBACKS

The shoreline setback area is the area of land between the certified shoreline and the line that runs 40 feet mountainside from and parallel to the certified shoreline at the horizontal plane, as established by the Honolulu City Council in Chapter 26 of the ROH. The purpose of Chapter 26 is to establish standards and procedures which "generally prohibit within the shoreline setback area any structure or activity that may adversely affect beach processes, public access along the shoreline, or shoreline open space" (ROH Chapter 26). The chapter outlines prohibited actions within the shoreline setback area including any action related to construction, reconstruction, repair, improvement, grubbing, grading, or stockpiling, the placement of structures, and the mining or taking of any earth material from the shoreline setback area. However, maintenance, repair, reconstruction, and minor additions to or alterations of lawfully established structures is an exemption to the prohibitions. Nonetheless, the SI Facility is located 50 feet from the shoreline at



its closest point; therefore, no additional permits related to the shoreline setback area are required.

7. DETERMINATION, FINDINGS, AND REASONS

7.1 ANTICIPATED DETERMINATION

Based upon information presented in this document, the proposed permitting and construction of the Project will likely have no significant environmental impacts and it is anticipated that the City and County of Honolulu DPP will issue a Finding of No Significant Impact (FONSI). This determination is based upon the 13 Significance Criteria outlined in Title 11 Chapter 200.1-12 HAR 2018, discussed below.

7.2 FINDINGS AND SUPPORTING REASONS

1. Irrevocably commit a natural, cultural, or historic resource;

The proposed Project involves improvements and construction with an existing industrial facility and heavily disturbed lands in an existing urbanized area. The Site does not include any critical habitats or native plants and is on a location of filled land where the potential to encounter historic resources is unlikely. Therefore, the Project does not represent an irrevocable commitment of a natural, cultural, or historic resource.

2. Curtail the range of beneficial uses of the environment;

The Project will not curtail the range of beneficial uses of the environment as the Site is currently developed and operational as a fueling facility. The proposed work is limited to upgrading the existing stormwater system at the SI Facility and no expansion of the facility will occur.

3. Conflict with the State's environmental policies or long-term environmental goals established by law;

As stated above in Section 5, the proposed Project does not conflict with the State's environmental policies or long-term environmental goals. Improvement of the stormwater system is in alignment with policies and goals to protect environmental well-being and public health.

4. Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and <u>Ss</u>tate;

The proposed Project will have a beneficial effect on the economic and social welfare by providing short-term construction employment. No adverse effects on cultural practices of the community and the State are anticipated as no changes are being made to the SI Facility other than improving the stormwater system.

5. Have a substantial adverse effect on public health;

The potential temporary impacts related to noise or air quality during construction will be addressed through construction compliance and BMPs with regards to federal, State, and County requirements. The purpose of improving the stormwater drainage system is to protect water quality and public health.



6. Involve adverse secondary impacts, such as population changes or effects on public facilities;

The Project will have no adverse secondary impacts such as population changes or effects on public facilities. No changes are being made to the existing SI Facility other than improving the stormwater system.

7. Involve a substantial degradation of environmental quality;

The proposed Project is a result of Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the <u>US</u>EPA requiring enhancements to the SI Facility such that any discharge of oil will not escape the containment system until clean-up can occur. Therefore, the Project will help to avoid degradation of environmental quality. There may be short-term temporary effects related to noise or air quality during construction with the use of diesel and heavy equipment, but those effects will be mitigated through required BMPs in compliance with federal, State, and County laws.

8. Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions;

The proposed Project involves implementing stormwater improvements at the existing SI Facility in compliance with a Consent Agreement and Final Order issued by the <u>US</u>EPA. Construction activities will be temporary and of relatively short duration (18 months), and do not involve a commitment for larger actions.

9. Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat;

The Project Site does not contain any critical habitats for rare, threatened, or endangered species. Construction activities will almost entirely be occurring within the fenced industrial site of the SI Facility. There will be some limited activity outside the fenced facility when installing the pipe extending a distance of approximately 100 feet to a stormwater inlet; however, this work will be occurring within a disturbed area where the surrounding land use is a graveled parking lot.

10. Have a substantial adverse effect on air or water quality or ambient noise levels;

Short-term air quality and ambient noise impacts are anticipated during construction. However, they will be mitigated by dust control measures, mufflers, site management BMPs, and compliance with State, County, and federal requirements. As the purpose of the Project is to improve the existing stormwater system, the Project will minimize the risks of having an adverse effect on water quality.

11. Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

The Project location is the existing HFFC facility, which is in a SMA, within 200 feet of Ke'ehi Lagoon and Small Boat Harbor, and is prone to flooding and sea level rise. The SI Facility has existed at this location since the 1960s and is the sole supplier of jet fuel to the HNL; any



interruption in the operation of the SI Facility would significantly impact the domestic and international travel industry and the Hawai'i economy. As discussed in Section 3.1.3, the City and County of Honolulu Multi-Hazard Pre-Disaster Mitigation Plan recommends that City government should plan and determine how to execute public works to protect existing critical facilities and infrastructure and vital economic assets at risk to climate change effects.

12. Have a substantial adverse effect on scenic vistas and view planes, during day or night, identified in county or state plans or studies; or

The Project will not have a substantial adverse effect on scenic vistas or view planes, during day or night, as the proposed improvements are at or below ground level within the fenced facility of the SI Facility, and the pipe extending outside of the fenced facility to the stormwater inlet will be buried.

13. Require substantial energy consumption or emit substantial greenhouse gases.

Construction activities will require the use of vehicles and equipment and may temporarily increase emissions related to the use of construction vehicles and equipment; however, the energy consumption and emissions will be short-term and limited to the duration of work to implement the stormwater improvements.



8. **REFERENCES**

- AECOM Technical Services, Inc. 2020. Methane Mitigation and Semiannual Monitoring Report Former Shell Honolulu Fuel Distribution Terminal 789 North Nimitz Highway, Honolulu, Hawaii AECOM Project No. 60406185. February 10, 2020.
- American Legal Publishing. 2021. "§ 21-3.130 Industrial Districts Purpose and Intent." <u>https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-19722</u>.
- Belt Collins Hawaii Ltd. 2021. Final Environmental Assessment/Environmental Impact Statement Preparation Notice Kapalama Container Terminal Honolulu Harbor.
- City and County of Honolulu, 2020. *City and County of Honolulu Multi-Hazard Pre-Disaster Mitigation Plan*. Chapter 4. Climate Change Effects. 31 January 2020. Accessed online, 14 June 2023 at <u>https://www.resilientoahu.org/hazard-mitigation-plan</u>.
- City and County of Honolulu, 2022. Department of Emergency Management. Accessed online, 15 June 2023. <u>https://www.honolulu.gov/dem/tsunami.html#:~:text=Since%201946%2C%20more%20t</u> han%20220,View%20our%20multilingual%20tsunami%20resources.
- City and County of Honolulu, 2022. Public Input Review and Comment. <u>https://www.honolulu.gov/dpp/public-input.html</u>. Site accessed 15 June 2023.
- <u>City and County of Honolulu. 2022. Revised Ordinances of Honolulu. Accessed online, 24 October</u> 2023. https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-1
- City and County of Honolulu Department of Planning and Permitting. 2021. General Plan. https://www.honolulu.gov/dpp/planning/planning-documents/O'ahu-general-plan.html.
- City and County of Honolulu Department of Planning and Permitting. 2023. Annual Report on the Status of Land Use on Oahu.
- <u>City and County of Honolulu Department of Planning and Permitting. 2004. Primary Urban Center</u> <u>Development Plan. Accessed online, 24 October 2023.</u> <u>https://www.honolulu.gov/rep/site/dpp/pd/pd_docs/PUCDP_2004.pdf</u>
- Courtney, C.A; Romine, B.M.; Lander, M.; Hintzen, K.D.; Owens, T.M.; Pap, R.A. 2020. Guidance for Addressing Sea Level Rise in Community Planning in Hawai'i. Prepared by Tetra Tech, Inc. for the University of Hawai'i Sea Grant College Program and State of Hawai'i Department of Land and Natural Resources and Office of Planning, with funding from National Oceanic and Atmospheric Administration Office for Coastal Management Award No. NA16NOS4730016.
- Environmental Data Resource. 2022. Hawaiian Electric Auiki Phase I ESA Inquiry Number Inquiry Number 6867649.8.
- Environmental Data Resource. 2022. Koapaka Phase 1 ESA Inquiry Number 6987425.8.
- ERM. 2020. Final Environmental Hazard Management Plan. #6 Sand Island Access Road, Honolulu, Hawai'i 96819. March 2020.
- ERM. 2021. SI Facility Response Plan Sand Island Fuel SI Facility. Hawai'i Fueling Facilities Corporation Sand Island Fuel SI Facility.
- ERM. 2023. Spill Prevention, Control, and Countermeasure Plan. #6 Sand Island Access Road, Honolulu, Hawai'i 96819.



- Hammatt, Hallett H. and David W. Schideler. 2007. A Cultural Impact Evaluation, Archaeological Literature Review and Field Inspection for the Development of a Small Shipyard at Ke'ehi Lagoon Small Boat Harbor, Kalihi Kai, Kona, O'ahu.
- Hawai'i State Department of Health. 2021. Hazard Evaluation and Emergency Response Office. Memorandum: Risks of Sea Level Rise and Increased Flooding on Known Chemical Contamination in Hawaii. June 21, 2021.
- Hawai'i Statewide GIS Program. 2016. *State Land Use Districts.* https://geoportal.Hawai'i.gov/datasets/cchnl::state-land-use-districts/about.
- HDOH (Hawai'i Department of Health). 2023. Personal communication between Achie Reyes/ERM and Sven Lindstrom/HDOH). November 1, 2023.
- Innergex Renewable Energy. July 2021. *Appendix H. Traffic Impact Analysis Report Innergex.* <u>https://www.innergex.com/Hawai'i/wp-content/uploads/2022/01/Appendix-H-Traffic-Impact-Analysis.pdf</u>.
- Mink, J.F. and Lau, L.S. 1990, Aquifer Identification and Classification for O'ahu: Groundwater Protection Strategy for Hawai'i, Technical Report No. 179.
- National Weather Service National Oceanic and Atmospheric Administration. 1983. *Climate of Hawai`i*. <u>https://www.weather.gov/hfo/climate_summary</u>
- State of Hawai'i. Climate Change Portal. <u>https://climate.Hawai'i.gov/hi-adaptation/sea-level-rise-viewer-flowchart/</u>. Accessed June 14, 2023.





APPENDIX A USEPA AOC DKT NO. OPA-311-09-2021-001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 9

75 Hawthorne Street San Francisco, CA 94105

)
IN THE MATTER OF:)
Hawaii Fueling Facilities Corporation Signature Flight Support Corporation))))
Honolulu, Hawaii)
Respondents.))

Dkt No. OPA-311-09-2021-001

ADMINISTRATIVE ORDER ON CONSENT

Proceeding under Sections 311(c), (e), and (m) of the Clean Water Act, 33 U.S.C. §§ 1321(c), (e), and (m)

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order on Consent ("AOC" or "Order") is issued pursuant to the authority vested in the U. S. Environmental Protection Agency ("EPA") by Sections 311(c), (e) and (m) of the Clean Water Act ("CWA"), 33 U.S.C. §§ 1321(c), (e) and (m) and Section 308 of the CWA, 33 U.S.C. § 1318.

2. This Order pertains to the bulk fuel storage facility located at 6 Sand Island Access Road in Honolulu, Hawaii

EPA has notified the State of Hawaii of this action pursuant to Section
 311(e)(1)(B) of the CWA, 33 U.S.C. § 1321(e)(1)(B).

4. The Oil Pollution Prevention Regulations, 40 C.F.R. Part 112, establish procedures to prevent and respond to the discharge of oil from non-transportation-related onshore facilities into the waters of the United States or adjoining shorelines pursuant to the authority in Section 311(j) of the CWA, 33 U.S.C. § 1321(j). Owners or operators of onshore facilities that due to their location could reasonably be expected to discharge oil in "harmful quantities" into the waters of the United States must prepare and fully implement a Spill Prevention Control and Countermeasure Plan ("SPCC Plan") for each facility under 40 C.F.R. § 112.3(a).

5. The SPCC Regulations also require the owner or operator of a regulated facility to take certain measures designed to contain oil spills. Pursuant to 40 C.F.R. § 112.8(a), owners or operators of onshore facilities must satisfy both the general requirements for SPCC Plans listed in 40 C.F.R. § 112.7 and the specific discharge prevention and containment procedures listed in 40 C.F.R. § 112.8 (excepting oil production facilities).

II. FINDINGS OF FACT

6. Respondent Hawaii Fueling Facilities Corporation ("HFFC") is a corporation organized under the laws of Hawaii.

7. Respondent Signature Flight Support LLC f/k/a Signature Flight Support Corporation ("SFSC") is a corporation organized under the laws of Delaware and registered in Hawaii.

8. HFFC owns the assets at the Facility and utilizes the Facility for the receipt, storage, and distribution of jet fuel to the Honolulu International Airport operations.

9. From approximately November 2004 through January 2017, Aircraft Services International Group, Inc. ("ASIG") was contracted by HFFC to provide certain operation, maintenance and administrative services at the Facility.

10. Effective February 1, 2017, SFSC was contracted by HFFC to provide certain operation, maintenance and administrative services at the Facility, and that contract is effective until at least March 26, 2026.

11. Primary containment for the jet fuel stored at the Facility is provided by sixteen bulk aboveground storage tanks located on three contiguous lots within the Facility: Lot 2, Lot 3, and Lot 3.5. There are seven aboveground storage tanks on Lot 2, five on Lot 3, and four on Lot 3.5.

12. The Facility contains at least 1,320 gallons of above ground oil-storage capacity. As indicated in the Facility's SPCC Plan, dated February 28, 2018, the Facility has total aboveground storage capacity of 42,125,950 million gallons of jet fuel.

13. The Facility is located approximately 200 feet from Ke'ehi Lagoon, which connects to Mamala Bay and the Pacific Ocean. Ke'ehi Lagoon, Mamala Bay, and the Pacific Ocean are navigable waters within the meaning of Section 502(7) of the Act, 33 U.S.C. § 1362(7) and 40 C.F.R. § 110.1.

14. Upon noticing an inventory discrepancy on Tank 2 at the Facility, ASIG emptied the tank and inspected it on January 21, 2015. Jet fuel was discovered under the tank bottom. Based on inventory reconciliation, it was estimated that 42,000 gallons of jet fuel was released.

15. ASIG recovered approximately 31,362 gallons of product within the Facility boundaries, 1,944 gallons of product was recovered outside of the Facility boundaries, and 1,182 gallons of product was recovered from beneath Tank 2 at the Facility, amounting to at least 34,488 gallons of recovered product.

16. Under the authority of section 308(a) of the Clean Water Act, 33 U.S.C. § 1318(a), EPA sent Respondents a Request for Information, dated February 12, 2018, to determine whether the Facility has implemented an appropriate SPCC Plan in compliance with 40 C.F.R. Part 112. EPA received a response to the Request for Information on March 6, 2018. In its response, Respondents provided the 2018 SPCC Plan for the Facility. The 2018 SPCC Plan provides that oil storage at the Facility consists primarily of jet fuel stored within large capacity above-ground storage tanks (ASTs). The bulk storage ASTs are located within a storage yard surrounded by a combination concrete containment wall, gravel covered berm, and a six-foot deep underground slurry wall. Beside the underground slurry wall, an eight-foot deep, 600 feet long interceptor trench was installed by HFFC between Lot 2 and Keehi Lagoon to prevent potential migration of fuel in ground water during a spill.

17. In April 2015, ASIG installed an underground extraction recovery trench along the west wall of Lot #2 to work in tandem with the slurry wall as part of the spill recovery operation at the facility. The extraction trench has been incorporated into the 2018 SPCC Plan.

18. The SPCC Plan requirements set forth at 40 C.F.R. § 112.8(c)(2) require that all bulk storage tank installations be constructed to provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. A facility must ensure that diked areas are sufficiently impervious to contain discharged oil.

19. The capacity of the Facility's single largest AST is 5,460,000 million gallons.

20. Based on the Tank 2 release, a review of HFFC's 2018 SPCC Plan, and Respondents' response to the Request for Information, EPA alleges that Respondents have not fully implemented an appropriate SPCC Plan in compliance with 40 C.F.R. Part 112, in that the Facility does not currently have sufficiently impermeable secondary containment that would allow for the retention of the worst-case discharge until clean-up can occur and does not provide a sufficient level of impermeability in all areas.

III. <u>CONCLUSIONS OF LAW</u>

21. The Facility is an "onshore facility" as defined in Section 311(a)(10) of the CWA, 33 U.S.C. § 1321(a)(10), and 40 C.F.R. § 112.2.

22. Respondents are "persons" as defined by Section 502(5) of the CWA, 33 U.S.C.§ 1362(5).

23. Based on the storage capacity of the Facility, the quantity of oil that the Facility may discharge is a harmful quantity within the meaning of Section 311(b)(3) of the CWA, 33 U.S.C. § 1321(b)(3) and 40 C.F.R. § 110.3(b).

24. EPA alleges that conditions at the Facility may present an imminent and substantial threat to public health or welfare of the United States, including fish and other wildlife, public and private property, shorelines, habitat, and other living and nonliving natural resources under the jurisdiction and control of the United States.

25. EPA alleges that the actions required by this Order are necessary to protect the public health and welfare of the United States, including fish and other wildlife, public and private property, shorelines, habitat, and other living and nonliving natural resources under the jurisdiction and control of the United States.

26. EPA alleges that the actions required by this Order are in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") and are authorized by EPA pursuant to the authority granted in Section 311(c) and (e) of the CWA, 33 U.S.C. § 1321(c) and (e).

IV. ORDER

27. Based upon the Findings of Fact and Conclusions of Law set forth above, EPA orders and Respondents agree to comply with the requirements of this Order as indicated below:

28. HFFC shall install a concrete pad with an impermeable underlaying and a new steel tank floor to create a "double bottom" with weep holes to aid in identification of any jet fuel release on Tanks 1, 3, 4, 5, 14, 15, 16, 17, and 18 at the Facility.

- a. The work described in this Paragraph with respect to Tank 1 shall be complete by December 31, 2020.
- b. The work described in this Paragraph with respect to Tanks 3, 4, 5 and 15 shall be complete by December 31, 2024.
- c. The work described in this Paragraph with respect to Tanks 14, 16, 17 and 18 shall be complete by December 31, 2028.

29. Respondents shall perform API 653 Out-of-Service tank inspections on the shorter of a five-year interval basis or the API 653 inspector's recommendation on all single-bottom tanks at the Facility.

30. Respondents shall conduct monthly physical inspections of the exterior of all single-bottom tanks at the Facility in accordance with API 653 until each tank meets the requirements of Paragraph 28 above.

31. Respondents shall conduct monthly physical inspections of the exterior and weep holes of all double-bottomed tanks at the Facility in accordance with API 653.

32. Within three years of the Effective Date of this AOC, HFFC shall enhance the Facility's secondary containment by installing an asphalt liner and industrial spray coating on Lots 2, 3, and 3.5 of the Facility.

33. HFFC may substitute an improved subsurface slurry wall for the asphalt liner and industrial spray coating described in the preceding paragraph, so long as the slurry wall is consistent with following:

- **a.** The wall depth will conform to the Technical Memorandum attached hereto as Appendix A.
- b. The wall installation will be verified using the Quality Assurance/Quality Control ("QA/QC") measures described in the document attached hereto as Appendix B.
- 34. HFFC shall revise the 2018 SPCC Plan within ninety (90) days of the

completion of the installation of the asphalt liner or the additional subsurface slurry wall.

35. Respondents shall submit evidence of completion of the upgrades and corrective

actions, within thirty (30) days of completion, as follows:

- **a.** With respect to paragraph 28, Respondents shall provide written notice of the completion of each "double bottom."
- b. With respect to paragraph 29, Respondents shall provide written notice of the completion of each API 653 Out-of-Service tank inspection.
- c. With respect to paragraph 33, Respondents shall provide written notice of the completion of the installation of the asphalt liner.
- d. With respect to paragraph 34, Respondents shall provide a completion report including as-built drawings, any deviations from design, and QA/QC information per Appendix B.
- 36. HFFC shall complete the Facility upgrades described above by no later than

December 31, 2028, unless EPA grants an extension for the completion thereof.

37. Respondents shall provide EPA representatives general access to the Facility.

Respondents shall also provide EPA and its representatives access to records and

documentation related to Respondents' implementation of this Order. Nothing in this Order limits or otherwise affects EPA's right of access and entry pursuant to applicable law.

38. Respondents shall send hard copies of notices of completion and the completion report to:

Connor Adams U.S. Environmental Protection Agency - Region 9 300 Ala Moana Blvd., #5-152 Honolulu, HI 96850

And provide electronic copies of notices of completion and the completion report to :adams.connor@epa.gov, garnett.desean@epa.gov, reich.peter@epa.gov.

39. In the event that the contract between HFFC and SFSC for the provision of certain operation, maintenance and administrative services at the Facility is no longer in effect, SFSC will have no further obligations pursuant to this Order. HFFC shall notify EPA within ten (10) business days of such change to operations at the Facility.

V. MODIFICATIONS

40. If Respondents seek permission to deviate from this Order, Respondents shall submit a written request to EPA for approval, outlining the proposed modification and its basis and how the deviation proposed will affect the work and schedule agreed to with EPA. Such written request shall be submitted to:

Connor Adams U.S. Environmental Protection Agency - Region 9 300 Ala Moana Blvd., #5-152 Honolulu, HI 96850

and

Desean Garnett Attorney-Advisor U.S. Environmental Protection Agency – Region 9 75 Hawthorne St. (ORC-2-4) San Francisco, CA 94105

Such written request may be submitted by email to Mr. Adams at <u>adams.connor@epa.gov</u> and to Mr. Garnett at <u>garnett.desean@epa.gov</u>.

41. Acceptance of non-material modifications requested by Respondents to any portion of the Order may be made in writing under signature of Connor Adams, EPA Region 9. Acceptance of material modifications requested by Respondents must be made by EPA's Enforcement and Compliance Assurance Division Director.

42. Respondents shall immediately take all appropriate action to abate or minimize any discharge or substantial threat of a discharge, if any incident during the actions conducted pursuant to this Order causes or may cause, either a substantial threat of a discharge or a discharge of oil or hazardous substances from the Facility. In addition, Respondents shall immediately notify (1) Connor Adams at (808) 541-2752; EPA Region 9's On-Scene Coordinator Duty Officer at (800) 300-2193; and (3) the National Response Center at (800) 424-8802.

VI. <u>DELAYS IN PERFORMANCE</u>

43. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this Section, and approved as a modification pursuant to Section V, shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

VII. FORCE MAJEURE

44. For purposes of this Order, Force Majeure is defined as any event arising from causes that are beyond the control of Respondent, any entity controlled by Respondent, or Respondent's contractors, which delays or prevents the performance of any obligation under this Order despite Respondent's reasonable best efforts to fulfill the obligation. The requirement that Respondent exercise "reasonable best efforts to fulfill the obligation" includes using reasonable best efforts to anticipate any potential Force Majeure event and reasonable best efforts to address the effects of any such event: (a) as it is occuring, and; (b) after it has occurred ot prevent or minimize any resulting delay to the greatest extent possible. Examples of Force Majeure events include, but are not limited to, unforeseen environment, geological, or archaeological conditions; labor, equipment, or material shortage; or pandemics, epidemics, or disease. Examples of events that are not Force Majeure include, but are not limited to, increased costs or expenses of any work to be performed under this Order and normal inclement weather.

45. Respondent shall exercise its best efforts to avoid or minimize any delay and any effects of a delay. If any event occurs which causes or may cause delays meeting the deadlines set forth in this Order, Respondent shall, within twenty-four (24) hours of the delay or within twenty-four (24) hours of Respondent's knowledge of the anticipated delay, whichever is earlier, notify EPA by email at the following email addresses: Connor Adams <u>adams.connor@epa.gov</u>, Desean Garnett <u>garnett.desean@epa.gov</u>, Pete Reich reich.peter@epa.gov.

46. Within seven (7) days thereafter, Respondent shall provide in writing the reasons for the delay, the anticipated duration of the delay, the measures taken or to be taken to prevent or minimize the delay, and a timetable by which those measures will be implemented. Failure to comply with the notice requirement of this paragraph shall preclude Respondent from asserting any claim of Force Majeure.

47. If EPA agrees in writing that the delay or anticipated delay in compliance with this Order has been or will be caused by circumstances entirely beyond the control of Respondent, the time for performance may be extended for the period of the delay resulting from the circumstances causing the delay. In such event, EPA will grant, in writing an extension of time. An extension of time for performing an obligation granted by EPA pursuant to this paragraph shall not, of itself, extend the time for performing a subsequent obligation.

VIII. RESERVATION OF RIGHTS, WAIVER, AND COMPLIANCE WITH LAWS

48. This Order represents the final form of the agreement between EPA and Respondents. By its consent to entry of this Order, Respondents do not admit any liability under the CWA or its implementing regulations. Respondents reserve any rights or defenses they may have, except that Respondents will not contest the allegations in this Order to the extent that those allegations provide EPA with a jurisdictional basis for bringing the claims alleged herein.

49. EPA hereby reserves all of its statutory and regulatory powers, authorities, rights, remedies, and defenses, both legal and equitable, including the right to disapprove

work performed by Respondents pursuant to this Order and to require that Respondents perform tasks in addition to those required by this Order. This Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, or authorities, civil or criminal, which EPA has under any statutory, regulatory, or common law enforcement authority of the United States.

50. Nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of a regulated substance on, at, or from the Facility. EPA reserves the right to bring an action against Respondents assessing or seeking penalties and/or other relief for any violations, including, without limitation, the violations referred to in the Findings of Fact and Conclusions of Law set forth above. This Order shall not constitute or be construed as a release of any liability that the Respondents or any other person has under the CWA or any other law. EPA also reserves all of its rights to obtain access to the Facility and require Respondents' submission of information to EPA.

51. This Order shall not relieve Respondents of their obligation to comply with all applicable federal, state, and local laws, regulations, and other legal requirements, including but not limited to Sections 311(c), (e), and (j) of the CWA, 33 U.S.C. §§ 1321(c), (e), and (j) nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit.

52. Respondents waives any and all remedies, claims for relief and otherwise available rights or remedies to judicial or administrative review that Respondents may

have with respect to any issue of fact or law set forth in this Order, including, but not limited to, any right of judicial review of the Order under the Administrative Procedure Act, 5 U.S.C. §§ 701-708.

53. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection, and enforcement authorities and rights under Section 308 of the CWA, 33 U.S.C. § 1318, and any other applicable statutes or regulations.

54. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action, or demand in law or equity against any person, firm, partnership, entity, or corporation for any liability such person, firm, partnership, entity, or corporation may have arising out of or relating in any way to the regulated activities at the Facility.

55. If a court issues an order that invalidates or stays any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

IX. <u>ENFORCEMENT</u>

56. Pursuant to the CWA, a court may subject Respondents to civil penalties of up to \$48,192 per day of violation or an amount up to three times the costs incurred by the Oil Spill Liability Trust Fund pursuant to Section 311(b)(7) of the Act, 33 U.S.C. § 1321(b)(7) and 40 C.F.R. Part 19 (Adjustment of Civil Monetary Penalties for Inflation), for violation of, or failure to comply with, the provisions of the foregoing Order.
X. <u>STIPULATED PENALTIES</u>

57. In the event Respondents fail to meet any requirement set forth in this Order, unless properly justified to EPA under Section VI or VII, HFFC shall pay stipulated penalties as set forth below. Compliance by Respondents shall include completion of any activity under this Order in a manner acceptable to EPA and within the time specified in and approved under this Order.

58. For failure to complete the activities required under this Order in the time specified:

A. FIVE HUNDRED DOLLARS (\$500) per day for the first to the fifteenth day of delay;

B. ONE THOUSAND DOLLARS (\$1,000) per day for the sixteenth to the thirtieth day of delay, and;

C. THREE THOUSAND DOLLARS (\$3,000) per day for each day of delay thereafter.

59. Stipulated penalties shall begin to accrue on the day after performance is due, and shall continue to accrue through the final day until performance is complete. HFFC shall pay stipulated penalties within fifteen (15) days of receipt of a written demand by EPA for such penalties. Payment of stipulated penalties shall be made in accordance with Paragraph 57.

60. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Order.

14

61. The payment of stipulated penalties specified in this Section shall not be deducted by Respondents or any other person or entity for federal, state, or local taxation purposes.

62. <u>Check Payment.</u> If paying by check, the Respondents shall submit a cashier's or certified check, payable to the "Treasurer, United States of America." The check shall specify in the notation section the docket number of this case. The cover letter transmitting each check should include Respondents' name, the case title, the docket number, and the amount of the penalty.

63. A check sent by regular U.S. Postal Service mail should be addressed to:

U.S. Environmental Protection Agency Fines and Penalties Cincinnati Finance Center P.O. Box 979077 St. Louis, MO 63197-9000

64. A check sent by overnight mail should be addressed to:

U.S. Environmental Protection Agency Government Lockbox 979077 U.S. EPA Fines and Penalties 1005 Convention Plaza SL-MO-C2-GL St. Louis, MO 63101 Contact: Craig Steffen (513-487-2091)

65. <u>Electronic Transfer.</u> Alternatively, payment may be made by electronic transfer. Respondents' name, the case title and the docket number shall be provided as part of the payment transmittal. An electronic payment shall be made as follows:

A. Wire transfers must be sent directly to the Federal Reserve Bank in New York City with the following information:

Federal Reserve Bank of New York ABA = 021030004 Account = 68010727 SWIFT address = FRNYUS33 33 Liberty Street New York, NY 10045 Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

ACH (also known as REX or remittance express): Automated Clearinghouse (ACH) for receiving US currency PNC Bank 808 17th Street, NW Washington, DC 20074 Contact – Jesse White (301-877-6548) ABA = 051036706 Transaction Code 22 – checking Environmental Protection Agency Account 31006 CTX Format

66. **Notification.** A copy of each check, or notification that the payment has been made by one of the other methods listed above, including proof of the date payment was made, shall be sent with a transmittal letter, indicating HFFC's name, the case title, and docket number, to the contacts listed in Paragraph 40.

67. In accordance with the Debt Collection Act of 1982 and U.S. Treasury directive

(TFRM 6-8000), failure to send the penalty by the due date will result in imposition of interest from the Effective Date of this Order at the current interest rate published by the U.S. Treasury, as described at 40 C.F.R. § 13.11. In addition, a twelve percent (12%) per annum penalty will be applied on any principal amount not paid within ninety (90) days of the due date.

XI. COMPUTATION OF TIME

68. Unless otherwise indicated, all times for performance of ordered activities shall be calculated from the Effective Date of this Order.

XII. <u>ADMINISTRATIVE RECORD</u>

69. The administrative record supporting this Order shall be available for public review at the U.S. Environmental Protection Agency Region 9, 75 Hawthorne Street, San Francisco, California.

XIII. <u>EFFECTIVE DATE</u>

70. This Order shall be effective upon receipt by the Respondents of the signed Order.

XIV. SIGNATORIES

For Respondent Hawaii Fueling Facilities Corporation:

Name: Bruno Das Santos Title: President

Date: 4/28/21

For Respondent Signature Flight Support Corporation:

Name: Matthew Klein as Title: Seniorlegal Coursel

Date: May 7, 2021

For Complainant U.S. Environmental Protection Agency:

Date:

Amy C. Miller, Director Enforcement and Compliance Assurance Division U.S. Environmental Protection Agency – Region 9

APPENDIX A



1132 Bishop Street, Suite 512 Honolulu, Hawaii 96813 Telephone:+1 808 521 4404Fax:+1 808 521 4408

www.erm.com

LNAPL DISTRIBUTION AND RECOVERY MODEL

Background



Environmental Resources Management (ERM) utilized the light non-aqueous phase liquid (LNAPL) Distribution and Recovery Model (LDRM), in order to obtain a technically sound determination of the appropriate depth of the slurry wall enhancement at the Hawaii Fueling Facilities Corporation (HFFC) Sand Island (SI) Fuel Facility ("Site" or "Fuel Facility"). Figure 1 shows a site layout map of the Fuel Facility with the existing slurry wall. The LDRM was developed for the American Petroleum Institute (API) to simulate the performance of proven hydraulic technologies for recovering free-product petroleum liquid releases to groundwater.

Based on the Site historical information and geotechnical exploration conducted at the Site on January 2020, the subsurface conditions encountered along the perimeter wall of the Fuel Facility were categorized as "very loose lagoon deposits/Clayey Gravel (coral detritus)". These conditions are typically found beneath the upper silty Gravel/Fill at depths between 6 and 20 feet (ft) below ground surface (bgs). Isolated non-continuous clay layers were occasionally encountered within the Fuel Facility and deeper hard coral is typically encountered around 20 to 25 ft bgs.

In addition to the geotechnical exploration work, a 2015 tidal study revealed that the groundwater at the Site was measured at or above 0.5 ft above mean sea level (amsl).

LDRM Objectives and Scope

The objectives of the LDRM were to:

- 1. Develop vertical distribution models that represent equilibrium conditions following the worst-case discharge of 5,460,000 gallons of fuel from Tank 1. The vertical distribution model calculates the LNAPL saturation, LNAPL thickness and specific LNAPL volume of the LNAPL in the formation.
- 2. Evaluate how the different soil types (loamy sand, silt loam, sandy clay, and sand) result in changes in the vertical distribution model.
- 3. Develop the estimated depth of a hanging wall to contain the release.

The scope of this modeling included:

- 1. Review the LNAPL vertical profiles that summarize the soil lithology (boring logs, geotechnical data) and well gauging data.
- 2. Select the LDRM input parameters including soil characteristics, groundwater elevation, and fluid (LNAPL and water) properties.
- 3. Develop a basis for the depth of a hanging wall to contain the release.

Page 1 of 8

Page 2 of 8

Assumptions

The LDRM for the Site was developed based on the worst-case discharge of 5,460,000 gallons of jet fuel from Tank 1 located in Lot 2 of the SI Facility. Other assumptions for the LDRM include the following:

- Various soil types were utilized for the model including sand, loamy sand, silty loam, and sandy clay;
- Sand and Sandy clay represent the extreme condition and serve as the boundary conditions/limits for the model;
- Based on the geotechnical survey, the Site soil generally falls between silt loam to loamy sand;
- A recovery operation of 250,000 gallons per day will be initiated immediately; and
- The spilled fuel will take time to infiltrate the ground with a recovery period of 1 day for sandy soil, 2.5 days for loamy soil, and 10 days for sandy clay.

LDRM Input Parameters

The LDRM has various input parameters related to the LNAPL, water and soil characteristics and include the following:

- Soil characteristics within the interval of mobile LNAPL;
- Gauged LNAPL thickness;
- Corrected groundwater elevation;
- Soil characteristics;
- Porosity;
- the van Genuchten parameters "N" and "α";
- irreducible water saturation;
- residual LNAPL saturation;
- Fluid characteristics;
- LNAPL density;
- air/water surface tension;
- air/LNAPL surface tension; and
- LNAPL/water interfacial tension.

Values for the input parameters were derived from field measurements and observations, and reference values. The parameter values used in the LDRM are provided as **Attachment A**.

LDRM Output

The LDRM model calculates the vertical saturation profile from which the LNAPL specific volume (ft^3/ft^2) (D_n) is calculated. The example output for a 5 ft thickness of LNAPL in a sandy loam soil is provided below.

9	NAPL D	Distribution	and Recov	very Model	(LDRM)			
File	Data	Recovery	Graphs	Options	Help	Exit			
LNAPL Specific Volume, Dn (ft) =							0.8501		
	I NAPI, Becoverable Volume, Bn (ft) =						0.5951		

The LDRM also graphically represents the saturation profile as shown in the example image below.



The specific volume of LNAPL (ft^3/ft^2) was calculated for each soil type for increasing LNAPL thicknesses by the LDRM. For each of the four soil types the LDRM was run at 1 foot increments and the quantity of LNAPL in the formation was estimated by multiplying by the total surface area (366,000 sq ft). The LDRM modelling was complete once the total calculated volume in the formation exceeded the 5,460,000 gallons. Summary tables are provided in **Attachment B**.

Graphical Output

Graphical representations of the LDRM output were developed and are provided in **Attachment B** Figures 1 and 2.

Attachment B Figure 1 represents the estimated thickness of LNAPL in the formation. The red line represents the maximum volume of LNAPL released. The dashed red line represents the estimated volume of LNAPL that actually penetrates into the ground with the assumption that a recovery operation of 250,000 gallons per day will be initiated

immediately following a release. Based on the assumptions, the anticipated thickness of LNAPL in the formation varies between 6.5 and 14 ft depending on the soil type.

Attachment B Figure 2 represents the estimated elevation of the LNAPL/water interface (bottom of the mobile interval of LNAPL). Based on the assumptions, the anticipated depth of LNAPL in the formation varies between -4 and -10 ft amsl depending on the soil type.

A geotechnical exploration report dated 3 March 2020 with boring logs and fence diagram is included in this report as **Attachment C**.

Conclusion and Recommendation

Based on site investigations, the site soil is generally classified between loamy sand to silty loam. As a conservative measure, the LRDM assumes silty loam as the modeled soil. A conservative reasonable recovery rate was also used. Based on the model results using conservative assumptions, we recommend an enhanced slurry wall installed 8 ft below mean sea level (approximately 13 to 14 ft bgs) to provide containment of a jet fuel release during a worst-case spill. With the groundwater at the Site historically measured at or above 0.5 ft amsl, the enhanced slurry wall at 8 ft below mean sea level provides enough contingency for tidal fluctuation.

It is important to note that these modelled scenarios are estimates based on conservative assumptions regarding subsurface soil type and homogeneity. They are intended to provide an improved understanding of the potential depth of LNAPL following a release. The modelling performed does not guarantee containment of LNAPL following a catastrophic release, but provides a reasonable basis from which to design a hanging wall for containment.

