MAY - 3 2011

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

May 2, 2011

S0507JR

CERTIFIED MAIL NO. 7010 2780 0000 4780 7425
RETURN RECEIPT REQUESTED

Mr. Joseph Whelan, District Manager
Waste Management of Hawaii, Inc.
92-460 Farrington Highway
Kapolei, Hawaii 96707

CERTIFIED MAIL NO. 7010 2780 0000 4780 7418
RETURN RECEIPT REQUESTED

Mr. Timothy Steinberger, Director
Department of Environmental Services
City and County of Honolulu
1000 Uluohia Street
Kapolei, Hawaii 96707

Dear Messrs. Whelan and Steinberger:

SUBJECT: Rainstorm Events, MSW Cell E-6 Damage Repairs, and Construction of the Western Drainage System Inspection
Waimanalo Gulch Sanitary Landfill (WGLF)

Since December 23, 2010 to March 30, 2011, representatives of the Hawaii Department of Health (DOH), Solid Waste Section (SWS) conducted landfill site visits to observe the damages, repairs and status of the on-going cleanup at the landfill caused by rainstorms at WGLF and in accordance with Hawaii Revised Statutes (HRS) Section 342H-6. The purpose of the inspection was to determine compliance with HRS, Chapter 342H and Hawaii Administrative Rules (HAR), Title 11, Chapter 58.1-15.

A copy of the inspection reports and photographs are enclosed, which identify the inspected areas and describe the conditions of the facility at the time of the site visits and inspections. Any omissions shall not be construed as a determination of compliance with any applicable laws.

EXHIBIT K97 at 1

Should you have any questions regarding this letter or the inspection report, please contact Jose Ruiz of our Solid Waste Section at (808) 586-4226.

Sincerely,

STEVEN Y.K. CHANG, P.E., CHIEF
Solid and Hazardous Waste Branch

Enclosures: Inspection Reports
Photographs

DEPARTMENT OF HEALTH
SOLID AND HAZARDOUS WASTE BRANCH
SOLID WASTE SECTION
919 ALA MOANA BOULEVARD, ROOM 212
HONOLULU, HAWAII 96814
TEL. NO. 586-4226 FAX NO. 586-7509

INSPECTION REPORT

FACILITY NAME:	Waimanalo Gulch Sanitary Landfill (WGLF)
INSPECTION DATE:	December 23, 28, 30, 2010, and January 6, 10, 13, 18 and 20, 2011
PERMIT NUMBER:	LF-0182-09
ISSUE DATE:	June 4, 2010
EXPIRATION DATE:	June 3, 2015
MAILING ADDRESS:	Joseph Whelan Operations Manager Waste Management of Hawaii, Inc. 92-460 Farrington Highway Kapolei, Hawaii 96707
LOCATION ADDRESS:	92-460 Farrington Highway Kapolei, Hawaii 96707
PERSONS CONTACTED:	Joseph Whelan, Operations Manager (OM) Justin Lottig, Market Area Environmental Protection Manager (EPM), Waste Management of Hawaii Inc. (WMH) Jesse Frey, Market Engineer, WMH
TELEPHONE NO.:	808-668-2985, ext 16
INSPECTOR AND TITLE:	Jose Ruiz, Inspector, Thomas Miyashiro, Engineer
REPORT DATE:	January 11, 2011

REASON FOR INSPECTION:

( )	ROUTINE	( )	COMPLIANCE SCHEDULE
( )	VARIANCE CONDITION	( )	PERMIT REQUIREMENT
( )	COMPLAINT EXPLAIN:	(x)	OTHER

Background: On December 19, December 27, 2010 and January 13, 2011 WGLF experienced rainstorms events of 5 inches, 2.25 inches in 2.5 hours, and about 11 inches of rain, based on information provided by WMH in their incident reports. On December 20, 2010, Justin Lottig, Market Area EPM for WMH called Mr. Tom Miyashiro, Solid Waste Engineer for the Solid Waste Section (SWS) and verbally notified SWS of the rain event. Based on an e-mail dated December 21, 2010, which stated *"The biggest issue that resulted from this rain is that cell E6 had a large amount of water ponding on top of it as a result of cell construction sequencing designed to enable us to finish the West Berm in the next few months. The 36-inch HDPE*

temporary storm water diversion pipe that captures water up canyon became plugged and caused the up canyon water to flow into cell E6. We removed the generator and control panel that were operating the sump pump to..." The volume of precipitation and conditions described by WMH prompted SWS to conduct the initial December 23, 2010 site visit and assess the condition of the landfill after the rainstorm event.