Malely B-

David de Courcy-Bower Technical Lead

ERM

Page 5 of 8

Figure



ERM

Page 5 of 7

Attachment A LDRM Input Parameters

GENERAL SITE DATA		Comments/Source
Project	HFFC Sand Island	
Ground Surface Elev. (ft MSL)	4.51	
Groundwater Elevation (ft MSL)	1	Approximation based on MW-25 gauging data

LNAPL DATA		Comments/Source		
LNAPL Density, ro (g/cm3)	0.82	API Pub 4729, August 2003, Appendix D, Jet Fuel JP-5		
LNAPL dynamic viscosity, mo (centipoise)	2	http://www.etc-cte.ec.gc.ca/databases/OilProperties/oil prop e.html		
Air/Water Surface Tension, saw (dyne/cm)	65	API Pub 4729, August 2003, Appendix D		
LNAPL/Water Surface Tension, sow (dyne/cm)	50	API Pub 4729, August 2003, Appendix D, Jet Fuel JP-4/5		
Air/LNAPL Surface Tension, sao (dyne/cm)	25	API Pub 4729, August 2003, Appendix D, Jet Fuel JP-4/5		

Run 1 - SOIL DATA - 1 Layer Model		Comments/Source
Layer 1	Loamy Sand	
Soil porosity	0.41	API Pub 4729, August 2003, Appendix E (Loamy Sand)
Hydraulic conductivity (ft/d)	11	API Pub 4729, August 2003, Appendix C (Loamy Sand - mean)
van Genuchten "N," N (dimensionless)	2.280	API Pub 4729, August 2003, Appendix C (Loamy Sand - mean)
van Genuchten "α," α (feet-1)	3.800	API Pub 4729, August 2003, Appendix C (Loamy Sand - mean)
Irreducible Water Saturation, S _{wr} (ratio pore volume)	0.140	API Pub 4729, August 2003, Appendix E (Loamy Sand)
Residual LNAPL Saturation, S _{or} (ratio pore volume)	Variable	
van Genuchten Model (Mualem/Burdine)	Burdine	

Run 2 - SOIL DATA - 1 Layer Model	Г	Comments/Source
Layer 1	Silt Loam	
Soil porosity	0.45	API Pub 4729, August 2003, Appendix E (Silt Loam)
Hydraulic conductivity (ft/d)	0.36	API Pub 4729, August 2003, Appendix C (Silt Loam - mean)
van Genuchten "N," N (dimensionless)	1.410	API Pub 4729, August 2003, Appendix C (Silt Loam - mean)
van Genuchten "α," α (feet-1)	0.610	API Pub 4729, August 2003, Appendix C (Silt Loam - mean)
Irreducible Water Saturation, Swr (ratio pore volume)	0.150	API Pub 4729, August 2003, Appendix E (Silt Loam)
Residual LNAPL Saturation, Sor (ratio pore volume)	Variable	
van Genuchten Model (Mualem/Burdine)	Mualem	

Run 3 - SOIL DATA - 1 Layer Model		Comments/Source		
Layer 1	Sandy Clay			
Soil porosity	0.38	API Pub 4729, August 2003, Appendix E (Sandy Clay)		
Hydraulic conductivity (ft/d)	0.095	API Pub 4729, August 2003, Appendix C (Sandy Clay - mean)		
van Genuchten "N," N (dimensionless)	1.230	API Pub 4729, August 2003, Appendix C (Sandy Clay - mean)		
van Genuchten "α," α (feet-1)	0.820	API Pub 4729, August 2003, Appendix C (Sandy Clay - mean)		
Irreducible Water Saturation, Swr (ratio pore volume)	0.260	API Pub 4729, August 2003, Appendix E (Sandy Clay)		
Residual LNAPL Saturation, Sor (ratio pore volume)	Variable			
van Genuchten Model (Mualem/Burdine)	Mualem			

Run 4 - SOIL DATA - 1 Layer Model		Comments/Source
Layer 1	Sand	
Soil porosity	0.43	API Pub 4729, August 2003, Appendix E (Sandy Clay)
Hydraulic conductivity (ft/d)	23	API Pub 4729, August 2003, Appendix C (Sandy Clay - mean)
van Genuchten "N," N (dimensionless)	2.680	API Pub 4729, August 2003, Appendix C (Sandy Clay - mean)
van Genuchten "α," α (feet-1)	4.400	API Pub 4729, August 2003, Appendix C (Sandy Clay - mean)
Irreducible Water Saturation, Swr (ratio pore volume)	0.100	API Pub 4729, August 2003, Appendix E (Sandy Clay)
Residual LNAPL Saturation, Sor (ratio pore volume)	Variable	
van Genuchten Model (Mualem/Burdine)	Burdine	

ERM

Page 6 of 7

Attachment B LDRM Output

Table B1 LDRM Model Output Summary Soil Type: 1 Layer - Loamy Sand

LNAPL Gauged	Specific	Bottom of Mobile	Containment	Volume	Volume
Thickness (ft)	Volume (ft)	Interval (ft MSL)	Area (sqft)	(cuft)	(gallons)
1	0.068	0.18	366000	24888	186174.68
2	0.229	-0.64	366000	83814	626970.63
3	0.432	-1.46	366000	158112	1182756.8
4	0.635	-2.28	366000	232410	1738543
5	0.85	-3.1	366000	311100	2327183.6
6	1.067	-3.92	366000	390522	2921299.8
7	1.284	-4.74	366000	469944	3515416.1
8	1.503	-5.56	366000	550098	4115008.1
9	1.722	-6.38	366000	630252	4714600.1
10	1.942	-7.2	366000	710772	5316929.9
11	2.162	-8.02	366000	791292	5919259.8
12	2.382	-8.84	366000	871812	6521589.7
13	2.602	-9.66	366000	952332	7123919.5
14	2.821	-10.48	366000	1032486	7723511.5
15	3.039	-11.3	366000	1112274	8320365.7

Table B2 LDRM Model Output Summary Soil Type: 1 Layer - Silt Loam

LNAPL Gauged	Specific	Bottom of Mobile	Containment	Volume	Volume
Thickness (ft)	Volume (ft)	Interval (ft MSL)	Area (sqft)	(cuft)	(gallons)
1	0.022	0.18	366000	8052	60232.986
2	0.096	-0.64	366000	35136	262834.85
3	0.211	-1.46	366000	77226	577689.09
4	0.357	-2.28	366000	130662	977417.09
5	0.513	-3.1	366000	187758	1404523.7
6	0.673	-3.92	366000	246318	1842581.8
7	0.837	-4.74	366000	306342	2291591.3
8	1.005	-5.56	366000	367830	2751552.3
9	1.176	-6.38	366000	430416	3219726.9
10	1.35	-7.2	366000	494100	3696115.1
11	1.527	-8.02	366000	558882	4180716.8
12	1.706	-8.84	366000	624396	4670794.3
13	1.887	-9.66	366000	690642	5166347.5
14	2.069	-10.48	366000	757254	5664638.5
15	2.253	-11.3	366000	824598	6168405.3

Table B3 LDRM Model Output Summary Soil Type: 1 Layer - Sandy Clay

LNAPL Gauged	Specific	Bottom of Mobile	Containment	Volume	Volume
Thickness (ft)	Volume (ft)	Interval (ft MSL)	Area (sqft)	(cuft)	(gallons)
1	0.017	0.18	366000	6222	46543.671
2	0.065	-0.64	366000	23790	177961.1
3	0.135	-1.46	366000	49410	369611.51
4	0.219	-2.28	366000	80154	599592
5	0.309	-3.1	366000	113094	845999.67
6	0.401	-3.92	366000	146766	1097883.1
7	0.496	-4.74	366000	181536	1357980
8	0.592	-5.56	366000	216672	1620814.9
9	0.691	-6.38	366000	252906	1891863.3
10	0.791	-7.2	366000	289506	2165649.6
11	0.892	-8.02	366000	326472	2442173.8
12	0.995	-8.84	366000	364170	2724173.7
13	1.099	-9.66	366000	402234	3008911.4
14	1.204	-10.48	366000	440664	3296387.1
15	1.309	-11.3	366000	479094	3583862.7
16	1.415	-12.12	366000	517890	3874076.1
17	1.522	-12.94	366000	557052	4167027.5
18	1.629	-13.76	366000	596214	4459978.8
19	1.736	-14.58	366000	635376	4752930.2
20	1.834	-15.4	366000	671244	5021240.7
21	1.946	-16.22	366000	712236	5327881.4
22	2.06	-17.04	366000	753960	5639997.8

Table B4 LDRM Model Output Summary Soil Type: 1 Layer - Sand

LNAPL Gauged	Specific	Bottom of Mobile	Containment	Volume	Volume
Thickness (ft)	Volume (ft)	Interval (ft MSL)	Area (sqft)	(cuft)	(gallons)
1	0.16	0.18	366000	58560	438058.08
2	0.467	-0.64	366000	170922	1278582
3	0.805	-1.46	366000	294630	2203979.7
4	1.154	-2.28	366000	422364	3159493.9
5	1.504	-3.1	366000	550464	4117746
6	1.852	-3.92	366000	677832	5070522.3
7	2.199	-4.74	366000	804834	6020560.7



Attachment B - Figure 2



Page 7 of 7

Attachment C Sand Island Geotechnical Exploration



Sand Island Geotechnical Exploration

Hawaii Fueling Facilities Corporation Sand Island Fuel Facility

3 March 2020 Project No.: 0537336



The business of sustainability

Signature Page

3 March 2020

Sand Island Geotechnical Exploration

HFFC Sand Island Fuel Facility

John Cavanaugh, P.G. Partner in Charge

Achie Reyes

Dana Susina Principal Consultant

Tanner Gillespie Staff Scientist

ERM-West 1132 Bishop St. Suite 512 Honolulu, HI 96813

© Copyright 2020 by ERM Worldwide Group Ltd and / or its affiliates ("ERM"). All rights reserved. No part of this work may be reproduced or transmitted in any form, or by any means, without the prior written permission of ERM.

CONTENTS

1.	INTRO	NTRODUCTION					
2.	BACK	BACKGROUND					
	2.1 2.2	Locatior Geology	n and Site Description y and Hydrogeology	3 4			
3.	PREV	PREVIOUS INVESTIGATIONS					
		3.1.1 3.1.2	2015 Field Exploration 2018 Field Exploration	5 5			
4.	SLUR	RY WAL	L GEOTECHNICAL EXPLORATION	6			
	4.1 4.2	Geotech Soil Lab	hnical Exploration boratory Testing	6 7			
5.	SUBS	URFACE	E CONDITIONS	11			
6.	CONCLUSION11						
7.	REFE	RENCES	8				

List of Tables

Table 1 Subsurface Soil Classifications

List of Figures

- Figure 1 Project Location Map
- Figure 2 Site Location Map
- Figure 3 Borehole Locations
- Figure 4 Fence Diagram

Appendices

- Appendix A USCS Chart and Boring Logs
- Appendix B Photographic Log
- Appendix C Geolabs 2015 and 2018 Boring Logs

Acronyms and Abbreviations

API American Petroleum Institute amsl Above mean sea level

Aboveground storage tank
American Society for Testing and Material
Burns and McDonnell
Below ground surface
Department of Transportation, Airports Division
Environmental Protection Agency
Environmental Resources Management
Hawaii Fueling Facilities Corporation
Daniel K. Inouye International Airport
GeoTek Hawaii
LNAPL Distribution and Recovery Model
Light non-aqueous phase liquid
Sand Island
Unified Soil Classification System

1. INTRODUCTION

Environmental Resources Management (ERM), has prepared this Geotechnical Exploration on behalf of Hawaii Fueling Facilities Corporation (HFFC) to document the additional subsurface exploration at the HFFC Sand Island (SI) Fuel Facility ("Site" or "Fuel Facility"). The United States Environmental Protection Agency (EPA) Region 9 agreed to the refinement of the equilibrium analysis presented in the Conceptual Design Report prepared by ERM to determine the appropriate depth of the proposed slurry wall enhancements at the HFFC SI Fuel Facility (Figure 1).

EPA requested additional exploration to collect geotechnical data on the lithology of the land along the perimeter of the Fuel Facility. The purpose of this geotechnical exploration is to obtain a general understanding of the subsurface soil condition and develop a model based on the light non-aqueous phase liquid (LNAPL) Distribution and Recovery Model (LDRM) in order to obtain a more technically sound determination of the appropriate depth of the slurry wall enhancement. LDRM was developed for the American Petroleum Institute (API) to simulate the performance of proven hydraulic technologies for recovering free-product petroleum liquid releases to groundwater.

2. BACKGROUND

2.1 Location and Site Description

The Fuel Facility is located along the western side of Sand Island Access Road at the corner of Access Road No. 2 on a reclaimed area owned by the State of Hawaii Department of Transportation, Airports Division (DOTA). It is approximately 1.5 miles southeast of the Daniel K. Inouye International Airport (HNL). Ke'ehi Lagoon Small Boat harbor is located less than 200 feet west of the Site with the Harbor Access Road bordering the Site to the south and Access Road No. 2 to the north. Across Sand Island Access Road is the former Kapalama Military Reservation.

The Fuel Facility is approximately 8.4 acres and subdivided into Lots 2, 3, and 3.5 and house a total of 16 breakout aboveground storage tanks (ASTs) that supply jet fuel to HNL. Figure 2 shows a site layout map of the Fuel Facility with the largest tank (Tank 1) with a capacity of 5.46M gallons. The Fuel Facility is equipped with a concrete wall perimeter fence where the lowest elevation of the wall is 8.8 feet above mean sea level (amsl). The Site topography is generally flat with ground surface elevations ranging from approximately 4 to 10 feet amsl. The average ground surface elevation for Lot 2 is approximately 4.3 feet amsl while the average ground surface elevation for Lot 3/3.5 is approximately 4.5 feet amsl.

Ke'ehi Lagoon is located approximately 200 feet west of the Site and tidally influenced groundwater is encountered at approximately 4 to 6 feet below ground surface (bgs). A site layout map of the Fuel Facility with the proposed exploratory borehole locations is shown in Figure 2.

Fuel at the HFFC SI bulk storage facility is delivered via tanker ships that offload at the Sand Island Pier 51 through an underground fuel pipeline. Fuel is also delivered via petroleum pipeline from Par Hawaii Refinery located at Barber's Point to the west of Oahu. No fuel is loaded or unloaded via tanker trucks at the facility. The fuelcontainment area is primarily enclosed by a concrete retaining wall and a slurrywall six (6) feet below grade. A portion of the site near the fire foam building utilizes a gravel covered earthen berm overlying the slurry for fuel containment. The concrete wall, earthen berm and underground slurry wall, which are depicted on Figure 2, are designed to contain fuel spill from leaving the facility.

2.2 Geology and Hydrogeology

The Site is located within the coastal plain of Southern Oahu. The coastal plain is situated on the eroded flanks of the Koolau Volcano, which forms the eastern two-thirds of the Island of Oahu. The coastal plain is made up by an extensive accumulation of alluvium, interbedded with coral reefs and associated deposits (MacDonald et. al., 1983).

The Site and surrounding area are generally flat with ground surface elevations ranging from approximately 0 to 5 feet above mean sea level. The area is underlain by a broad elevated coral reef, covered by volcanic alluvium. Land reclamation projects in the past century have built Sand Island and the surrounding area to its current topography.

The Site is contained within the Honolulu aquifer sector and the Kalihi aquifer system with basal, unconfined sedimentary soil (Mink and Lau, 1990). Mink and Lau also indicated that the surrounding area of the Site contains two aquifer types (caprock or sedimentary deposit and basal). The basal unconfined sedimentary aquifer (Aquifer Code 30103116) is considered currently used but neither a drinking water source or ecologically important with moderate salinity, and high vulnerability to contamination. The flank basal confined aquifer is currently used as a source of fresh drinking water and considered irreplaceable with low vulnerability to contamination.

The surface soils of the Site are classified by the U.S. Department of Agriculture, Soil Conservation Service, as "Fill Land, Mixed" generated from the past dredging operations from nearby areas, and consisting of silty sand and coral gravel, which characteristically have high porosity and permeability. The groundwater table in the area is tidally influenced and is at the same elevation as the mean sea level, approximately 4 to 6 feet bgs. It is important to note that groundwater flow direction can be influenced locally and regionally by the presence of local wetland features, surface topography, recharge and discharge areas, heterogeneity of subsurface soils, proximity to water pumping wells and tidal influence, due to the proximity of the Site to the Honolulu Harbor shoreline.

3. PREVIOUS INVESTIGATIONS

Several previous investigations that examined subsurface conditions at the site have been conducted in recent years. These investigations include the following:

- 2015 Tidal Study
- 2016 Tank 2 Spill Closure; and
- 2015 and 2018 Geolabs Engineering Exploration

The majority of these investigations focused on shallow soils (less than 10 ft bgs). However deeper data is available from the 2015 and 2018 Geolabs field explorations. The relevant boring logs from these investigations are included in Appendix B and the results of the investigations are summarized below.

3.1.1 2015 Field Exploration

Geolabs conducted a subsurface investigation in Lot 3 of the SI Fuel Facility on April 6 through April 8, 2015 and completed a total of three borings near the Pump Pad on the northeast corner of Lot 3. One of the three borings (Boring #3) near the existing slurry wall was drilled down to 30.5 feet bgs.

Results of the 2015 subsurface investigation revealed the presence of fill materials from about 2 to 4 feet thick in Boring #3, consisting of stiff to very stiff sandy silt underlain by medium dense silty sand. The fill was underlain by 2 feet of lagoonal deposit consisting of gravelly sand and silt followed by a very soft to medium stiff silt and clay extending down to about 7.5 feet bgs.

Underneath the layer of silty clay is a continuous layer of silty gravel from 8 feet bgs down to 22 feet bgs. Severely to moderately-fractured hard coral formation was encountered below 22 feet bgs. Groundwater was encountered at 4 feet bgs during the borehole installation. Boring #3 was on the same location as the proposed BH-10 borehole and therefore was utilized as a substitute boring for borehole "BH-10".

3.1.2 2018 Field Exploration

On July 16 through 18, 2018, Geolabs conducted a subsurface investigation in Lot 2 and 3 of the SI Fuel Facility as part of the engineering investigation for the installation of a power distribution center and an oil water separator. Geolabs completed a total of three borehole installations with two borings located on the northeast corner of the Fuel Facility (Boring #1 and #2) and the 3rd borehole (Boring #3) on the northwest corner of Lot 3/3.5.

Boring #2 was installed just adjacent to the slurry wall at the Fuel Facility parking lot with 4 inches of asphaltic concrete. Underneath the asphalt pavement is a dense sandy gravel fill that extend down to 7.5 feet bgs. The surface fill was underlain by lagoonal deposits consisting of soft silty clays extending to a depth of about 19 feet bgs. A moderately fractured, moderately weathered, soft coral formation was encountered at a depth of 19.5 bgs. Due to the elevation of the parking lot, groundwater was encountered at 7.3 feet bgs in Boring #2.

Boring #3 located on the northwest corner of Lot 3 consisted of medium dense sandy gravel fill extending to a depth of 3 feet bgs. Below the surface fills, lagoonal deposits consisting of soft silty clay and loose silty sands and gravel were encountered and extend to a depth of 22 feet bgs. Medium hard coral formation was encountered below 22 feet bgs and extended to a depth of about 27 feet bgs. Groundwater was encountered at 3.3 feet bgs at the time of borehole installation.

Borings #2 and #3 were installed adjacent to the existing slurry wall and were utilized as substitute borings for boreholes "BH-14" and "BH-05" respectively.

4. SLURRY WALL GEOTECHNICAL EXPLORATION

The slurry wall geotechnical exploration consisted of drilling and sampling 15 boreholes designated as BH-01 to BH-15, along the perimeter of the existing slurry wall to a depth of 20.5 feet to 31.5 feet bgs. The boreholes were spaced at 100- to 200-foot intervals inside the Fuel Facility along the edge of the existing slurry wall, in order to capture the variation in soil lithology at the Site. However, due to the previous field exploration conducted by Geolabs, Inc. (Geolabs) in 2015 and 2018, the total number of proposed boreholes for this geotechnical exploration was reduced to 12.

4.1 Geotechnical Exploration

The 12 boreholes installed during the geotechnical exploration extend to depths of about 21 to 32 feet bgs. The approximate boring/sample locations are shown in Figure 3. GeoTek Hawaii (GTH) was contracted by ERM for the borehole installation and to complete the subsurface clearing operation to locate underground utilities at the Site. The boreholes were installed utilizing a 4-inch diameter hollow stem auger that utilizes a split spoon for sampling soil from each pre-determined depth. Sample depths at each borehole location were taken at the following intervals, 5.0 - 6.5 ft bgs, 7.0 - 8.5 ft bgs, 10.0 - 11.5 ft bgs, 15.0 - 16.5 bgs, 20.0 - 21.5 ft bgs, and 25-26.5 ft bgs. Soil samples recovered during the subsurface exploration were shipped to JLT Laboratories in Canonsberg, Pennsylvania for physical and engineering property testing.

All of the boreholes were advanced to a total depth of 26.5 ft bgs except for the following boreholes:

- BH-01 encountered refusal at 21.0 ft bgs (16.5 ft below msl);
- BH-13 encountered refusal at 20.5 ft bgs (16.5 ft below msl); and
- BH-07 was advanced to a total depth of 31.5 ft bgs (27 ft below msl).

The materials encountered in the borings were classified by visual and textural examination in the field by our geologists Dana Susina and John Cavanaugh, who monitored the drilling operations on a near-continuous basis. ERM's Staff Scientist Tanner Gillespie monitored the drilling operations and supported sampling procedures as well as served as the Health and Safety on-site coordinator during the geotechnical exploration.

Soils were classified by the visual inspection and textural examination of the materials encountered during borehole installation in accordance with the Unified Soil Classification System (USCS). The results of this classification are shown on the borelogs. Copy of the USCS chart is included in this report as Appendix A together with the boring logs showing the graphic representations of the subsurface soils encountered at each boring locations. The location of each borehole is shown in Figure 3. Photographic log of the geotechnical exploration is included as Appendix B of this report.

A penetration test was performed during the geotechnical exploration utilizing a modified California sampler with a 140-pound hammer falling 30 inches, blow counts were counted at 6-inch intervals for a total of three counts or 1.5 feet. Additionally samples were obtained with a Split-Barrel system, by driving a 2-inch OD standard penetration sampler using the same hammer and drop system.

The geotechnical exploration indicated that the Site is generally underlain by surface fills and lagoonal materials overlying coralline deposits. The granular surface fill materials were encountered with the consistency of dense to medium dense, extending to depths varying from 4 to 6 feet below the existing ground surface. The granular surface fills were underlain by soft/loose lagoonal deposits extending to a depth of up to about 25 feet deep. Coralline deposits consisting of dense coral formation, sandstones, and medium dense coralline detritus with localized loose/soft pockets with variable consistency extended to the maximum depth of 31.5 feet in borehole BH-07 located on the southwest corner of Lot 3.

Groundwater was encountered at depth of about 3.5 to 6.5 feet bgs at the time of the field exploration. Due the proximity of the Site to the Pacific Ocean, groundwater levels are expected to change with tidal fluctuations. Seasonal precipitation, storm surge conditions, surface water ponding, and other factors may also influence the groundwater levels at the Site.

In general, very loose lagoon deposits/Clayey Gravel (coral detritus) is typically found beneath the upper silty Gravel/Fill at depths between 6 and 20 feet bgs at the Site and isolated non-continuous clay layers are occasionally encountered. Deeper hard coral is typically encountered around 20 to 25 feet bgs. In addition, no evidence of fuel in the deeper strata was encountered. These observations were similar to the findings in the 2015 and 2018 Geolabs engineering exploration reports.

Detailed descriptions of the materials encountered from the geotechnical exploration are presented in the Boring Logs included as Appendix A of this report and summarized in Table 1 below. For each borehole, the corresponding sample depths, penetration test and corresponding USCS code is presented.

4.2 Soil Laboratory Testing

The soil samples were further examined by laboratory testing at JLT Laboratories. Soil samples collected from the 5 to 15 ft intervals were combined into one composite sample for lab testing. The composite samples is classified as Clayey Sand with Gravel per ASTM D2487.

The composite sample is being used for slurry wall mix design tests at JLT Laboratories. The mix design testing include the following components:

- Groundwater and site water compatibility with bentonite; •
- Slurry trial mix with bentonite and Organo Clay, and short term permeability; •
- Slurry trial mix long term permeability. •

The laboratory analytical results will be presented in future submittals upon completion of all the laboratory tests.

Borehole ID	Sample Depth (ft)	Penetration Test	USCS Code	Description
BH-01	5.0 - 6.5	0-3-3	SC	Clayey Sand with Gravel
	7.0 - 8.5	0-1-0	GC	Clayey Gravel with Sand
	10.0 - 11.5	0-1-0	GC	Clayey Gravel with Sand
	15.0 - 16.5	1-0-1	GC	Clayey Gravel with Sand
_	20.0 - 21.5	9-40-50	SP	Poorly graded Sand and Coral
				REFUSAL AT 21.0 ft bgs
BH-02	5.0 - 6.5	3-1-1	СН	Fat Clay with gravel
	7.0 - 8.5	1-1-1	SM	Silty Sand with gravel
	10.0 - 11.5	1-1-0	SM	Silty Sand with gravel
	15.0 - 16.5	1-1-0	GM	Silty Gravel with sand
	20.0 - 21.5	1-0-0	GM	Silty Gravel with sand
	25.0 - 26.5	9-16-6	CORAL	CORAL
BH-03	5.0 - 6.5	0-2-2	СН	Fat Clay with gravel
	7.0 - 8.5	1-1-2	SM	Silty Sand with gravel
	10.0 - 11.5	2-2-1	GM	Silty Gravel with sand
	15.0 - 16.5	0-0-1	GM	Silty Gravel with sand
	20.0 - 21.5	0-0-1	GC	Clayey Gravel with Sand
	25.0 - 26.5	1-0-0	GM	Silty Gravel with sand
BH-04	5.0 - 6.5	1-1-1	СН	Fat Clay with gravel
	7.0 - 8.5	0-1-1	GM	Silty Gravel with sand
	10.0 - 11.5	2-3-2	GC	Clayey Gravel with Sand
	15.0- 16.5	1-2-0	GC	Clayey Gravel with Sand
	20.0 - 21.5	1-0-0	GC	Clayey Gravel with Sand
	25.0 - 26.5	2-36-50	CORAL	CORAL
BH-05**	5.0 - 6.5	-	SM	Gray Silty Sand with traces of clay, loose (lagoonal deposit)
(Geolabs, 2018)	7.0 - 8.5	-	SM	Gray Silty Sand with traces of clay,
	10.0 - 11.5	-	GM	Gray Silty Gravel with some sand (coralline) loose (lagoonal deposit)
	15.0 - 16.5	-	GM	Gray Silty Gravel with some sand (coralline) loose (lagoonal deposit)
	20.0 - 21.5	-	GM	Gray Silty Gravel with some sand (coralline) loose (lagoonal deposit)

Table 1 Subsurface Soil Classifications

P:\Projects\0537336 Signature Flight Support - PWK - Sand Island Slurry.AR\SI Geotechnical Investigation\Revised SI Geotechnical Exploration Report rgd edits.docx

	22.0 - 22.5	-	CORAL	Tan Coral, closely fractured, moderately weathered, medium hard (coral formation)
BH-06	5.0 - 6.5	2-3-3	GW	Well Graded Gravel with sand
	7.0 - 8.5	1-0-0	MH	Elastic Silt with Sand
	10.0 - 11.5	0-0-0	CL	Gravelly Lean Clav
	15.0 - 16.5	1-1-0	GM	Silty Gravel with sand
	20.0 - 21.5	2-6-9	GM	Silty Gravel with sand
	25.0 - 26.5	18-20-39	CORAL	CORAL
	50 65	F 6 5	GP	Beerly graded gravel with cond
DI -07	J.0 - 0.J	542	GM	Foolity graded graver with sand
	7.0 - 0.5	5-4-3	GM	Silty Gravel with sand
	10.0 - 11.5	2-0-1	GM	Slity Gravel with sand
	15.0 - 16.5	0-0-6	GC	Clayey Gravel with Sand
	20.0 - 21.5	1-0-1	GW	Well Graded Gravel with sand
	25.0 - 26.5	1-0-0	GC	Clayey Gravel with Sand
	30.0 - 31.5		SW	SW (Well graded Sand with Gravel) and CORAL
BH-08	5.0 - 6.5	1-4-0	SM	Silty Sand with gravel
	7.0 - 8.5	2-1-1	SP	Poorly graded Sand and Coral
	10.0 - 11.5	1-1-0	GM	Silty Gravel with sand
	15.0 - 16.5	0-0-0	СН	Fat Clay with gravel
	20.0 - 21.5	0-1-0	GM	Silty Gravel with sand
	25.0 - 26.5	5-12-47	CORAL	CORAL
BH-09	50-65	1-0-0	СН	Fat Clay with gravel
Direct	70-85	2-2-0	GP	Poorly graded gravel with sand
	7.0 0.0	220	GM	Silty Gravel with sand (coralline)
	10.0 - 11.5	1-0-0	Cim	loose (lagoonal deposit)
	15.0 - 16.5	1-0-0	GC	Clayey Gravel with Sand
	20.0 - 21.5	0-0-0	GC	Clayey Gravel with Sand
		7 40 40	SW	Well graded Sand with Gravel and
	25.0 - 20.5	7-10-13		Coral
			SW/SM	Gray Gravelly Sand (coralline) with
	5.0 - 6.5	-		some silt, loose, wet lagoonal
				deposit
	7.0 - 8.5	-	UL	Gray Silly Gray with some line sand,
			GM	Grav Silty Gravel (coralline) with
BH-10*	10.0 - 11.5	-	Cim	some sand. loose lagoonal deposit
(Geolabs, 2015)	150 165		GM	Gray Silty Gravel (coralline) with
	15.0 - 16.5	-		some sand, loose lagoonal deposit
	20.0 - 21.5	-	GM	Gray Silty Gravel (coralline) with
	20.0 21.0		0004	some sand, loose lagoonal deposit
	220 225		CORAL	I an Coral, severely to moderate
	22.0 - 22.0	-		hard (coral formation)
			SW/SM/CH	Well graded Sand with Gravel Silty
BH-11	5.0 - 6.5	0-1-0	0.1.01	Sand, CH (Fat Clay). SP (Poorly
		- • •		graded Sand)
	7.0 - 8.5	1-0-0	GM	Silty Gravel with sand (coralline), loose (lagoonal deposit)

	10.0 - 11.5	1-0-2	GM	Silty Gravel with sand (coralline),	
	15.0 - 16.5	0-1-0	GC	Clavey Gravel with Sand	
	20.0 - 21.5	0-0-0	GC	Clavey Gravel with Sand	
	25.0 - 26.5	18-24-34	CORAL		
	23.0 - 20.3	10-24-04		Eat Clay with gravel Lean Clay with	
BH-12	5.0 - 6.5	0-0-2	011/02/00	Silty Gravel	
	7.0 - 8.5			No Recovery (no soil core recovered in 18 inches of coring)	
	10.0 - 11.5	0-2-2	GC	Clayey Gravel with Sand	
	15.0 - 16.5	2-0-1	GM	Silty Gravel with sand	
	20.0 - 21.5	1-11-13	CL	Gravelly Lean Clay), SP (Poorly graded Sand	
	25.0 - 26.5	5-10-43	SP	Poorly graded Sand and Coral	
BH-13	5.0 - 6.5	0-0-1	SM/GM/CH	Silty Sand with gravel, Silty Gravel with fat Clay	
	7.0 - 8.5	1-1-0	GM	Silty Gravel with sand	
	10.0 - 11.5	1-1-0	GC	Clayey Gravel with Sand	
	15.0 - 16.5	1-1-0	GC	Clayey Gravel with Sand	
	20.0 - 21.5	100	CORAL	CORAL	
				001012	
				REFUSAL AT 20.5 ft bgs	
BH-14**			SM	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill)	
BH-14**	 5.0 - 6.5		SM	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense	
BH-14** (Geolabs, 2018)	 5.0 - 6.5 7.0 - 8.5		SM CH	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (Jagoonal denosit)	
BH-14** (Geolabs, 2018)	 5.0 - 6.5 7.0 - 8.5 10 0 - 11 5		SM CH GM	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand	
BH-14** (Geolabs, 2018)	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5	 - -	SM CH GM	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit)	
BH-14** (Geolabs, 2018)	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5		SM CH GM CH	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal	
BH-14** (Geolabs, 2018)	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5	 - - -	SM CH GM CH	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit)	
BH-14** (Geolabs, 2018)	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5		SM CH GM CH GM	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Tan Coral, moderately fractured,	
BH-14** (Geolabs, 2018)	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5 20.0 - 21.5		SM CH GM CH GM	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Tan Coral, moderately fractured, moderately weathered, soft (coral	
BH-14** (Geolabs, 2018)	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5 20.0 - 21.5		SM CH GM CH GM	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Tan Coral, moderately fractured, moderately weathered, soft (coral formation)	
BH-14** (Geolabs, 2018) BH-15	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5 20.0 - 21.5 5.0 - 6.5	 - - - - -	SM CH GM CH GM CH/SM	REFUSAL AT 20.5 ft bgs REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Tan Coral, moderately fractured, moderately weathered, soft (coral formation) Fat Clay with Silty Sand	
BH-14** (Geolabs, 2018) BH-15	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5 20.0 - 21.5 5.0 - 6.5 7.0 - 8.5	 - - - - - 0-0-4 1-0-0	SM CH GM CH GM CH/SM GM	REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Tan Coral, moderately fractured, moderately weathered, soft (coral formation) Fat Clay with Silty Sand Silty Gravel with sand (coralline)	
BH-14** (Geolabs, 2018) BH-15	 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5 20.0 - 21.5 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5	 - - - - - 0-0-4 1-0-0 0-0-0	SM CH GM CH GM CH/SM GM GC	REFUSAL AT 20.5 ft bgs REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Tan Coral, moderately fractured, moderately weathered, soft (coral formation) Fat Clay with Silty Sand Silty Gravel with sand (coralline) Clayey Gravel with Sand	
BH-14** (Geolabs, 2018) BH-15	5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5 20.0 - 21.5 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5	 - - - - - - 0-0-4 1-0-0 0-0-0 5-27-38	SM CH GM CH GM CH/SM GM GC SW	REFUSAL AT 20.5 ft bgs REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Tan Coral, moderately fractured, moderately weathered, soft (coral formation) Fat Clay with Silty Sand Silty Gravel with sand (coralline) Clayey Gravel with Sand Well Graded Sand with gravel and Coral	
BH-14** (Geolabs, 2018) BH-15	5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5 20.0 - 21.5 5.0 - 6.5 7.0 - 8.5 10.0 - 11.5 15.0 - 16.5 20.0 - 21.5	 - - - - - - - - - - - - - - - - - -	SM CH GM CH GM CH/SM GM GC SW SP	REFUSAL AT 20.5 ft bgs REFUSAL AT 20.5 ft bgs Brownish tan Silty Sand (Coralline) with some gravel, dense, moist (fill) grades to medium dense Gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Gray Silty Gravel with some sand (coralline), loose (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Brownish gray Silty Clay with traces of sand and shells, soft (lagoonal deposit) Tan Coral, moderately fractured, moderately weathered, soft (coral formation) Fat Clay with Silty Sand Silty Gravel with sand (coralline) Clayey Gravel with Sand Well Graded Sand with gravel and Coral Poorly graded Sand and Coral	

Notes:

Penetration test shows the blow count for each 6-inch interval for a total of 1.5 ft.

* Geolabs, 2015, no samples collected and no blow counts.

** Geolabs, 2018, no samples collected and no blow counts.

5. SUBSURFACE CONDITIONS

Based on the geotechnical exploration, the Site primarily consists of three layers, the upper silty gravel/fill, the middle loose lagoon deposits and the deeper hard coral layer. Figure 4 shows the subsurface profile at the SI Fuel Facility along the existing slurry wall.

The upper layer of the Site generally consists of a brownish tan silty gravel (coralline) fill materials. This layer typically occurs at 0 to 6 feet bgs with some isolated non-continuous clay layers around 4 to 6 feet bgs. Underneath the surface fill material is a layer of loose silty sand lagoonal deposit that typically occurs from 6 to 20 ft below ground surface. The soft lagoonal deposit consists of loose gray silty sand and gravel with traces of fractured corals, and shells. Below the soft lagoonal layer is a layer of hard coral. The coral layer was typically encountered between 20-26 feet bgs.

In addition to the subsurface soil conditions, there was no free-product encountered in any of the 12 borings installed during the geotechnical exploration at the Site. The 2019 annual groundwater monitoring (ERM, 2019) revealed no measureable product in 53 out of 54 onsite monitoring wells located within Lot #2 and Lot # 3/3.5. The exception is monitoring well "PZ-4", located between Tank 15 and Tank 17 in Lot 3/3.5. PZ-4 is about 15 feet to the north of borehole "BH-08". Monitoring well PZ-4, together with monitoring wells PZ-2, PZ-3, and PZ-10, are all located within the area covered by the on-going automatic extraction system in Lot 3/3.5.

6. CONCLUSION

Based on the subsurface conditions encountered during the geotechnical exploration along the slurry wall at the Fuel Facility, very loose lagoon deposits/Clayey Gravel (coral detritus) is typically found beneath the upper silty Gravel/Fill at depths between 6 and 20 feet bgs at the Site with isolated non-continuous clay layers occasionally encountered. Deeper hard coral is typically encountered around 20 to 25 feet bgs. In addition, no evidence of fuel in the deeper strata was encountered. These observations were similar to the findings in the 2015 and 2018 Geolabs engineering exploration reports.

7. **REFERENCES**

- Burns and McDonnell. 2015. Subsurface Information for Sand Island Lot 3 Pump back to Pier Project. Hawaii Fueling Facilities Corp. Honolulu, Oahu, Hawaii. Burns and McDonnell Engineering Company, Inc. Project No. 78785. October 2015.
- Burns and McDonnell. 2018. Subsurface Information for the HFFC CIP Phase I, Hawaii Fueling Facilities Corp. Honolulu, Oahu, Hawaii. Burns and McDonnell Engineering Company, Inc. Project No. 94716. September 2018.
- ERM. 2015. Tidal Study. Sand Island Fuel Storage Facility 6 Sand Island Access Road, Honolulu, HI. Hawaii Fueling Facilities Corporation. September 2015.
- ERM. 2019. Annual Groundwater Monitoring Report. Hawaii Fueling Facilities Corporation Sand Island Fuel Storage Facility. Sand Island Access Road, Honolulu, HI. December 2019.
- Geolabs. 2016. Geotechnical Engineering Exploration New Kapalama Terminal, Honolulu, Oahu, Hawaii. W.O. 6826-00. October 2016.
- MacDonald, et. al. 1983. Volcanoes in the Sea The Geology of Hawaii. Second Edition. Gordon A. MacDonald, Agatin T. Abbott, and Frank L. Peterson. University of Hawaii Press Honolulu. March 1983.
- Mink and Lau. 1990. Aquifer Identification and Classification For O'ahu: Groundwater Protection Strategy for Hawaii, Technical Report No. 179, John Mink and L. Stephen Lau. February 1990 Revised.
- Stantec. 2008. Sand Island Slurry Wall Design/Construct Proposal for Hawaii Fueling Facilities Corporation. Sand Island Fuel Storage Facility - 6 Sand Island Access Road, Honolulu, HI. May 3, 2008.

Figures








XXXX.XX.XX G:\DWGS\0537336 Sand Island\02\053733602-01.c

2/28/2020

Appendix A USCS Chart and Boring Logs

UNIFIED SOIL CLASSIFICATION SYSTEM

Soils are visually classified by the United Soil Classification System (USCS) on the boring logs presented in this report. Grain size analysis and Atterberg limits tests are often performed on selected samples to aid in classification. The classification system is briefly outlined on this chart. For a more detailed description of the system, see "The Unified Soil Classification System" Corps of Engineers, US Army Technical Memorandum No. 3–357 (Revised April 1960) or ASTM Designation: D2487–66T.

		MAJOR DI	VISIONS	GROUP SYMBOL	TYPICAL NAMES
ve) ve)		(CLEAN GRAVELS	GW	Well graded gravels, gravel—sand mixtures, or sand—gravel—cobble mixtures.
S. So sie	/ELS less (fraction	(Less than S	5% passes No. 200 sieve)	GP	Poorly graded gravels, gravel—sand mixtures, or sand—gravel—cobble mixtures.
0 SOII 10. 20	GRA 50% or coarse ses No	GRAVELS WITH FINES (More than 12%	Limits plot below the "A" line & hatched zone on plasticity chart	GM	Silty gravels, gravel—sand—silt mixtures.
RAINEI sses h	spd	passes No. 200 sieve)	Limits plot above the "A" line & hatched zone on plasticity chart	GC	Clayey gravels, gravel—sand—clay mixtures.
Da %	n eve)		CLEAN SANDS	SW	Well graded sands, gravelly sands.
DARSE an 50	VDS n 50% fractio	(Less than S	5% passes No. 200 sieve)	SP	Poorly graded sands, gravelly sands.
ss th CC	SAN SAN ore tha coarse ses No	SANDS WITH FINES (More than 12%	Limits plot below the "A" line & hatched zone on plasticity chart	SM	Silty sands, sand—silt mixtures.
(Le	o M()	passes No. 200 sieve)	Limits plot above the "A" line & hatched zone on plasticity chart	SC	Clayey sands, sand-clay mixtures.
ED asses e)	.TS s Plot A* Line tched s on ticity urt)	SILTS (Liquic	S OF LOW PLASTICITY I Limit Less Than 50)	ML	Inorganic silts, non—plastic or slightly plastic.
GRAIN ILS ore p siev	SIL (Limits Below & ha Zone Plast	SILTS (Liquid	OF HIGH PLASTICITY Limit More Than 50)	ΜН	Inorganic silts, micaceous or diatomaceous silty soils, elastic silts.
E 1 0 200	YS * Plot A" Line tched * on ricity	CLAYS (Liquic	S OF LOW PLASTICITY I Limit Less Than 50)	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
EIN (50% No	CLA (Limit: Above * & hor Zone Plast	CLAYS (Liquid	S OF HIGH PLASTICITY Limit More Than 50)	СН	Inorganic clays of high plasticity, fat clays, sandy clays of high plasticity.

NOTE:

Coarse grained soils with between 5% & 12% passing the No. 200 sieve and fine grained soils with Atterberg limits plotting in the hatched zone on the plasticity chart shall have dual symbol. In Arizona, local streams contain sand, gravel & cobble type material, which are locally known as SGC or riverrun material. The USCS is not used to divide and symbolize this material.



DEFINITIONS OF SOIL FRACTIONS

SOIL COMPONENTPARTICLE SIZE RANGECobblesAbove 3 in.Gravel3 in. to No. 4 sieveCoarse gravel3 in. to 3/4 in.Fine gravel3/4 in. to No. 4 sieveSandNo. 4 to No. 200CoarseNo. 4 to No. 10MediumNo. 10 to No. 40FineNo. 40 to No. 200Fines (silt & clay)Below No. 200 sieveColloidSmaller than 2 microns		
CobblesAbove 3 in.Gravel3 in. to No. 4 sieveCoarse gravel3 in. to 3/4 in.Fine gravel3/4 in. to No. 4 sieveSandNo. 4 to No. 200CoarseNo. 4 to No. 10MediumNo. 10 to No. 40FineNo. 40 to No. 200Fines (silt & clay)Below No. 200 sieveColloidSmaller than 2 microns	SOIL COMPONENT	PARTICLE SIZE RANGE
	Cobbles Gravel Coarse gravel Fine gravel Sand Coarse Medium Fine Fines (silt & clay) Clay Colloid	Above 3 in. 3 in. to No. 4 sieve 3 in. to 3/4 in. 3/4 in. to No. 4 sieve No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200 Below No. 200 sieve Smaller than 2 microns Smaller than 5 microns

	ERI		ERM 132 Bishoj 06813	p St. Suite 5	512				BORING NUMBER BH-01 PAGE 1 OF 1
	CLIEN	T Hawa	elepnone: aii Fuelina I	acility Corp	i04 oratior	ו (HFF	=C)		PROJECT NAME Sand Island Geophysical Survey
	PROJI DATE	ECT NUN	MBER <u>053</u> D <u>1/17/20</u>	57336)	CON	IPLET	ED _1/17/	/20	PROJECT LOCATION _HFFC Sand Island Facility APPROX. GROUND ELEVATION _4.35 ft HOLE SIZE _4 in
	DRILL			A Hawaii G	eoTek				(Nearest MW) GROUND WATER LEVELS:
	LOGG	ED BY	HOD <u>Hol</u> Tanner Gil	low Stem Au lespie	uger CHE	CKED	BY Johr	n Cavanaugh	AT TIME OF DRILLING
	NOTE	S Neare	est MW: ES	S-13	1		1		AFTER DRILLING
	o DEPTH (ft)	SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	nscs	Sample Depth (ft)		MATERIAL DESCRIPTION
								SILTY SAN poorly grade	D WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, ed FILL
		SS	0-3-3 (6)	PID = 10.1		<u>SM</u>	<u>0-5</u>	CLAYEY SA medium gra	AND WITH GRAVEL, (SC) 60% gravel, 10% sand, 30% fines, gray, fine to ined, saturated
EO.GPJ		SS	(1)	PID = 2.1		50	5-7	CLAYEY G	RAVEL WITH SAND, (GC) 60% gravel, 10% sand, 30% fines, gray,
OJECTS\SI HFFC GE	 <u>10</u> 	SS	0-1-0 (1)	PID = 0.8		GC	<u>7 - 10</u>	CLAYEY G	RAVEL WITH SAND, (GC) 60% gravel, 10% sand, 30% fines, gray,
TS\BENTLEY\GINTCL\PR	 - <u>15</u> 	SS	1-0-1 (1)	PID = 0.4		GC	<u>10 - 15</u>	CLAYEY G	RAVEL WITH SAND, (GC) 60% gravel, 10% sand, 30% fines, tan, saturated
8\PUBLIC\DOCUMEN	20	SS	9-40-50 (90)	PID = 0		GC SP	15 - 20 - 20 - 20 4 - 20 4 - 21	POORLY G	RADED SAND, (SP) 100% sand, tan, well graded, coarse grained, saturated r 0.4- 21 ft CORAL- Off-white
ENVIRONMENTAL BH - GINT STD US.GDT - 1/23/20 12:32 - C:\USER									Reiusal at 21.0 feet. Bottom of borehole at 21.0 feet.

	6	E 1	RM 132 Bishop	St. Suite 5	12			BORING NUMBER BH-02 PAGE 1 OF 1
	ERM	9 I T	6813 elephone:	808-521-44	104			
	CLIENT	Hawa	iii Fueling F	acility Corp	oration	(HFF	=C)	PROJECT NAME Sand Island Geophysical Survey
	PROJEC	CT NUN TARTE	IBER <u>053</u> D <u>1/13/20</u>	7336	СОМ	PLET	ED 1/13/2	PROJECT LOCATION HFFC Sand Island Facility 20 APPROX. GROUND ELEVATION 4.09 ft HOLE SIZE 4 in (Nearest MW) 4.09 ft HOLE SIZE 4 in
	DRILLIN		ITRACTOR	Hawaii Ge	eoTek			GROUND WATER LEVELS:
	DRILLIN		HOD Holle	ow Stem Au	lger			AT TIME OF DRILLING
	LOGGE	D BY _/	Achie Reye	<u>s</u>	CHE	CKED	JBY John	AFTER DRILLING 3.60 ft / Elev 0.49 ft
\mathbf{F}				AL -				
	o DEPTH (ft)	SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENT, DATA	GRAPHIC LOG	SOSU	Sample Depth (ft)	MATERIAL DESCRIPTION
								SILTY SAND WITH GRAVEL, (GP) 20% gravel, 60% sand, 20% fines, tannish brown, poorly graded
$\left \right $	5		3-1-1 (2)	PID = 0		<u>GP</u>	<u>0-5</u>	FAT CLAY WITH GRAVEL, (CH) 30% gravel, 60% fines, gray, fine grained, saturated
$\left \right $			1-1-1			CH SC	<u>- 5-6</u> 6-7	CLAYEY SAND WITH GRAVEL, (SC) 10% gravel, 60% sand, 30% fines, gray, saturated
			(2)	PID = 1				SILTY SAND WITH GRAVEL, (SM) 10% gravel, 60% sand, 30% fines, gray, fine to medium grained, saturated
	 		1-1-0 (1)	PID = 0		<u>SM</u>	<u>7 - 10</u>	SILTY SAND WITH GRAVEL, (SM) 10% gravel, 60% sand, 30% fines, gray, fine to medium grained, saturated
	 <u>15</u> 		1-1-0 (1)	PID = 0		<u>SM</u> .	<u>10 - 15</u>	SILTY GRAVEL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines, light gray, saturated
	 		1-0-0 (0)	PID = 0				
10101			9-16-6 (22)	PID = 0	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	<u>GM</u>	<u>15 - 24.5</u> 24.5 - 26.5	100% gravel, white, saturated 24.5-26.5 ft bgs CORAL
								Bottom of borehole at 26.5 feet.

ERI	Е 9 1 9 И т	ERM 132 Bishor 6813 Telephone:	o St. Suite 5	12 04				BORING NUMBER BH-03 PAGE 1 OF
CLIEN	T <u>Hawa</u>	aii Fueling F	acility Corp	oration	(HFF	EC)		PROJECT NAME Sand Island Geophysical Survey
DATE	STARTE	D <u>1/13/20</u>) R <u>Hawaii Ge</u>	COM	PLET	ED <u>1/13/</u>	20	APPROX. GROUND ELEVATION 4.12 ft HOLE SIZE 4 in (Nearest MW)
DRILL	ING MET		ow Stem Au	iger				AT TIME OF DRILLING
NOTE	S Neare	est MW: M	N-A3	CHEC	,KED	BT John	Cavanaugn	AFTER DRILLING
o DEPTH (ft)	SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	NSCS	Sample Depth (ft)		MATERIAL DESCRIPTION
-							SILTY SANE poorly grade	D WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, d
5	SS	0-2-2 (4)	PID = 0		 <u>сн</u>	<u> 0 -5 </u>	GRAVELLY	FAT CLAY, (CH)
_	SS	1-1-2 (3)	PID = 1.6				SILTY SANE	0 WITH GRAVEL, (SM) 10% gravel, 60% sand, 30% fines
<u>10</u>	SS	2-2-1 (3)	PID = 2.3		<u>sm</u> .	<u>6 - 10</u>	SILTY GRAV	/EL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines
 	SS	0-0-1 (1)	PID = 0.3					
20	SS	0-0-1 (1)	PID = 0		<u>GM</u> .	<u>10 - 20</u>	CLAYEY GR	AVEL, (GC) 60% gravel, 40% fines
25	SS	1-0-0 (0)	PID = 0		<u>GC</u>	<u>20 - 25</u>	SILTY GRAV	/EL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines
				54J	GM	25 - 26.5		Bottom of borehole at 26.5 feet.

F		ERM 1132 Bisho _l 96813 Telephone:	p St. Suite 5 808-521-44	12 04		BORING NUMBER BH-U4 PAGE 1 OF 1
CLI	ENT Hawa	aii Fueling I	acility Corp	oration (F	IFFC)	PROJECT NAME Sand Island Geophysical Survey
PR		MBER 053	7336		t	PROJECT LOCATION HFFC Sand Island Facility
DA		ED <u>1/13/20</u>)	COMPL	ETED 1/13	APPROX. GROUND ELEVATION 4.03 ft HOLE SIZE 4 in (Nearest MW)
			R <u>Hawaii G</u> e	eoTek		GROUND WATER LEVELS:
		Achio Pov	IOW Stem AL	CHECK		$\nabla \mathbf{AT} = \mathbf{F} \mathbf{N} \mathbf{C} \mathbf{P} \mathbf{C} \mathbf{F} \mathbf{C} \mathbf{F} \mathbf{C} \mathbf{F} \mathbf{C} \mathbf{F} \mathbf{C} \mathbf{F} \mathbf{C} \mathbf{F} \mathbf{C} \mathbf{C} \mathbf{C} \mathbf{C} \mathbf{C} \mathbf{C} \mathbf{C} C$
	TES Near	Achie Reye	<u>ν_</u> ΔΔ	CHECK		AFTER DRILLING
O DEPTH	(II) SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENT# DATA	GRAPHIC LOG	Sample Depth (ft)	MATERIAL DESCRIPTION
-	-					SILTY SAND WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, poorly graded
5		1-1-1 (2)	PID = 5.6		05	FAT CLAY WITH GRAVEL, (CH) 30% gravel, 10% sand, 60% fines, gray, saturated,
ŀ	-					
	_	(2)	PID = 1.4			SILTY GRAVEL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines, gray, saturated
5- 2	, -	2-3-2			VI 7 - 10	
	-	(5)	PID = 0			CLAYEY GRAVEL WITH SAND, (GC) 60% gravel, 10% sand, 30% fines, gray, saturated
	-	1-2-0 (2)	PID = 0			
	-	1-0-0 (0)	PID = 0			
ز از]					
25	;	2-36-50		G	<u>10 - 25</u>	
	_	(86)	PID = 0	¢ × ¢	25 - 26 5	Pale white, saturated 25- 26.5 ft bgs CORAL
		1	1	اد خرا	20-20.5	Bottom of borehole at 26.5 feet.

	۲ ۲	ERM 132 Bishop 96813	St. Suite 5	12				BORING NUMBER BH-06 PAGE 1 OF 1
ER	M	Telephone:	808-521-44	104				
CLIEN	IT Hawa	aii Fueling F	acility Corp	oration	(HFF	C)		PROJECT NAME Sand Island Geophysical Survey
DATE	ECT NUN STARTE	BER <u>053</u> D <u>1/14/20</u>	7336	COM	PLET	ED <u>1/14/</u>	20	PROJECT LOCATION HFFC Sand Island Facility APPROX. GROUND ELEVATION 4.37 ft HOLE SIZE 4 in (Nearest MW) 4.37 ft HOLE SIZE 4 in
DRILL			Hawaii G	eoTek				GROUND WATER LEVELS:
LOGG		Tanner Gille	espie	CHEC	CKED	BY Johr	n Cavanaugh	T FINE OF DRILLING
NOTE	S Near	est MW: MV	V-A12				<u> </u>	AFTER DRILLING
DEPTH (ft)	SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	NSCS	Sample Depth (ft)		MATERIAL DESCRIPTION
			ш				SILTY SANI poorly grade	D WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, d
5	SS	2-3-3 (6)	PID = 2			0 - 5	WELL GRAI	DED GRAVEL WITH SAND, (GW) 60% gravel, 30% sand, 10% fines, dark
		1-0-0			GW	5-7	gray, satura	ted
		(0)	PID = 0				ELASTIC SI saturated	LT WITH SAND, (MH) 10% gravel, 30% sand, 60% fines, gray, fine grained,
	SS	0-0-0 (0)	PID = 0		<u>MH</u> .	<u>7 - 10</u>	GRAVELLY	LEAN CLAY, (CL) 30% gravel, 70% fines, gray, fine grained, saturated
	SS	1-1-0 (1)	PID = 0		<u>CL</u>	<u>10 - 15</u>	SILTY GRA coarse Cora	VEL, (GM) 70% gravel, 30% fines, gray, coarse grained, saturated Very line
	SS	2-6-9 (15)	PID = 0					
	SS	18-20-39 (59)	PID = 0		<u>GM</u>	<u>15 - 25</u> 25 - 26.5	 100% grave	I, white, saturated Moderately weathered 25- 26.5 ft bgs CORAL
JS.GU								
/IRONMENTAL BH - GINT STD								
Ź								

	E 1 c	ERM I 132 Bishoj 96813	p St. Suite 5	12			BORING NUMBER BH-07 PAGE 1 OF 1
ERN	M	Felephone:	808-521-44	04			
CLIEN	T Hawa	aii Fueling I	Facility Corp	oration	(HFF	FC)	PROJECT NAME Sand Island Geophysical Survey
PROJE DATE	ECT NUN STARTE	IBER <u>053</u> D <u>1/16/20</u>)	СОМ	PLET	ED <u>1/16/2</u>	PROJECT LOCATION HFFC Sand Island Facility 20 APPROX. GROUND ELEVATION 4.51 ft HOLE SIZE 4 in (Nearest MW) (Nearest MW) 4.51 ft HOLE SIZE 4 in
DRILL	ING CON	TRACTOR	R Hawaii Ge	eoTek			GROUND WATER LEVELS:
DRILL		Terrar Oil	low Stem Au	ger			AT TIME OF DRILLING
NOTES		Tanner Gill		CHE	JNED	JONN	AFTER DRILLING
o DEPTH (ff)	SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENT# DATA	GRAPHIC LOG	NSCS	Sample Depth (ft)	MATERIAL DESCRIPTION
							SILTY SAND WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, poorly graded
- 5	SS	(11)	PID = 55.9		GP	<u> </u>	POORLY GRADED GRAVEL WITH SAND, (GP) 60% gravel, 30% sand, 10% fines,
	66	5-4-3			GP	5.8 - 6.5	gray, poorly graded, saturated FUEL ODOR*
	33	(7)	PID = 29.6	β		I	gray, poorly graded, saturated /
				° D C			SETT GRAVEL, (Givi) 00% gravel, 10% sand, 50% intes, gray, saturated
<u> 10 </u>	SS	2-0-1 (1)	PID = 13.9				
 	SS	0-0-6 (6)	PID = 0.2		<u>GM</u> .	<u>6.5 - 15</u>	CLAYEY GRAVEL, (GC) 60% gravel, 10% sand, 30% fines, gray, saturated
	SS	1-0-1 (1)	PID = 1.8		<u>GC</u>	<u>15 - 20</u>	WELL GRADED GRAVEL, (GW) 80% gravel, 20% sand, gray, well graded, coarse grained, saturated With Shells
	SS	1-0-0	PID = 0		<u>GW</u>	<u>20 - 25</u>	CLAYEY GRAVEL (GC) 70% gravel 10% sand 20% fines grav saturated
30					55 SAL	25-25.7 -25.7-26 -26-26-5	SILTY SAND, (SM) 10% gravel, 60% sand, 30% fines, dark gray, saturated SILTY SAND, (SM) 10% gravel, 60% sand, 30% fines, dark gray, saturated SILT, (ML) 5% sand, 95% fines, very dark gray, saturated, medium plasticity WELL GRADED SAND WITH GRAVEL, (SW) 10% gravel, 80% sand, 10% fines, tan, well graded, coarse grained, saturated Coral and Shells, HARD SPOT at 27.5 ft bgs
					SW	26.5 - 31.5	Bottom of borehole at 31.5 feet.

		ERM 132 Bishop 96813	o St. Suite 5	12			BORING NUMBER BH-08 PAGE 1 OF 1
EK		elephone:	808-521-44	04			
CLIEN	IT <u>Hawa</u>	aii Fueling F	acility Corp	oration	(HFF	C)	PROJECT NAME Sand Island Geophysical Survey
DATE	ECT NUN STARTE	BER <u>053</u> D <u>1/14/20</u>	7336	COMP	PLET	ED <u>1/14/</u> 2	PROJECT LOCATION HFFC Sand Island Facility /20 APPROX. GROUND ELEVATION 4.99 ft HOLE SIZE 4 in (Nearest MW) (Nearest MW) HOLE SIZE 4 in HOLE SIZE 4 in
DRILL			<u>Hawaii Ge</u>	eoTek			GROUND WATER LEVELS:
LOGG	ED BY	Tanner Gill	espie		KED	BY John	$\mathbf{\nabla} \mathbf{AT} = \mathbf{F} \mathbf{D} \mathbf{C} \mathbf{C} \mathbf{AT} = \mathbf{F} \mathbf{D} \mathbf{C} \mathbf{C} \mathbf{C} \mathbf{T} \mathbf{C} \mathbf{T} \mathbf{C} \mathbf{T} \mathbf{C} \mathbf{T} \mathbf{C} \mathbf{T} \mathbf{T} \mathbf{T} \mathbf{T} \mathbf{T} \mathbf{T} \mathbf{T} T$
NOTE	S Neare	est MW: PZ	-4				AFTER DRILLING
DEPTH (ft)	SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	NVIRONMENTAL DATA	GRAPHIC LOG	USCS	Sample Depth (ft)	MATERIAL DESCRIPTION
							SILTY SAND WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, poorly graded
	SS	1-4-0 (4)	PID = 3.6			<u>0-5</u>	SILTY SAND WITH GRAVEL, (SM) 10% gravel, 60% sand, 30% fines, gray, saturated
_	SS	2-1-1 (2)	PID = 3		<u>sm</u>	<u> </u>	POORLY GRADED SAND WITH GRAVEL (SP) 20% gravel 70% sand 10% fines
- – –		(-)		exx -	SP	<u> </u>	gray, poorly graded, coarse grained, saturated
	SS	1-1-0 (1)	PID = 0.7		<u>GC</u>	<u>8 - 10</u>	SILTY GRAVEL WITH SAND, (GC) 60% gravel, 10% sand, 30% fines, gray, saturated SILTY GRAVEL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines, gray, saturated
TIS/BENTLEY/GINTCL/PR	SS	0-0-0 (0)	PID = 0.7		<u>GM</u>	<u>10 - 15</u>	FAT CLAY WITH GRAVEL, (CH) 30% gravel, 10% sand, 60% fines, light gray, saturated
	SS	0-1-0 (1)	PID = 0		<u>сн</u>	<u>15 - 20</u>	SILTY GRAVEL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines, gray, saturated
- 1/23/20 12:32 - C: 25	SS	5-12-47 (59)	PID = 0		<u>GM</u>	<u>20 - 25</u> 25 - 26.5	Tan, saturated CORAL at 25-26.5 ft bgs, moderately fractured, soft
ENVIKONMENIAL BH - GINI S I'U US.GU							

CLIEN PROJ	IT <u>Hawa</u> ECT NUN	aii Fueling F IBER <u>053</u>	Facility Corp 7336	oration	(HFF	C)		PROJECT NAME <u>Sand Island Geophysical Survey</u> PROJECT LOCATION HFFC Sand Island Facility
DATE	STARTE	D <u>1/14/20</u>)	COM	PLET	ED <u>1/14/</u>	20	APPROX. GROUND ELEVATION <u>4.29 ft</u> HOLE SIZE <u>4 in</u> (Nearest MW)
	ING CON		Hawaii Ge	eoTek				GROUND WATER LEVELS:
LOGG	ED BY	Tanner Gill	<u>ow Stem At</u> espie		KED	BY Johr	n Cavanaugh	AT TIME OF DRILLING
NOTE	S Neare	est MW: PZ	2-3				<u> </u>	AFTER DRILLING
C DEPTH (ft) (ft) (ft) (ft) (ft) (ft) (ft) (ft)						Sample Depth (ft)		MATERIAL DESCRIPTION
-							SILTY SAN poorly grade	D WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, ed
	SS	1-0-0 (0)	PID = 1			<u> 0 -5 </u>	FAT CLAY	WITH SAND, (CH) 10% gravel, 30% sand, 60% fines, gray, fine grained,
-	SS	(2)	PID = 2.9			5_7	POORLY G gray, poorly	RADED GRAVEL WITH SAND, (GP) 60% gravel, 30% sand, 10% fines, graded, saturated
<u>10</u> -	SS	1-0-0 (0)	PID = 10.1		<u>GP</u>	<u>7 - 10</u>	SILTY GRA	VEL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines, gray, saturated
 	SS	1-0-0 (0)	PID = 1.6		<u>GM</u>	<u>10 - 15</u>	CLAYEY SA	AND, (GC) 10% gravel, 60% sand, 30% fines, gray, well graded, saturated
20	SS	0-0-0 (0)	PID = 0		<u>GC</u>	<u>15 - 20</u>	CLAYEY GI Shells	RAVEL, (GC) 60% gravel, 10% sand, 30% fines, gray, saturated , Coral and
	SS	7-10-13 (23)	PID = 0		<u>GC</u>	<u>20 - 25</u>	WELL GRA	DED SAND WITH GRAVEL, (SW) 30% gravel, 70% sand, gray, well graded
				<u>َ</u>	SW	25 - 26.5	rounded, co	Bottom of borehole at 26.5 feet.
					sw	25 - 26.5	rounded, co	arse grained, saturated Coraline Bottom of borehole at 26.5 feet.

	ERM	ERM 1132 Bishop 96813	o St. Suite 5	12			BORING NUMBER BH-11 PAGE 1 OF 1
		Telephone:	808-521-44	04			
		aii Fueling F	Facility Corp 7336	oration	(HFF	C)	PROJECT NAME Sand Island Geophysical Survey
DA	TE STARTE	ED <u>1/15/20</u>		COM	PLET	ED <u>1/15/</u> 2	APPROX. GROUND ELEVATION 3.56 ft HOLE SIZE 4 in (Nearest MW)
	RILLING CO	NTRACTOR THOD Holl	_ <u>Hawaii Ge</u> ow Stem Au	olek der			GROUND WATER LEVELS:
LO	GGED BY	Tanner Gill	espie	CHEC	KED	BY John	nn Cavanaugh X AT END OF DRILLING 2.65 ft / Elev 0.91 ft
NC	TES Near	est MW: MV	V-A7				AFTER DRILLING
O DEPTH	(ft) SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	NSCS	Sample Depth (ft)	MATERIAL DESCRIPTION
	-						SILTY SAND WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, poorly graded
5	ss ss	0-1-0 (1)	PID = 3.8		SW SMF CH⊡	0-5 	WELL GRADED SAND, (SW) 15% gravel, 70% sand, 15% fines, gray, well graded, fines, gray,
GEO.GPJ	- SS	1-0-0 (0)	PID = 0.9		SP- CH	5.9 - 6.2 6.2 - 6.5	SILTY SAND, (SM) 5% gravel, 10% sand, 85% fines, dark gray, fine grained, saturated FAT CLAY, (CH) 5% gravel, 5% sand, 90% fines, gray, saturated, high plasticity POORLY GRADED SAND, (SP) 80% sand, 20% fines, gray, saturated FAT CLAY, (CH) 100% fines, gray, saturated, high plasticity
ECTS/SI HFFC	0 SS	1-0-2 (2)	PID = 0.2		<u>GM</u>	6.5 - 11.5	SILTY GRAVEL, (GM) 70% gravel, 30% fines, gray, saturated
	5SS	0-1-0 (1)	PID = 0				Coraline
	0 SS	0-0-0 (0)	PID = 0		<u>GC</u>	<u>11.5 - 20</u>	CLAYEY GRAVEL, (GC) 70% gravel, 30% fines, gray, coarse grained, saturated , Coraline
- 1/23/20 12:32 - C	5SS	18-24-34 (58)	PID = 0		<u>GC </u>	20 <u>- 25</u> 25 - 26.5	Saturated , CORAL at 25-26.5 ft bgs, moderately fractured, pale white
ENVIRONMENTAL BH - GINT STD US.GDT							Bottom of borehole at 26.5 feet.

	E ع م	RM 132 Bishop 6813	o St. Suite 5	512				BORING NUMBER BH-12 PAGE 1 OF 1
ER	M T	elephone:	808-521-44	104				
CLIEN	I T Hawa	iii Fueling F	acility Corp	oration	(HFF	C)		PROJECT NAME Sand Island Geophysical Survey
PROJ DATE	ECT NUN STARTE	IBER <u>053</u> D <u>1/15/20</u>	7336	СОМ	PLET	ED <u>1/16/</u>	/20	PROJECT LOCATION HFFC Sand Island Facility APPROX. GROUND ELEVATION 3.63 ft HOLE SIZE 4 in (Nearest MW) 4 in
DRILL	ING CON		<u>Hawaii Ge</u>	eoTek				GROUND WATER LEVELS:
	ED BY	Dana Susir	ow Stem At		CKED	BY Johr	n Cavanaugh	T END OF DRILLING 2.61 ft / Elev 1.02 ft
NOTE	S Neare	est MW: MV	V-A6					AFTER DRILLING
o DEPTH (ft)	SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	NSCS	Sample Depth (ft)		MATERIAL DESCRIPTION
				Ŧ			SILTY SANE poorly grade	0 WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, d
 _ 5 	SS	0-0-2 (2)	PID = 0		СН СL GC	$ \begin{array}{r} 0 - 5 \\ $	FAT CLAY, (LEAN CLAY SILTY GRAN No Recovery	(CH) 10% gravel, 90% fines, gray, high plasticity , (CL) 100% fines, gray, fine grained, medium plasticity /EL, (GC) 60% gravel, 40% fines, gray/
 <u>10</u> 		0-2-2 (4)	PID = 0			<u>6.5 - 10</u>	CLAYEY GR	AVEL WITH SAND, (GC) 60% gravel, 10% sand, 30% fines, gray
 - <u>15</u> 	SS	2-0-1 (1)	PID = 0		<u>GC</u>	<u>10 - 15</u>	SILTY GRAV	/EL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines, gray
 	SS	1-11-13 (24)	PID = 0		<u>GM</u> <u>C</u> L	15 - 20 20 - 20.5	LEAN CLAY 100% gravel	, (CL) 100% fines, very dark gray, fine grained, medium plasticity
 _ <u>25</u>	SS	5-10-43 (53)	PID = 0		\SP_1 \ <u>SP_</u> 1	20.5 - 25 25 - 25.5 25.5 - 26 26 - 26.5	POORLY GF POORLY GF	RADED SAND, (SP) 90% sand, 10% fines, tan, medium grained
								Bottom of borehole at 26.5 feet.

	9	ERM 1132 Bishoj 96813	o St. Suite 5	512			BORING NUMBER BH-13 PAGE 1 OF 1
E	ERM	Telephone:	808-521-44	104			
CLI	ENT Haw	aii Fueling F	acility Corp	oratior	n (HFF	FC)	PROJECT NAME Sand Island Geophysical Survey
PR DA	OJECT NUI TE STARTE	MBER <u>053</u> ED <u>1/16/20</u>	7336)	CON	IPLET	ED _1/16/	PROJECT LOCATION HFFC Sand Island Facility 20 APPROX. GROUND ELEVATION 3.71 ft HOLE SIZE 4 in (Nearest MW)
DR	ILLING CO	NTRACTOR	Hawaii Ge	eoTek			GROUND WATER LEVELS:
DR		THOD Holl	low Stem Au	uger		DV Jahr	AT TIME OF DRILLING
	GGED BT	Dana Susir	1a N_24	CHE	CREL	JONT JONT	AFTER DRILLING
-							
o DEPTH	(π) SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENT/ DATA	GRAPHIC LOG	nscs	Sample Depth (ft)	MATERIAL DESCRIPTION
-	-						SILTY SAND WITH GRAVEL, (SM) 20% gravel, 60% sand, 20% fines, tannish brown, poorly graded
5	SS	0-0-1 (1)	PID = 0.4		GM SM CH	0 - 5 = 5 - 5 .2 -5.2 -5.5	SILTY GRAVEL WITH SAND, (GM) 60% gravel, 10% sand, 30% fines, gray, saturated
	- SS -	1-1-0 (1)	PID = 0		SM CH	5.5 - 5.8 <u>5.8 - 6.1</u> 6.1 - 7	SILTY SAND, (SM) 60% sand, 40% lines, gray, saturated FAT CLAY, (CH) 100% fines, gray, fine grained, saturated, high plasticity SILTY SAND, (SM) 60% sand, 40% fines, yellowish gray, saturated FAT CLAY, (CH) 100% fines, gray, fine grained, saturated, high plasticity SILTY GRAVEL (GM) 60% gravel 40% fines, gray, saturated
) SS 	1-1-0 (1)	PID = 0		<u>GM</u>	<u>7 - 10</u>	CLAYEY GRAVEL WITH SAND, (GC) 60% gravel, 10% sand, 30% fines, gray, saturated
	5 5 - - -	1-1-0 (1)	PID = 0.3		<u>GC</u>	<u>10 - 15</u>	CLAYEY GRAVEL, (GC) 60% gravel, 40% fines, gray, saturated
20) SS	100	PID = 0		GC	<u>15 - 20</u> 20 - 20.5	100% gravel, white, saturated CORAL
				-		,	Refusal at 20.5 feet. Bottom of borehole at 20.5 feet

		E 1 9	ERM 132 Bishop 96813	o St. Suite 5	12				BORING NUMBER BH-15 PAGE 1 OF 1
	EKN	T	elephone:	808-521-44	04				
		T <u>Hawa</u>	aii Fueling F	acility Corp	oration	(HFF	C)	PROJECT NAME Sand	Island Geophysical Survey
P D		ECT NUN	BER <u>053</u> D <u>1/17/20</u>	7336	СОМ	PLET	ED <u>1/17/</u> 2	PROJECT LOCATION <u> </u> APPROX. GROUND ELE\ (Nearest MW)	IFFC Sand Island Facility VATION _4.28 ftHOLE SIZE _4 in
	RILLI			Hawaii Ge	eoTek				LS:
			Tanner Gill	osnie	СНЕС	יאבט	BV John		NG 3.00 ft / Elev 1.28 ft
	OTES	S_Neare	est MW: MV	V-15	UNE				
ЛЕРТН	o (ff)	SAMPLE TYPE	BLOW COUNTS/ 6" (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	NSCS	Sample Depth (ft)	MATER	IAL DESCRIPTION
-								LTY SAND WITH GRAVEL, (SM) 20 orly graded	0% gravel, 60% sand, 20% fines, tannish brown,
	5	SS	(4)	PID = 0.3				AT CLAY, (CH) 100% fines, gray, fine	
F	-		1-0-0			CH SM	<u>5 - 6.3</u> 6.3 - 7		nes, dark grav, fine to medium grained, saturated
GEO.GPJ	-	SS	(0)	PID = 0.3				LTY GRAVEL WITH SAND, (GM) 60	0% gravel, 10% sand, 30% fines, gray, saturated
	<u>10</u> - -	SS	0-0-0 (0)	PID = 0		<u>GM</u> .	<u>7 - 10</u>	AYEY GRAVEL WITH SAND, (GC) turated	60% gravel, 10% sand, 30% fines, gray,
	- 15 - -	SS	5-27-38 (65)	PID = 0		GC SW	10 <u>- 15</u> 1 <u>5 - 15 4</u> - L	ELL GRADED SAND WITH GRAVE arse grained, saturated 10% gravel, gray, saturated CORAL	L, (SW) 40% gravel, 60% sand, gray, well graded, _r
	_ 20	SS	23-19-17 (36)	PID = 0			<u> 15.4 - 20</u>	DORLY GRADED SAND, (SP) white turated Coraline	, poorly graded, rounded, coarse grained,
- 1/23/20 12:32 - C:	25 - -	SS	12-22-18 (40)	PID = 0		SP	20 - 26.5		
NVIRONMENTAL BH - GIN I S I D US. GUI								Bottom of	dorenole at 26.5 teet.

Appendix B Photographic Log





Photo #1 – Kevin Rogers of Geotek Hawaii (GTH) toning for underground utilities around BH-02 with an underground utility locator (RIDGID[™]).



Photo #2 – Underground utility locate at BH-02 completed and marked.





Photo #3 – GTH utilized a ground penetrating radar (GPR) to identify underground utilities at each proposed borehole locations



Photo #4 – Waster ponding at a proposed borehole location resulted in extended subsurface clearing operation.





Photo #5 – Location of borehole "BH-06" was repositioned towards the east to avoid an underground utility on the west perimeter fence of Lot 3/3.5.



Photo #6 – Due to the location of Borehole "BH-07" near an underground pipeline, it was cleared utilizing hand tools down to 5ft bgs.





Photo #7 – GTH installing borehole "BH-02".







Photo #9 – Recovery from borehole "BH-02" at 7.0 - 8.5 feet bgs. The loose subsurface soil resulted in poor recovery in all borehole locations.



Photo #10 - Recovery from borehole "BH-02" at 10.0 - 11.5 feet bgs.





Photo #11 – Recovery from borehole "BH-02" at 15.0 - 16.5 feet bgs.



Photo #12 – A 4-inch diameter ollow stem auger was utilized during the geotechnical exploration.





Photo #13 – Recovery from borehole "BH-02" at 20-21.5 feet bgs.



Photo #14 – Recovery from borehole "BH-02" at 25.0 - 26.5 feet bgs with moderately fractured coral.





Photo #15 – Recovery at "BH-03" is similar to those found at "BH-02: at 15-16.5 feet bgs.



Photo #16 - Visual and textural examination of subsurface soil collected at BH-03





Photo #17 – Subsurface soil at various depth were visually and texturally inspected prior to collecting them in ZiplocTM freezer bags.



Photo #18 – Visual/textural examination of subsurface soil from BH-04 at 10-11.5 feet bgs.

Appendix C Geolabs 2015 and 2018 Boring Logs and Maps

											Fr	om GeoLabs, 2018	
	GEOLABS, INC Geotechnical Engineerin							НА	W All F	UELI	ING FACILITIES CORPORATION CIP PHASE 1 OLULU, OAHU, HAWAII	Log of Boring BH-05	
	Labr	vratory			F	ield	-					•	
	Tests	aut %)	ensity	very (%)	(%)	tration tance s/foot)	et Pen.	n (feet)	el jc		Approximate Ground Sur Elevation : N/A	faœ	
	Other	Moist	Dry D (pcf)	Core	Rob	Pene' Resis (bbw	Pock((tsf)	Depth	Samp Grapt	nscs	Description		
		10	82			20			°0° °0°	GP	Brownish tan SANDY GRAVEL (CO medium dense, moist (fill)	RALLINE),	
		16				8			00				
								- -		СН	Gray SILTY CLAY with traces of san soft, moist (lagoonal deposit)	nd and shells,	
	Consol.	33	95			9			X	SM	Gray SILTY SAND with traces of cla (lagoonal deposit)	ıy, loose	
		45				3		-					
								10					
		35	77						000	GM	Gray SILTY GRAVEL with some sar loose (lagoonal deposit)	nd (coralline),	
		44				3			Måð				
				0					Has				
								15-	20				
		48						.	20				
		43				5		-	₽ ₿				
				0				-	Δig				
				•				20	٩ð				
		37	63					20-	90				
		06				57		.	°p e		Tan CODAL closely freetured med	lovetelu	
		20				57		-	∎°,°		weathered, medium hard (coral fo	rmation)	
				67	19			-	Č¢				
								25-	*			-	
									¢.,				
	Sieve - #200 =	40				19		.		SP	Black SAND (BASALTIC) with trace	s of silt and	
	3.6%			0				.			gravel, mediam dense (emder)		
								30-				-	
9771								-					
S.GDT		31	0			31		.					
GEOLAB				0					Î				
GPJ	Data Star	tod	lube	17 00	10		Water	35		0.04	07/10/2010 1056 UDS		
67-20	Date Star	ieu: inleter	July It July	18,20	18		Water Level: ¥ 3.3 ft. 07/18/2018 1056 HRS						
12 00	Logged B	γ:	B. Ai	u.			Drill Rig: CME-45C TRUCK (Energy Transfer Ratio - 78%)						
NGLC	Total Dep	, th:	47.7	5 feet			Drilling	A - 3 1					
OR	Work Ord			Driving	1								

		A.	GE		ABS,	, INC.	5	SAND		Log of Boring				
	Ser.	5	Geo	technic	al Eng	gineering	9	H/	\\\\		HON	OLULU, OAHU, HAWAII	BH-10	
	Labo	oratory			F	ield								
	Tests	ure ent (%)	ensity	very (%)	(%)	tration tance s/foot)	et Pen.	n (feet)	ale	hic		Approximate Ground Sur Elevation (feet MSL): 5	face .5 *	
	Other	Moist	Dry D (pd)	Core Reco	RQD	Pene Resis (blow	Pock	Depti	Samp	Grap	nsce	Description		
		10	82			15					SM	Tan SANDY SILT with some gravel (coralline), very stiff, dry (fill)	and cobbles	
		16				9			Ą			Tan SILTY SAND (CORALLINE) with gravel (coralline), medium dense,	h some damp (fill)	
								¥	H	.0	SW- SM	Gray GRAVELLY SAND (CORALLIN some silt loose wet (lagoonal der	IE) with	
	Direct	57	67			2		5	N	Ø				
	Silear										CL	Gray SILTY CLAY with some fine sa (lagoonal deposit)	and, very soft	
	Sieve - #200 =	45				4				000	, GM	Gray SILTY GRAVEL (CORALLINE) sand, loose (lagoonal deposit)	with some	
	33.8%	35	77			6		10-			>		-	
			···	0		ľ			A		>			
				ľ					1		>			
									╢		>			
		48				2		15-	U				-	
		10		0		-								
				ľ					H					
								20-	11	00	>		-	
		37	63			18			X		, 			
				90	71				Ĥ	, V ⊫ ⊗ ; ⊃	>	Tan CORAL, severely to moderately	(fractured,	
									\mathbf{H}	្លុំខ	-	moderately weathered, hard (cora	nonnauony	
				100	72			25	H	្តែខ្ល	ł		-	
					12					ົຼັ				
									-	ŝ	ł			
15/15								30-	11		+			
GDT 9/									┦┦	24		Boring terminated at 30.5 feet		
GEOLABS												* Elevations estimated from Site Pl Burns & McDonnell on Septembe	an provided by r 3, 2015.	
T3.GP.								35						
77-0010	Date Star	ted:	April	6,201	5		Water Level: ⊻ 4.0 ft. 04/06/2015 1023 HRS							
NG 716	Logged B	iplete v:	a: April D. G	6, 201 iremmi	o nger		Drill Rig: CME-75DG1 (Energy Transfer F						Plate	
NG_LO	Total Dep	oth:	30.5	feet			Drillin	g Met	thod	1:	10" H	lollow-Stem Auger & PQ Coring	A - 1	
BORI	Work Order: 7167-00							Driving Energy: 140 lb. wt., 30 in. drop						

From GeoLabs, 2015

From	GeoLa	bs. 20	18
	GCOLU	os, 20	T O

G				GEOLABS, INC. Geotechnical Engineering							HAWAII FUELING FACILITIES CORPORATION CIP PHASE 1 HONOLULU, OAHU, HAWAII							
	Labo	oratory			F	ield												
	r Tests	ture ent (%)	Density	very (%)	(%)	tration stance ss/foot)	et Pen.		h (feet)	ole	hic	Ś	Approximate Ground Sur Elevation : N/A	face				
	Othe	Mois	Dov [Pece	뎙	Pene	Pod	(tst)	Dept	Sam	Grap	nsc	Description					
							1	-	_	_		SM	4-inch ASPHALTIC CONCRETE	/				
		26 12	89			82 43			-	Ķ			Brownish tan SILTY SAND (CORAL some gravel, dense, moist (fill)	LINE) with				
	Sieve - #200 = 12.5%	17	93			29			5-	X			grades to medium dense	-				
	121070	69				3		Ť		١		СН	Gray SILTY CLAY with traces of sar soft (lagoonal deposit)	nd and shells, -				
		33 35	70	0		3			10	X	0000	GM	Gray SILTY GRAVEL with some sar loose (lagoonal deposit)	nd (coralline), -				
	Direct Shear	29 43	91 82	100	67	7			- 15- - -	X	14	СН	Brownish gray SILTY CLAY with tra and shells, soft (lagoonal deposit)	ces of sand - - - -				
	UC= 550 psi	33		100	64	30			20— - - -			+	Tan CORAL , moderately fractured, weathered, soft (coral formation)	moderately - - -				
		26 23		67	0	49			25- - - -			- 		-				
GEOLMBOADU BYLLID		21		33	0	32			30- - - 35-				grades to severely fractured					
ALC: NO	Date Star	ted:	July	16, 20	18		Wate	er L	evel	: 1		7.3 ft.	07/16/2018 1316 HRS					
10/-4	Date Con	npleted	: July	17, 20	18									Plate				
3	Logged B	y:	B. Ai	u			Drill	Rig	:		(CME-	45C TRUCK (Energy Transfer Ratio = 78%)					
2	Total Dep	oth:	38 fe	et			Drilli	ing I	Vlet	100	1: 4	4" So	lid Stem Auger & PQ Coring	A - 2.1				
Work Order: 7167-20							Driving Energy: 140 lb. wt., 30 in. drop											

APPENDIX B

1132 Bishop Street, Suite 512 Honolulu, Hawaii 96813
 Telephone:
 +1 808 521 4404

 Fax:
 +1 808 521 4408

www.erm.com

Construction QA/QC Practices for the Proposed Sand Island Slurry Wall Upgrade



The following construction quality assurance/construction quality control (CQA/CQC) and their frequency are based on an EPA guidance document¹. They are widely accepted by the industry as the standard and have been proven effective to verify the quality of the finished slurry wall. These guidelines will be the basis for the CQA/CQC plan for the slurry wall construction at the HFFC Sand Island Facility.

Summary of QA/QC methods

Matrix	Acceptable Industry Practice							
Specialty Contractor	Per EPA guidance document, the specialty construction contractor will be							
	selected from firms who have completed a minimum of four projects with							
	comparable technical challenges in the recent past							
Trench Width, Verticality,	Periodic inspection and measurements of the width of bucket and trench							
Continuity	verticality through each working day.							
Trench Sounding (backfill	The depth of the trench will be measured to verify that it is meets the design							
slope and bottom)	every 10-20 feet.							
Slurry Mixing	Fresh bentonite mix should be continually agitated and allow to hydrate at a							
	minimum of 12 hours.							
Slurry Viscosity (ex-Situ)	Marsh Funnel method for testing viscosity of fresh slurry should be conducted at							
	least twice per shift.							
Slurry Viscosity (in-situ)	Sample at various elevations including near the bottom to check on possible							
	degradation of the slurry due to dilution with groundwater. Recommended at							
	least twice per shift (Marsh Funnel).							
Mixing and Testing of	Gradation Testing – Determine that the content of fines in the backfill							
Backfill	material meets the specified gradation requirements. Should be							
	performed once every 400-600 cubic yard (cy).							
	 Dry Bentonite Content - Contractor to meter and report the actual 							
	percentage added to the backfill per batch.							
	 Consistency – Consistency of the backfill material must be verified by 							
	slump testing every 400-600 cy or once per shift, whichever is more							
	stringent.							
Permeability of Backfill	An independently approved laboratory will perform testing of backfill							
	permeability at a frequency of one test every 400-600 cy.							
Placement of Backfill	Oversight/approval of engineer (sounding of trench bottom prior to placement).							
	No free-dropping of the backfill through the slurry should occur. The slope of the							
	backfill should be measured once per shift. If backfill operation stopped for more							
	than 24 hours, the slope should be sounded prior to resuming backfill placement.							

¹ Evaluation of subsurface engineered barriers at waste sites (EPA-542-R-98-005, 1998)

© Copyright 2020 by ERM Worldwide Group Limited and/or its affiliates ('ERM'). All Rights Reserved. No part of this work may be reproduced or transmitted in any form or by any means, without prior written permission of ERM.

Continuity	Direct oversight with continuous sequence to ensure joints and seams are minimized.
Post Construction Sampling	Confirm quality of construction by sampling the barrier wall every 500 feet intervals and testing the permeability and physical properties of the retrieved samples.
As-Built Records	Provide construction completion report w/ drawings and QA/QC results.
Final Alignment Survey	Document the final survey of barrier alignment.

Unforeseen field conditions may result in deviation from the above construction QA/QC and adjustment may be necessary. If such condition occurs, EPA will be informed and consulted.

PRIOR SMA PERMITS


Department of Land Utilization

	Contact Memorendum Date 7/29/85
•	Project No.

Carl

SUBJECT: SMP for Fuel Tank at Palihitai CONTACT: Mr. fange

Mr. Song called long dutant. I tald him we needed letter raging buy want to apply for all 8 tanks it they wanted to de ro. Ano, we needed rom iden of pharing the raid they would supply verenary information

100-11 (0/73)

4	j L	
े • उन्हें • 5 / 80)	Please Review for Compliance	
	pulla	
DEPARTMENT OF LAND UTILIZATION ENVIRONMENTAL CHECK LIST	File No. IS SmA - 61	
(To Be Kept In A	pplication Folder)	
1 ENVIRONMENTAL IMPACT STATEMENT (EIS) COMPLIANC		
APPLICABILITY:	DETERMINATION:	
DOES NOT APPLY	EXEMPT CLASS (Section No)	
XLAPPLIES* AS CHECKED:	ACCECCINENT.	
C STATE/COUNTY LANDS/FONDS	Nationation Declaration Published State DOT	
	Event to be character to the street of the both	
(State or National Register)	Date Subject ac of Aug	
(Section A of Development Plan)	Data Data	
GENERAL PLAN AMENDMENT		
After June 15, 1974)	(EQC Bulletin Publication Date)	
*If applies, route to LUC		
2 SPECIAL MANAGEMENT AREA (SMA) COMPLIANCE	CHECK FOR LUC FOLLOW-UP	
APPLICABILITY:	DETERMINATION:	
NOT WITHIN SMA	Exemption No	
WITHIN" SMA	Minor Permit \$	
Γ	Major Permit	
	ASSESSMENT:	
	A See EIS Assessment I above	
	FIS Pren Notice Published	
	Date	
	EIS Accepted	
*If within SMA, route to LUC	(EQC Bulletin Publication Date)	
3 SHORELINE SETBACK RULES & REGULATIONS		
APPLICABILITY:	DATE OF CERTIFIED SHORELINE	
DOES NOT APPLY	40 foot applies U variance required	
APPLIES*		
🥍 •if apollas, route to LUC	*government projects requires two public nearings	
4 OTHER DLU PERMITS REQUIRED	÷	
Au	3	
	4	
2. Norman in anti- in a second se	۹	
For Environmental Affairs Brench Only		
Maps [] Mailing List Acknowledgement Lefter	3 ••	
Management for the for the second second and the second seco	ahtari menananan kana athara athara athara athar an	

	nannan feanna a' colonnann ann ann ann ann ann ann ann ann a	an an the second s	
	CITY AND CO	UNTY OF HONOLULU 1985 JUL 16 PH 3: 43	
	DEPARTMENT	DEPT. OF LAND UTILIZATION	
	APPLIC	CATION FORM	
	Additional data, drawing/plan, and fee requirements a PLEASE ASK FOR THESE INSTRUCTIONS. The sp application is considered incomplete.	re listed on a separate sheet titled "Instructions for Filing." ecified materials and fees must accompany this form or the	
	(Pri	nt or Type)	
	you have questions. Phone: 523-4254.)	o consoli with the Central Coordinating Agency if	
	Cluster Development Conditional Use Permit	Site Development Plan Special Design District	
	Existing Use Flood Hazard Variance	Undicate District)	
	Historic, Cultural, Scenic District	Special Management Area Permit/Assessment	
	Park Dedication		
	Plan Review Use Planned Development	Waiver Zone Change: From To	
	Shoreline Setback Variance	Variance, Section(s)	
	Name : State of Hawaii, DOT Airports Di	v Name (Koenf & Lange Inc	
	Mailing Honolulu International Airport Address : Konolulu HI 06819	Mailing 971 Dewing Avenue Address Lafavetto CA 04540	
	Phone No. :	Phone No. (415)284-4660	
	Robert S. Chun, Engineering	Signature : Just ung	
	Name : Honolulu Fueling Facility Corr	1. Tax Map Kev(s): 1-2-25:20 Lot 3/1-2-25:20+270	
	Mailing 1 <u>600 Kapiolani Blvd, Suite 718</u> Address : <u>Honolulu, HI 96814</u>	Lot Area : 4.0	
	Phone No. : (808)949-4960 Business Phone:	Operator: Lockheed Air Terminal, Inc.	
——	Signature : Annan Saundars Vice Prosi	Honolulu, KI 96819	
	Street Address/Location of Property Sand J	sland Access Road (Lot 3) Gene Hassing, Myr.	
	Present Use of Property/Building <u>Storage Bulk Pl</u>	ant for Aviation Turbine Fuel which supplies	
	Honolulu International Airport.		
	PROJECT PROPOSAL Briefly describe the proposed activity or project. It	is proposed to add four new substitut fuel	
	storage tanks to the existing four tank fu	el storage terminal at Lot 3. (This was	
	At the same time, the Owner will add a foa	m fire protection building as coordinated	
	the existing four tanks as well as to the	new four tanks. In a near future Phase II,	
	t is proposed to add the two remaining ne	n tanks designated "future." at 66t3 plus	
	(in	and a second	
	Date Application Accepted	State Land Use	
	Accepted by (Initials) Date of Public Hearing	DLUM/DP	
	Fee Received \$	Setbacks	
	Approved		
	Denied for reason(s) given below.		
	THIS COPY, WHEN SIGNED BELOW, IS NOTIFICATION OF 1	HE ACTION TAKEN	
			Tage and a second second
	Signature	Tille Date	
		hite.File Vellow.CCA	¥
		and the second state of the se	All all here and a second and

• • •	KOEPF & LANGE, WC. Consulting Engineers 971 Dewing Avenue LAFAYETTE, CALIFORNIA 94549 (415) 284-4850		LOB CALSULATED BY CONTRACT OF A CONTRACT OF		DATE	
	4	4.35	MILLION		Frank Star	e i i
n ;						
ar 10 - ar 110						
41° k						
1944 - 1944 - 1	•					
	·					
way of the second second						
agan an sa t					·	
n n - 21 - 1	ı					
nga sena ba	• •					
una sena e des						
، مەسى چەرىپىنى	· · · ·.					
	4 ±					
aga Maga sa						
ан, наў — М						
ang sa ta						·
•• **	,					
, , 4						



1985 JUL 16 PM 3:43

DEPT. OF LAND UTILIZATION CITY & COUNTY OF MANAGEMENT

日本があるとなるのであった。と

July 12, 1985

State of Hawaii Dept. of Transportation Airport Division City and County of Honolulu Dept of Land Utilization Honolulu, HI 96819

SUBJECT: HFFC Fuel Storage Addition TMK 1-2-25:20 (Lot3) SAND ISLAND ACCESS ROAD, Honolulu, HI File 409, Permit, Dept. of Land Utilization

To whom it may concern:

As chairman of HFFC, this communication serves to advise that Fred Lange of Koepf & Lange, Inc. with offices at 971 Dewing Av, LaFayette, CA 94549, is my project engineer for the above subject. Mr. Lange is authorized to act as my agent in filing Ordinance 84-4 on behalf of HFFC.

Very truly yours, /Sturtz Robert M. Chairman /- HFFC

RMS:ed

P.O. Box 66100 Chicago Illinois 60666 • Location Elk Grove Township, Illinois, on Route 62, one-half mile west of Houte 63

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 1 OF 8 REVISED JULY 9, 1985

5

P 3 3

5

SMA APPLICATION SUPPORT

LOT 3 FUEL STORAGE ADDITION

1. PROJECT DESCRIPTION

1.1 GENERAL:

The Honolulu Fuel Facilities Corp. (HFFC) is the lessee of the oil terminal (bulk plant) site of Lot 3 and most of Lot 2 on Sand Island Access Road near the bascule bridge to Sand Island. HFFC proposes to add four new aviation fuel storage tanks to Lot 3 where four tanks now exist. At the same time HFFC will add a foam pumphouse building for fire protection. In a near future project, it is proposed to add the two remaining tanks on Lot 3 which are now designated as future. this application requests approval for the four tank construction and the remaining subsequent two tank construction on this same Lot 3.

The terminal storage sites at Sand Island Access Road are in an area suggested by the DOT in 1963 after the original site in 1962 on Lagoon Drive were found to be unsatisfactory for large above-ground storage tanks by the CAA (FAA). Texaco originally obtained this lease for Lot 3 from the State for this Sand Island Access Road site in about 1966 with appropriate pipeline easements from Honolulu Harbor to the Honolulu International Airport. Alternatives were investigated and this site was found to be the best location in keeping with the planning concepts at the time. In 1967, Texaco constructed the storage tanks and pipelines which exist today. This included four API steel storage tanks totaling 210,000 K / barrels in a diked enclosure with space for future tanks.

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 2 OF 8 REVISED JULY 9, 1985

Subsequently during the fuel shortages of the 1970's, the Honolulu Fueling Facilities Corp. (HFFC), which is a consortium of the airlines, negotiated purchase of the Texaco facilities at Lot 3, as well as other fuel facilities, and they became lessees of Lot 3 and other State owned land which was previously set aside for the storage and distribution of aviation fuels.

With the uncertainties of the fuel deliveries to the Hawaiian Islands, HFFC has determined that the number of existing "fuel supply days" is not adequate considering the ullage necessary to allow long-term ordering of fuel.

HFFC proposes to add four to six additional storage tanks, totalling 234,000 to 338,000 barrels of fuel.

Reviewing this Lot 3 location at this present time there is no alternative site. The land adjacent to the Airport proper is required for satellite "day-to-day" fuel storage which now exists in addition to the many service companies required to support the Airport operation. The Sand Island Access Road storage site is 1500 feet north (mauka) of the new State Pier 51-A. This pier in addition to handling containership cargo includes mooring facilities for tankships discharging aviation fuels. Dock pipelines to and from State Pier 51-A connect to Lot 3 and adjacent oil terminals. Transportation pipelines from existing oil company storage supply sites also connect to Lot 3 and to the adjacent HFFC and Hawaiian Independent Refinery Co. (HIRI) sites for receipt and deliveries of fuel supplies.

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 3 OF 8 REVISED JULY 9, 1985

1.2 TANKAGE:

Design and construction practices have been adopted to insure minimum environmental impact. The tankage will be internally and externally coated and cathodically protected. The tankage will conform with latest the American Petroleum Institute (API) and National Fire Protection Association (NFPA) applicable codes as well as local requirements. The steel welded joints will be inspected by radiographic methods in accordance with API codes. The completed steel tanks will be fully water tested to proof test the steel structure and the foundation soils prior to placing the tanks into operation for the storage of aviation turbine fuels; these fuels weigh less than water.

1.3 FIRE PROTECTION:

In keeping with the current fuel farm policies of HFFC and the Honolulu Fire Department, HFFC will equip the new storage tanks with permanently attached foam extinguishing chambers with connecting foam pipelines to a new centrally located Foam Pumphouse. This Foam Pumphouse will house the AFFF toam liquid, foam proportioning equipment and water booster fire pump and emergency power generator. This Foam Pumphouse will be designed for sufficient capacity to supply the adjacent HFFC Fuel Farm in the future with future connecting pipelines.

The existing four (4) tanks on this Lot 3 will be retrofitted with permanently attached foam extinguishing chambers including new connecting pipelines to the new Foam Pumphouse.

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 4 OF 8 REVISED JULY 9, 1985

1.4 SPILL PROTECTION:

The existing four (4) fuel tanks include new, recently installed, overfill protection high level switches and alarms. The new tankage at Lot 3 will be similarly equipped.

1.5 SPILL PREVENTION CONTROL AND COUNTER-MEASURE PLAN (SPCC):

The EPA, Title 40, Part 112, Oil Pollution Prevention, Section 112.7, has been implemented at Lot 3 by the preparation of a SPCC plan dated November 23, 1984. This plan will be revised to include the new tankage before the new tankage is placed into fuel service. In addition, HFFC has contracted the services and equipment of the local firm of P.& S. Pacific, Inc.; this firm places spill containment booms around each tankship during each fuel unloading operations at Pier 51-A. P.& S. Pacific, Inc. also stocks sorbent pads and other oil cleanup materials which are immediately available in the event that a spill occurred.

1.6 CLEAN AIR ACT:

The aviation turbine fuel is a combustible Class II fuel as per NFPA 30-1984. The vapor pressure is nil. The flash point is minimum 100°F. The fuel is Jet-A or A-1 as per ASTM D1655-83, Standard Specifications for Aviation Turbine Fuels.

The tankage will be fixed cone roof tanks with pressure/vacuum conservation type vent valves provided even though the product is a combustible liquid without a discernible vapor pressure.

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 5 OF 8 REVISED JULY 9, 1985

2. RELATIONSHIP TO SMA OBJECTIVES POLICIES AND GUIDELINES

- 2.1 The following answers or comments on the items listed under Section 4, Review Guidelines of Ordinance No. 84.4.
 - A. (1) Access to Keehi Boat Harbor which is actually on the shore line behind Lot 3 is not affected. Access city roadways exist to the shoreline.
 - (2) Not applicable.
 - (3) A new recently installed product recovery system exists with filter and oily/water separator to handle the process water drained from the bottoms of the fuel tanks. The new tankage will be connected to same. An original gravity type oily/water separator exists in the rear of the site; this is normally locked closed and is used only rarely after heavy sustained rainfall. Personnel are not stationed at this site; therefore no office or sanitary sewage is involved. The site is manned only during receipts of fuel into the tanks and during maintenance work. Adjacent oil terminals are used for restroom requirements where sanitary facilities exist.
 - (4) Not applicable. The tank farm exists with its walled enclosure and security fence. The wall enclosure will be increased in height by only 8 inches.
 - B. (1) The storage addition will not have any substantial adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by compelling

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 6 OF 8 REVISED JULY 9, 1985

public interest. The new tankage will be constructed in accordance with safety codes and will be equipped with the latest fire protection and overfill high level alarm systems. As described under paragraph a(3), the new tankage will have the water draw sumps connected to the existing product recovery system which separates the product from the process water; the water is then disposed into an injection well. The recovered product is returned to storage or hauled away for other energy use as determined by the quality.

- (2) Refers to all comments under Part "A" above. The addition is consistent with the objectives and policies.
- (3) The addition is consistent as we understand the planning. This site is in the only dedicated fuel area and must be used efficiently.
- C. (1) Does not affect.
 - (2) Does not affect.

(3) Does not affect.

(4) This is an existing developed tank farm with enclosing dike walls and security fences which blocks the view of Keehi Boat Harbor which in turn obscures the view of the sea with the structures and the stored boats.

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 7 OF 8 REVISED JULY 9, 1985

(5) No water is drained from the tank farm which has even a sheen on it as per the November 23, 1984 SPCC Plan for HFFC Lot 3. Water is rarely drained except after a heavy sustained rainfall and only when attended by an operator.

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 8 OF 8 REVISED JULY 9, 1985

3. DRAWING LIST

- 300-G1 General Plan, Lots 2 and 3
- 409-A1 Tank Location Plan
- 409-A2 Site Elevation Sections
- 409-A3 Site Elevation Sections
- 409-A5 Foam Pumphouse Elevations
- 409-C2 Grading and Drainage Plan
- 409-C3 Tank Foundation Plan and Details
- 409-C4 Tank Foundation Plan and Details
- 409-C5 Dike Wall Alterations
- 409-C6 Dike Wall Alterations

KOEPF & LANGE INC. CONSULTING ENGINEERS 971 DEWING AVENUE LAFAYETTE. CALIFORNIA 94549 (415) 284-4650

July 29, 1985

VIA EXPRESS MAIL

1.(18/81 3272

AUG

1

P

φ 6

Mr. John T. Whalen, Director Department of Land Utilization City and County of Honolulu 650 South King Street Honolulu, HI 96813

Attention: Earl Matsukawa/Paula Rankine

Subject: Honolulu Fueling Facilities Corp. (HFFC) Sand Island Access Road, Lot 3 and 2 File 409, Proposed Fuel Storage Additions

Dear Mr. Whalen:

This refers to the writer's original meeting with John Nakagawa on June 12, 1985, subsequent meetings with Earl Matsukawa on July 16 and 18, 1985 with telephone discussion on July 29, 1985.

In order to clarify the application and to include all construction phases for both Lot 3 and Lot 2, we enclosed three revised copies of the "SMA Application Support," revised July 15, 1985, Pages 1 through 9.

Thank you for your assistance in this filing. Please phone Gene Hassing or Stan Ambo at 836-1381 with any telephone message. They will contact the writer immediately.

Yours very truly,

KOEPF & LANGE, INC.

and

FL:ed Enclosures

c: *Bob Sturtz, UAL, Chicago
*Gene Hassing/Stan Ambo, LAT, Honolulu
*Joe Harmon, LAT, Burbank
*K. A. Lange, K&L, Lafayette

*Copy of enclosures included.

P.S. We have enclosed three (3) clean sets of the listed drawings, dated 7-15-85.

HONC_ULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 1 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

¥

SMA APPLICATION SUPPORT

LOT 3 AND 2 FUEL STORAGE ADDITION

1. PROJECT DESCRIPTION

1.1 GENERAL:

The Honolulu Fuel Facilities Corp. (HFFC) is the lessee of the oil terminal (bulk plant) site of Lot 3 and of Lot 2 on Sand Island Access Road near the bascule bridge to Sand Island. HFFC proposes to add four new aviation fuel storage tanks plus a small water tank to Lot 3 where four tanks now exist. At the same time HFFC will add a foam pumphouse building for fire protection. In a near future project, it is proposed to add the two fuel tanks on Lot 3 and two fuel tanks on Lot 2 which are now designated as future. This application requests approval for the four fuel tank construction and one water tank construction, the remaining subsequent two tank construction on this same Lot 3 plus the subsequent two tank construction on the adjacent Lot 2.

The terminal storage sites at Sand Island Access Road are in an area suggested by the DOT in 1963 after the original sites in 1962 on Lagoon Drive were found to be unsatisfactory for large above-ground storage tanks by the CAA (FAA). Texaco originally obtained this lease for Lot 3 from the State for this Sand Island Access Road site in about 1966 with appropriate pipeline easements from Honolulu Harbor to the Honolulu International Airport. Alternatives were investigated and this site was found to be the best location in keeping with the planning concepts at the time. In 1967, Texaco constructed the storage tanks and pipelines which exist today. This

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 2 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

included four API steel storage tanks totaling 210,000 barrels in a diked enclosure with space for future tanks. Shell Oil obtained a similar lease for Lot 2 from the State and constructed five API steel storage tanks totalling 394,000 barrels in a diked enclosure with space for future tanks.

Subsequently during the fuel shortages of the 1970's, the Honolulu Fueling Facilities Corp. (HFFC), which is a consortium of the airlines, negotiated purchase of the Texaco facilities at Lot 3, the Shell facilities at Lot 2, as well as other fuel facilities, and HFFC became lessees of Lot 3, Lot 2 and other State owned land which was previously set aside for the storage and distribution of aviation fuels. HFFC has subleased approximately one-third of Lot 2 to the Hawaiian Independent Refinery, Inc., (HIRI)

With the uncertainties of the fuel deliveries to the Hawaiian Islands, HFFC has determined that the number of existing "fuel supply days" is not adequate considering the ullage necessary to allow long-term ordering of fuel.

HFFC proposes to add four to six additional fuel storage tanks, totalling 234,000 to 338,000 barrels of fuel on Lot 3 and two additional fuel storage tanks totalling 132,000 barrels on Lot 2 in a phased project.

544

19,740 m

Reviewing these Lot 3 and Lot 2 locations at this present time there is no alternative site. The land adjacent to the Airport proper is required for satellite "day-to-day" fuel storage which now exists in addition to the many service companies required to support the Airport operation. The Sand Island Access Road storage site is 1500 feet north (mauka) of the new State Pier 51-A. This pier in addition to handling

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 3 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

containership cargo includes mooring facilities for tankships discharging aviation fuels. Dock pipelines to and from State Pier 51-A connect to Lot 3 and adjacent oil terminals. Transportation pipelines from existing oil company storage supply sites also connect to Lot 3, Lot 2 and to the adjacent HFFC and Hawaiian Independent Refinery Co. (HIRI) sites for receipt and deliveries of fuel supplies.

1.2 TANKAGE:

Design and construction practices have been adopted to insure minimum environmental impact. The tankage will be internally and externally coated and cathodically protected. The tankage will conform with latest the American Petroleum Institute (API) and National Fire Protection Association (NFPA) applicable codes as well as local requirements. The stee welded joints will be inspected by radiographic methods in accordance with API codes. The completed steel tanks will be fully water tested to proof test the steel structure and the foundation soils prior to placing the tanks into operation for the storage of aviation turbine fuels; these fuels weigh less than water.

1.3 FIRE PROTECTION:

In keeping with the current fuel farm policies of HFFC and the Honolulu Fire Department, HFFC will equip the new storage tanks with permanently attached foam extinguishing chambers with connecting foam pipelines to a new centrally located Foam Pumphouse. This Foam Pumphouse will house the AFFF foam liquid, foam proportioning equipment and water booster fire pump and emergency power generator. This Foam Pumphouse will be

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 4 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

designed for sufficient capacity to supply the adjacent HFFC Fuel Farm in Lot 2 in the future with future connecting pipelines.

The existing four (4) tanks on this Lot 3 will be retrofitted with permanently attached foam extinguishing chambers including new connecting pipelines to the new Foam Pumphouse. In the future, the existing five (5) tanks on Lot 2 will be similarly retrofitted with extinguishing chambers.

1.4 SPILL PROTECTION:

The existing four (4) fuel tanks on Lot 3 include new, recently installed, overfill protection high level switches and alarms. The new tankage at Lot 3 will be similarly equipped. The Lot 2 tanks include existing overfill protection, high-level switches, and future tanks on Lot 2 would be similarly equipped.

1.5 SPILL PREVENTION CONTROL AND COUNTER-MEASURE PLAN (SPCC):

The EPA, Title 40, Part 112, Oil Pollution Prevention, Section 112.7, has been implemented at Lot 3 and Lot 2 by the preparation of separate SPCC plans dated November 23, 1984. These plans will be revised to include the new tankage before the new tankage is placed into fuel service. In addition, HFFC has contracted the services and equipment of the local firm of P.& S. Pacific, Inc.; this firm places spill containment booms around each tankship during each fuel unloading operations at Pier 51-A. P.& S. Pacific, Inc. also stocks sorbent pads and other oil cleanup materials which are immediately available in the event that a spill occurred.



HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 5 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

1.6 CLEAN AIR ACT:

The aviation turbine fuel is a combustible Class II fuel as per NFPA 30-1984. The vapor pressure is nil. The flash point is minimum 100°F. The fuel is Jet-A or A-1 as per ASTM D1655-83, Standard Specifications for Aviation Turbine Fuels.

The tankage will be fixed cone roof tank and provided with pressure/vacuum conservation type vent valves, even though the product is a combustible liquid without a discernible vapor pressure.

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 6 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

2. RELATIONSHIP TO SMA OBJECTIVES POLICIES AND GUIDELINES

- 2.1 The following answers or comments on the items listed under Section 4, Review Guidelines of Ordinance No. 84.4.
 - A. (1) Access to Keehi Boat Harbor which is actually on the shore line behind Lot 3 and Lot 2 is not affected. Access city roadways exist to the shoreline.
 - (2) Not applicable.
 - (3) On Lot 3, a new recently installed product recovery system exists with filter and oily/water separator to handle the process water drained from the bottoms of the fuel tanks. The new tankage will be connected to same. An original gravity type oily/water separator exists in the rear of the site; this is normally locked closed and is used only rarely after heavy sustained rainfall. Personnel are not stationed at this site; therefore no office or sanitary sewage is involved. The site is manned only during receipts of fuel into the tanks and during maintenance work. Adjacent oil terminals are used for restroom requirements where sanitary facilities exist. The Lot 2 existing tanks include an originally installed product recovery system.
 - (4) Not applicable. The tank farm exists with its walled enclosure and security fence. The wall enclosure will be increased in height by only 8 inches.



HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 7 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

- 8. (1) The storage addition will not have any substantial adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by compelling public interest. The new tankage will be constructed in accordance with safety codes and will be equipped with the latest fire protection and overfill high level alarm systems. As described under paragraph A(3), the new tankage will have the water draw sumps connected to the existing product recovery system which separates the product from the process water; the water is then disposed into an injection well. The recovered product is returned to storage or hauled away for other energy use as determined by the quality.
 - (2) Refers to all comments under Part "A" above. The addition is consistent with the objectives and policies.
 - (3) The addition is consistent as we understand the planning. This site is in the only dedicated fuel area and must be used efficiently.
- C. (1) Does not affect.

- (2) Does not affect.
- (3) Does not affect.
- (4) This is an existing developed tank farm area with enclosing dike walls and security fences which blocks the view of Keehi Boat Harbor which in turn obscures

HONOLULU FUELING FACILITIES COPP. JUNE 24, 1985 PAGE 8 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

the view of the sea with the structures and the stored boats.

(5) No water is drained from the tank farm which has even a sheen on it as per the November 23, 1984 SPCC Plans for HFFC Lot 3 and for HFFC Lot 2. Water is rarely drained except after a heavy sustained rainfall and only when attended by an operator.

HONOLULU FUELING FACILITIES CORP. JUNE 24, 1985 PAGE 9 OF 9 REVISED JULY 9, 1985 REVISED JULY 15, 1985

3. DRAWING LIST

「「「「「

300-G1	General Plan, Lots 2 and 3
409-A1	Tank Location Plan
409-A2	Site Elevation Sections
409-A3	Site Elevation Sections
409-A5	Foam Pumphouse Elevations
409-C2	Grading and Drainage Plan
409-C3	Tank Foundation Plan and Details
409-C4	Tank Foundation Plan and Details
409-C5	Dike Wall Alterations
409-C6	Dike Wall Alterations

NEGATIVE DECLARATION FOR FUEL STORAGE ADDITION HONOLULU INTERNATIONAL AIRPORT SAND ISLAND ACCESS ROAD TMK 1-2-25:20 (Lot 3)/21 (Lot 2)

A. <u>Proposing Agency</u>:

Honolulu Fueling Facilities Corp. 160 Kapiolani Blvd., Suite 718 Honolulu, Hawaii 96814

Via Project Engineer:

Fred Lange, Vice President Koepf & Lange, Inc. Consulting Engineers 971 Dewing Avenue Lafayette, CA 94549

Via Airports Division, Department of Transportation State of Hawaii

B. Agencies:

Agency Contacted	Person to Contact	Owner's Emergency Phone Number
Federal Aviation Administration	Mr. Henry A. Sumida Airports District Office Manager, Airports District Office 300 Ala Moana Blvd. Honolulu, HI 96813 (808)546-7129	(808)836-0615
Hawaiian Electric Company, Inc.	Mr. Edwin Kam Customer Designer Distribution Engr. Dept. 820 Ward Avenue Honolulu, HI (808)548-7771	(808)548-7961
Board of Water Supply City and County of Honolulu	Mr. Kenneth Kawamoto Engineering Branch 630 South Beretania St. Honolulu, HI 96843 (808)725-6144	On Duty: (808)527-5207 Off Duty: (808)527-5200

LU 8/85- 3300

KOEPF & LANGE INC. CONSULTING ENGINEERS 971 DEWING AVENUE LAFAYETTE, CALIFORNIA 94549 (415) 284-4850

July 30, 1985

VIA EXPRESS MAIL

COC

AUG

~

R

2

A COUNTY OF HONDLUL

Mr. John T. Whalen, Director Department of Land Utilization City and County of Honolulu 650 South King Street Honolulu, HI 96813

Attention: Earl Matsukawa/Paula Rankine

Subject:

Honolulu Fueling Facilities Corp. (HFFC) Sand Island Access Road, Lot 3 and 2 File 409, Proposed Fuel Storage Additions

Dear Mr. Whalen:

This refers to our letter of same subject dated yesterday, July 29, 1985 related to SMA support data.

For your information and reference, we have enclosed the "Negative Declaration" which we sent to the Airports Division, Department of Transportation on July 26, 1985.

'Is there an overlap between the State and City and County or is this the same item? It appears that the Airports Division is the agency submitting this on their airports parcels.

Yours very truly,

KOEPF & LANGE, INC.

Fred Lange

FL:ed Enclosures

Robert S. Chun, Airports Division, HIA C: Bob Sturtz, UAL, Chicago Gene Hassing/Stan Ambo, LAT, Honolulu Joe Harmon, LAT, Burbank K. A. Lange, K&L, Lafayette



State of Hawaii Department of Transportation

Honolulu Fire Department Mr. Robert S. Chun Engineering Airports Division Honolulu International Airport Honolulu, HI 96819 (808)836-6443

Ernest P. Latorre Battalion Chief Fire Prevention Bureau 1455 S. Beretania Street Third Floor Honoiulu, HI 96814 (808)943-3165

John P. Souza, Captain Fire Prevention Building Department Permits City & County of Honolulu (808)523-4186

C. Proposed Action.

1. Project Description:

1.1 General:

The Honolul J Fuel Facilities Corp. (HFFC) is the lessee of the oil terminal (bulk plant) site of Lot 3 and of Lot 2 on Sand Island Access Road near the bascule bridge to Sand Island. HFFC proposes to add four new aviation fuel storage tanks plus a small water tank to Lot 3 where four tanks now exist. At the same time HFFC will add a foam pumphouse building for fire protection. In a near future project, it is proposed to add the two fuel tanks on Lot 3 and two fuel tanks on Lot 2 which are now designated as future. This application requests approval for the four fuel tank construction and one water tank construction, the subsequent two tank construction on this same Lot 3 and the subsequent two tank construction on the adjacent Lot 2.

(808)836-6411

911

The terminal storage sites at Sand Island Access Road are in an area suggested by the DOT in 1963 after the original site in 1962 on Lagoon Drive was found to be unsatisfactory for large above-ground storage tanks by the CAA (FAA). Texaco originally obtained this lease for Lot 3 from the State for this Sand Island Access Road site in about 1966 with appropriate pipeline easements from Honolulu Harbor to the Honolulu International Airport. Alternatives were investigated and this site was found to be the best location in keeping with the planning concepts at the time. In 1967, Texaco constructed the storage tanks and pipelines which exist today. This included four API steel storage tanks totaling 210,000 barrels in a diked enclosure with space for future tanks. Shell Oil obtained a similar lease for Lot 2 from the State and constructed five API steel storage tanks totalling 394,000 barrels in a diked enclosure with space for future tanks.

Subsequently during the fuel shortages of the 1970's, the Honolulu Fueling Facilities Corp. (HFFC), which is a consortium of the airlines, negotiated purchase of the Texaco facilities at Lot 3, the Shell facilities at Lot 2, as well as other fuel facilities, and HFFC became the lessee of Lot 3, Lot 2 and other State owned land which was previously set aside for the storage and distribution of aviation fuels. HFFC subleased approximately one-third of Lot 2 to the Hawaiian Independent Refinery, Inc., (HIRI)

With the uncertainties of the fuel deliveries to the Hawaiian Islands, HFFC has determined that the number of existing "fuel supply days" is not adequate considering the ullage necessary to allow long-term ordering of fuel.

-3-

HFFC proposes to add four to six additional fuel storage tanks, totalling 234,000 to 338,000 barrels of fuel on Lot 3 and two additional fuel storage tanks totalling 132,000 barrels on Lot 2 in a phased project.

Reviewing these Lot 3 and Lot 2 locations at this present time there is no alternative site. The land adjacent to the Airport proper is required for satellite "day-to-day" fuel storage which now exists in addition to the many service companies required to support the Airport operation. The Sand Island Access Road storage site is 1500 feet north (mauka) of the new State Pier 51-A. This pier in addition to handling containership cargo includes mooring facilities for tankships discharging aviation turbine fuels. Dock pipelines to and from State Pier 51-A connect to Lot 3, Lot 2 and adjacent oil terminals. Transportation pipelines from existing oil company storage supply sites also connect to Lot 3 and to the adjacent HFFC and Hawaiian Independent Refinery Co. (HIRI) sites for receipt and deliveries of fuel supplies.

2. Technical Considerations:

2.2 Tankage:

Design and construction practices have been adopted to insure minimum environmental impact. The tankage will be internally and externally coated and cathodically protected. The tankage will conform with the latest American Petroleum Institute (API) and National Fire Protection Association (NFPA) applicable codes as well as local requirements. The steel welded joints will be inspected by radiographic methods in accordance with API codes. The completed steel tanks will be fully water tested to proof test the steel structure and the foundation soils prior to placing the tanks into operation for

-4-

the storage of aviation turbine fuels; these fuels weigh less than water.

The following lists the approximate dimensions of the proposed new and future tanks:

Lot 2 & 3 Phases	Tank No.	Diameter Feet	Snell Height Feet
I I I	A (Lot 3) B (" 3) C (" 3) D (" 3)	90 70 90 90	60 60 60 60
II II II II	E (Lot 3) F (" 3) G (Lot 2) H (" 2)	90 70 102 102	60 60 48 48

2.2 Fire Protection:

In keeping with the current fuel farm policies of HFFC and the Honolulu Fire Department, HFFC will equip the new storage tanks with permanently attached foam extinguishing chambers with connecting foam pipelines to a new centrally located Foam Pumphouse in Lot 3. This Foam Pumphouse will house the AFFF foam liquid, foam proportioning equipment and water booster fire pump and emergency power generator. This Foam Pumphouse will be designed for sufficient capacity to supply the adjacent HFFC Fuel Farm in Lot 2 in the future with future connecting pipelines.

The existing four (4) tanks on Lot 3 will be retrofitted with permanently attached foam extinguishing chambers including new connecting pipelines to the new Foam Pumphouse. In the future, the existing five (5) tanks on Lot 2 will be similarly retrofitted with permanent extinguishing chambers.

-5-

The following lists the dimensions of the proposed new masonry walled foam pumphouse at Lot 3:

48 to 50 feet long by 22 feet wide by 15 feet 4 inches to the eave plus approximately 4 feet to the top of the uppermost roof.

2.3 Spill Protection:

The existing four (4) fuel tanks on Lot 3 include new, recently installed, overfill protection high level switches and alarms. The new tankage at Lot 3 will be similarly equipped. The Lot 2 tanks include existing overfill protection high-level switches, and future tanks on Lot 2 would be similarly equipped.

2.4 Spill Prevention Control and Counter-Measure Plan (SPCC):

The EPA, Title 40, Part 112, Oil Pollution Prevention, Section 112.7, has been implemented at Lot 3 and Lot 2 by the preparation of a SPCC plan dated November 23, 1984. These plans will be revised to include the new tankage before the new tankage is placed into fuel service. In addition, HFFC has contracted the services and equipment of the local firm of P.& S. Pacific, Inc.; this firm places spill containment booms around each tankship during each fuel unloading operation at Pier 51-A. P.& S. Pacific, Inc. also stocks sorbent pads and other oil cleanup materials which are immediately available in the event that a spill occurred.

2.5 Clean Air Act:

The aviation turbine fuel is a combustible Class II fuel as per NFPA 30-1984. The vapor pressure is nil. The flash point is minimum 100°F. The fuel is Jet-A or A-1

-6-

as per ASTM D1655-83, Standard Specifications for Aviation Turbine Fuels.

The tankage will be fixed cone roof tanks with pressure/ vacuum conservation type vent valves provided even though the product is a combustible liquid without a discernible vapor pressure.

- 3. Economic Characteristics:
 - 3.1 The estimated cost of the proposed fuel storage addition is \$4.85 million, all of which will be borne by HFFC 1
- 4. Social Characteristics:
 - 4.1 As previously described, the purpose is to add additional fuel storage tanks in existing fuel farms in order to provide storage for adequate supplies of aviation turbine fuels to service the Honolulu International Airport. Thus there are no prominent social characteristics associated with this project.

5. Environmental Characteristics:

5.1 There are no salient environmental characteristics associated with the proposed project inasmuch as the fuel storage tanks proposed will conform to the existing land use patterns, i.e., aviation turbine fuel storage. Furthermore, the project will not constitute a source of new significant energy additions since the existing electrical pumps will serve the added storage although the existing pumps will consume energy to pump the additional fuel storage if the airport fuel throughput increases. Four new energy efficient high pressure sodium 70 watt tank lights will be included on each tank. No wastes, liquids or solids

-7-

will be generated except during construction which in itself will be short term and except for infrequent tank cleaning. These wastes will be legally disposed off the site. An existing product recovery oily/water system exists for handling process drain water. The expenditure of resources in terms of labor and some materials will be irreversible; however, no other irreversible commitment, such as to preclude future land use options or reuse of certain materials will be made since the tanks could eventually be torn down and salvaged as scrap. The only alteration to the existing environmental setting will be the addition of tanks within the existing diked fuel farm. No historic, scenic, or recreational site will be affected and no persons will be displaced as a result of the proposed action.

D. Affected Environment

1. General Discussion:

The proposed project site is located on Lot 3 for the Phase I work and on Lots 3 and 2 for the Phase II work. The site location was discussed above under "C Proposed Action, Paragraph 1, Project Description." The Lots 3 and 2 have frontages on Sand Island Access Road and are bounded by Access Roads on both the north and south ends of the property. The rear of Lots 3 and 2 are bounded by parking lots of the Keehi Boat Harbor, Harbors Division. The new tanks are proposed to be ten feet higher than the existing 50 foot high tanks. This additional ten feet will not be significant to any nearby person, automobile or boat but this enables the tank diameter to be less for a given tank volume.

The FAA was consulted for tank heights as it affects air navigation. The Honolulu Fire Department was consulted as it affects fire prevention codes and regulations. The Board of

-8-

Water Supply was consulted in order to provide a fire water meter in fire protection design. The Hawaiian Electric Co. was consulted for clearance to electrical power lines and for a small increase in transformers to serve emergency power for the water booster pumps in fire protection design. The Airports Division was consulted for general review to satisfy lease requirements for Lots 3 and 2. The Airports Division has consulted with the Harbors Division.

- Major Impacts and Alternatives Considered: The proposed project will not have any significant nor adverse impact on the existing environmental setting. No other alternatives were considered to the proposed action.
- 3. Mitigation Measures: None.
- 4. <u>Determination</u>: It is the determination of Airports Division, Department of Transportation, State of Hawaii, that the proposed action will not have a significant effect on the environment and therefore does not require an EIS. This notice of determination is therefore submitted as a <u>Negative Declaration</u>.
- 5. <u>Reasons Supporting Determination</u>: The determination that the proposed project does not require an EIS is based on the conclusion that the action:
 - 5.1 Does not involve an irrevocable commitment to loss or destruction of any natural or cultural resource;
 - 5.2 Does not curtail the range of beneficial uses of the environment;
 - 5.3 Does not conflict with the State's long-term environmental policies or goals;

- 5.4 Does not affect the economic or social welfare of the community or State;
- 5.5 Does not affect economic or sociological activities;
- 5.6 Does not involve secondary impacts such a population changes or effects on public facilities;
- 5.7 Does not involve degradation of environmental quality;
- 5.8 Does not involve a commitment for larger actions;
- 5.9 Does not affect a rare, ti.reatened, or endangered species of animal or plant or habitat;
- 5.10 Does not detrimentally affect air or water quality or ambient noise levels; and
- 5.11 Does not affect an environmentally sensitive area.

Department of Land Utilization

Contact Memorandum
Date 3: Aug. 85
Project No.

SUBJECT: HFFC - proposed fuel starage additions Publication of Neq. Dec. CONTACT: boob thee - Airports Div. 836-6485

According to Mr. thee, Airports Division - State P<u>r</u> <u>nas</u> submitted the Neq. Dec., written by Koepf & Lange - Consuling Engineers, to OEQC for publication

Mr. Here stated the paper work has left his decik but he could not say exactly when OEQC would receive it publish the neq. dec. He felt it would be within the worth.

Paulo

Published Aug. 23, 1985

Mula-27. supt. 85

190-11 (#778)

LU 8/85-3332

8

AUS

S

2

**

22

COUNTY OF

KOEPF & LANGE INC. CONSULTING ENGINEERS 971 DEWING AVENUE LAFAYETTE. CALIFORNIA 96549 (415) 284-4650

July 31, 1985

Aviation Division of the Hawaii State Transportation Department Engineering Branch Honolulu International Airport Honolulu, HI 96819

Attention: Mr. Robert S. Chun Engineering Program Manager

Subject: Honolulu Fueling Facilities Corp. (HFFC) Sand Island Access Road, Lot 2 and 3 File 409, Proposed Storage Additions

Gentlemen:

Enclosed is a copy of a letter to Mr. John Whalen, Director of Land Utilization, City and County of Honolulu, Attention: Earl Matsukawa/Paula Rankine, dated July 29, 1985 with the transmitted "SMA Support Data," Pages 1 through 9, revised July 15, 1985 to clarify the inclusion of Lot 2 future work.

This "SMA Support Data" was attached to the Application Form, Department of Land Utilization which we filed July 16, 1985 with all signatures and with the \$100.00 fee.

We have enclosed one set of the drawings, dated 7-15-85 as listed in the "SMA Support Data."

Do you see any duplication in the City and County, Department of Land Utilization application and the Negative Declaration we sent to you on July 26, 1985?

Yours very truly,

KOEPF & LANGE, INC. Sand

Fred Lange

FL:ed Enclosures

c: Bob Sturtz, UAL, Chicago Stan Ambo, LAT, Honolulu Joe Harmon, LAT, Burbank K. A. Lange, K&L, Lafayette John T. Hhalen, DLU, Honolulu
DEPARTMENT OF LAND UTILIZATION Nº 12893 CITY AND COUNTY OF HONOLULU Honolulu, Hawaii, Curg. 7, 1985 Received from Onc. hange. Due hunderd a 85/SMA-61 Key 1-2-25:20 and notico ~ DOLLARS For Tax Map Key . * # 42.61 10000 Dun DEPARTMENT OF LAND UTILIZATION

LU 8/85- 3502

Via Express Mail

KOEPF & LANGE INC. CONSULTING ENGINEERS 971 DEWING AVENUE LAFAYETTE. CALIFORNIA 94549 (415) 286-4650

August 12, 1985

Mr. John T. Whalen, Director Department of Land Utilization City and County of Honolulu 650 South King Street Honolulu, HI 96813

Attention: Earl Matsukawa/Paula Rankine

Subject: Honolulu Fueling Facilities Corp. (HFFC) Sand Island Access Road, Lot 3 and 2 File 409, Proposed Fuel Storage Additions

Dear Mr. Whalen:

This refers to our SMA Application filed July 16, 1985 with the \$100.00 fee plus clarification letter dated July 29, 1985.

The following representatives of the subject project will be in Honolulu August 15 and 16, 1985:

Joe Harmon, HFFC Project Manager (Lockheed Air Terminal Inc.) Fred Lange, HFFC Project Engineer (Koepf & Lange, Inc.)

We would appreciate the opportunity to meet with your representatives on Friday August 16, 1985 to review the status and schedules on the application. The writer will telephone August 14th or 15th to confirm a convenient time.

Thank you for your assistance.

Yours very truly,

KOEPF & LANGE, INC.

Zant FredLange

FL:ed

 c: Bob Sturtz, UAL, Chicago Gene Hassing/Stan Ambo, LAT, Honolulu Joe Harmon, LAT, Burbank K. A. Lange, K&L, Lafayette 385 AUG 14 AM ID Ight. Cf. Land utlical Im a. Commun of House

PARTMENT OF LAND UTILIZATI

CITY AND COUNTY OF HONOLULU

680 SOUTH KING STREET

FRANK F FASI MATOR



JOHN P WHALEN

85/SMA-61(PR) CERTIFIED MAIL

رتم

のないでは、「ない」のないで、「ない」ので、

August 15, 1985

Mr. Fred Lange Vice President Koepf & Lange, Inc. 971 Dewing Avenue Lafayette, CA 94549

Dear Mr. Lange:

Special Management Area Use Permit (SMP) Acceptance Date: August 15, 1985

Recorded Owner Agent Location Tax Map Key Request	 State of Hawaii, DOT Airports Division Fred Lange Lots 2 & 3, Sand Island Access RoadKalihi, Oahu 1-2-25: 20 Lots 2 & 3 Addition of six (6) new fuel storage tanks and a foam pump house at Lot 3; addition of two (2) new fule storage tanks at Lot 2
---	--

This will acknowledge acceptance of the above application for a SMP.

A Department of Land Utilization public hearing must be set no less than twentyone (21) nor more than sixty (60) days after the above acceptance date. You will be notified when the public hearing has been scheduled.

If you should have any questions or wish additional information on this matter, please contact Paula Rankin of our staff at 527-5349.

Very truly yours, 1 JOHN P. WHALEN Director of Land Utilization

JPW:sl attach.: Receipt No. 12893

cc: City Council

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET

HONOLULU, HAWAII SERIS @ (808) 525-4432



JOHN P. WHALEN

85/SMA-61(PR)

September 3, 1985

Mr. Fred Lange Koepf & Lange, Inc. 971 Dewing Avenue Lafayette, California 94549

Dear Mr. Lange:

##+f>#

Special Management Area Use Permit Public Hearing Notice

Applicant	:	Honolulu Fueling Facility Corporation
Agent (if any)	:	Mr. Fred Lange
Location	:	Lots 2 & 3, Sand Island Access Road, Kalihi
Тах Мар Кеу	:	1-2-25: 20

This is to notify you that a public hearing on the above application has been scheduled (notice attached):

Date	: Friday, September 27, 1985	
Time	: 10:30 a.m.	
Location	: Kalihi-Palama Library, 1325 Kalihi Street	

Please feel free to contact Paula Rankin of our staff at 523-4077 or 523-4256 if you have any questions or wish additional information.

Very truly yours,

m P. Walen JOHN P. WHALEN

Director of Land Utilization

JPW:s1 attach.

DEPARTMENT OF LAND UTILIZATION

j.

PUBLIC HEARING

NOTICE IS HEREBY GIVEN of a public hearing to be held by the Department of Land Utilization of the City and County of Honolulu under Ordinance No. 84-4 for the following application at the date and the time specified or soon thereafter:

Friday, September 27, 1985 DATE : TIME: 10:30 a.m. Kalihi-Palama Library, 1325 Kalihi Street PLACE: SHORELINE MANAGEMENT AREA USE PERMIT (SMP) **APPLICATION:** 85/SMA-61(PR) RECORDED OWNER: State of Hawaii, Department of Transportation, Airports Division Fred Lange AGENT: 1-2-25: 20 TAX MAP KEY: Lots 2 and 3. Sand Island Access Road, Kalihi LOCATION: **REQUEST:** An addition of six (6) new fuel storage tanks and a foam pump house at Lot 3; and an addition of two (2) new fuel storage tanks at Lot 2.

Maps showing the general location and boundaries of the area under consideration are on file in the office of the Department of Land Utilization, Honolulu Municipal Building, 650 South King Street, 7th Floor, and are available to the public for inspection during office hours. For assistance, please call the department's Environmental Affairs Branch at 523-4077.

All interested persons are invited to attend. Those desiring to speak may register prior to the public hearing at the public hearing site and are encouraged to submit one copy of their written testimony.

Attendance at the public hearing is not necessary to submit testimony. Written testimony which is received by the Department of Land Utilization at the above address prior to the public hearing will be included with the transcripts of the hearing and will be considered in the evaluation of the request.

> JOHN P. WHALEN Director of Land Utilization

(Hon. Adv.: Monday, September 2, 1985) 0436e









TAX MAP KEY:__

DATE: 5.00+.85



beyond.





SEPARTMENT OF LAND UTILIZATION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET Honolulu, Hawan Jorta (1608) 533-4432

PRANK P PASK MATCH



NOTINE DE VITALS 4 MARINE

いたい、いたいなられたいというないないで、たちのですいたいないないないない

85/SMA-61(PR)

October 7, 1985

Honorable George Akahane, Chairman and Members of the City Council City and County of Honolulu Honolulu, Hawaii

Dear Chairman and Councilmembers:

Application for a Special Management Area Use Permit (SMP)

Applicant Recorded Owner	:	Honolulu Fueling Facilities Corporation State of Hawaii, DOT Airports Division
Agent Location	•	Fred Lange Sand Island
Tax Map Key Acceptance Date	:	1-2-25: 20, Lot 3 & 21, Lot 2 August 15, 1985

We recommend approval of this application for a SMP to construct additional improvements at an existing aviation fuel storage facility, subject to the following condition:

Prior to implementation of the project, the applicant must meet the requirements and obtain approval of all governmental agencies normally required for such projects.

Attached for your consideration are: (1) my report and draft resolution; and (2) the transcript of the public hearing, held on September 27, 1985. The hearing was attended by four representatives of the applicant.

Honorable George Akahane, Chairman and Members of the City Council

Under Ordinance No. 84-4, City Council is required to act on this application by November 26, 1985, unless an extension is requested by the applicant.

Respectfully,

Own Pwhalen

JOHN P. WHALEN Director of Land Utilization

JPW:sl 2414A attach.

the state of the s

The sheet of the trade of the South of the

FORWARDED:

D.G. "ANDY" ANDERSON Managing Director

يور بيد بعد

DEPARTMENT OF LAND DITUL/ATION (DLU) 85/SMA-61(PR) October 7, 1985

DIRECTOR'S REPORT SPECIAL MANAGEMENT AREA USE PERMIT (SMP)

I. LOCATION

The proposed project site is located on the makai side of Sand Island Access Road, near the bascule bridge about 3/4 mile from the Nimitz Highway intersection. The project area, comprised of Tax Map Keys (THK) 1-2-25: 20 and 21, encompasses four acres owned by the State of Hawaii, Department of Transportation and under lease to Honolulu Fuel Facilities Corporation. The entire site lies within the Special Management Area (SMA). See the attached Location Map.

II. EXISTING LAND USE

The project site, created in the 1970's by combining Shell Oil and Texaco fuel facilities, is an existing tank farm comprised of nine (9) storage tanks. A CMU dike wall encloses the entire facility providing safety and security. The land is flat and unpaved. Neighboring parcels have similar industrial uses. A vacant area, adjoining Keehi Boat Harbor, lies directly east of the site.

705-9.enis

Add 8 Tanks

The parcel is designated as "Public Facility" in the Development Plan and is zoned I-3 Water Front Industrial.

III. PROPOSED ACTION

The applicant is proposing to add a total of eight aviation fuel storage tanks and a foam pumphouse to the existing fuel storage facility. These improvements will be constructed in two phases:

- A. The first phase will consist of four tanks and the foam pumphouse at TMK 1-2-25: 20.
- B. The second phase will consist of two additional tanks at TMK 1-2-25: 20, plus two tanks at TMK 1-2-25: 21.

In addition, the height of the perimeter wall will be increased to provide additional safety and security. 85/SMA-61(PR) Page 2

Existing driveways, one at each parcel, will continue to provide access.

The proposed improvements will cost approximately \$4.85 million.

IV. ENVIRONMENTAL ASSESSMENT

The applicant assessed the environmental impacts of the proposed project and issued a Negative Declaration which was published in the "OEQC Bulletin" on August 23, 1985.

V. PUBLIC HEARING

DLU held a public hearing on September 27, 1985 at the Kalihi-Palama Library. Representatives of the applicant were present. No one from the public attended and no testimony was received.

VI. ANALYSIS

Our analysis of the proposed project is based on the review guidelines found in Section 4 of Ordinance 84-4.

- A. Access
 - The proposed project will not affect access to any public recreation area.
 - Public access to Keehi Boat Harbor is via the State-owned access road which intersects Sand Island Access Road to the south of the site.

B. Public Recreation Areas and Wildlife Preserves

The State-owned Keehi Boat Harbor and the planned State shoreline park to the north of the site are the only recreation facilities in the vicinity. Inasmuch as the area is zoned "industrial" and current industrial uses will remain, it is not anticipated that the proposed project will have a significant effect on existing or planned recreation opportunities. There is no wildlife habitat in the vicinity. 85/SMA-61(PR) Page 3

C. Solid and Liquid Waste Disposal

Process water, drained from the bottoms of fuel tanks, is directed through a product recovery filter system which separates the fuel product from the water. The water is then disposed into a properly permitted, existing injection well.

No sewage or solid waste is generated on the site.

- D. Alteration of Land Form
 - Grading and Drainage: The project site is essentially flat and unpaved. Therefore, grading will be minimal, limited mainly to specific sites for new tanks.

Surface runoff from the site is processed through the project recovery filter system, then disposed into an injection well.

- 2. Flood Protection: According to the Federal Flood Insurance Rate Maps (FIRM) for the City and County of Honolulu, the site is within Zone C, an area of minimal flooding. FIRM Zone C areas are not subject to flood proofing requirements of the <u>Comprehensive</u> Zoning Code.
- 3. Archaeological Resources: Since the site is reclaimed land and consists of fill material, there are no archaeological or historic resources.

VII. CONCLUSION

On the basis of the analysis under Ordinance No. 84-4, the proposed development is found to be consistent with the objectives, policies, and guidelines established in Sections 3 and 4 of the ordinance. PS/SMA-Al(PR) Page a

VIII. RECOMMENDATION

Repair S

It is recommended that the application for a Special Management Area Use Permit be granted, subject to the following condition:

Prior to implementation of the project, the applicant must meet the requirements and obtain approval of all governmental agencies normally required for such projects.

OShen Proverlan APPROVED

1 the

JOHN P. WHALEN Director of Land Utilization

JPW:s1 2353A



SMA BOUNDARY LINE

LOCATION MAP

1 M.K. 1-2-35 20 and 21

I, Evelyn Takemoto, Hearings Reporter, Department of Land Utilization. City and County of Honolulu, certify that the foregoing page comprise true and accurate minutes of the entitled matter held on September 27, 1985; 85/SMA-61(PR); Sand Island Access Road.

Gept. 27 1985

Public Hearings Officer

19 A

699

DEPARTMENT OF LAND UTILIZATION CITY AND COUNTY OF HUNOLULU PUBLIC HEARING MINUTES September 27, 1985

The Department of Land Utilization held a public hearing on September 27. 1985 at the Kalihi-Palama Library starting at 10:30 a.m. This hearing was held in compliance with Special (Shoreline) Management Area, Ordinance No. 84-4.

PUBLIC HEARINGS OFFICER: EARL MATSUKAWA STAFF PRESENT: Paula Rankin, Staff Planner

FILE NO.:	85/SMA-61
RECORDED OWNER:	State of Hawaii, Department of Transportation,
	Airports Division
AGENT:	Fred Lange
TAX MAP KEYS:	1-2-25: 20 and 21
I OCATION:	Lots 2 and 3. Sand Island Access Road, Kalihi
REQUEST:	An addition of six (6) new fuel storage tanks and a foam
	nump house at Lot 3: and an addition of two (2) new fuel
	storage tanks at Lot 2.

Four representatives of the applicant were present.

The Public Hearings Officer opened, then closed the public hearing as there was no testimony presented.

The public hearing was closed at 10:45 a.m.

a lady Down 3

EARL MATSUKAWA Public Hearings Officer

et

Restand Responses of

0458e

EPARTMENT OF LAND UTILIZATIC

COUNTY OF HONOLULU CITY AND

650 SOUTH RING STREET 截截长前接() F - HONOLUSU, NAWAH BORTS # (BORTS23-2482

BCI 8 8 15 AM '85

CITY CLEAK HONOLULUT HAWAIT

water a state



85 MT -7 P1:41

HORARS DE LANGER : 1 MANAGING DIRECTOR'S OFFICE CAC REMARKING PR)

October 7, 1965

Honorable George Akahane, Chairman and Members of the City Council City and County of Honolulu Honolulu, Hawaii

Dear Chairman and Councilmembers:

Application for a Special Management Area Use Permit VS

Applicant Recorded Owner ٠ Agent Location Tax Map Key

State of Hawaii, DOT Airports Division Fred Lange Sand Island 1-2-25: 20, Lot 3 & 21, Lot 2 : Acceptance Date : August 15, 1985

Honolulu Fueling Facilities Corporation

We recommend approval of this application for a SMP to construct additional improvements at an existing aviation fuel storage facility, subject to the following condition:

Prior to implementation of the project, the applicant must meet the requirements and obtain approval of all governmental agencies normally required for such projects.

Attached for your consideration are: (1) my report and draft resolution; and (2) the transcript of the public hearing, held on September 27, 1985. The hearing was attended by four representatives of the applicant.

Honorable George Akahane, Chairman and Members of the City Council A PARA AND A CO

Under-Ordinance No. 84-4, City Council is Required to act on this application by November 26, 1985, unless an extension is requested by the applicant.

Respectfully,

Om Prichalen

JOHN P. WHALEN Director of Land Utilization

12

2

JPW:s1 2414A attach.

のないのないでいた。

FORWARDED:

D.G. Andonios

D.G. "ANDY" ANDERSON Managing Director

RESOLUTION

25-254

No.

WHEREAS, the Department of Land Utilization (DLU) on August 15, 1985, accepted the application of <u>Honolulu</u> <u>Fueling Facilities Corporation</u>, herein referred to as the <u>APPLICANT</u>, for a Special Management Area Use Permit (SMP) to add eight aviation fuel storage tanks and a foam pumphouse to an existing fuel storage facility located at Sand Island Access Road, in Honolulu and identified as Tax Map Key 1-2-25: 20 & 21; Reference Humber <u>85/SMA-61</u>; and

HONDEULU. HAWAH

in the second second

017

WHEREAS, on <u>September 27, 1985</u>, the DLU held a public hearing which was attended by four representatives of the applicant; and

WHEREAS on October 7, 1985 , within ten (10) working days after the close of the public hearing, the DLU, having duly considered all evidence and reports of said public hearing and the review guidelines as established in Sections 3 and 4 of Ordinance No. 84-4, completed its report and transmitted its findings and recommendation of approval to the Council; and

WHEREAS, the City Council having received the findings and recommendation of DLU on October 8, 1985, and at its meeting of OCT 23 1985, having duly considered all of the findings and reports on the matter, approved the subject application for SMP with the condition enumerated below; now, therefore,

BE IT RESOLVED by the Council of the City and County of Honolulu that a SMP be issued to the APPLICANT under the following condition:

Prior to implementation of the project, the applicant must meet the requirements and obtain approval of all governmental agencies normally required for such projects. RESOLUTION

BE IT FINALLY RESOLVED by the Council of the City and County of Honolulu that the Clerk be, and he is, hereby directed to transmit copies of this resolution to Mr. John P. Whalen, Director of Land Utilization; Mr. Herbert K. Huraoke, Director and Building Superintendent, Building Department; and Mr. Fred Lange, Koepf & Lange, Inc., 971 Dewing Avenue, Lafayette, California 94549.

INTRODUCED

5

DATE OF INTRODUCTION:

OCT 23 1965 Honolulu, Hawall

Councilmembers

. 2 .

CITY COUNCIL Chit and County of Monolulus Honolulu, Nawahi

I hereby earlier that the foregoing RESOLUTION was adopted by the COUNCIL OF THE CIPY AND COUNTY OF HONGLULU on the date and by the sole indicated to the right.

TASMOND S. PUA

COTT & CLOBER

TATY MAINARS, ACCING 化乙烯酸 鲈 医球发病系的系统病 的复数经生物

9CT 23 1985 Dated

ADOPTED MEETING HELD DET 23 1985 AV E 360 Research and the second s 66.82 PAWCZ 77 CONFILMENTS \$1.8.4 VAX 3 2.81.74.74 网络生物

Reference:

Report No. 2006CCR-091

Resolution No. 85 65.7

Committee Meeting Held October 16, 1985 സ ന

1,0

Hr. Chairman:

Your Committee on Land Use and Controls considered the following:

Communication D-929 from the Director of Land Utilization, relating to a SHORELINE MANAGEMENT PERMIT (SMP) APPLICATION IN SAND ISLAND.

Purpose

This communication transmits an application for an SMP in Sand Island:

Details of the SMP application are as follows:

DLU	Reference:	85/SMA-61(PR)

Applicant: Honolulu Fueling Facilities Corporation

Recorded Owner: State of Hawaii, DOT Airports Division

Agent: Fred Lange

Location: Sand Island

Tax Map Key: 1-2-25: 20, Lot 3 & 21, Lot 2

Request: To construct additional improvements at an existing aviation fuel storage facility.

The Director of Land Utilization, in communication D-929, recommends approval of the resolution for an SMP application, subject to the following condition:

Prior to implementation of the project, the applicant must meet the requirements and obtain approval of all governmental agencies normally required for such projects.

(Continued - CR-891)

CITY COUNTY OF TONGLULU HONGLULU, NA WAID

COMMITTEE REPORT NO.

ADDPTED ON

REPORT OF THE COMMITTEE ON LAND USE AND CONTROLS Sch-Wai Doo, Chair Pro-Tempore Marilyn Bornborst, Melcome 5. Fawcett, David W. Kahanu Parsy T. Mink, Tony Narvaes, Mushers

SMP IN SAND ISLAND WEDNESDAT, OCTOBER 16, 1985

Page 2

Discussion

Chair Doo explained that this SMP request was for the construction of improvements at the existing Sand Island aviation fuel storage facility. Committee Member Bornhorst asked whether, in view of the development of the Barbers Point Deep Draft Harbor, there was any plan to phase out this facility. Robin Foster, of the Department of Land Utilization, indicated that the request has to do directly with the fueling of aircraft at the Honolulu International Airport and there had been no discussion of phasing it out.

Recommendation

Your Committee on Land Use and Controls recommends that Resolution (85-354) be reported out to the Council for adoption on Wednesday, October 23, 1985.

Your Committee further recommends that a copy of this report be forwarded to the Managing Director's Office; the Director of Land Utilization; the Director and Building Superintendent; and Mr. Fred Lange, Koepf & Lange, Inc., 971 Dewing Avenue. Lafayette, California 94549 for their information.

> CITE COUPOLL CHY AND COUPY OF HENOLULU NONOLULU, NAWED

MARTEDON

UCT 23 (00)

COMPLEXES SSERVES XO

大学を

Hawallan Independent Reimery, Inc.

an an an Arabana an Arabana

October 77, 1999

Department of Land Utilization Attention John P. Walen Director Zening Division

Dear Sirs:

PIPELINE TRANSMISSION ANTENNAE

In regards to our request for permit to install a SCADA (Supervisory Control & Data Acquisition System) Antennae, Robin Foster requested that we submit a description of how the system will operate. Please reference the following:

The SCADA system will gather remote pipeline information, to include pressures and pigging data, and transmit this data to the Refinery using a 450 MHZ signal. In the event that the pipeline malfunctions, alarms will go off at the pumphouse control room and the operator will then be able to shutdown the pipeline using remotely actuated valves. The transmission signal consists of a 12V, 2 watt signal which requires a "Line of Sight" antennae in order to reach the HIRL Refinery located at Campbell Industrial Par's.

If there are any questions please contact me at 547-3952.

Sincerely yours,

Adaction of Carron

Michael J. Turina, Supervisor of Project Engineering KCL:R16

理局适应 模拟 100 86 56 816 81 6824

4.97%

2.111、制作于 1	AS/SMACH WARE AMPLICATES 10/03/800
TAY MAD RIV:	1- x- 29 x0 x1 SATE OF FLETH INSPECTION:
APPI JEANT:	thin two ling Fair when Curp
ADDRESS:	Cand Ishird Agelas Rd. PHOTOS ATTACHED YES [] NO []
CONDITIONS (A	tlached)
ZZ All cond	tions have been met; Date
∠ Condition	i(s) have not been met; Date
Date and Initi 7/10/89 P	al <u>Action taken (rovoke, terminate, extension, atc.)</u> H <u>CLO</u>
2	
and a star of the second star and a star of the second star star and st	

01510

i AREA FILE <u>B515MA</u>-61 reference file SHORELINE/SPECIAL MANAGEMENT









ġ





.












é

ę







٠ę



ę

÷

DEPARTMENT OF PLANNING AND PERMITTING CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813 PHONE: (808) 768-8000 • FAX: (808) 768-6041 DEPT. WEB SITE: <u>www.honoluludpp.org</u> • CITY WEB SITE: <u>www.honolulu.gov</u>

KIRK CALDWELL MAYOR



GEORGE I. ATTA, FAICP DIRECTOR

ARTHUR D. CHALLACOMBE DEPUTY DIRECTOR

2016/SMA-20(MS)

MINOR PERMIT:	SPECIAL MANAGEMENT AREA (SMA)
File Number:	2016/SMA-20
Project: (Valuation):	Sand Island Fuel Storage Facility - Lot 3 Pump Back Project (\$368,856)
Landowner:	Department of Transportation - Airports Division State of Hawaii
Applicant:	Hawaii Fuel Facilities Corporation (HFFC)
Location:	6 Sand Island Access Road – Kalihi-Kai
Тах Мар Кеу:	1-2-25: 20
Zoning:	I-3 Waterfront Industrial District
Date Received:	March 29, 2016

We have reviewed your proposal to allow the replacement of four existing transfer pumps and associated appurtenant equipment with four new pumps and a new equipment enclosure, and install a new fence and gate, at the Sand Island Fuel Storage Facility, which is within the SMA established by Revised Ordinances of Honolulu (ROH) Chapter 25. The proposed development has a stated valuation of less than \$500,000 and will have no significant effect on SMA resources. Therefore, an SMA Minor Permit is hereby <u>APPROVED</u>, subject to the conditions listed below.

- 1. All work shall be in accordance with the approved plans (application documents received on March 29 and May 4, 2016), which have been marked Exhibits A-1 through A-7, and have been made a part of the file maintained by the Department of Planning and Permitting (DPP). Any modification to the Project and/or approved plans shall be subject to the prior review of and approval by the Director of the DPP. Major modifications shall require a new SMA permit.
- 2. If the actual valuation of the proposed work ultimately exceeds \$500,000, then the Project shall be returned to the DPP for further review under ROH Chapter 25.

2016/SMA-20 Page 2

- 3. Artificial light from exterior lighting fixtures, including, but not necessarily limited to floodlights, uplights, or spotlights used for decorative or aesthetic purposes on a shoreline lot shall be prohibited if the light directly illuminates or is directed to project across property boundaries toward the shoreline and/or ocean waters, except as may otherwise be permitted by Hawaii Revised Statutes Section 205A-71(b).
- 4. If, during construction, any previously unidentified archaeological sites or remains (such as artifacts, shell, bone, or charcoal deposits, human burials, rock or coral alignments, paving or walls) are encountered, the Applicant shall stop work and contact the State Historic Preservation Division (SHPD) immediately. Work in the immediate area shall be stopped until the SHPD is able to assess the impact and make further recommendations for mitigative action.
- 5. This application has only been reviewed and approved pursuant to the provisions of ROH Chapter 25, and its approval shall not constitute compliance with the requirements of other governmental agencies. These are subject to separate review and approval. The Applicant shall be responsible for insuring that the final plans for the Project approved under this permit comply with all applicable provisions and requirements of other government agencies, including compliance with the provisions of the Land Use Ordinance (LUO).
- 6. The Director of the DPP may modify the conditions of this approval by imposing additional conditions, modifying existing conditions, or deleting conditions deemed satisfied upon a finding that circumstances related to the approved Project have significantly changed so as to warrant a modification to the conditions of approval. In the event of the noncompliance with any of the conditions set forth herein, the Director of the DPP may terminate all uses approved under this permit or halt their operation until all conditions are met or may declare this permit null and void or seek civil enforcement.

The Project site is the Sand Island Fuel Storage Facility, which is on State-land located along Honolulu Harbor in the I-3 Waterfront Industrial District. The Applicant proposes to replace four existing transfer pumps and associated equipment with four new pumps with variable frequency drives (VFDs), flow transmitters, and a meter (see Exhibits A-1 to A-7). All electrical power and controls will be housed inside a new 339-square-foot, 12-foot high, Power Distribution Center (PDC) enclosure, which will be installed atop a new concrete pad. The PDC will protect the equipment from inclement weather and the elements (i.e., sun, heavy wind and rain, and salt water spray). A new electrical transformer will also be installed to the southeast, on a 17-square-foot concrete pad which will be surrounded by a new six-foot high chain-link fence topped with one-foot of barbed wire. A new personnel gate will be installed on the existing fence (see Exhibit A-2). Only authorized personnel is permitted on-site (i.e., no access by the general public). No new landscaping, lighting, or additional parking is proposed. The Project cost is estimated at \$368,856, and therefore qualifies as a minor SMA permit.

As a facility located on state lands, it is subject to the environmental disclosure provisions of Hawaii Revised Statutes (HRS) Chapter 343. However, pursuant to Section 11-200-8(3), "*the construction and location of single, new, small facilities or structures ...*" is exempt from the requirement to prepare an environmental assessment.

2016/SMA-20 Page 3

This 4-acre fuel storage facility, which receives Jet-A fuel refined at Kalaeloa via underground pipelines, predates the SMA regulations, and is considered a non-conforming facility (i.e., There is no prevailing SMA Use Permit recognizing the facility or governing its use). As such, non-exempt activities require the approval of an SMA Use Permit.

Consequently, on September 23, 2004, approval of SMA No. 2004/SMA-63 was required to install and connect new carbon steel pipeline to the facility terminal and install an above ground meter and valve station. Also, on April 19, 1999, approval of SMA No. 1999/SMA-30 was required to construct a new laboratory addition to the fuel storage facility.

Provided that the above-listed conditions are observed, the proposed development will not have a significant effect on the SMA, will not alter the character of the area, and will not have any substantial adverse environmental or ecological effects.

Any person who is specifically, personally, and adversely affected by the Director's action (in this case) and wants to appeal any part or requirement of the action may submit a written request for a contested case hearing to the Department of Planning and Permitting within thirty (30) calendar days from the date of mailing, personal service, or publication of the action of the Director. Contested case hearings shall be conducted pursuant to Chapter 12 of the DPP Part 2 Rules Relating to Shoreline Setbacks and the Special Management Area. Essentially, these Rules require that a petitioner show that the Director based his action on an erroneous finding of a material fact, and/or that the Director otherwise acted in an arbitrary or capricious manner, or there are extenuating circumstances. The filing fee for a contested case hearing is \$400 (payable to the City and County of Honolulu).

A copy of this approval should accompany your application(s) for construction permits. Should you have any questions or need additional information concerning this SMA Minor Permit, please contact Malynne Simeon of our staff at 768-8023.

Enclosures: Receipt Nos. 107489 and 107490 Exhibits A-1 to A-7

cc: State Office of Planning (Shichao Li)

THIS COPY, WHEN SIGNED BELOW, IS NOTIFICATION OF THE ACTION TAKEN.

Steven	Hum Director	May 12, 2016
SÍGNÁTURE	TITLE	DATE

This approval does not constitute approval of any other required permits, such as building or sign permits.



EXHIBIT A-1













EXHIBIT A-7

DEPARTMENT OF PLANNING AND PERMITTING CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR ● HONOLULU, HAWAII 96813 PHONE: (808) 768-8000 ● FAX: (808) 768-6041 DEPT. WEB SITE: <u>www.honoluludpp.org</u> ● CITY WEB SITE: <u>www.honolulu.gov</u>

KIRK CALDWELL MAYOR



KATHY K. SOKUGAWA ACTING DIRECTOR

TIMOTHY F. T. HIU DEPUTY DIRECTOR

EUGENE H. TAKAHASHI DEPUTY DIRECTOR

2019/SMA-42(ST)

MINOR PERMIT:	SPECIAL MANAGEMENT AREA
File Number:	2019/SMA-42
Project:	New Prefabricated Power Distribution Center (PDC) and various electrical distribution equipment upgrades
(Valuation):	(\$491,424)
Applicant:	Hawaii Fueling Facilities Corporation (HFFC)
	(Jason Maga - General Manager)
Landowners:	State of Hawaii - Department of Transportation - Airports Division
Agent:	Burns and McDonnell Engineering Company, Inc. (John Clarke)
Location:	50 Sand Island Access Road - Kalihi-Kai
Tax Map Keys:	1-2-025: 020 and 021
Zoning:	I-3 Waterfront Industrial District
Received:	November 27, 2019

The application to allow various maintenance and system upgrades at the existing jet fuel storage facility, including the installation of a new PDC that will be contained within a prefabricated, 28-foot-long by 10-foot-wide by 14.5-foot-high modular unit (i.e., container) located at the northeast corner of the site, which lies within the Special Management Area (SMA) established by Chapter 25, Revised Ordinances of Honolulu (ROH), is <u>APPROVED</u>, subject to the following conditions:

1. Development must be in general conformance with the plan, labeled Exhibits A through E, which is now the approved plan for the Project, and has been made part of the file. Any modifications to the Project and/or approved plan are subject to the prior review of and approval by the Director of the Department of Planning and Permitting (DPP). Major modifications will require a new SMA permit.

- 2. If the actual valuation of the proposed work ultimately exceeds \$500,000, then the Project must be returned to the DPP for further review under Chapter 25, ROH.
- 3. Artificial light from exterior lighting fixtures, including, but not necessarily limited to floodlights, up lights, or spotlights used for decorative or aesthetic purposes are prohibited if the light directly illuminates or directly projects across the property boundaries toward the shoreline and ocean waters, except as may otherwise be permitted pursuant to Hawaii Revised Statutes (HRS) Section 205A-71(b).
- 4. This application has only been reviewed and approved pursuant to the provisions of Chapter 25, ROH, and its approval does not constitute compliance with the requirements of other governmental agencies. These are subject to separate review and approval. The Applicant is responsible for ensuring that the final plans for the Project approved under this permit comply with all applicable provisions and requirements of other government agencies, including compliance with the provisions of the Land Use Ordinance.
- 5. If, during construction, any previously unidentified archaeological sites or remains (such as, artifacts, shell, bone, or charcoal deposits, human burials, rock or coral alignments, paving, or walls) are encountered, the Applicant shall stop work and contact the State Historic Preservation Division (SHPD) immediately. Work in the immediate area must be stopped until the SHPD is able to assess the impact and make further recommendations to mitigate action.
- 6. The Director of the DPP may modify the conditions of this approval by imposing additional conditions, modifying existing conditions, or deleting conditions deemed satisfied upon a finding that circumstances related to the approved Project have significantly changed, so as to warrant a modification to the conditions of approval. In the event of the noncompliance with any of the conditions set forth herein, the Director of the DPP may terminate all uses approved under this permit or halt their operations until all conditions are met or may declare this permit null and void or seek civil enforcement.

Location: The 8.4-acre site is located along Sand Island Access Road, adjacent to the Keehi Small Boat Harbor in Kalihi-Kai (see Exhibit A). The site is entirely located within the SMA and is zoned I-3 Waterfront Industrial District. The existing jet fuel storage facility, known as the HFFC site, consists of 17 large above ground steel tanks which store jet fuels, produced at refineries located at Kalaeloa (formerly known as Campbell Industrial Park) and conveyed to this site via pipelines, for use at the Daniel K. Inouye International Airport.

2019/SMA-42 Page 3

<u>Project</u>: The Applicant proposes to install a new PDC which contains electrical and control equipment which manages the storage and distribution operations at the existing jet fuel storage facility. The modular PDC will be installed at the northeast corner of the site, on a pedestal foundation about 3.5 feet above the surrounding grade. The PDC will not exceed the 60-foot height limit of the I-3 Industrial District. The replacement of an existing emergency generator and upgrades to the existing stormwater management and spill containment systems are considered exempt from SMA permit requirements, as maintenance and repair of the existing facility.

<u>Evaluation</u>: The site is in Flood Zone AE, with a base flood elevation of nine feet above mean sea level, as shown on Federal Flood Insurance Rate Map (No. 15003C053G). This designation corresponds to areas subject to one percent annual chance of flooding (the 100-year flood). The area consist of fill land, mixed (FL) created with the dredging of Honolulu Harbor and Keehi Lagoon. The Applicant also proposes various improvements to the existing stormwater management and drainage system within the facility, which are related to maintaining the existing facility, but can be considered exempt from SMA requirements pursuant to ROH, Section 25-1.3(b)(P).

There are no federally designated critical habitat in the immediate vicinity of the site as shown on the U.S. Fish and Wildlife Service mapping site. However, endangered native Hawaiian waterbirds may frequent surrounding areas, such as Keehi Lagoon. The installation of the modest prefabricated structure on the mauka side of the existing rather massive tank farm, will not affect potentially transiting waterbirds, impact near-shore or groundwater resources, result in visual impacts, or otherwise affect open space or line-of-site views of the ocean from the existing State highway.

Considering that the site was previously developed with 19 very large above-ground steel fuel storage tanks, piping, and associated improvements on fill lands, it is unlikely that any archaeological sites or human burials remain. Nonetheless, the proposed work is subject to the standard stop-work condition, should historic artifacts or cultural resources, or human remains be encountered.

Therefore, the small addition to the very substantial existing facility, does not conflict with objectives of the Coastal Zoning Management Program, Chapter 205A-2, HRS, and the SMA Ordinance, found in Section 25-3.1, ROH.

The Project has a valuation or fair market value below \$500,000, and does not have a significant effect the SMA. Because the site is developed on State-owned land, it is subject to compliance with Chapter 343, HRS. However, the State Department of Transportation declared by Project exempt from the preparation of an environmental assessment pursuant Chapter 343, HRS and Title 11, Chapter 200, Hawaii Administrative Rules on October 8, 2019.

2019/SMA-42 Page 4

Any person who is specifically, personally, and adversely affected by the Director's action (on the SMA Permit) and want to appeal any part or requirement of the action, may submit a written request for a contested case hearing to the DPP within 30 calendar days from the date of mailing, personal service, or publication of the action of the Director. Contested case hearings shall be conducted pursuant to Chapter 12 of the DPP Part 2 Rules Relating to Shoreline Setbacks and the SMA.

Essentially, these Rules require that a petitioner show that the Director based his/her action on an erroneous finding of a material fact, and/or that the Director otherwise acted in an arbitrary or capricious manner, or there are extenuating circumstances. The filing fee for a contested case hearing is \$400 (payable to the City and County of Honolulu).

A copy of this approval should accompany your application(s) for construction permits. Should you have any questions, please contact Steve Tagawa, of our staff, at 768-8024.

Enclosure: Receipt Nos. 125455 and 125456 Exhibits A through E

cc: Office of Planning Shichao Li

THIS COPY, WHEN SIGNED BELOW, IS NOTIFICATION OF THE ACTION TAKEN.

December 31, 2019 Acting Director DATE TITLE onstitute approval of any other required permits, such as building or sign permits. This approva



FILE NO.: 2019/SMA-42



FILE NO.: 2019/SMA-42





FILE NO.: 2019/SMA-42



FILE NO.: 2019/SMA-42



APPENDIX B

GRANT OF NON-EXCLUSIVE EASEMENT BOE-002



Total Number of Pages: Tax Map Key Nos. (1) 1-2-025:Portions of 22 and 113

GRANT OF NON-EXCLUSIVE EASEMENT BOE-002

THIS INDENTURE, made and entered into this 29 day of 400 , 2016, by and between the STATE OF HAWAII, by its Board of Land and Natural Resources, hereinafter referred to as the "Grantor," and HAWAII FUELING FACILITIES CORPORATION, a Hawaii corporation, whose address is 3201 Aolele Street, Honolulu, Hawaii 96819, hereinafter referred to as the "Grantee."

WITNESSETH THAT:

The Grantor, pursuant to Section 171-13, Hawaii Revised Statutes, for and in consideration of the rent to be paid and of the terms, conditions, and covenants herein contained, all on the part of the Grantee to be kept, observed, and performed, does hereby grant unto the Grantee, the following non-exclusive and term easement rights:

> Right, privilege, and authority for construction, access, repair, replacement and maintenance of monitoring/recovery wells and interceptor trench to be used to monitor and capture potential releases of fuel from the Grantee's facility adjacent to the Keehi Small Boat Harbor; subject to the terms and conditions herein,

> > PROLIM, APPR'D. Department of the Attorney General

625977_3.DOC

in, over, under and across those certain parcels of land ("area"), also referred to as "premises," situate at Kaliawa and Mokauea, Kalihi, Honolulu, Oahu, Hawaii, being identified as "Non-Exclusive Interceptor Trench Easement," containing an area of 6677 square feet, more particularly described in Exhibit "A" and delineated on Exhibit "B," both of which are attached hereto and made parts hereof, said exhibits being respectively, a survey description and survey map prepared by the Survey Division, Department of Accounting and General Services, State of Hawaii, designated C.S.F. No. 25,493 and dated March 11, 2016, TOGETHER WITH the rights of ingress and egress to and from the easement area for all purposes in connection with the rights hereby granted.

TO HAVE AND TO HOLD the easement rights unto the Grantee, its successors and assigns, SUBJECT, HOWEVER, to the following terms, conditions and covenants:

1. The term of this easement shall be fifty-five (55) years, commencing on the <u>17</u> th day of <u>400</u>, <u>2016</u>, up to and including the <u>28</u> th day of <u>400</u>, <u>1074</u>, unless sooner terminated as hereinafter provided, the Grantor reserving and the Grantee yielding and paying to the Grantor at the Office of the Department of Land and Natural Resources, Honolulu, Oahu, State of Hawaii, a one time payment, payable in advance, without notice or demand of NINETY SEVEN THOUSAND AND NO/100 DOLLARS (\$97,000.00).

625977_3.DOC

PRELIM. APPR'D. Department of the Attorney General THE GRANTOR AND THE GRANTEE COVENANT AND AGREE AS FOLLOWS:

1. The Grantee shall at all times with respect to the easement area use due care for public safety and agrees to release, indemnify, defend, and hold the Grantor harmless from and against any claim or demand for loss, liability, or damage, including claims for bodily injury, wrongful death, or property damage, arising out of or resulting from: 1) any act or omission on the part of the Grantee relating to the Grantee's use, occupancy, maintenance, or enjoyment of the easement area; 2) any failure on the part of the Grantee to maintain the easement area and sidewalks, roadways, and parking areas adjacent thereto while in the Grantee's use and control, and including any accident, fire or nuisance, growing out of or caused by any failure on the part of the Grantee to maintain the easement area in a safe condition; and 3) from and against all actions, suits, damages, and claims by whomsoever brought or made by reason of the Grantee's non-observance or non-performance of any of the terms, covenants, and conditions of this grant of non-exclusive easement or the rules, regulations, ordinances, and laws of the federal, state, municipal or county governments.

2. The Grantor reserves unto itself, its successors and assigns, the full use and enjoyment of the easement area and the right to grant to others rights and privileges for any and all purposes affecting the easement area, provided, however, that the rights herein reserved shall not be exercised by the Grantor and similar grantee(s) in any manner which interferes unreasonably with the Grantee in the use of the easement area for the purposes for which this easement is granted.

3. The placement of all improvements and maintenance, repair, and replacement of said improvements in or upon the easement area by the Grantee shall be done without cost or expense to the Grantor and shall remain the property of the Grantee and subject to the terms of paragraphs 10 and 14 may be removed or otherwise disposed of by the Grantee at any time; provided, that the removal shall be accomplished with minimum disturbance to the easement area which shall be restored to its original condition, or as close thereto as possible, within a reasonable time after removal.

4. Upon completion of any work performed in or upon the easement area, the Grantee shall remove therefrom all equipment and unused or surplus materials, if any, and shall leave the easement area in a clean and sanitary condition satisfactory to the Grantor.

3

625977_3.DOC

4 - Se

PRELIM. APPR'D. Department of the Attorney General 5. This easement or any rights granted herein shall not be sold, assigned, conveyed, leased, mortgaged, or otherwise transferred or disposed of, directly or by operation of law, except with the prior written consent of the Grantor.

6. The Grantee shall keep the easement area and the improvements thereon in a safe, clean, sanitary, and orderly condition, and shall not make any waste, strip, spoil, nuisance or unlawful, improper, or offensive use of the easement area.

7. The Grantee covenants, for itself, its successors and assigns, that the use and enjoyment of the land herein granted shall not be in support of any policy which discriminates against anyone based upon race, creed, sex, color, national origin, religion, marital status, familial status, ancestry, physical handicap, disability, age or HIV (human immunodeficiency virus) infection.

8. The Grantee, in the exercise of the rights granted herein, shall comply with all of the requirements of the federal, state, and county authorities and shall observe all county ordinances and state and federal laws, rules and regulations, now in force or which may hereinafter be in force.

9. These easement rights shall cease and terminate, and the easement area shall automatically be forfeited to the Grantor, without any action on the part of the Grantor, in the event of non-use or abandonment by the Grantee of the easement area, or any portion thereof, for a consecutive period of one (1) year.

The Grantee shall, at the end of the term or other 10. sooner termination of this easement, peaceably deliver unto the Grantor possession of the premises, together with all improvements existing or constructed thereon or Grantee shall remove such improvements and shall restore the premises to their original state, or as close thereto as possible, within a reasonable time and at the expense of the Grantee. If the Grantee does not remove the improvements or restore the premises to the reasonable satisfaction of the Grantor, the Grantor may effect such action and the Grantee agrees to pay all costs and expenses for such action. Furthermore, upon the expiration, termination, or revocation of this easement, should the Grantee fail to remove any and all of Grantee's personal property from the premises, after notice thereof, the Grantor may remove any and all of Grantee's personal property from the premises, and either deem the property abandoned and dispose of the property or place the property in storage at the cost and expense of Grantee

625977_3.DOC

PRELIM. APPR'D. Department of the Attorney General and the Grantee does agree to pay all reasonable costs and expenses for disposal, removal, or storage of the personal property. This provision shall survive the termination of the easement.

11. The Grantee shall procure and maintain, at its own cost and expense, in full force and effect throughout the term of this easement, general liability insurance, or its equivalent, with an insurance company or companies licensed or authorized to do business in the State of Hawaii with an AM Best rating of not less than "A-" or other comparable and equivalent industry rating, in an amount of at least \$1,000,000.00 for each occurrence and \$2,000,000.00 aggregate, and with coverage terms reasonably acceptable to the Chairperson of the Board of Land and Natural Resources. The policy or policies of insurance shall name the State of Hawaii as an additional insured. A copy of the policy or other documentation required by the Grantor shall be filed with the State of Hawaii, Department of Land and Natural Resources. The insurance shall cover the entire easement area, including all improvements and grounds and all roadways or sidewalks on or adjacent to the easement while in the use or control of the Grantee.

The Grantee, prior to entry and use of the easement area or within fifteen (15) days after the effective date of this easement, whichever is sooner, shall furnish the Grantor with a policy(s) or other documentation required by the Grantor showing the policy(s) to be initially in force, keep the policy(s) or other documentation required by the Grantor on deposit during the entire easement term, and furnish a like policy(s) or other documentation required by the Grantor upon each renewal of the policy(s). This insurance shall not be cancelled, limited in scope of coverage, or nonrenewed until after thirty (30) days written notice has been given to the Grantor. The Grantor may at any time require the Grantee to provide Grantor with copies of the insurance policy(s) that are or were in effect during the easement period or other documentation required by the Grantor.

The Grantor shall retain the right at any time to review the coverage, form, and amount of the insurance required by this easement. If, in the reasonable opinion of the Grantor, the insurance provisions in this easement do not provide adequate protection for the Grantor, the Grantor may require Grantee to obtain insurance sufficient in coverage, form, and amount to provide adequate protection. The Grantor's requirements shall be reasonable but shall be designed to assure protection for and against the kind and extent of the risks which exist at the time a change in insurance is required. The Grantor shall notify

625977_3.DOC

RELIM. APPR'D.

Grantee in writing of changes in the insurance requirements and Grantee shall deposit copies of acceptable insurance policy(s) or other documentation required by the Grantor thereof, with the Grantor incorporating the changes within thirty (30) days after receipt of the notice.

The procuring of the required policy(s) of insurance shall not be construed to limit Grantee's liability under this easement nor to release or relieve the Grantee of the indemnification provisions and requirements of this easement. Notwithstanding the policy(s) of insurance, Grantee shall be obligated for the full and total amount of any damage, injury, or loss caused by Grantee's negligence or neglect connected with this easement.

It is agreed that any insurance maintained by the Grantor will apply in excess of, and not contribute with, insurance provided by Grantee's policy.

12. At its sole cost and expense, Grantee shall obtain and keep in full force during the entire term of this easement a pollution legal liability insurance policy containing a limit of not less than \$10,000,000.00. Such policy shall name the State of Hawaii as additionally insured. Grantee shall provide proof of said insurance satisfactory to Grantor that shall include, at a minimum, a policy(s) or other documentation reasonably required by the Grantor from the insurer indicating the coverage provided and the term during which said policy shall irrevocably remain in effect. In the event Grantee changes insurers, or Grantee's insurer provides notice of change, cancellation, termination or modification of its coverage to Grantee, Grantee shall provide Grantor with notice of said action thirty (30) days prior to the effective date of said change, cancellation, termination or modification.

13. Grantor reserves the right to withdraw the easement for public use or purposes, at any time during the term of this easement upon the giving of reasonable notice to Grantee. Upon withdrawal of the easement, Grantor shall return to Grantee a portion of the one-time payment described in paragraph 1. For purposes of determining the amount to be returned to the Grantee, the term "net payment" shall mean the one-time payment described in paragraph 1 reduced by any nonrefundable portion of the one-time payment, if any, that Grantor was required by statute to pay to any other entity or body. The amount returned to Grantee shall be the net payment prorated for the unused term of the easement.

625977_3.DOC

PEBLIM. APPR'D. Department of the Atterney General 14. The Grantee shall not mortgage, hypothecate, or pledge the premises, any portion, or any interest in this easement without the prior written approval of the Chairperson of the Board of Land and Natural Resources and any mortgage, hypothecation, or pledge without the approval shall be null and void.

Time is of the essence in this agreement and if 15. the Grantee shall abandon the premises, or if this easement and premises shall be attached or taken by operation of law, or if any assignment is made of the Grantee's property for the benefit of creditors, or if Grantee shall fail to observe and perform any of the covenants, terms, and conditions contained in this easement and on its part to be observed and performed, and this failure shall continue for a period of more than sixty (60) calendar days after delivery by the Grantor of a written notice of breach or default, by personal service, registered mail or certified mail to the Grantee at its last known address and to each mortgagee or holder of record having a security interest in the premises, the Grantor may, subject to the provisions of section 171-21, Hawaii Revised Statutes, at once re-enter the premises, or any part, and upon or without the entry, at its option, terminate this easement without prejudice to any other remedy or right of action for any preceding or other breach of contract; and in the event of termination, at the option of Grantor, all improvements shall remain and become the property of the Grantor or shall be removed by Grantee.

In the event the Grantor seeks to forfeit the 16. privilege, interest, or estate created by this easement, each recorded holder of a security interest may, at its option, cure or remedy the default or breach within sixty (60) calendar days, from the date of receipt of the Grantor's notice, or within an additional period allowed by Grantor for good cause, and add the cost to the mortgage debt and the lien of the mortgage. Upon failure of the holder to exercise its option, the Grantor may: (a) pay to the holder from any moneys at its disposal, including the special land and development fund, the amount of the mortgage debt, together with interest and penalties, and secure an assignment of the debt and mortgage from the holder or if ownership of the privilege, interest, or estate shall have vested in the holder by way of foreclosure, or action in lieu thereof, the Grantor shall be entitled to the conveyance of the privilege, interest, or estate upon payment to the holder of the amount of the mortgage debt, including interest and penalties, and all reasonable expenses incurred by the holder in connection with the foreclosure and preservation of its security interest, less appropriate credits, including income received from the

625977_3.DOC

PROLIM. APPR'D. Department of the Attorney General

privilege, interest, or estate subsequent to the foreclosure; or (b) if the property cannot be reasonably reassigned without loss to the State, then terminate the outstanding privilege, interest, or estate without prejudice to any other right or remedy for any preceding or other breach or default and use its best efforts to redispose of the affected land to a qualified and responsible person free and clear of the mortgage and the debt secured; provided that a reasonable delay by the Grantor in instituting or prosecuting its rights or remedies shall not operate as a waiver of these rights or to deprive it of a remedy when it may still otherwise hope to resolve the problems created by the breach or default. The proceeds of any redisposition shall be applied, first, to reimburse the Grantor for costs and expenses in connection with the redisposition; second, to discharge in full any unpaid purchase price or other indebtedness owing the Grantor in connection with the privilege, interest, or estate terminated; third, to the mortgagee to the extent of the value received by the State upon redisposition which exceeds the fair market value of the land as previously determined by the State's appraiser; and fourth, to the owner of the privilege, interest, or estate.

17. In case the Grantor shall, without any fault on its part, be made a party to any litigation commenced by or against the Grantee as a result of this grant of non-exclusive easement (other than condemnation proceedings), the Grantee shall pay all costs, including reasonable attorney's fees and expenses incurred by or imposed on the Grantor; furthermore, the Grantee shall pay all costs, including reasonable attorney's fees and expenses, which may be incurred by or paid by the Grantor in enforcing the covenants and conditions of this grant of non-exclusive easement, or in the collection of delinquent rental, fees, taxes, and any and all other applicable charges attributed to said easement area.

The Grantee shall not cause or permit the escape, 18. disposal or release of any hazardous materials except as permitted by law. Grantee shall not allow the storage or use of such materials in any manner not sanctioned by law or by the highest standards prevailing in the industry for the storage and use of such materials, nor shall Grantee bring onto the easement area any such materials except to use in the ordinary course of Grantee's business, and then only after written notice is given to Grantor of the identity of such materials and upon Grantor's consent which consent may be withheld at Grantor's sole and If any lender or governmental agency shall absolute discretion. ever require testing to ascertain whether or not there has been any release of hazardous materials by Grantee, based upon reasonable cause, then the Grantee shall be responsible for the

625977_3.DOC

PRELIM, APPR'D. Department of the Attorney Ganaral reasonable costs thereof. In addition, Grantee shall execute affidavits, representations and the like from time to time at Grantor's request concerning Grantee's best knowledge and belief regarding the presence of hazardous materials on the easement area placed or released by Grantee.

The Grantee agrees to release, indemnify, defend, and hold Grantor harmless, from any damages and claims resulting from the release of hazardous materials on the easement area occurring while Grantee is in possession, or elsewhere if caused by Grantee or persons acting under Grantee. These covenants shall survive the expiration or earlier termination of this easement.

For the purpose of this easement "hazardous material" shall mean any pollutant, toxic substance, hazardous waste, hazardous material, hazardous substance, or oil as defined in or pursuant to the Resource Conservation and Recovery Act, as amended, the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, the Federal Clean Water Act, or any other federal, state, or local environmental law, regulation, ordinance, rule, or bylaw, whether existing as of the date hereof, previously enforced, or subsequently enacted.

19. The Grantee shall not construct, place or maintain any building or structure over or upon the easement area, except for the purposes described in this grant.

20. The Grantee shall comply with all applicable federal and state environmental impact regulations.

21. The Grantee shall maintain and employ debris, pollution and contamination control measures, safeguards and techniques to prevent debris, pollution or contamination to the ocean waters, streams or waterways resulting from the Grantee's, its invitee's and its agent's use, maintenance, repair and operation of the easement area, and shall take immediate corrective action in the event of such pollution or contamination to immediately remove the cause of such pollution or contamination, and shall immediately contain and take remedial action in the easement area and its surrounding waters of such pollutant or contaminant and restore to the Grantor's reasonable satisfaction the area affected by such pollution or contamination, all at the Grantee's own cost and expense.

22. The easement area is encumbered by Governor's Executive Order No. 4322 to the State of Hawaii, Department of Land and Natural Resources, and therefore this grant of easement is subject to the State of Hawaii Governor's approval. Said

625977_3.DOC

PRELIM. APPR'D. Department of the Atterney General approval was obtained on April 22, 2016.

23. The easement area is encumbered by Governor's Executive Order No. 2404 to the State of Hawaii, Department of Transportation, and therefore this grant of easement is subject to the State of Hawaii Governor's approval. Said approval was obtained on April 22, 2016.

24. The easement area is encumbered by Governor's Executive Order No. 2404 to the State of Hawaii, Department of Transportation, and therefore this grant of easement is subject to the State of Hawaii, Department of Transportation approval. Said approval was obtained on April 18, 2016.

25 This easement shall be subject to Executive Order No. 2404 and to all of its conditions set forth therein.

PRELIM. APPR'D. Department of the Atterney General
IN WITNESS WHEREOF, the STATE OF HAWAII, by its Board of Land and Natural Resources, has caused the seal of the Department of Land and Natural Resources to be hereunto affixed and the parties hereto have caused this Indenture to be executed as of the day, month, and year first above written.

STATE OF HAWAII

Approved by the Board of Land and Natural Resources at its meeting held on October 23, 2015.

By

SUZANNE D. CASE Chairperson Board of Land and Natural Resources

GRANTOR

HAWAII FUELING FACILITIES CORPORATION, a Hawaii corporation By It By Its

APPROVED AS TO FORM:

CINDY YÒUNG Deputy Attorney General

Dated: April 25, 2016

GRANTEE

ant of th ney General

625977_3.DOC

SS.

CITY AND COUNTY OF HONOLULU)

On this 25th day of April 20 16 before me appeared <u>SCOTT G. MORITA</u> and ----- , to me_personally known, who, being by me duly sworn, did say that they are the Secretary and respectively of HAWAII FUELING FACILITIES CORPORATION, a Hawaii corporation, and that said instrument was signed in behalf of said corporation by authority of its Board of Directors, and the and _____ said Secretary acknowledged said instrument to be the free act and deed of said corporation.



Notary Public State of Hawaii

Merlita A. Raguindin

My commission expires: 01/25/2020



Doc. Date: Fronting time Pages: 16 (Exhibits ASE Name: Merlita A. Raguindin First Circuit Doc. Description: Grantof Non-Exclusive ascment BOE

NOTARY CERTIFICATION





APPENDIX C

HFFC TANK BOTTOMS SCHEDULE MODIFICATION APPROVAL



November 29, 2023

Via Electronic Mail

Jason Maga General Manager, Hawaii Fueling Facilities Corporation 3201 Aolele Street Honolulu, Hawaii 96819 jason.maga@signatureflight.com

Modification of Administrative Order on Consent, Dkt No. OPA-311-09-2021-001

Dear Jason Maga:

On June 19, 2023, the Hawaii Fueling Facilities Corporation (HFFC) submitted a written request to the U.S. Environmental Protection Agency, Region 9 to modify the above-referenced Administrative Order on Consent. Specifically, HFFC requests a non-material modification to paragraph 32 of the Order to extend the deadline to December 31, 2028 to install an asphalt liner and industrial spray coating on Lots 2, 3, and 3.5 of the facility. In its request, HFFC explains that, from an engineering perspective, it makes more sense to sequence construction of the last of the 4 tank bottom replacements outlined in Paragraph 28c prior to enhancing the facility's secondary containment area. The request therefore relates only to the sequencing of the work and not the final completion deadline of all requirements of the Order.

EPA understands the rationale to modify the sequence of improvements at the Facility and therefore we approve your request, as a non-material modification to the Order. EPA appreciates the efforts by HFFC to comply with the Order and to conduct the work in a thoughtful and expeditious manner.

Sincerely,



Pete Reich U.S. EPA Region 9 Oil Program Stormwater, Wetlands and Oil Section Enforcement and Compliance Assurance Division



APPENDIX <u>BD</u> PRELIMINARY CONSTRUCTION DRAWINGS

GE							
1	ALL DIMENSIONS ELEVATIONS AND STATIONS ARE IN FEET UNLESS INDICATED OTHERWISE	<u>GRAE</u>	DING NOTES:				
2.	CALLOUTS, COORDINATES, AND DIMENSIONS ARE POINTED TO OR MEASURED TO STRUCTURE CENTER, EDGE OF PAVEMENT, OR OUTSIDE FACE OF FOUNDATION, UNLESS INDICATED OTHERWISE.	1. P Iř	ROPOSED ELEVA	TIONS INDICATED ARE FO	R TOP OF FINAL GRADE, PAVE	MENT, OR S	STRUCTURE UNLES
3.	ALL WORK SHALL BE SUBJECT TO INSPECTION BY AUTHORIZED PERSONNEL OF LOCAL AND GOVERNMENT REGULATORY AGENCIES AND THE CONTRACTOR.	2. E S	LEVATION DENOT	ED AS "MATCH" ARE INTEN ATIONS AT TIE-INS AND N	NDED TO MEET EXISTING GRAI MATCH POINTS PRIOR TO BEG	DE ELEVAT INNING CO	TIONS. CONTRACTO
4.	ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND LOCAL AND GOVERNMENT CODES, ORDINANCES, AND REGULATIONS. IN CASE OF CONTRADICTION OR DISCREPANCY	3. A R 1	ALL GRADING WOR RELATED TO GRAD 990, AS AMENDED	K SHALL BE DONE IN ACC ING, SOIL EROSION AND S , AND SOILS REPORT.	ORDANCE WITH CHAPTER 14, SEDIMENT CONTROL OF THE R	ARTICLES EVISED OF	13, 14, 15 AND 16, A9 RDINANCES OF HON
5.	ALL WORK SHALL BE CONDUCTED IN A PROFESSIONAL WORKMANSHIP MANNER USING QUALITY MATERIALS. WORK SHALL CONFORM TO SPECIFICATIONS, UNLESS INDICATED OTHERWISE OR AS DIRECTED BY THE CONTRACTOR.	4. T F S C	HE SUBCONTRAC REE FROM DUST I TANDARDS CONT CONTROL".	TOR, AT HIS OWN EXPENS NUISANCE. THE WORK SH AINED IN THE HAWAII ADM	SE, SHALL KEEP THE PROJECT ALL BE IN CONFORMANCE WIT IINISTRATIVE RULES, TITLE 11,	AREA AND H THE AIR , CHAPTER	O SURROUNDING AR POLLUTION CONTR 60.1, "AIR POLLUTIC
6.	WHEN CONSTRUCTION WORK IS RESTRICTED TO BEING PERFORMED WITHIN EASEMENTS, SUBCONTRACTOR SHALL CONFINE WORK WITHIN THE PERMANENT AND TEMPORARY EASEMENTS.	5. T ¢	HE EXISTING UTIL	ITIES SHOWN ARE APPRO IE FACILITIES AND EXERC	XIMATE. THE SUBCONTRACTO	R SHALL V TING IN TH	/ERIFY THE LOCATION
7.	DRAWING BACKGROUND INFORMATION (STRUCTURES, GRADING, UTILITIES, ETC. SHOWN ON THE DRAWINGS AREA BASED ON SURVEYS PERFORMED BY MERIDIAN ASSOCIATES (OCTOBER 2011). SEE THE REFERENCE	C E E	CONNECTIONS OF XISTING LINES AT XCAVATION FOR	NEW UTILITIES ARE SHOW THE PROPOSED CONNEC THE NEW LINES.	VN ON THE PLANS, THE SUBCC TIONS TO VERIFY THEIR LOCA	NTRACTO	R SHALL EXPOSE T D DEPTHS PRIOR TO
3.	THE SUBCONTRACTOR SHALL FIELD-CHECK ALL EXISTING CONDITIONS AND BE THOROUGHLY FAMILIAR WITH THE SITE BEFORE ANY WORK COMMENCES. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE CONTRACTOR BEFORE ANY FURTHER WORK COMMENCES	6. A A N	ADEQUATE PROVIS AN EXCAVATION O IADE TO PREVENT	FIONS SHALL BE MADE TO R THE SLOPED SURFACES SEDIMENT-LADEN RUNO	PREVENT SURFACE WATERS S OF A FILL. FURTHERMORE, A FF FROM LEAVING THE SITE.	FROM DAN DEQUATE I	AGING THE CUT FA PROVISIONS SHALL
9.	IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO FIELD-VERIFY EXISTING STRUCTURES, UTILITIES, AND SURVEY INFORMATION, AND TO TAKE NECESSARY PRECAUTIONS DURING DEMOLITION AND CONSTRUCTION. SUBCONTRACTOR SHALL VERIFY EXISTENCE AND MARK LOCATIONS OF ALL UTILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES, PRIOR TO BEGINNING WORK.	7. T C 5 C S	HE SUBCONTRAC CONFORMANCE WI 4, "WATER QUALIT CHAPTER 14 OF TH GHALL BE EMPLOY	TOR SHALL BE RESPONSI TH APPLICABLE PROVISIO Y STANDARDS," AND TITL E REVISED ORDINANCES ED AT ALL TIMES DURING	BLE FOR ALL GRADING OPERA ONS OF THE HAWAII ADMINISTF E 11, CHAPTER 55, "WATER PC OF HONOLULU, AS AMENDED. CONSTRUCTION.	TIONS TO RATIVE RUI DLLUTION C BEST MAN	BE PERFORMED IN LES, TITLE 11, CHAF CONTROL", AS WELL IAGEMENT PRACTIC
	SUBCONTRACTOR SHALL CONTACT THE CONTRACTOR AND ALL ASSOCIATED UTILITY COMPANIES AND AGENCIES TO IDENTIFY THE LOCATION OF UTILITIES. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION.	T P	HE SUBCONTRAC ERMIT COVERAGE	TOR SHALL OBTAIN NATIO	NAL POLLUTANT DISCHARGE	ELIMINATIO	ON SYSTEM (NPDES
10.	PRIOR TO CONSTRUCTION, THE SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF OPERATIONAL PLANS IN THE EVENT AN UNEXPECTED UTILITY OR STRUCTURE INTERFERENCE OR CONFLICT IS ENCOUNTERED DURING CONSTRUCTION, THE SUBCONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTOR. ANY UTILIT	A C B Y S	A. STORM WATER [DR MORE, AND B. DISCHARGES OF STATE WATERS.	DISCHARGES ASSOCIATED	O WITH CONSTRUCTION ACTIV	ITIES THAT	DISTURB ONE (1) A
DE	IMMEDIATELY AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CONTRACTOR.	אן 4 2 2	N ACCORDANCE W RE REQUIRED TO CHAPTER 11-54). BI DF SEDIMENT. DEB	TH STATE LAW, ALL DISC COMPLY WITH STATE WA EST MANAGEMENT PRACT RIS. AND OTHER POLLUTA	HARGES RELATED TO PROJEC TER QUALITY STANDARDS (HA TICES SHALL BE USED TO MINI ANTS TO STATE WATERS, PER	CT CONSTR WAII ADMI MIZE OR PI MIT COVER	RUCTION OR OPER NISTRATIVE RULES REVENT THE DISCH RAGE IS AVAILABLE
1. 2.	ALL DEMOLITION, WASTE, DEBRIS, AND UNSATISFACTORY MATERIALS SHALL BE DISPOSED OF OFF SITE. ANY DAMAGE TO PAVEMENT AREAS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REMOVED AND	T C ¢	HE DEPARTMENT	OF HEALTH, CLEAN WATE R/SUBCONTRACTOR IS RI AS REQUIRED BY LAW.	R BRANCH AT <u>HTTP://HEALTH.</u> ESPONSIBLE FOR OBTAINING (HAWAII.GC	<u>DV/CWB.</u> THE DERAL, STATE, OR
3.	REPLACED AT NO ADDITIONAL COST TO CONTRACTOR. HANDLING AND DISPOSAL OF CONTAMINATED SOIL & WATER SHALL BE IN ACCORDANCE WITH THE SAND	8. V E	VHERE APPLICABL E IN PLACE BEFOI	E AND FEASIBLE THE MEA RE ANY EARTH MOVING PI	ASURES TO CONTROL EROSIO HASE OF THE GRADING IS INIT	N AND OTH IATED.	IER POLLUTANTS S
4.	PAVEMENT DESIGNATED FOR REMOVAL TO SUPPORT PROPOSED CONSTRUCTION SHALL BE SAWCUT FULL	T .9 11	EMPORARY EROS	ION CONTROLS SHALL NO ABLISHED.	DT BE REMOVED BEFORE PERI	MANENT EF	ROSION CONTROL
ST	ORM DRAIN AND FORCE MAIN NOTES:	10. T F	EMPORARY EROS	ION CONTROL PROCEDUF MIT.	RES SHALL BE SUBMITTED FOR	R APPROVA	AL PRIOR TO APPL
1.	PIPE AND FITTINGS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (DUCTILE IRON PIPE SIZE) CONFORMING TO ASTM D3035 WITH A MINIMUM PRESSURE RATING OF 125 PSI AT 73.4 DEGREE F AND SHALL HAVE A STANDARE THERMOPLASTIC PIPE DIMENSION RATIO OF DR-17	11. IF C	THE GRADING W	ORK INVOLVES CONTAMIN TH APPLICABLE STATE AN	NATED SOIL, THEN ALL GRADIN ND FEDERAL REQUIREMENTS.	IG WORK S	SHALL BE DONE IN
2.	JOINTS SHALL BE HEAT FUSION JOINTS CONFORMING TO ASTM D2620.	12. A C	LL GRADING AND F POLLUTANTS FI	CONSTRUCTION WORK SI ROM THE CONSTRUCTION	HALL IMPLEMENT MEASURES	TO ENSURE HE MAXIMU	E THAT THE DISCH JM EXTENT PRACT
3.	PIPE, PIPE FITTINGS AND APPURTENANCES SHALL BE INSTALLED AT THE LOCATIONS INDICATED. EXCAVATION, TRENCHING, AND BACKFILLING SHALL BE AS SPECIFIED IN SECTION 31 20 01 SITE PREPARATION AND EARTHWORK AND ASTM D2774.	A 13. T T	ND WILL NOT CAU THE CITY SHALL BE THE APPLICATION I	SE OR CONTRIBUTE TO A INFORMED OF THE LOCA FOR A GRADING PERMIT IS THE GRADING ORDINAN(N EXCEEDANCE OF WATER QU TION OF THE BORROW/DISPO S MADE. THE BORROW/DISPO	JALITY STA SAL SITE F SAL SITE M	ANDARDS. OR THE PROJECT IUST ALSO FULFIL
4.	PIPE SHALL BE CUT IN A NEAT MANNER WITH MECHANICAL CUTTERS. WHEEL CUTTERS SHALL BE USED WHERE PRACTICABLE. SHARP AND ROUGH EDGES SHALL BE GROUND SMOOTH AND LOOSE MATERIAL REMOVED FROM THE PIPE BEFORE LAYING.	14. N N C	IO GRADING WORI	(SHALL BE DONE ON SAT RECTOR, D.P.P., PROVIDED	URDAYS, SUNDAYS AND HOLIE D SUCH GRADING WORK IS ALS CONTAINED IN THE HAWAII ADN	DAYS AT AN SO IN CONF /INISTRATI	NY TIME WITHOUT FORMANCE WITH
5.	BEFORE LOWERING AND WHILE SUSPENDED, THE PIPE SHALL BE INSPECTED FOR DEFECTS. DEFECTIVE MATERIAL SHALL BE REJECTED.	C	CHAPTER 46, "COM	MUNITY NOISE CONTROL	'. 		- ,
6.	HEAT FUSION JOINTS SHALL COMPLY WITH THE MANUFACTURER'S INSTRUCTIONS CONCERNING EQUIPMENT, TEMPERATURE, MELT TIME, HEAT COAT, AND JOINING TIME. FLANGED JOINTS SHALL BE MADE IN COMPLIANC WITH THE MANUFACTURER'S INSTRUCTIONS.	15. F 7 E C P	OR NON-CITY PRO 68-8084 TO ARRAN CONSTRUCTION PL PROJECTS, THE CO	DECTS, THE CONTRACTO IGE FOR INSPECTIONAL S ANS SEVEN (7) DAYS PRIC INTRACTOR SHALL COOR	R SHALL NOTIFY THE CIVIL EN ERVICES AND SUBMIT TWO (2) OR TO COMMENCEMENT OF CO DINATE INSPECTIONAL SERVIO	GINEERING) SETS OF / ONSTRUCT CES WITH T	g Branch, d.p.p. / Approved Fion Work. For (The Responsible
7.	AFTER THE PIPE HAS BEEN INSTALLED, JOINTS COMPLETE, AND THE TRENCH HAS BEEN PARTIALLY BACKFILLED, LEAVING THE JOINTS EXPOSED FOR EXAMINATION, THE PIPE SHALL BE FILLED WITH WATER TO EXPEL ALL AIR. THE PIPELINE SHALL BE SUBJECTED TO A TEST PRESSURE OF 100 PSI OR 150 PERCENT IF TH WORKING PRESSURE, WHICHEVER IS GREATER, FOR A PERIOD OF AT LEAST ONE HOUR. THE EXPOSED PIPE, JOINTS, FITTING, AND VALVES SHALL BE EXAMINED FOR LEAKS. VISIBLE LEAKS SHALL BE STOPPED OR THE DEFECTIVE PIPE, FITTING, JOINTS, OR VALVE SHALL BE REPLACED.	16. P : D T F C	PURSUANT TO CHA DURING CONSTRUCT THE HONOLULU PO RESOURCES-HISTO CONTRACTOR SHA	PTER 6E, HRS, IN THE EVI CTION OPERATION, THE C LICE DEPARTMENT, THE S RIC PRESERVATION DIVIS	ENT ANY ARTIFACTS OR HUMA ONTRACTOR SHALL IMMEDIAT STATE DEPARTMENT OF LAND SION (692-8015). IN ADDITION, GINEERING BRANCH, D.P.P. (766	N REMAINS ELY SUSPE AND NATU FOR NON-(8-8084); AN	S ARE UNCOVERE END WORK AND N JRAL CITY PROJECTS, T ID FOR CITY PROJ
8.	FOLLOW MANUFACTURER'S RECOMMENDATIONS REGARDING LIMITING HDPE PIPE EXPOSURE TO SUN AND	Ν	IOTIFY THE RESPO	NSIBLE CITY AGENCY.			
<u>CA</u>							
1.	CATCH BASINS (CB) ARE TO BE NYLOPLAST 18" DRAIN BASIN INSTALLED PER MANUFACTURER'S RECOMMENDATION. SEE NYLOPLAST DRAWING NUMBER 70001-110-191 FOR INSTALLATION DETAIL.						
2.	CATCH BASINS (CB) ARE TO BE INSTALLED WITH ANTI-FLOTATION FOOTING AS SHOWN ON NYLOPLAST DRAWING NUMBER 7001-110-142.						
	CATCH BASINS (CB) ARE TO BE INSTALLED WITH FLEX STORM SHORT BAG, 18" BOND ADS P/N G218NYFYS.						
3.							

UTILITY NOTES:

9

1. ALL PIPE SIZES ARE IN INCHES UNLESS INDICATED OTHERWISE.

10

2. SEE DETAILS 1 AND 3 ON DRAWING C-501 FOR TYPICAL PIPE TRENCH DETAIL.

11

3. THE MINIMUM DEPTH OF COVER FOR ALL UTILITY PIPING SHALL BE 36 INCHES UNLESS INDICATED OTHERWISE. A. ELECTRICAL: 24 INCHESB. ALL OTHER UTILITIES: 36 INCHES

SPECIFICATION NOTES:

- 1. THE FOLLOWING HAWAII DEPT. OF TRANSPORTATION (HDOT) STANDARD SPECIFICATION SECTIONS ARE INCORPORATED BY REFERENCE: HDOT SECTION 301 (HOT MIX ASPHALT BASE COURSE); HDOT SECTION 304 (AGGREGATE BASE COURSE); HDOT SECTION 401 (HOT MIX ASPHALT PAVEMENT); HDOT SECTION 641 (HYDRO-MULCH SEEDING).
- 2. THE TECHNICAL PROVISIONS OF THE REFERENCED HDOT STANDARD SPECIFICATION SECTIONS ARE APPLICABLE TO THIS PROJECT. HOWEVER, SINCE THE PROJECT IS A LUMP SUM CONTRACT, THE PROVISIONS FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT ARE NOT APPLICABLE.

ABBREVIATIONS

AC	ACRES
CB	
CONC	CONCRETE
CU	
CEM	
	CONTROLLED LOW-STRENGTH MATERIAL
	DIAMETER
	DETECTABLE WARNING SURFACE
FG	
FI	
FESO	
FXIST	FXISTING
EXP	EXPANSION
FT	FEET
FM	FORCE MAIN (PRESSURIZED)
HORZ	HORIZONTAL
IN	INCHES
LF	LINEAR FEET
LS	LIFT STATION
MH	MANHOLE
MW	MONITORING WELL
NAVD	NORTH AMERICAN VERTICAL DATUM
NIC	NOT IN CONTRACT
NO	NUMBER
OC	ON CENTER
PDC	POWER DISTRIBUTION CENTER
R/W	RIGHT-OF-WAY
ROW	RIGHT-OF-WAY
SD	STORM DRAIN (GRAVITY)
SQ	SQUARE
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
TYP	TYPICAL

UE UNDERGROUND ELECTRIC UON UNLESS OTHERWISE NOTED 13

ΓΙΟΝS ARE Γ SECTION 304 ΙΟΝ 641						
NS ARE THE PROVISIONS	no	date	by	ckd	description	
	A	08/24/21	WBB	втн	60% DESIGN	
	 	07/05/23		<u> </u>	PROGRESS PRINT	в
	<u> </u>	07703723				
						с
						D
		TMK <u>AF</u> F	SEE S K REFE FECTE	HEET EREN(G-101 FOR CE LOCATIONS: TAX MAP KEYS 12025020	E
	F	PRE OR		IIN/ NS	12025021 ARY - NOT TRUCTION	F
		1	BL	JRN I≌D(S ONNELL	
		ķ	9400 \ (ANSA 8 LICEN	WARD S CIT 316-33 NSEE	PARKWAY Y, MO 64114 3-9400 NO. 000165	G
	da de	te 1/17 signed W. BA	7/17 .TTEY		detailed J. EICHENBERGER checked B. HANSEN	
-		FA	HA CILIT	WAII I IES C((HF	FUELING ORPORATION FC)	н
	но	SAND NOLULU 50 S	ISLAN J INTE SAND HON	ND ST RNAT ISLAN OLULI	ORAGE FACILITY IONAL AIRPORT (HNL) ID ACCESS RD. J, HI 96819	
		SAI	ND ISL	AND	STORMWATER	
	CIV	/IL GENE	RAL N	NOTES	S AND ABBREVIATIONS	
	pro	oject 131	790		contract	
Signature Expiration Date of the License THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND	dra	awing	C-(001	– ^{rev.}	
CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION	file	e 131790	_C-00	1.DW0	3	

	1		5	4	5	0	I	8	
<u>ERO</u>	DSION PREVENTION BMPS:				GOOD HOUSEKEEPING BM	<u>IPS (CONT'D):</u>			
1.	PERMANENT STABILIZATION				10. VEHICLE AND EQUIP	MENT CLEANING, FUE	LING, AND MAINTENANC	E	
	PRIOR TO CLOSING OF ANY THE FOLLOWING REQUIREM	PERMIT(S) PERMANENT	STABILIZATION MUST BE IN PL	LACE WHICH INCLUDES	 PREVENT POLLUT MAINTENANCE BY AREAS ONLY, USI 	ANTS IN STORM WATE USING OFF-SITE FAC	ER FROM VEHICLE AND E ILITIES WHEN FEASIBLE, R VEHICLES AND EQUIPM	QUIPMENT CLEANING, FUELING PERFORMING WORK IN DESIGN IENT, CHECKING FOR LEAKS AN	3 AND NATED ND SPILLS.
	 ALL EXPOSED DISTURB SUCH AS VEGETATION, 	ED AREAS MUST BE PER GRAVEL, OR PAVERS;	MANENTLY STABILIZED WITH	GROUND COVERING	AND CONTAINING	AND CLEANING UP SF	PILLS IMMEDIATELY.		
	RAIN GUTTERS, DOWNS DESIGNED ¹	POUTS, AND CHANNELIZ	ED FLOWS MUST BE INSTALLI	ED AND FUNCTIONING AS	11. HAZARDOUS MATER	IALS	OF POLITIANTS TO STO	ORM WATER FROM HAZARDOUS	SWASTE
	 IN SEEDED AREAS, GRA SOILS OR MUST BE TEM 	SS OR VEGETATION MUS	ST COVER AT LEAST 90 PERCE IILE IT IS GROWING;	ENT OF THE DISTURBED	THROUGH PROPE ARE DISCHARGEE NOTIFY THE DEPA	ER MATERIAL USE AND D TO THE MS4, THE PR ARTMENT OF FACILITIE	WASTE DISPOSAL. IN T ROPERTY OWNER OR ESC ES MAINTENANCE, HONO	HE EVENT THAT HAZARDOUS M CP COORDINATOR SHALL IMMEE LULU FIRE DEPARTMENT, AND F	ATERIALS DIATELY HONOLULU
	•• TEMPORARY MEASURE MEASURES ARE IN PLA	S, SUCH AS SEDIMENT B. CE;	ARRIERS, SHOULD BE REMOV	ED WHEN PERMANENT	POLICE DEPARTM POLLUTANTS THA HAVE BEEN TAKE	IENT OF THE DISCHAR T WERE DISCHARGED N OR WILL BE TAKEN	RGE BY TELEPHONE. A W D, THE REASONS FOR TH TO PREVENT A REOCCUP	RITTEN REPORT DESCRIBING THE E DISCHARGE, AND THE MEASU RRENCE OF THE DISCHARGE SH	⊣E ∣RES THAT †ALL BE
	•• ALL PAVED SURFACES	MUST BE CLEAN; AND				HE DIRECTOR NO LESS	S THAN 3 DAYS AFTER NO	DTIFICATION BY PHONE.	
	 STORM DRAIN INLET FIL COMPLETED. 	TERS MUST BE REMOVE	D AFTER ALL CLEANUP ACTIV	/ITIES HAVE BEEN	IN THE EVENT THAT	AT NON-HAZARDOUS N	MATERIALS ARE DISCHAF	RGED TO THE MS4, THE PROPER	RTY OWNER
2.	TEMPORARY STABILIZATION				OR ESCP COORDI TELEPHONE NO L	INATOR SHALL NOTIFY ATER THAN THE NEXT	Y THE CITY DEPARTMENT BUSINESS DAY. A WRIT	OF FACILITIES MAINTENANCE E	3Y
	TEMPORARY STABILIZATION THE DISTURBED AREA WILL	I IS REQUIRED ON DISTU NOT BE WORKED FOR 1	RBED AREAS WHICH ARE AT F 4 CONSECUTIVE DAYS OR MO	FINAL GRADE OR WHEN RE.	POLLUTANTS THA HAVE BEEN TAKEI SUBMITTED TO TH	AT WERE DISCHARGED N OR WILL BE TAKEN ⁻ HE DIRECTOR NO LESS	D, THE REASONS FOR TH TO PREVENT A REOCCUF S THAN 3 DAYS AFTER NO	E DISCHARGE, AND THE MEASU RRENCE OF THE DISCHARGE SH DTIFICATION BY PHONE.	RES THAT IALL BE
	THIS PROJECT WILL USE RO TEMPORARY STABILIZATION)LLED EROSION CONTRO N.	L PRODUCTS OR PLANTING A	ND VEGETATION FOR	OMITTED BMPS:				
<u>SED</u>	DIMENT CONTROL BMPS:				A COMPREHENSIVE LIST C GUIDANCE DOCUMENTS M	OF BMPS BASED ON TH IENTIONED ABOVE, WE	HE DPP RULES RELATING ERE REVIEWED TO COMP	TO WATER QUALITY AND PLETE THIS ESCP. THE FOLLOWI	ING
1.	PERIMETER CONTROLS				BMPS WERE DETERMINED EROSION PREVENTION AN	TO BE NOT APPLICAB	BLE BECAUSE THEY WOU DL BASED ON THE SPECIF	LD NOT EFFECTIVELY MANAGE	
	SEDIMENT FENCES OR BAR THERE IS POTENTIAL FOR F	RIERS SHALL BE USED A ⁻ RUNOFF TO FLOW OFF TH	T THE PERIMETER OF ALL DIS E PROJECT SITE. BARRIERS N	TURBED AREAS WHERE MAY INCLUDE GRAVEL	INSPECTORS.	55ES, REVISIONS MAT	DE NECESSART AND WI		
	BAGS, SAND BAGS, FIBER R INTERCEPTS RUNOFF.	OLLS, SILT FENCES, COM	IPOST SOCKS, OR AN EQUIVA	LENT BMP THAT	OMITTED) BMPS	<u> </u>	RATIONALE]
2.	INLET PROTECTION				DEWATERING OPERATIO	ONS			-
	ALL STORM DRAIN INLETS C SHALL USE AN INLET PROTE	NSITE AND THOSE OFFS	ITE WHICH MAY RECEIVE RUN THEY ARE DIRECTED TO A SEV	NOFF FROM THE SITE DIMENT BASIN OR TRAP	LIQUID WASTE MANAGE	MENT	NON-STORM WATE	R ON SITE.	-
<u>GOC</u>	OD HOUSEKEEPING BMPS:						ALL WORK WILL BE	ON SLOPES LESS THAN 15%	+
1.	BMP AND SITE MAINTENANCE						ANTICIPATED ON S	ITE ON-SITE CLEANING.	-
	REGULARLY INSPECT AND I	AINTAIN BMPS TO ENSU	RE CONTINUED PERFORMAN	CE.	VEHICLE AND EQUIPME FUELING AND MAINTEN	NT CLEANING, ANCE	FUELING OR MAINT CONSTRUCTION VE	ENANCE OF ANY EHICLES OR EQUIPMENT	
2.	DUST CONTROL						·		
	DUST FROM THE PROJECT S	SITE SHALL NOT BE TRAN	ISPORTED OR DISCHARGED T	O OFF-SITE AREAS.	SCHEDULE NOTES:				
3	THIS PROJECT WILL USE WA	ATER TO MAINTAIN SOIL M	MOISTURE TO PREVENT DUST		1. AN ESCP COORDINA ISSUANCE USING AP	PENDIX A OR B OF TH	E RULES RELATING TO W	ATER QUALITY.	ERMIT
0.	PREVENT OR REDUCE THE	DISCHARGE OF POLLUTA	NTS TO STORM WATER FROM	I CONCRETE WASTE BY	2. NOTIFY DPP IN WRIT	ING TWO WEEKS PRIC	OR TO STARTING WORK E	BY EMAIL OR PHONE: 768-8132.	
	CONDUCTING WASHOUT OF CONSTRUCTED AND MAINT	FSITE OR PERFORMING (AINED IN SUFFICIENT QU	ONSITE WASHOUT IN A DESIG ANTITY AND SIZE TO CONTAIN	NATED AREA ALL LIQUID AND	3. MEASURES TO PREV EARTHWORK IS INITI	ENT AND CONTROL E	ROSION AND OTHER POL	LUTANTS SHALL BE IN PLACE B	EFORE ANY
			ATIONS.		4. BEST MANAGEMENT	PRACTICES (BMPS) S	HALL NOT BE REMOVED	UNTIL FINAL STABILIZATION IS C	COMPLETE.
	SHOULD BE FREE OF HOLES THE MATERIAL.	3, TEARS, OR OTHER DEF	ECTS THAT COMPROMISE TH	EINE STIELE HING AND	5. PRACTICE GOOD HO	USEKEEPING MEASUF	RES THROUGHOUT THE E	DURATION OF CONSTRUCTION.	
	CONTAINMENT AREAS OR D CONTAINED LIQUID CAN DIS	EVICES SHOULD NOT BE CHARGE TO WATER BOD	LOCATED WHERE ACCIDENT	AL RELEASE OF THE DRAINS.	 INSPECTIONS WILL B AS NEEDED. 	BE PERFORMED MONT	'HLY AT A MINIMUM AND I	MAY BE PERFORMED MORE FRE	EQUENTLY
	WASHOUT FACILITIES MUST USE ONCE THE WASHOUT IS	[•] BE CLEANED, OR NEW F S 75 PERCENT FULL.	ACILITIES MUST BE CONSTRU	JCTED AND READY FOR					
	ONCE CONCRETE WASTES CONCRETE SHOULD BE BRO	ARE WASHED INTO THE [OKEN UP, REMOVED, AN[DESIGNATED AREA AND ALLO DISPOSED OF AS SOLID WAS	WED TO HARDEN, THE STES.					
4.	STOCKPILE MANAGEMENT								
	 STOCKPILES SHALL NOT BE CONCENTRATED FLOWS, AN 	LOCATED IN DRAINAGE '	WAYS, WITHIN 50 FEET FROM THE CITY RIGHT- OF- WAY. S	AREAS OF EDIMENT BARRIERS OR					
	SILT FENCES SHALL BE USE 15 FEET IN HEIGHT. STOCKF BENCHING IN ACCORDANCE PLASTIC SHEETING OR A CO	D AROUND THE BASE OF ILES GREATER THAN 15 WITH ROH CHAPTER 14 OMPARABLE MATERIAL IF	ALL STOCKPILES. STOCKPILE FEET IN HEIGHT SHALL REQU ARTICLE 15. STOCKPILES MU THEY WILL NOT BE ACTIVELY	ES SHALL NOT EXCEED IRE 8-FOOT WIDE JST BE COVERED WITH / USED WITHIN 7 DAYS.					
5.	VEHICLE TRACKING CONTROL								
	 RESTRICT VEHICLE TRAFFIC TIRES PRIOR TO EXITING TH OFF-SITE MUST BE SWEPT (CONTROPERLY DESIGNATE PROJECT SITE. ALL SE	ATED AREAS AND REMOVE SE DIMENTS THAT ARE TRACKED ND OF EACH DAY.	DIMENT FROM VEHICLE O OR DISCHARGED					
6.	MATERIALS DELIVERY, STORA	GE AND USE MANAGEME	NT						
	MINIMIZE THE STORAGE OF AND INSTALL SECONDARY (CONCENTRATED FLOW, OR OR DRAINAGE IMPROVEMENT	POTENTIAL POLLUTANTS CONTAINMENT. DO NOT S AREAS ABUTTING THE C	S ONSITE, STORE MATERIALS STORE MATERIALS IN BUFFER ITY STORM DRAINAGE SYSTE	IN A DESIGNATED AREA, AREAS, NEAR AREAS OF M, RECEIVING WATERS,					
7.	SPILL PREVENTION AND CONT	ROL							
	KEEP AMPLE SUPPLY OF CL	EANUP MATERIALS ONSI	TE. CLEAN UP SPILLS IMMEDIA	ATELY, USING DRY					
8.	SOLID WASTE MANAGEMENT	E POSSIBLE, AND DISPOS	SE OF USED MATERIALS PROF	ERLY.					
	PREVENT OR REDUCE DISC FROM SOLID WASTE OR CO COLLECTION AREAS, COLLE COLLECTED REMOVED AN	HARGE OF POLLUTANTS NSTRUCTION AND DEMO ECT SITE TRASH DAILY, A D DISPOSED OF ONLY AT	TO THE LAND, GROUNDWATE LITION WASTE BY PROVIDING ND ENSURING THAT CONSTRU AUTHORIZED DISPOSAL ARE	R, AND IN STORM WATER DESIGNATED WASTE UCTION WASTE IS AS					
0	PORTABLE TOILETS (SANITARY	//SEPTIC WASTE MANAGI	EMENT)						
9.		E SANITARY AND SEPTIC	WASTE SYSTEMS SHALL BE	MOUNTED OR STAKED IN,					
9.				/ 11K1/ 1 1 1 1 1 1 1 1 1 1 7 1 OE					

10 9

PROJECT SCHEDULE:

THE FOLLOWING IS THE PLANNED SEQUENCE AND TIMELINE OF ACTIVITIES. RE AND WILL BE PROVIDED TO DPP INSPECTORS.

11

ACTION	TIMEL
SAND ISLAND STORMWATER SYSTEM WO	R
NOTIFY THE DEPARTMENT OF PLANNING AND PERMITTING OF PROJECT START DATE - 768-8132	2 WE STA
INSTALL DRAIN INLET PROTECTION AND PERIMETER CONTROLS	DAY
PERFORM PRE-CONSTRUCTION INSPECTION	DAY
SITE CLEARING	3 DA
OBSERVATION BASIN EXCAVATION	1 WE
OBSERVATION BASIN CONCRETE FOUNDATION	2 WE
OBSERVATION BASIN VERTICAL CONSTRUCTION THROUGH FINAL STABILIZATION	1 MC
ABOVE GRADE STORMWATER PIPING INSTALLATION	1 WE
TRENCHING FOR STORMWATER OUTFALL PIPING	1 WE
INSTALL STORMWATER OUTFALL PIPING AND CONNECT TO STORM DRAIN	1 WE
BACKFILL AND RESURFACE PIPING TRENCH	1 WE
DEMOBILIZE EQUIPMENT AND MATERIALS	2 DA
REMOVE DRAIN INLET PROTECTION AND PERIMETER CONTROLS	1 DA
SWEEPING AND WASTE DISPOSAL	DAIL

1. TIMELINE IDENTIFIES CONSTRUCTION ACTIVITIES LOCATED OUTSIDE THE CONTAINMENT WALL.

RAIN RESPONSE PLAN:

THE FOLLOWING WILL BE PERFORMED WHEN SEVERE RAIN IS IMMINENT OR IS 48 HOURS:

- 1. TEMPORARILY SUSPEND LAND DISTURBING ACTIVITIES INCLUDING CLEAF TRENCHING.
- 2. INSPECT ALL BMPS AND MAINTAIN AS NEEDED.
- 3. REINSTALL BMPS THAT WERE REMOVED DUE TO ACTIVE WORK IN THE AR
- 4. IF A SEVERE STORM IS EXPECTED, REMOVE INLET PROTECTION DEVICES SURROUNDING STREETS.
- 5. COVER OR RELOCATE MATERIAL STOCKPILES AND LIQUID MATERIAL CON RAINWATER.
- 6. PLACE SPILL PANS OR OIL-ONLY SPILL PADS UNDER CONSTRUCTION VEH CONTACTING ANY SPILLED PETROLEUM PRODUCTS. PROPERLY DISPOSE WATER AFTER THE RAIN EVENT.
- 7. RE-INSPECT PROJECT SITE AFTER THE RAIN EVENT AND REPLACE OR MA

STREET USAGE PERMITS:

- 1. IF THE PROPOSED LAND DISTURBING WORK WILL BE PERFORMED IN THE AND/OR BEST MANAGEMENT PRACTICES INSTALLED IN THE SIDEWALK AR PROPERTY LINE AND EDGE OF PAVEMENT), THE OWNER IS RESPONSIBLE STREET USAGE FROM THE DEPARTMENT OF TRANSPORTATION SERVICES HONOLULU, HAWAII, 96813.
- 2. THE OWNER IS RESPONSIBLE FOR INSTALLING APPROPRIATE BARRICADE PEDESTRIAN AND VEHICULAR SAFETY, AND REMOVING THE INLET PROTECT TO PREVENT FLOODING OF THE ROAD AND AFTER THE PROJECT SITE IS O

12	13	-		-
EVISIONS MAY BE N	IECESSARY			
INE OR DATE (NOTE	<u> 1)</u>			
EEKS BEFORE	_			
RTING WORK	_			Α
1				
YS	_			
EEKS			no. date by ckd description	1
NTH			A 08/24/21 WBB BTH 60% DESIGN	
EK	_		B 07/05/23 PROGRESS PRINT	В
EK	_			•
EK				
YS				
Y Y				
				С
LEATENTS OF EXIS				
FORECASTED IN T	HE NEXT			
Ring, grubbing, c	SRADING AND			
				D
REA.				
5 TO FREVENT FLO				
NTAINERS TO AVOII	D CONTACT WITH			
HICLES TO PREVEN E OF ANY ACCUMUL	T RUNOFF FROM _ATED OILY			
AINTAIN BMPS AS N	IFEDED			Ē
			SEE SHEET G-101 FOR	
E CITY SIDEWALK O	R RIGHT-OF-WAY		TMK REFERENCE LOCATIONS: AFFECTED TAX MAP KEYS	
REA (AREA BETWEE E FOR OBTAINING A	EN THE A PERMIT FOR		□ 12025020 □ 12025021	
S, 650 S. KING STR	EET, 2ND FLOOR,			-
ES, FLASHERS, AND ECTION(S) BEFORE	D SIGNAGE FOR A STORM EVENT		PRELIMINARY - NOT	F
COMPLETELY STAE	3ILIZED.		FOR CONSTRUCTION	
			♦ BURNS	
			MEDONNELL	
			9400 WARD PARKWAY KANSAS CITY, MO 64114	
			816-333-9400 LICENSEE NO. 000165	G
			date detailed 01/14/19 J. FICHENBERGER	
			designed checked	
			W. BATTEY B. HANSEN	
			HAWAII FUELING	
			FACILITIES CORPORATION (HFFC)	I H
			SAND ISLAND STORAGE FACILITY	
			HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819	
			SAND ISLAND STORMWATER	1
			EROSION CONTROL NOTES	1
			project I contract	
			131790	
	Signature E	Expiration Date of the Licens	^e C-002 – A	
	UNDER MY SUPERVISI CONSTRUCTION OF TH	ON AND HIS PROJECT WILL		
				-



\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-010.DWG 4/19/2023 12:30 PM JCEICHENBERGER

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
STA 1.1	55324.67	1677426.92	5.88	BOLT IN WALL
STA 1.2	55036.87	1677503.32	4.40	"Y" MARK ON CONCRETE
STA 1.3	54757.13	1677643.78	8.51	BOLT ON WALL
STA 1.4	55396.27	1677566.09	9.88	"Y" CUT ON WALL
STA 1.5	55275.65	1677718.78	9.89	"Y" CUT ON WALL
STA 1.6	54888.68	1677909.73	8.87	"Y" CUT ON WALL
STA 2.1	54718.03	1677613.33	8.45	"Y" CUT ON WALL
STA 2.2	54402.36	1677758.55	7.93	"Y" CUT ON WALL
STA 2.3	54427.84	1678018.68	8.55	"Y" CUT ON WALL
STA 2.4	54651.13	1678001.62	6.31	"Y" CUT ON CONCRETE
STA 2.5	54778.13	1677930.29	9.57	"Y" CUT ON WALL
NTROL POI	NT NOTES:		•	
CONTROL	POINTS ARE FRO	M A SURVEY BY A	CE LAND SURVE	YING, LLC DATED JUNE 30,

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-100.DWG 6/19/2023 11:59 AM JCEICHENBERGER

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-101_103.DWG 6/19/2023 11:59 AM JCEICHENBERGER

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-101_103.DWG 6/19/2023 11:59 AM JCEICHENBERGER

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-101_103.DWG 6/19/2023 11:59 AM JCEICHENBERGER

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-110.DWG 7/5/2023 4:32 PM JCEICHENBERGER

12 13	
DWG C-112	A
TANK 17	no. date by ckd description A 08/24/21 WBB BTH 60% DESIGN B 07/05/23 WBB PROGRESS PRINT
TANK 15	C
TANK 11	SEE SHEET G-101 FOR TMK REFERENCE LOCATIONS: AFFECTED TAX MAP KEYS 12025020 I 12025021
	FOR CONSTRUCTION SURNS MSDONNELL 9400 WARD PARKWAY
	G KANSAS CITY, MO 64114 816-333-9400 LICENSEE NO. 000165 date ######## detailed J. EICHENBERGER Checked B. HANSEN
-	HAWAII FUELING FACILITIES CORPORATION (HFFC) SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819
	SAND ISLAND STORMWATER OVERALL GRADING AND UTILITY PLAN project 131790 drawing C-110
	tile 131790_C-110.DWG

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-111_113.DWG 7/5/2023 4:30 PM JCEICHENBERGER

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-111_113.DWG 7/5/2023 4:30 PM JCEICHENBERGER

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-111_113.DWG 7/5/2023 4:30 PM JCEICHENBERGER

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-201.DWG 4/19/2023 10:55 AM JCEICHENBERGER

11' 4' 4' \bigcirc 0.25' _____ - OIL-W EXISTING GRADE (SEE **SECTION A**

10

9

11

		PC	DINT TABLE	
NUMBER	NORTHING	EASTING	ELEVATION	DESCRI
1	54746.29	1677645.09	5.12	TOP/CONC PAD
2	54729.19	1677653.38	5.12	TOP/CONC PAD
3	54717.05	1677628.33	5.12	TOP/CONC PAD
4	54734.15	1677620.04	5.12	TOP/CONC PAD
5	54747.63	1677645.55	4.87	TOP GRADE/BER
6	54728.73	1677654.71	4.87	TOP GRADE/BER
7	54715.72	1677627.86	4.87	TOP GRADE/BER
8	54734.61	1677618.70	4.87	TOP GRADE/BER
9	54737.14	1677603.05	9.48	TOP OUTSIDE CO
10	54717.41	1677612.60	9.48	TOP OUTSIDE CO
11	54706.11	1677589.28	9.48	TOP OUTSIDE CO
12	54725.83	1677579.72	9.48	TOP OUTSIDE CO

SCALE IN FEET

12	13		
			— в
		B 07/05/23 PROGRESS PRIM	∖ T
			с
– OIL-WATER SEPER (SEE MECHANICAL	ATOR		
DRAWINGS FOR DE	ETAILS)		
<mark> 4' → - 1'</mark>			
			D
	- TOP OF CONC. PAD=5.12		
	- PROPOSED GRADE		
	(SEE NOTE 1)		
			E
OIL-WATER SEPAI	RATOR FOUNDATION		
(SEE STRUCTURA	L DRAWINGS FOR DETAILS	S) TMK REFERENCE LOCATIONS:	
		AFFECTED TAX MAP KEYS 12025020	
		□ 12025021	
		PRELIMINARY - NO)T
		FOR CONSTRUCTIO)N
		9400 WARD PARKWAY	
DESCRIPTION		KANSAS CITY, MO 64114 816-333-9400 LICENSEE NO 000165	G
ONC PAD		date detailed	
		designed	GER
ONC PAD		W. BATTEY B. HANSEN	Ν
RADE/BERM		HAWAII FUELING	
RADE/BERM RADE/BERM		FACILITIES CORPORATION (HFFC)	н
RADE/BERM		_ (
UTSIDE CORNER/ BASIN		SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT	(HNL)
UTSIDE CORNER/ BASIN		50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819	
UTSIDE CORNER/ BASIN		SAND ISLAND STORMWATER	
		GRADING ENLARGEMENT PLAN	· ·
		project contract	—
		131790 drawing	
	Signature Expi THIS WORK WAS PREPA	In the License Instanting C-201 —	A
	UNDER MY SUPERVISION CONSTRUCTION OF THIS BE UNDER MY OBSERVA	N AND S PROJECT WILL TION file 131790 C-201 DWG	—

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-301.DWG 6/1/2023 3:07 PM JCEICHENBERGER

						A
	no	. date	by	ckd	description	\mathbf{I}
	A	08/24/21	WBB	втн	60% DESIGN	
	В —	07/05/23			PROGRESS PRINT	В
						с
		0		20	' 40'	D
		0	S	GCALE IN HORIZC 4' GCALE IN VERTI	N FEET N FEET CAL	-E-
		TMI <u>A</u> F	SEE S K REFE FECTE	HEET EREN(D 1	G-101 FOR CE LOCATIONS: <u>FAX MAP KEYS</u> 12025020 12025021	
	F	PRE FOR	LIN CO	IIN/ NS	ARY - NOT TRUCTION	F
			9400 V		PARKWAY Y, MO 64114	6
	da de	ate 05/05 esigned W. BA	EICEN 5/2021	16-33 NSEE	3-9400 NO. 000165 detailed J. EICHENBERGER checked B. HANSEN	
_		F	HA ACILIT	WAII I IES C((HF	FUELING ORPORATION FC)	- Н
	нс	SAND DNOLULI 50 \$	ISLAN J INTE SAND HON	ND ST RNAT ISLAN OLULI	ORAGE FACILITY IONAL AIRPORT (HNL) ID ACCESS RD. J, HI 96819	
	pr	SA	ND ISL	AND	STORMWATER OFILES - 1 contract	'
Signature Expiration Date of the License THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND	dr	131 awing	⁷⁹⁰	301	- rev.	
CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION	file	e 131790)_C-30	1.DW(G	I

12

3.91 3.73

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-301.DWG 6/1/2023 3:07 PM JCEICHENBERGER

		Α
	no. date by ckd description	
	A 08/24/21 WBB BTH 60% DESIGN	-
	B 07/05/23 PROGRESS PRINT	в
		С
		D
	HORIZONTAL	
	SCALE IN FEET VERTICAL	- E
	SEE SHEET G-101 FOR TMK REFERENCE LOCATIONS:	
	AFFECTED TAX MAP KEYS □ 12025020 ☑ 12025021	
	PRELIMINARY - NOT	F
	FOR CONSTRUCTION	
	9400 WARD PARKWAY KANSAS CITY, MO 64114 816-333-9400 LICENSEE NO, 000165	G
	date detailed 05/05/2021 J. EICHENBERGER	
	designedcheckedW. BATTEYB. HANSEN	
_	HAWAII FUELING FACILITIES CORPORATION (HFFC)	н
	SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819	
	SAND ISLAND STORMWATER	
	CIVIL PROFILES - 3	I
	project contract 131790	
Signature Expiration Date of the License THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL	C-303 – A	

file 131790_C-301.DWG

BE UNDER MY OBSERVATION

\\BMCD\DFS\CLIENTS\ANF\HIDOT\HNL\131790_SICONTAINSWIMP\DESIGN\CIVIL\SHEETS\131790_C-301.DWG 6/1/2023 3:07 PM JCEICHENBERGER

8

9

	no. date by ckd description
	A 08/24/21 WBB BTH 60% DESIGN
	B 07/05/23 PROGRESS PRINT
	0 20' 40' SCALE IN FEET HORIZONTAL
	0 4' 8'
	SCALE IN FEET VERTICAL
	SEE SHEET G-101 FOR TMK REFERENCE LOCATIONS: <u>AFFECTED</u> <u>TAX MAP KEYS</u> 12025020 12025021
	PRELIMINARY - NOT FOR CONSTRUCTION
	Sector Se
	date detailed 05/05/2021 J. EICHENBERGER designed checked
-	HAWAII FUELING FACILITIES CORPORATION (HFFC)
	SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819
	SAND ISLAND STORMWATER
	CIVIL PROFILES - 4
	project contract 131790
nature Expiration Date of the License HS WORK WAS PREPARED BY ME OR NDER MY SUPERVISION AND	drawing C-304 – A
ONSTRUCTION OF THIS PROJECT WILL E UNDER MY OBSERVATION	file 131790 C-301.DWG

12	13					
						A
3'-0"						
			no. date	by ckd	description	
			A 08/24/21	WBB BTH	60% DESIGN	_ _
~	-T T P D		B 07/05/23		PROGRESS PRINT	- ^в
ACC VAL						с
EDGE	E OF LIFT STATION					
CONCRETE MA	INTENANCE SLAB					D
AWING C-001.						
HALL BE 8" TH SECTION 0330	ICK, 00. REINFORCE					
T CONCRETE	MAINTENANCE				•	
TION STRUCT	JRE. (SEE		ТМК	SEE SHEET (REFEREN	G-101 FOR CE LOCATIONS:	
т	5		<u>AFF</u>		<u>FAX MAP KEYS</u> 12025020 12025021	
SCALE V			PREI FOR	LIMIN CONS	ARY - NOT TRUCTION	-
			\$		IS ONNELL	
			K	9400 WARE ANSAS CIT 816-33 LICENSEE) PARKWAY 'Y, MO 64114 33-9400 NO. 000165	G
			date 05/05/	/2021	detailed J. EICHENBERGEF	२
			designed W. BA	TTEY	checked B. HANSEN	
		-	FA	HAWAII CILITIES C (HF	FUELING ORPORATION [:] FC)	н
			SAND HONOLULU 50 S	ISLAND ST I INTERNAT SAND ISLAN HONOLUL	ORAGE FACILITY IONAL AIRPORT (HNI ID ACCESS RD. U, HI 96819	L)
			SAN		STORMWATER	,
			project			-
	Signature Expira THIS WORK WAS PREPAR	ation Date of the License RED BY ME OR	131 [°] drawing	⁷⁹⁰ C-501	rev. A	-
	CONSTRUCTION OF THIS BE UNDER MY OBSERVAT	PROJECT WILL	# file 131790	_C-501.DW	G	-

3

4

5

2

7

10

11

CONSTRUCTION ENTRANCE DETAIL

24"x24" SQUARE CONCRETE COLLAR

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I. CLASS II. OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

SEE NOTE 5

DETAIL		4
	NOT TO SCALE	C-102
FORCE MA	AIN HIGH POINT VEN	T (HPV)

								A
	no.	date	by	ckd		descriptic	on	
	A 0	8/24/21	WBB	втн	60% C	ESIGN		
NTROL FACT SHEET TR-1 FOR FURTHER DETAILS ON A STABILIZED CONSTRUCTION N THE CITY AND COUNTY OF HONOLULU STORM AGEMENT PRACTICE MANUAL FOR IOVEMBER 2011).	во	07/05/23			PROG	RESS PI	RINT	В
EXTILE FABRIC (FILTER CLOTH) SHALL BE EXISTING GROUND PRIOR TO PLACING STONE. AGGREGATE (3" TO 6" DIA.) SHALL BE PLACED OVER THE LENGTH AND WIDTH OF THE								с
BILIZED CONSTRUCTION ENTRANCE SHALL BE VN ON SHEET C100 AND AT EVERY POINT CTION TRAFFIC ENTERS OR LEAVES A ITE. VEHICLES LEAVING THE SITE MUST TRAVEL LENGTH OF THE STABILIZED CONSTRUCTION								
OFF THE CONSTRUCTION ENTRANCE SHALL BE 1' VERTICAL OR FLATTER AND SHALL BE CHED. UM STREET AT ENTRANCE OR EXIT AS NEEDED.								D
								E
- ,		TMK <u>AF</u> F	SEE S REFE ECTE	HEET EREN(G-101 CE LOC FAX MA 1202 1202	FOR CATIONS <u>AP KEYS</u> 5020 5021	:	
TING GRADE	P F(PREI OR	LIM CO	IIN/ NS		(- N UCTI	OT ION	F
NOTES: 1. AIR RELEASE VALVE BODY AND COVER SHALL BE DUCTILE IRON ASTM A536 GRADE 65-45-12 AND INTERNAL TRIM SHALL BE TYPE 316 STAINLESS STEEL	date	, K	9400 \ (ANSA ELICEN	WARD S CIT 316-33 SEE	PARK Y, MO 3-9400 NO. 00	WAY 64114 0165 ed		G
2. AIR RELEASE VALVE SHALL BE RATED FOR 150	desi	05/05/ gned	/2021		J. E check	ICHENB	ERGER	
 SEE SPECIFICATION SECTION 33 52 46 FOR WAX TAPE TO APPLY TO CARBON STEEL PIPING. 		W. BA		WAII F		B. HANS	SEN	┨
		SAND	ISLAN	(HF	FC)	EFACILI	TY	
ons B 5 5/16"		SAN	AND HON	KNAT ISLAN OLULI AND	IONAL ID ACC U, HI 96 STORM	AIRPOR ESS RD. 5819 IWATER	: (HNL)	
	nroir	ect	CIV	/IL DE	TAILS -	- 2 act		ı
Signature Expiration Date of the License	draw	131 [°] ving	790 C- !	502		rev	/. A	
I HIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION	file	# 131790	_C-50	2.DW0	G			

APPENDIX $\underline{\in} \underline{E}$

COMMENTS IN RESPONSE TO EARLY CONSULTATION <u>AND DRAFT</u> <u>ENVIRONMENTAL ASSESSMENT</u> <u>COMMENTS AND RESPONSE LETTERS</u>

KALIHI – PALAMA NEIGHBORHOOD BOARD NO. 15 c/o NEIGHBORHOOD COMMISSION • 925 DILLINGHAM BOULEVARD, SUITE 160 • HONOLULU, HAWAII, 96817 PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov/nco

SUBJECT: Community Environmental Concerns

To All Concerned,

Similar to the situation with Factory Street, the actions of the past must be rectified, and in 2015 there was a spill that occurred for which thousands of gallons of fuel leaked into the surrounding ground. By federal consent decree, Dkt. No. OPA-311-09-2021-001, HFFC was ordered to correct the situation by installing additional liners as a redundancy system which will protect the environment. Furthermore, we of the Neighborhood Board understand how vital the protection of our environment for current and future generations and the delicate balance between the needs of our communities concerning Aerial transportation for inter-island, continental, and international flights.

The company selected Burns & McDonnell Engineering Company specializes in design and construction of jet fuel facilities. This employee-owned company has many years of experience and has the capabilities that are needed to design and install the liner system.

Burns & McDonnell will be enhancing the Facility's secondary containment by installing an asphalt liner and industrial spray coating on Lots 2, 3, and 3.5 of the Facility. Therefore, we of the Kalihi-Palama Neighborhood No. 15 board support the installation of the Facility's project and the secondary containment barrier. However, with this support we demand to be updated on the status of installation including but not limited to: incidents during the installation whereby the surrounding environment is affected by the activities of the installation, or any other activities that present a danger to the environment and surrounding residents. With this collaboration with the community, we can foster a relationship with the community within Kalihi-Palama.

Ken Farm

Chair, Board Member CAC, Oahu MPO Neighborhood Board No. 15. Kalihi-Palama, Iwilei, A'ala, Sand Island

JOSH GREEN, M.D. GOVERNOR OF HAWAI'I KE KIA'ÅINA O KA MOKU'ÅINA 'O HAWAI'I

KENNETH S. FINK, MD, MGA, MPH DIRECTOR OF HEALTH KA LUNA HO'OKELE

In reply, please refer to:

File:

STATE OF HAWAI'I DEPARTMENT OF HEALTH KA 'OIHANA OLAKINO P. O. BOX 3378 HONOLULU, HI 96801-3378

07016CMHK.23

July 28, 2023

MEMORANDUM

SUBJECT: Clean Water Branch Standard Project Comments

- TO: Agencies and Project Owners
- FROM: DARRYL LUM, P.E., CHIEF Samuel Zum Clean Water Branch

This memo is provided for your information and sharing. You are encouraged to share this memo with your project partners, team members, and appropriate personnel.

The Department of Health (DOH), Clean Water Branch (CWB) will no longer be responding directly to requests for comments on the following documents (Pre-consultation, Early Consultation, Preparation Notice, Draft, Final, Addendums, and/or Supplements):

- Environmental Impact Statements (EIS)
- Environmental Assessments (EA)
- Stream Channel Alteration Permits (SCAP)
- Stream Diversion Works Permits (SDWP)
- Well Construction/Pump Installation Permits
- Conservation District Use Applications (CDUA)
- Special Management Area Permits (SMAP)
- Shoreline Setback Areas (SSA)

For agencies or project owners requiring DOH-CWB comments for one or more of these documents, please utilize the DOH-CWB Standard Comments below regarding your project's responsibilities to maintain water quality and any necessary permitting. DOH-CWB Standard Comments are also available on the DOH-CWB website located at: <u>http://health.hawaii.gov/cwb/</u>.

DOH-CWB Standard Comments

The following information is for agencies and/or project owners who are seeking comments regarding environmental compliance for their projects with the Hawaii Administrative Rules (HAR), Chapters 11-53, 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program.

- 1. Any project and its potential impacts to State waters must meet the following criteria:
 - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
 - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
 - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
- You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for point source water pollutant discharges into State surface waters (HAR, Chapter 11-55). Point source means any discernible, confined, and discrete conveyance from which pollutants are or may be discharged.

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

The DOH, Environmental Health Administration (EHA) e-Permitting Portal received Cross-Media Electronic Reporting Rule (CROMERR) certification by the Environmental Protection Agency (EPA) for electronic signature. Currently, Applicants and Permittees may now certify and submit EHA Electronic Signature Forms electronically through the EHA e-Permitting Portal without the need to physically send in an ink signature and CD/DVD/flash drive.

Beginning January 31, 2023, the DOH-CWB will only utilize electronic signature e-Permitting forms and discontinue the hard-copy signature forms. All hard-copy signature certification e-Permitting forms, including compliance forms, will be inactivated.

The electronic signature forms will require electronic signature approval to submit a form to the CWB. For details on how to obtain the electronic signature approval please visit CWB website located at:

https://health.hawaii.gov/cwb/announcements/cwb-announces-new-requirement-forelectronic-signature-approval-for-all-submissions-beginning-january-31-2023/.

The NPDES NOI or application will be processed after the filing fees submitted and payable to the "State of Hawaii" in the form of a pre-printed check, cashier's check, money order, or as otherwise specified by the director is received by the CWB.

Some of the activities requiring NPDES permit coverage include, but, are not limited to:

- a. Discharges of Storm Water.
 - i. For Construction Activities Disturbing One (1) or More Acres of Total Land Area.

By HAR Chapter 11-55, an NPDES permit is required before the start of the construction activities that result in the disturbance of one (1) or more acres of total land area, including clearing, grading, and excavation. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale.

- ii. For Industrial Activities for facilities with primary Standard Industrial Classification (SIC) Codes regulated in the Code of Federal Regulations (CFR) at 40 CFR 122.26(b)(14)(i) through (ix) and (xi). If a facility has more than one SIC code, the activity that generates the greatest revenue is the primary SIC code. If revenue information is unavailable, use the SIC code for the activity with the most employees. If employee information is also unavailable, use the SIC code for the activity with the greatest production.
- iii. From a small Municipal Separate Storm Sewer System (along with certain non-storm water discharges).

- b. Discharges to State surface waters from construction activity hydrotesting or dewatering.
- c. Discharges to State surface waters from cooling water applications.
- d. Discharges to State surface waters from the application of pesticides (including insecticides, herbicides, fungicides, rodenticides, and various other substances to control pest) to State waters.
- e. Well-Drilling Activities.

Any discharge to State surface waters of treated process wastewater effluent associated with well drilling activities is regulated by HAR Chapter 11-55. Discharges of treated process wastewater effluent (including well drilling slurries, lubricating fluids wastewater, and well purge wastewater) to State surface waters requires NPDES permit coverage.

NPDES permit coverage is not required for well pump testing. For well pump testing, the discharger shall take all measures necessary to prevent the discharge of pollutants from entering State waters. Such measures shall include, if necessary, containment of initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices (BMPs) shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of the storm drain prior to discharge. Furthermore, BMPs shall be implemented to prevent the discharge from discharge from collecting sediments and other pollutants prior to entering the storm drain.

- 3. A Section 401 Water Quality Certification (WQC) may be required if your project/activity:
 - a. Requires a federal license or permit; and
 - b. May result in a discharge into waters of the United States (WOTUS).

"License or permit" means any permit, certificate, approval, registration, charter, membership, statutory exemption, or other form of permission granted by an agency of the federal government to conduct any activity which may result in any discharge.

The term "discharge" is defined in Clean Water Act, Subsections 502(16), 502(12), and 502(6).

Examples of "discharge" include, but are not limited to, allowing the following pollutants to enter WOTUS from the surface, or in-water: solid waste, rock/sand/dirt, heat, sewage, construction debris, any underwater work, chemicals, fugitive dust/spray paint, agricultural wastes, biological materials, industrial wastes, concrete/sealant/epoxy, and washing/cleaning effluent.

Determine if your project/activity requires a federal permit, license, certificate, approval, registration, or statutory exemption by contacting the appropriate federal agencies (e.g. Department of the Army (DA), U.S. Army Corps of Engineers (COE), Pacific Ocean Division Honolulu District Office (POH) Tel: (808) 835-4303; U.S. Environmental Protection Agency, Region 9 Tel: (415) 947-8021; Federal Energy Regulatory Commission Tel: (866) 208-3372; U.S. Coast Guard Office of Bridge Programs Tel: (202) 372-1511). If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the COE-POH regarding their DA permitting requirements.

To request an individual Section 401 WQC, you must complete and submit the Section 401 WQC application together with \$1,000 filing fee made payable to the "State of Hawaii" in the form of a check or other method specified by the department. This application is available on the e-Permitting Portal website located at: <u>https://eha-cloud.doh.hawaii.gov/epermit/</u>.

The processing of a Section 401 WQC application will begin after the CWB has received filing fee. The processing of a Section 401 WQC application is also subject to the compliance with 40 CFR §121 requirements.

Beginning January 31, 2023, the DOH-CWB will only utilize electronic signature e-Permitting forms and discontinue the hard-copy signature forms. All hard-copy signature certification e-Permitting forms, including compliance forms, will be inactivated.

The electronic signature forms will require electronic signature approval to submit a form to the CWB. For details on how to obtain the electronic signature approval please visit CWB website located at:

https://health.hawaii.gov/cwb/announcements/cwb-announces-new-requirement-forelectronic-signature-approval-for-all-submissions-beginning-january-31-2023/.

Please see HAR, Chapters 11-53 and 11-54 for the State's Water Quality Standards and for more information on the Section 401 WQC. HAR, Chapters 11-53 and 11-54 are available on the CWB website at: <u>http://health.hawaii.gov/cwb/</u>.

- 4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapters 11-53 and 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation and up to two (2) years in jail.
- 5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
 - a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.
 - b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
 - c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

November 15, 2023

VIA EMAIL: darryl.lum@doh.hawaii.gov

Mr. Darryl Lum, P.E. Chief State of Hawai'i Department of Health, Clean Water Branch P.O. Box 3378 Honolulu, HI 96801-3378

Re: Response Letter to Comments on Draft Environmental Assessment for the Proposed Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project

Dear Mr. Lum:

Thank you for your July 28, 2023 letter concerning the Draft Environmental Assessment for the Hawai'i Fueling Facilities Corporation Stormwater System Upgrade Project.

We acknowledge your comments and understand that projects must protect water quality and beneficial uses of State waters and that project-related discharges must comply with all applicable State Water Quality standards.

The Facility has an existing National Pollutant Discharge Elimination System (NPDES) permit that will be updated and renewed for this project, and an NPDES permit will be obtained for construction. There will be no direct discharge from construction activities into Ke'ehi Lagoon. Any post-construction discharges will flow into the storm drainage system and are covered by the NPDES permit for industrial activities.

You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<u>https://planning.hawaii.gov/erp/</u>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (816) 823-6063 or by email at <u>jjewell@burnsmcd.com</u>.

Sincerely,

Burns & McDonnell Engineering Company, Inc.

Jeremy Jewell Senior Environmental Scientist

> 9450 Ward Parkway \ Kansas City, MO 64114 O 816-601-4919 \ burnsmcd.com

Mr. Darryl Lum, P.E. State of Hawai'i Department of Health, Clean Water Branch November 15, 2023 Page 2

cc: Steve Tagawa, DPP Land Use Approval Branch

HONOLULU FIRE DEPARTMENT KA 'OIHANA KINAI AHI 'O HONOLULU CITY AND COUNTY OF HONOLULU

636 SOUTH STREET • HONOLULU, HAWAI'I 96813 PHONE: (808) 723-7139 • FAX: (808) 723-7111 • WEB: www.honolulu.gov

RICK BLANGIARDI MAYOR *MEIA*

SHELDON K. HAO FIRE CHIEF LUNA NUI KINAI AHI

JASON SAMALA DEPUTY FIRE CHIEF HOPE LUNA NUI KINAI AHI

September 22, 2023

Mr. Jeremy Jewell, Agent Burns and McDonnell 733 Bishop Street, Suite 2150 Honolulu, Hawaii 96813

Dear Mr. Jewell:

Subject: Draft Environmental Assessment Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade 6 Sand Island Access Road Honolulu, Hawaii 96819 Tax Map Keys: 1-2-025: 020 and 021

In response to a letter from Ms. Dawn Takeuchi Apuna, Director of the City and County of Honolulu's (City) Department of Planning and Permitting (DPP) dated September 15, 2023, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires the following be complied with:

 Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2018 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1, as amended.)

A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2018 Edition, Section 18.2.3.2.1.)
Mr. Jeremy Jewell, Agent Page 2 September 22, 2023

- 2. Fire department access roads shall be in accordance with NFPA 1; 2018 Edition, Section 18.2.3.
- 3. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1; 2018 Edition, Sections 18.3 and 18.4.
- 4. Submit civil drawings to the City's DPP and route them to the HFD for review and approval.

The abovementioned provisions are required by the HFD. This project may necessitate that additional requirements be met as determined by other agencies.

Should you have questions, please contact Battalion Chief Jean-Claude Bisch of our Fire Prevention Bureau at 808-723-7151 or jbisch@honolulu.gov.

CRAIG UCHIMURA Assistant Chief

SKH/MD:bh

cc: Steve Tagawa, DPP Land Use Approval Branch



November 15, 2023

VIA EMAIL: c/o Battalion Chief Jean-Claude Bisch, jbisch@honolulu.gov

Mr. Craig Uchimura Assistant Chief Honolulu Fire Department 636 South Street Honolulu, HI 96813

Re: Response Letter to Comments on Draft Environmental Assessment for the Proposed Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project

Dear Mr. Uchimura:

Thank you for your September 22, 2023 letter concerning the Draft Environmental Assessment for the Hawai'i Fueling Facilities Corporation Stormwater System Upgrade Project. We appreciate the time you spent reviewing the Draft Environmental Assessment and preparing your response.

Your comments are in respect of compliance with National Fire Protection Association regulations, fire department access, and water supply for fire protection. The HFFC Sand Island Fuel Facility is adjacent to the west side of Sand Island Access Road and can be accessed from this road. The existing driveways provide access to within 150 feet of the buildings on site; no portion of the facility is 150 feet from a 20-foot-wide access drive. Fire hydrants exist along both sides of Sand Island Access Road in this location. There are no changes to the existing fire water supply as a result of this project. Additionally, the HFFC Fuel Facility site contains a Fire Foam Building, which houses a fire suppression system. There will be no changes to facility access associated with this project.

As requested, civil drawings will be sent to the City of Honolulu's Department of Planning and Permitting and routed to the Honolulu Fire Department for review and approval.

You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<u>https://planning.hawaii.gov/erp/</u>) once its availability is announced in The Environmental Notice. If you have any questions or concerns in the future regarding this project, please contact me at (816) 823-6063 or <u>jjewell@burnsmcd.com</u>.



Mr. Craig Uchimura Honolulu Fire Department November 15, 2023 Page 2

Sincerely,

12

Burns & McDonnell Engineering Company, Inc.

Jeremy Jewell Senior Environmental Scientist

cc: Steve Tagawa, DPP Land Use Approval Branch



POLICE DEPARTMENT KA 'OIHANA MĀKA'I O HONOLULU

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAI'I 96813 TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

RICK BLANGIARDI Mayor *Meia*



ARTHUR J. LOGAN Chief Kahu Māka I

KEITH K. HOR KAWA RADE K. VANIC DEPUTY CHIEFS HOPE LUNA NUI MÄKA'I

OUR REFERENCE EO-SH

September 25, 2023

SENT VIA EMAIL

Mr. Jeremy Jewell jjewell@burnsmcd.com

Dear Mr. Jewell:

This is in response to the correspondence dated September 15, 2023, from the Department of Planning and Permitting; requesting input for the Draft Environmental Assessment for the upgrade to the secondary spill containment and stormwater management system at the Hawai'i Fueling Facilities Corporation's Sand Island Fuel Facility.

Based on the information provided, the Honolulu Police Department does not have any concerns at this time.

If there are any questions, please call Major Roland Turner of District 5 (Kalihi) at (808) 723-8208.

Sincerely,

Elle Hayado

Glenn Hayashi Assistant Chief of Police Support Services Bureau

cc: Steve Tagawa, DPP



November 15, 2023

VIA EMAIL: c/o hpdgeneral@honolulu.gov

Mr. Glenn Hayashi Assistant Chief of Police Honolulu Police Department 801 South Beretania Street Honolulu, HI 96813

Re: Response Letter to Comments on Draft Environmental Assessment for the Proposed Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project

Dear Mr. Hayashi:

Thank you for your September 25, 2023 letter concerning the Draft Environmental Assessment for the Hawai'i Fueling Facilities Corporation Stormwater System Upgrade Project. We appreciate the time you spent reviewing the Draft Environmental Assessment and preparing your response.

Thank you for confirming that the Honolulu Police Department has no comments or concerns to offer.

You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<u>https://planning.hawaii.gov/erp/</u>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (816) 823-6063 or <u>jjewell@burnsmcd.com</u>.

Sincerely,

Burns & McDonnell Engineering Company, Inc.

Jeremy Jewell Senior Environmental Scientist

cc: Steve Tagawa, DPP Land Use Approval Branch

9450 Ward Parkway \ Kansas City, MO 64114 O 816-601-4919 \ burnsmcd.com

BOARD OF WATER SUPPLY KA 'OIHANA WAI

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET • HONOLULU, HAWAII 96843 Phone: (808) 748-5000 • www.boardofwatersupply.com

RICK BLANGIARDI MAYOR *MEIA*

ERNEST Y. W. LAU, P.E. MANAGER AND CHIEF ENGINEER MANAKIA A ME KAHU WILIKĪ

ERWIN KAWATA DEPUTY MANAGER *HOPE MANAKIA*



October 2, 2023

NA'ALEHU ANTHONY, Chair KAPUA SPROAT, Vice Chair BRYAN P. ANDAYA JONATHAN KANESHIRO EDWIN H. SNIFFEN, Ex-Officio GENE C. ALBANO, P.E., Ex-Officio

Mr. Jeremy Jewell Burns and McDonnel 733 Bishop Street, Suite 2150 Honolulu, Hawaii 96813

Dear Mr. Jewell:

Subject: Your Letter Dated September 15, 2023, Requesting Comments on the Draft Environmental Assessment for the Proposed Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project – <u>Tax Map Key: 1-2-025</u>: 020, 021

Thank you for your letter regarding the proposed stormwater system upgrade project.

The Board of Water Supply (BWS) has no objections to the proposed stormwater system upgrade project.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

1W Far

ERNEST Y. W. LAU, P.E. Manager and Chief Engineer

cc: Steve Tagawa, Land Use Approval Branch



November 15, 2023

VIA EMAIL: c/o contactus@hbws.org

Mr. Ernest Y. W. Lau Manager and Chief Engineer Honolulu Board of Water Supply 630 South Beretania Street Honolulu, HI 96843

Re: Response Letter to Comments on Draft Environmental Assessment for the Proposed Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project

Dear Mr. Lau:

Thank you for your October 2, 2023 letter concerning the Draft Environmental Assessment for the Hawai'i Fueling Facilities Corporation Stormwater System Upgrade Project. We appreciate the time you spent reviewing the Draft Environmental Assessment and preparing your response.

Thank you for confirming that the Board of Water has no comments or objections to offer.

You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<u>https://planning.hawaii.gov/erp/</u>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (816) 823-6063 or <u>jjewell@burnsmcd.com</u>.

Sincerely,

Burns & McDonnell Engineering Company, Inc.

Jeremy Jewell Senior Environmental Scientist

cc: Steve Tagawa, DPP Land Use Approval Branch



STATE OF HAWAI'I OFFICE OF PLANNING & SUSTAINABLE DEVELOPMENT

235 South Beretania Street, 6th Floor, Honolulu, Hawaiʻi 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaiʻi 96804 JOSH GREEN, M.D. GOVERNOR

MARY ALICE EVANS

Telephone: (808) 587-2846 Fax: (808) 587-2824 Web: https://planning.hawaii.gov/

DTS 202309181320NA

October 5, 2023

Management Program

Coastal Zone

Environmental Review Program

Land Use Commission

Land Use Division

Special Plans Branch

State Transit-Oriented Development

Statewide Geographic Information System

Statewide Sustainability Branch Ms. Dawn Takeuchi Apuna, Director Department of Planning and Permitting City and County of Honolulu 650 South King Street, 7th Floor Honolulu, Hawaii 96813

Attn: Mr. Steve Tagawa

Dear Ms. Apuna:

Subject: Chapter 343, Hawai'i Revised Statutes
 Draft Environmental Assessment for Hawai'i Fueling Facilities
 Corporation Sand Island Fuel Facility Stormwater System Upgrade at 6
 Sand Island Access Road, Kalihi-Kai, O'ahu; Tax Map Key: (1) 1-2 025: 020 and 021

The Office of Planning and Sustainable Development (OPSD) is in receipt of your review request, dated September 15, 2023, on the Draft Environmental Assessment (EA) for the proposed Hawai'i Fueling Facilities Corporation (HFFC) Sand Island Fuel Facility Stormwater System Upgrade at 6 Sand Island Access Road, Kalihi-Kai, Oahu.

The HFFC Sand Island Facility, which was built in the early 1960s, receives, stores, and together with the HFFC Airport Facility, distributes jet fuel to the Daniel K. Inouye International Airport. The Facility is located on the land leased from the State of Hawai'i Department of Transportation Airports Division, and within the county designated Special Management Area (SMA).

According to the Draft EA, the U.S. Environmental Protection Agency mandated an upgrade to enhance the secondary containment system of the facility so that it is sufficiently impervious to contain any discharged oil until clean-up can occur. Without the upgrade, the facility will continue to pose a potential threat to wildlife, natural resources, and public health.

The proposed fuel facility stormwater system upgrade includes new asphalt pavement, spray-on industrial coating on exposed areas, 31 collection stormwater drainage inlets, 4 life stations with sump pumps and an above-ground Ms. Dawn Takeuchi Apuna October 5, 2023 Page 2

oil-water separator (OWS). The drainage inlets and lift stations will be connected via a network of above and underground drainage pipes that connect the lift stations to the OWS. The stormwater drainage system will be equipped with multiple mitigative measures to prevent possible inundation of the OWS as follows:

- Primary mitigation measures consist of oil stop valves installed at catch basins nearest each larger lift station to control localized spills to each quadrant of the site.
- The OWS will have integral controls and high-level oil alarms that will automatically shut off the lift station pumps and close the OWS effluent valve.
- The OWS will have an integral hydrocarbon sensor to shut off the entire system should the OWS itself fail.

The proposed upgrade will not lead to an increase in fuel storage capacity at the site. Grading will be required to direct the flow of stormwater to the catch basin inlets. Excavated soil during construction will be tested and re-used where possible or properly disposed.

The completion of the proposed upgrade project will take approximately 18 months, and the total construction cost is estimated at \$9,000,000.

The site is located in an area designated by the National Insurance Flood Program as Special Flood Hazard Area Zone AE, a high flood hazard zone subject to inundation by 1 percent annual chance of flood. The site is situated within the 3.2-foot sea level rise exposure area by the end of the century based on exposure to passive inundation, coastal erosion, and annual high wave runup.

The OPSD has reviewed the subject Draft EA, and has the following comments to offer:

- 1. If the subject EA will serve as the supporting document for the SMA Use Permit Application, the OPSD recommends that the EA specifically discuss the compliance with the requirements of SMA use under Revised Ordinances of Honolulu Chapter 25, as amended, for the proposed facility upgrade project.
- 2. Given that the Sand Island Fuel Facility serves as a critical infrastructure, the OPSD suggests that the EA assess and illustrate potential impacts of 3.2-foot sea level rise and further 6-foot sea level rise in more detail, and consider long-term mitigation measures or plans to mitigate the impacts of low-lying area flooding from sea level rise on the subject facility and its operations.
- 3. In enacting Act 224, Session Laws of Hawaii 2005, the legislature found that light pollution in Hawaii's coastal areas and artificial lighting illuminating the shoreline and ocean waters can be disruptive to avian and marine life. Pursuant to HRS § 205A-30.5,

Ms. Dawn Takeuchi Apuna October 5, 2023 Page 3

> no artificial light from the proposed facility upgrade shall be directed to travel across the property boundary toward the shoreline and ocean waters.

4. The OPSD concurs that should any archaeological or cultural resources be discovered during any earth disturbance activity, all construction work shall be ceased immediately. Subsequent work shall proceed only upon an archaeological clearance from the State Historic Preservation Division, Department of Lands and Natural Resources.

If you have any questions regarding this comment letter, please contact Shichao Li of our office at (808) 587-2841 or by email at shichao.li@hawaii.gov.

Sincerely,

Mary Alice Evans

Mary Alice Evans Interim Director



November 15, 2023

VIA EMAIL: maryalice.evans@hawaii.gov

Ms. Mary Alice Evans Interim Director State of Hawaii Office of Planning & Sustainable Development 235 South Beretania Street, 6th floor Honolulu, HI 96813

Re: Response Letter to Comments on Draft Environmental Assessment for the Proposed Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project

Dear Ms. Evans:

Thank you for your October 5, 2023 letter concerning the Draft Environmental Assessment for the Hawai'i Fueling Facilities Corporation Stormwater System Upgrade Project. We acknowledge your comments and appreciate the time you spent reviewing the Draft Environmental Assessment and preparing your response.

Your comments are in respect of sea level rise, illumination from artificial lighting, and inadvertent discovery of archaeological or cultural resources. Clarifications will be added in the Final Environmental Assessment regarding long-term sea-level rise and methane mitigation plans, potential impacts of exterior lighting and mitigation measures being implemented, and avoidance mitigation measures for archaeological resource discovery.

As a point of clarification, the proposed project is to improve stormwater infrastructure to address ponding within the facility and enhance secondary containment per the Environmental Protection Agency (EPA) Administrative Order on Consent (AOC). Sea level rise design referenced in the Environmental Assessment is solely based on the Department of Health Sea Level Rise memorandum regarding potential future accumulation of methane gas under the proposed containment liner/pavement. The overall impact of a 3.2- to 6-foot sea level rise at the facility is beyond the scope of this project. It is worth noting the Sand Island fuel facility has a concrete dike wall around its perimeter. The minimum top elevation of the wall is 8.19 feet above the mean lower-low water level.

No exterior light fixture is directed to specifically shine outside the property boundary and towards the shoreline and ocean waters. All exterior lighting along the perimeter of the site points inward towards the site. Perimeter exterior lighting is LED and utilizes a Type IV distribution. This distribution type results in minimal backlighting and therefore minimal light pollution outside of the Sand Island Facility property boundary.

9450 Ward Parkway \ Kansas City, MO 64114 O 816-601-4919 \ burnsmcd.com



Ms. Mary Alice Evans State of Hawaii Office of Planning & Sustainable Development November 15, 2023 Page 2

You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<u>https://planning.hawaii.gov/erp/</u>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (816) 823-6063 or <u>jjewell@burnsmcd.com</u>.

Sincerely,

Burns & McDonnell Engineering Company, Inc.

Jeremy Jewell Senior Environmental Scientist

cc: Shichao Li, Office of Planning & Sustainable Development Steve Tagawa, DPP Land Use Approval Branch



JOSH GREEN, M.D. GOVERNOR

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

October 6, 2023

VIA EMAIL: jjewell@burnsmcd.com

Mr. Jeremy Jewell Burns and McDonnell 733 Bishop Street, Suite 2150 Honolulu, Hawaii 96813

Dear Mr. Jewell:

Hawaii Revised Statutes Chapter 343, Draft Environmental Assessment Subject: Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Honolulu, Oahu, Hawaii Tax Map Key: (1) 1-2-025: 020 and 021

The Hawaii Department of Transportation (HDOT) has received a letter dated September 15, 2023, from the City and County of Honolulu, Department of Planning and Permitting (DPP) requesting the review and comment on the proposed Hawaii Fueling Facilities Corporation (HFFC) Sand Island Fuel Facility Stormwater System Upgrade project. HDOT understands HFFC is proposing Environmental Protection Agency-mandated upgrades to the 8.4-acre jet fuel facility on HDOT property off Sand Island Access Road. The upgrades include new asphalt pavement, spray-on industrial coating on exposed areas, 31 collection inlets, 4 lift stations with sump pumps, and an above-ground oil-water separator.

HDOT has the following comments:

- 1. The proposed project is within the boundary of the Daniel K. Inouye International Airport (HNL). All projects within five miles from Hawaii State airports are advised to read the Technical Assistance Memorandum (TAM) for guidance with development and activities that may require further review and permits. The TAM can be viewed at this link: http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports 08-01-2016.pdf.
- 2. Federal Aviation Administration (FAA) regulation requires the submittal of FAA Form 7460-1 Notice of Proposed Construction or Alteration pursuant to the Code of Federal Regulations, Title 14, Part 77.9, if the construction or alteration is within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 feet. Construction equipment and staging area heights, including heights of temporary construction cranes, shall be included in the submittal. The form and criteria for submittal can be found at the following website:

https://oeaaa.faa.gov/oeaaa/external/portal.jsp. Please provide a copy of the FAA response to the Part 77 analysis to the HDOT Airport Planning Section.



EDWIN H. SNIFFEN DIRECTOR

Deputy Directors FORD N. FUCHIGAMI DREANALEE K. KALILI TAMMY L. LEE ROBIN K. SHISHIDO

IN REPLY REFER TO:

DIR 0696 STP 8.3666 Mr. Jeremy Jewell October 6, 2023 Page 2

- 3. Due to the proximity to the airport, the applicant and future users should be aware of potential single-event noise from aircraft operations. There is also a potential for fumes, smoke, vibrations, odors, etc., resulting from occasional aircraft flight operations over or near the project location. These impacts may increase or decrease over time depending on airport operations.
- 4. Standing water has the potential to become a wildlife hazard. The HDOT recommends that the developer incorporates measures to minimize hazardous wildlife attractants in compliance with <u>FAA Advisory Circular 150/5200-33C</u>, <u>Hazardous Wildlife Attractants On Or Near Airports</u>. If the project results in a wildlife attractant, the developer shall immediately mitigate the hazard upon notification by the HDOT and/or FAA.
- 5. On the Draft Environmental Assessment (DEA), page 2 (PDF Page 10), the document refers to the Department of Transportation Airport Division (DOTA), please remove the "Airport Division" and the "A" from the acronym.
- 6. On the DEA, page 2 (PDF Page 10), it states, "Daniel K. Inouye International Airport (HNL), also known as Honolulu International Airport", please remove the "also known as..." portion.
- On the DEA, page 3 (PDF Page 11), Figure 1 has an incorrect representation of the boundary for HNL. The figure shows large portions of Hickam Airfield as belonging to HNL and does not show that Keehi Lagoon is a part of HNL. Please correct this figure. The correct boundaries can be found on the State of Hawaii Geographic Information System portal, through this link: <u>https://geoportal.hawaii.gov/datasets/airports/explore?location=21.310518%2C-157.875708%2C12.91</u>.

Please submit any subsequent land use entitlement-related requests for review or correspondence to the HDOT Land Use Intake email address at DOT.LandUse@hawaii.gov.

If there are any questions, please contact Mr. Blayne Nikaido, Planner, Land Use Section of the HDOT Statewide Transportation Planning Office at (808) 831-7979 or via email at blayne.h.nikaido@hawaii.gov.

Sincerely,

EDWIN H. SNIFFEN Director of Transportation

c: Mr. Steve Tagawa – DPP, Land Use Approval Branch (VIA EMAIL: stagawa@honolulu.gov)



November 15, 2023

VIA EMAIL: edwin.h.sniffen@hawaii.gov

Mr. Edwin H. Sniffen Director of Transportation State of Hawaii Department of Transportation 869 Punchbowl Street Honolulu, HI 96813-5097

Re: Response Letter to Comments on Draft Environmental Assessment for the Proposed Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project

Dear Mr. Sniffen:

Thank you for your October 6, 2023 letter concerning the Draft Environmental Assessment for the Hawai'i Fueling Facilities Corporation Stormwater System Upgrade Project. We appreciate the time you spent reviewing the Draft Environmental Assessment and preparing your response.

We acknowledge your comments regarding the proximity of the project to the airport and requirements regarding avigation and noise easements and Federal Aviation Administration (FAA) regulation. We understand that the project must comply with FAA requirements and the Technical Assistance Memorandum. FAA Form 7460 Notices have been submitted on behalf of the applicant. We also confirm that the stormwater drainage upgrades that are planned with this project are intended to reduce potential for standing water within the facility. Additionally, the design includes a float sensor on the discharge to prevent the stormwater pumps from activating and overflowing in the event of a high tide or backup.

The stormwater system has been designed to automatically discharge accumulating runoff to minimize standing water within the facility. Several controls are included on the stormwater system (oil stop valves, oil/water separator, oil sensor) to prevent oil discharge if a spill occurs. The HNL boundaries in Figure 1 and references to the Department of Transportation and Daniel K. Inouye International Airport have been corrected in the Final Environmental Assessment.

You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<u>https://planning.hawaii.gov/erp/</u>) once its availability is announced in The Environmental Notice. If you have any questions or concerns in the future regarding this project, please contact me at (816) 823-6063 or <u>jjewell@burnsmcd.com</u>.



Mr. Edwin H. Sniffen State of Hawaii Department of Transportation November 15, 2023 Page 2

Sincerely,

Burns & McDonnell Engineering Company, Inc.

Jeremy Jewell Senior Environmental Scientist

cc: Blayne Nikaido, Hawaii Department of Transportation Steve Tagawa, DPP Land Use Approval Branch



DEPARTMENT OF PLANNING AND PERMITTING KA 'OIHANA HO'OLĀLĀ A ME NĀ PALAPALA 'AE CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAI'I 96813 PHONE: (808) 768-8000 • FAX: (808) 768-6041 • WEB: honolulu.gov/dpp

RICK BLANGIARDI MAYOR *MEIA*



DAWN TAKEUCHI APUNA DIRECTOR *PO'O*

JIRO A. SUMADA DEPUTY DIRECTOR *HOPE PO'*O

October 6, 2023

2023/ED-9(ST)

Mr. Jeremy Jewell Burns & McDonnell Engineering Company, Inc. 733 Bishop Street, Suite 2150 Honolulu, Hawaii 96813

Dear Mr. Jewell:

SUBJECT: Draft Environmental Assessment (EA) Hawaii Revised Statutes Chapter 343 Hawaii Fueling Facilities Corporation Stormwater System Upgrade (Project) 6 Sand Island Access Road – Kalihi Kai Tax Map Keys 1-2-025: 020 and 21

The following are our comments on the Draft EA for the above Project:

- 1. <u>Section 2.2 Background</u>: This section must be expanded to provide a more complete background on the original construction of the jet fuel storage facility. Describe the facility and its capacity at the time of its initial construction, and how it expanded to its current 16-tank configuration with a storage capacity of 42 million gallons.
- 2. <u>Section 2.3 Purpose and Need</u>: A copy of the U.S. Environmental Protection Agency Administrative Order and Consent (Docket No. OPA-331-09-2021-001) should be attached as an appendix to the Final EA.
- 3. <u>Section 3 Environmental Setting, Impacts, and Mitigation:</u>
 - a. <u>Section 3.1.2 Geology, Soils, and Geologic Hazards</u>: This section should include an estimate of the earthwork necessary to implement the Project and discuss the disposal of potentially hazardous excess soils.

Mr. Jeremy Jewell October 6, 2023 Page 2

- b. <u>Section 3.1.3. Hydrology, Flood Zone, and Sea Level Rise</u>: This section of the Final EA must include a discussion of the tsunami hazard to this facility. Discuss what the potential impacts of a tsunami on this massive waterfront facility could be. Describe the existing protective or mitigative features of the facility, and planned improvements to these protective measures.
- 4. <u>Section 5 Required Permits and Approvals</u>: This table should be revised to correctly indicate that the authority issuing the Special Management Area (SMA) Use Permit is the Honolulu City Council and not the Department of Planning and Permitting.
- 5. <u>Section 6 Consistency with Government Plans and Policies</u>: This section of the Final EA must be expanded to include subsections which address the consistency of the existing facility and Project with the following City plans and policies:
 - a. Primary Urban Center Development Plan (PUCDP) The PUCDP should be identified and the existing facilities recognition by, and consistency with its planning policies and guidelines, should be discussed.
 - b. Land Use Ordinance (LUO) The City zoning, or LUO, Revised Ordinances of Honolulu (ROH) Chapter 21, should be identified and the existing facility's compliance regarding permitted uses and its conformance with LUO development standards for the I-3 Waterfront Industrial District, should be discussed.
 - c. The SMA Ordinance, ROH Chapter 25, should be identified and the existing facility's compliance regarding previous SMA permits, should be discussed.
 - d. The Shoreline Setback Ordinance, ROH Chapter 26, should be identified and the existing facility's conformance with requirements of this prohibition on structures within the shoreline setback, should be discussed

We are also forwarding copies of the comments we received so far which may not have already been sent directly or copied to you. Mr. Jeremy Jewell October 6, 2023 Page 3

Should you have any questions, please contact Steve Tagawa, of our Land Use Approval Branch, at (808) 768-8024.

Very truly yours,

Dawn Takeuchi Apuna Director

Attachments: Comment Letters

cc: Department of Transportation - Airport Division Department of Land and Natural Resources-Division of Boating and Ocean Recreation Environmental Review Program - Mary Alice Evans Office of Planning and Sustainable Development - Shichao Li



STATE OF HAWAI'I OFFICE OF PLANNING & SUSTAINABLE DEVELOPMENT

235 South Beretania Street, 6th Floor, Honolulu, Hawai'i 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawai'i 96804 JOSH GREEN, M.D.

SYLVIA LUKE LT. GOVERNOR

MARY ALICE EVANS

Telephone: (808) 587-2846 Fax: (808) 587-2824 Web: https://planning.hawaii.gov/

DTS 202309181320NA

October 5, 2023

Ms. Dawn Takeuchi Apuna, Director Department of Planning and Permitting City and County of Honolulu 650 South King Street, 7th Floor Honolulu, Hawaii 96813

Attn: Mr. Steve Tagawa

Dear Ms. Apuna:

Subject: Chapter 343, Hawai'i Revised Statutes
 Draft Environmental Assessment for Hawai'i Fueling Facilities
 Corporation Sand Island Fuel Facility Stormwater System Upgrade at 6
 Sand Island Access Road, Kalihi-Kai, O'ahu; Tax Map Key: (1) 1-2 025: 020 and 021

The Office of Planning and Sustainable Development (OPSD) is in receipt of your review request, dated September 15, 2023, on the Draft Environmental Assessment (EA) for the proposed Hawai'i Fueling Facilities Corporation (HFFC) Sand Island Fuel Facility Stormwater System Upgrade at 6 Sand Island Access Road, Kalihi-Kai, Oahu.

The HFFC Sand Island Facility, which was built in the early 1960s, receives, stores, and together with the HFFC Airport Facility, distributes jet fuel to the Daniel K. Inouye International Airport. The Facility is located on the land leased from the State of Hawai'i Department of Transportation Airports Division, and within the county designated Special Management Area (SMA).

According to the Draft EA, the U.S. Environmental Protection Agency mandated an upgrade to enhance the secondary containment system of the facility so that it is sufficiently impervious to contain any discharged oil until clean-up can occur. Without the upgrade, the facility will continue to pose a potential threat to wildlife, natural resources, and public health.

The proposed fuel facility stormwater system upgrade includes new asphalt pavement, spray-on industrial coating on exposed areas, 31 collection stormwater drainage inlets, 4 life stations with sump pumps and an above-ground

Coastal Zone Management Program

Environmental Review Program

Land Use Commission

Land Use Division

Special Plans Branch

State Transit-Oriented Development

Statewide Geographic Information System

Statewide Sustainability Branch Ms. Dawn Takeuchi Apuna October 5, 2023 Page 2

oil-water separator (OWS). The drainage inlets and lift stations will be connected via a network of above and underground drainage pipes that connect the lift stations to the OWS. The stormwater drainage system will be equipped with multiple mitigative measures to prevent possible inundation of the OWS as follows:

- Primary mitigation measures consist of oil stop valves installed at catch basins nearest each larger lift station to control localized spills to each quadrant of the site.
- The OWS will have integral controls and high-level oil alarms that will automatically shut off the lift station pumps and close the OWS effluent valve.
- The OWS will have an integral hydrocarbon sensor to shut off the entire system should the OWS itself fail.

The proposed upgrade will not lead to an increase in fuel storage capacity at the site. Grading will be required to direct the flow of stormwater to the catch basin inlets. Excavated soil during construction will be tested and re-used where possible or properly disposed.

The completion of the proposed upgrade project will take approximately 18 months, and the total construction cost is estimated at \$9,000,000.

The site is located in an area designated by the National Insurance Flood Program as Special Flood Hazard Area Zone AE, a high flood hazard zone subject to inundation by 1 percent annual chance of flood. The site is situated within the 3.2-foot sea level rise exposure area by the end of the century based on exposure to passive inundation, coastal erosion, and annual high wave runup.

The OPSD has reviewed the subject Draft EA, and has the following comments to offer:

- 1. If the subject EA will serve as the supporting document for the SMA Use Permit Application, the OPSD recommends that the EA specifically discuss the compliance with the requirements of SMA use under Revised Ordinances of Honolulu Chapter 25, as amended, for the proposed facility upgrade project.
- 2. Given that the Sand Island Fuel Facility serves as a critical infrastructure, the OPSD suggests that the EA assess and illustrate potential impacts of 3.2-foot sea level rise and further 6-foot sea level rise in more detail, and consider long-term mitigation measures or plans to mitigate the impacts of low-lying area flooding from sea level rise on the subject facility and its operations.
- 3. In enacting Act 224, Session Laws of Hawaii 2005, the legislature found that light pollution in Hawaii's coastal areas and artificial lighting illuminating the shoreline and ocean waters can be disruptive to avian and marine life. Pursuant to HRS § 205A-30.5,

Ms. Dawn Takeuchi Apuna October 5, 2023 Page 3

no artificial light from the proposed facility upgrade shall be directed to travel across the property boundary toward the shoreline and ocean waters.

4. The OPSD concurs that should any archaeological or cultural resources be discovered during any earth disturbance activity, all construction work shall be ceased immediately. Subsequent work shall proceed only upon an archaeological clearance from the State Historic Preservation Division, Department of Lands and Natural Resources.

If you have any questions regarding this comment letter, please contact Shichao Li of our office at (808) 587-2841 or by email at shichao.li@hawaii.gov.

Sincerely,

Mary Alice Evans

Mary Alice Evans Interim Director

DEPARTMENT OF PLANNING AND PERMITTING KA 'OIHANA HO'OLĀLĀ A ME NĀ PALAPALA 'AE CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAI'I 96813 PHONE: (808) 768-8000 • FAX: (808) 768-6041 • WEB: www.honolulu.gov

RICK BLANGIARDI MAYOR MEIA



DAWN TAKEUCHI APUNA DIRECTOR *PO'O*

JIRO A. SUMADA DEPUTY DIRECTOR HOPE PO'O

September 15, 2023

2023/ED-9(ST)

Dear Participant:

SUBJECT:	Chapter 343, Hawaii Revised Statutes
	Draft Environmental Assessment (EA)
Project:	Hawaii Fueling Facilities Corporation (HFFC)
	Sand Island Fuel Facility Stormwater System
	Upgrade
Applicant:	HFFC
Agent:	Burns and McDonnell (Jeremy Jewell)
Location:	6 Sand Island Access Road – Kalihi-Kai
Tax Map Kevs:	1-2-025: 020 and 021

Provided below for your review and comment is a link to the Draft EA for upgrade to the secondary spill containment and stormwater management system of the 8.4-acre jet fuel storage facility, which has been prepared pursuant to Chapter 343, Hawaii Revised Statutes.

https://files.hawaii.gov/dbedt/erp/Doc_Library/2023-09-08-OA-DEA-HFFC-Sand-Island-Fuel-Facility-Upgrade.pdf

Please send any comments regarding the potential environmental impacts of the Project to the Agent, Jeremy Jewell of Burns and McDonnell, at the address below with a copy to Steve Tagawa, of our Land Use Approval Branch. Comments are due by **October 9, 2023**.

Address:	733 Bishop Street, Suite 2150
	Honolulu, Hawaii 96813
Phone:	(816) 823-6303
Email:	jjewell@burnsmcd.com

The Department of Planning and Permitting (DPP) must determine whether the impacts of the Project are significant enough to warrant the preparation of an Environmental Impact Statement (EIS). Based on the current information provided, the DPP anticipates a "Finding of No Significant Impact" for this Project (i.e., no EIS required).

2023/ED-9 September 15, 2023 Page 2

9

Should you or the public have any questions, please contact Mr. Tagawa, of our Land Use Approval Branch, at (808) 768-8024 or by cmail at stagawa@honolulu.gov.

Very truly yours,

Dawn Takeuchi Apuna Director

No concerns re this 9/15/23 Notification:

KiyM. Andrew Bigitally signed by Hashiro, Kimberly Date: 2023.09.19 16:14:06 -10'00'

Kimberly M. Hashiro, Director Department of Customer Services

The Environmental Notice

September 8, 2023

O'AHU EAS/EISS (CONTINUED)

Sand Island Fuel Facility Stormwater System Upgrade Project – Draft EA (AFNSI)		
HRS §343-	(1) Propose the use of state or county lands or the use of state or county funds	
5(a) Trigger		
District(s)	O'ahu - multiple districts	
TMK(s)	(1)1-2-025:020; 1-2-025:021	
Permit(s)	Building and trenching permits; Special Management Area Use Permit on State-owned land	
Approving	City and County of Honolulu, Department of Planning and Permitting	
Agency	Steve Tagawa, (808) 768-8024, <u>stagawa@honolulu.gov</u>	
	650 South King Street, Honolulu, HI 96813	
Applicant	Hawaii Fueling Facilities Corporation; 3201 Aolele Street, Honolulu, HI 96819	
	Jason Maga, (808) 883-3291, <u>Jason.maga@signatureflight.com</u>	
Consultant	Burns and McDonnell Engineering Co., Inc.; 733 Bishop Street, Suite 2150, Honolulu, HI 96813	
	Jeremy Jewell, (816) 823-6063, jjewell@burnsmcd.com	
Status	Statutory 30-day public review and comment period starts. Comments are due by October 9, 2023. Please click on title	
	link above to read the document, then send comments to the approving agency at <u>dpp@honolulu.gov</u> and copy the	
-	consultant.	

This is an EPA mandated upgrade to the secondary spill containment and stormwater management system at the Applicant's jet fuel storage facility at 6 Sand Island Access Road. The 8.4-acre facility, built in the 1960s, consists of 16 large-capacity aboveground storage tanks with a capacity of 42 million gallons, and is the sole supplier of jet fuel for the Daniel K. Inouye International Airport. Jet fuel is transported to this storage facility via pipelines from refineries located in Kalaeloa (formerly Campbell Industrial Park). The upgrades include new asphalt pavement, spray-on industrial coating on exposed areas, 31 collection inlets, 4 lift stations with sump pumps and an above-ground oil-water separator. The site is owned by the State Department of Transportation, which triggers the preparation of an EA per Chapter 343. Upon DPP acceptance of a Final EA and a FONSI determination, the SMA application can be accepted for processing with decision-making by the Honolulu City Council.

CHAPTER 25, REVISED ORDINANCES OF HONOLULU

Use of the Special Management Area (SMA) is not a trigger under HRS Chapter 343, but major developments in O'ahu's SMA must go through an environmental review process that mirrors the procedural requirements of <u>HRS Chapter 343</u>, pursuant to <u>Revised</u> <u>Ordinances of Honolulu, Chapter 25</u>. Developments being reviewed under Chapter 25 but not Chapter 343 appear here.

Cluster Development at Pohakupuna – Final EA (EISPN)

District(s)	'Ewa
TMK(s)	(1)9-1-028: 040
Permit(s)	Various (see document)
Approving Agency / Accepting Authority	City and County of Honolulu, Department of Planning & Permitting Laura Mo, (808) 768-8025, <u>laura.mo@honolulu.gov</u> 650 South King Street, 7th Floor, Honolulu, HI 96813
Applicant	Jinshi Development Hawaii, Ltd.; 1188 Bishop Street, Unit 2003, Honolulu, HI 96813 (808) 388-3096, c/o consultant (see below)
Consultant	R.M. Towill Corporation; 2024 North King Street, Suite 200, Honolulu, HI 96819-3494 Isaiah Sato, (808) 842-1133, <u>isaiahs@rmtowill.com</u>
Status	30-day public review and comment period starts. Comments are due by October 9, 2023. Please send comments to the approving agency/accepting authority and copy the applicant and the consultant.

Jinshi Development Hawaii, Ltd. proposes to construct a 21-unit residential cluster development comprised of six duplexes, two triplexes, and three single-family units on a 2.74-acre parcel. The proposed dwelling units will include 19 market-priced and two for-rental affordable units. Common amenities will be provided including a pool, pavilion, and picnic areas. A total of 60 parking stalls will be provided including 51 off-street parking stalls for residents and nine stalls for guests. Onsite stormwater will be directed towards vegetated swales that discharge to a stormwater detention vault located beneath the common amenities. The proposed development will be located mauka of the 80-foot shoreline setback and all occupied-units will be located mauka of the 120-foot shoreline setback to minimize risks from coastal and sea level rise hazards. However, the development is nearly entirely within the 3.2-foot scenario of sea level rise, and proposes to grade and fill to raise the development.

The Environmental Notice

TABLE OF CONTENTS

STATEWIDE MAP OF NEW EA/EIS DOCUMENTS AND DETERMINATIONS	2
Hawai'i EAs/EISs	
After-the-Fact Demolition and Reconstruction of Single-Family Residence in Honaunau—Draft EA (AFNSI)	3
Bayfront Highway and Waianuenue Avenue Intersection Improvements—Final EA (FONSI)	3
OʻAHU EAS/EISS	
Board of Water Supply Waiawa 228 Reservoir Facility – Final EA (FONSI)	4
Waialua Mill Camp Restoration – Draft EA (AFNSI)	4
Sand Island Fuel Facility Stormwater System Upgrade Project – Draft EA (AFNSI)	5
Chapter 25, Revised Ordinances of Honolulu	
Cluster Development at Põhakupuna – Final EA (EISPN)	5
LISTS OF EXEMPTION NOTICES	6
COASTAL ZONE MANAGEMENT NOTICES	
Special Management Area (SMA) Minor Permits	6
SHORELINE NOTICES	
Applications for Shoreline Certification	6
Proposed Shoreline Certifications and Rejections	7
NATIONAL HISTORIC PRESERVATION ACT, SECTION 106 CONSULTATION	7
CONSERVATION DISTRICT USE APPLICATIONS	8
Federal Notices	8
GLOSSARY OF TERMS AND DEFINITIONS	9

STATEWIDE MAP OF NEW EA/EIS DOCUMENTS AND DETERMINATIONS Waialua Mill Camp **Board of Water** Supply Waiawa 228 **Reservoir Facility** Sand Island Fuel Facility Stormwater System **Bayfront Highway** and Waianuenue After-the-Fact Demolition of Avenue LEGEND Single-Family Intersection New document count in this issue: 5 total • HRS § 343-5(b) Agency Actions: 2 Residence O - HRS § 343-5(3) Applicant Actions: 3



The Environmental Notice September 8, 2023

Josh Green, M.D., Governor Mary Alice Evans, Interim Director The Environmental Notice provides public notice for projects undergoing environmental review in Hawai'i as mandated under Section 343-3, Hawai'i Revised Statutes, the Environmental Impact Statement Law. Along with publishing Environmental Assessments and Environmental Impact Statements for projects in Hawai'i, The Environmental Notice also includes other items related to the shoreline, coastal zone, and federal activities.





 Portions of the Waialua Sugar Mill Plantation Camp will be restored.
 Photo from Waialua Mill Camp Restoration's draft EA

 235 South Beretania Street, Suite 702
 Honolulu, Hawai'i 96813
 (808) 586-4185
 dbedt.opsd.erp@hawaii.gov
 https://planning.hawaii.gov/erp/



November 15, 2023

VIA EMAIL: c/o Steve Tagawa, stagawa@honolulu.gov

Ms. Dawn Takeuchi Apuna Director City and County of Honolulu Department of Planning and Permitting 650 South King Street, 7th floor Honolulu, HI 96813

Re: Response Letter to Comments on Draft Environmental Assessment for the Proposed Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project

Dear Ms. Apuna:

Thank you for your October 6, 2023 letter concerning the Draft Environmental Assessment for the Hawai'i Fueling Facilities Corporation Stormwater System Upgrade Project. We appreciate the time you spent reviewing the Draft Environmental Assessment and preparing your response.

In the Background section of the Final Environmental Assessment (EA) we will expand upon the original construction of the jet fuel facility, estimate earthwork to be performed, and include a discussion of a tsunami hazard to this facility. A Site-Specific C-EHMP will be implemented for the construction of this project, to address the potential for discovery of hazardous soil. The Final EA will also address consistency of the existing facility and Project with the City plans and policies listed in your letter. A copy of the U.S. Environmental Protection Agency Administrative Order of Consent (Docket No. OPA-331-09-2021-001) will be included as appendix A in the Final EA.

If you have any questions or concerns in the future regarding this project, please contact me at (816) 823-6063 or <u>jjewell@burnsmcd.com</u>.

Sincerely,

Burns & McDonnell Engineering Company, Inc.

Jeremy Jewell Senior Environmental Scientist



APPENDIX <u>EF</u> LETTER TO STATE HISTORIC PRESERVATION DIVISION



120 Main St Suite 300 Irvine, CA 92614 Telephone: +1 (949) 623-4700Fax: +1 (949) 623-4711

www.erm.com

05 June 2023

Alan Downer, Administrator

State Historic Preservation Division Department of Land and Natural Resources 601 Kamokila Boulevard, Suite 555

Kapolei, HI 96707

via: HICRIS (https://shpd.hawaii.gov/hicris)

Subject: State Historic Preservation Review – HRS 6E-42 Review Sand Island Fuel Facility Stormwater System Upgrade 6 Sand Island Access Road, Honolulu Hawai'i Island of Oahu

TMK: 1 20 25020000

Dear Mr. Downer

ERM submits this letter to provide a project summary for State Historic Preservation Division (SHPD) review per Hawaii Revised Statute (HRS) 6E-42 in connection with the Sand Island Fuel Facility Stormwater System Upgrade. The proposed scope of work includes installing asphalt liners and industrial spray coating on lots at the project site. The project site, Hawai'i Fueling Facilities Corporation (HFFC) Sand Island Storage Facility (the "Facility"), is located at 6 Sand Island Access Road, Honolulu, Hawai'i. It is located approximately 200 feet east of Ke'ehi Lagoon, which is connected to Mamala Bay and the Pacific Ocean. The Facility is in close proximity to navigable waters and is entirely within a Special Management Area (SMA).

The Facility is owned by HFFC, organized under the laws of Hawai'i, and operated by Signature Flight Support, LLC (SFSC). The facility is used for receiving, storing, and distributing jet fuel to operations at the Hawai'i International Airport (HNL), located 1.5 miles northwest of the Facility. Jet fuel is received at the facility using an underground 18-inch pipeline from Pier 51A and B (ERM 2021). Approximately 42 million gallons of jet fuel can be stored in the 16 above-ground bulk storage tanks in Lots 2,3, and 3.5. Lot 2 contains seven storage tanks, while lots 3 and 3.5 contain nine storage tanks. The tanks are surrounded by a concrete containment wall, gravel covered berm, six-foot-deep underground slurry wall, and an eight-foot-deep by 600-foot-long trench (ERM 2023). These installations were constructed with the goal of preventing contamination of groundwater by containing jet fuel in the event of a spill.

In January of 2015, a leak in the bottom of tank 2 released 42,000 gallons of jet fuel, which were not completely captured by the existing installations in the primary containment area. The fuel had leaked into the soil and migrated below the underground slurry wall and offsite (ERM 2020). It was



Page 2 of 13

revealed that the Spill Prevention, Control, and Countermeasure (SPCC) plan did not provide an impermeable secondary containment system capable of effectively capturing and containing discharged oil until it is able to be cleaned up.

Under the Administrative Order on Consent, Docket No. OPA-311-09-2021-001, provided by the United States Environmental Protection Agency (EPA), HFFC and SFSC are responsible for enhancing the secondary containment of tanks such that it is sufficiently impervious that any discharge of oil will not escape the containment system until clean-up can occur, and the facility must be constructed to ensure that diked areas are sufficiently impervious to contain discharged oil. As such, HFFC and SFSC plan to install an asphalt liner and industrial spray coating on Lots 2, 3, and 3.5 to fulfill this requirement. Additionally, collection inlets, a storm drainpipe, lift station pumps, an oil-water separator (OWS), and an observation basin will be added to the existing stormwater discharge system. This proposed work will require Special Management Area Permit approval and a Building Permit from the City and County of Honolulu Department of Permitting and Planning, and coverage under the National Pollutant Discharge Elimination System Construction General Permit.

Per Hawaii Administrative Rules (HAR) §13-284-5, ERM offers the following documentation to show that no historic properties are present in the project area, and requests that the SHPD provide a letter of concurrence of No Historic Properties Affected. All maps mentioned in the text below are attached to this document.

A topographic map from 1928 shows the location of the Facility (the red rectangle) to be offshore in the waters of what is now the Ke'ehi Boat Harbor, indicating it is located west of the original shoreline. This area is unlikely to contain cultural resources as it is man-made land that was created using dredged material from the nearby ocean. Additionally, there are five fishing ponds depicted on this 1928 same map with the closest to the Facility being either Auiki Pond or Ananoho Pond. Both of these ponds, however, were filled during World War II and an Army port and warehouse complex was built over. As the Facility is west of these ponds, excavations for the project will not pose a risk to the pond walls if they are still intact.

The Facility is first depicted on land in 1953, suggesting that it is located on land that was created by reclamation projects that enlarged "Sand Island". One of these reclamation projects included the creation of a seaplane channel immediately west of the Facility. Aerial imagery from the period does not depict any permanent structures on the newly created land and the area appears sandy. In contrast, by 1968, the area had been industrialized and a recreational pier as well as storage tanks are immediately obvious in the surrounding area. This trend continues and intensifies up to the modern day with the Facility currently surrounded by paved areas, suggesting the original soil horizon has been thoroughly disturbed and historic-era cultural resources are unlikely to occur. Additionally, a field inspection for the creation of a shipyard immediately west of the Facility in 2006 included a site visit that recorded soils as fill and the surrounding area as thoroughly impacted. Any non-paved soils were recorded as fill with some coral noted. Similarly, the Environmental Impact Statement for Kapalama Container Terminal Project 50 feet east of the Facility, came to a similar conclusion, noting that archaeological studies in the surrounding area have had limited results with major finds located along the pre-contact coastline.

Page 3 of 13

As the Facility is located west of the pre-contact shoreline and currently consists of fill with much of the area covered with pavement, a cultural survey of the area will not provide any additional insight into the surrounding area or potential impacts of the proposed work activities. As such, we are requesting that SHPD concur with the assessment that the project will have no historic properties affected.

Yours sincerely,

Sandra Pentney Principal Consultant, Archaeologist

References

ERM. 2020. Final Environmental Hazard Management Plan. #6 Sand Island Access Road, Honolulu, Hawaii 96819. March 2020.

ERM. 2021. Facility Response Plan Sand Island Fuel Facility. Hawaii Fueling Facilities Corporation Sand Island Fuel Facility.

ERM. 2023. Spill Prevention, Control, and Countermeasure Plan. #6 Sand Island Access Road, Honolulu, Hawaii 96819.




















Preliminary Construction Drawings dated 05/05/21 were attached to the letter submitted to SHPD.

Revised Preliminary Construction Drawings dated 07/05/23 are attached as Appendix A to the Environmental Assessment



ERM HAS OVER 160 OFFICES ACROSS THE FOLLOWING COUNTRIES AND TERRITORIES WORLDWIDE

Argentina	The Netherlands
Australia	New Zealand
Belgium	Peru
Brazil	Poland
Canada	Portugal
China	Puerto Rico
Colombia	Romania
France	Senegal
Germany	Singapore
Ghana	South Africa
Guyana	South Korea
Hong Kong	Spain
India	Switzerland
Indonesia	Taiwan
Ireland	Tanzania
Italy	Thailand
Japan	UAE
Kazakhstan	UK
Kenya	US
Malaysia	Vietnam
Mexico	
Mozambique	

ERM's Honolulu Office

500 Ala Moana Boulevard Suite 7400 Honolulu Hawai'i, 96813

T: 1 808 521 4404 F: 1 808 521 4408

www.erm.com