Any deficiencies, which may be noted in this inspection report, are not necessarily inclusive and any omissions shall not be construed as a determination of compliance with any applicable laws.

OBSERVATIONS / FINDINGS:
On December 23, 2010, SWS inspector Jose Ruiz and SWS Engineer, Thomas Miyashiro, visited WGLF and met with Justin Lottig (EPM-WM) to observe the damage caused by the rainstorm and current landfill conditions. SWS' observations were limited to MSW Cell E-6, and the sedimentation basin located to the left of the main entrance to the landfill.

<u>December 23, 2010 conditions:</u>

From the main landfill access road leading to MSW Cell E-6, SWS inspector noted erosion rills along both sides of road. Some MSW cells were observed with exposed waste, and road conditions were muddy.

MSW Cell E-6 was noted with two large water ponds and exposed trash from the recent December 19, 2010 storm (see photograph 6).

The leachate sump riser for MSW Cell E-6 was covered with water, trash, and soil. Justin Lottig (EPM, WMH) explained to the SWS inspector and engineer that the control panels for the E-6 leachate sump were removed due to high water levels and to prevent damage to the system. He further explained that the 48-inch diameter drain inlet for the 36-inch subsurface drainage line located in Cell E-7 to redirect the storm water beneath Cell E-6 was plugged with debris, soil, and rocks from the storm. The storm water overtopped the berm located between MSW Cell E-6 and Cell E-7. Observations of this area could not be conducted due to muddy conditions.

The SWS inspector and engineer observed Goodfellow Brothers Inc. (GBI) workers pumping liquid from the upper pond to the lower pond and into the Hobas storm water pipe located west of Cell E-6 (see photographs 1 & 4). The Hobas pipe leads to the sedimentation basin. Justin Lottig explained that they were pumping water from the top of the intermediate cover. The SWS inspector told Justin Lottig that the liquid being pumped from the ponds was considered leachate because it had come in contact with trash and trash was visible on top of the water and western slope of the cell. He said that approximately 20 to 25 feet of liquid had been pumped from the Cell E-6 ponds to the sedimentation basin (see photograph 4). The demarcation on the western slope of the cell showed the height of liquid that had been pumped and it also showed trash on the side slope of the cell (see photographs 3, 4, & 5).

At the SWS inspector request, leachate sumps (4-B and E-1) were checked for leachate levels. However, leachate sump riser in the ash cell was out of commission because the contractor planned to replace the corroded sump riser internal steel pipes. Justin Lottig informed SWS inspector that the steel pipes were removed the day before for replacement due to corrosion and the inspector observed the corroded pipes at the side of the ash sump riser. Justin Lottig

informed the SWS inspector that the contractor plans to have the sump riser steel pipes replaced that afternoon.

The SWS inspector notified Clean Water Branch (Matthew Kurano) that afternoon on the observations made at the landfill, where liquid was being pumped from Cell E-6 into the storm drain system and into the sedimentation basin, and SWS inspector considered the liquid to be leachate due to MSW floating on the ponded water and western side slope of the cell.

The SWS inspector and engineer observed the sedimentation basin located at the bottom of the landfill and adjacent to the main office with approximately two feet of storm water mixed with soil (see photographs 7 & 8). The top of the vertical drainage pipe inside the sedimentation basin was observed with debris and a trash bag on top of the screen.

December 28, 2010 conditions:

On December 27, 2010 a second storm hit the Island of Oahu and in a 1-hour period from 6:36 to 7:36 PM, the rain gage at Palehua station located slightly northwest and above WGLF showed a rainfall sum of 7.16 inches and from 5:36 PM to 9:36 PM a total rainfall sum of 11.5 inches. On December 28, 2010, SWS inspector and engineer revisited the site to observe the extent of damage caused by the storm. At the site, SWS inspector and engineer met with Jesse Frey, WMH Engineer, and Justin Lottig, WMH, EPM, who in turn showed the SWS inspector and engineer the landfill conditions caused by the December 27 rainstorm. Observations at WGSL were limited to MSW Cell E-6 and the sedimentation basin. The temporary drainage system inlet in cell E-7 was muddy and inaccessible.

From the landfill access road leading to MSW Cell E-6, cover erosion on some of the cells were observed. Concrete swales along the main road, where the soil had been washed out were observed with exposed trash visible on some of the cells and at the top of the landfill. Cell E-6 was almost completely covered with water (see photograph 3), and the upper portion of the cell had exposed MSW (see photograph 1 & 2). At the bottom of Cell E-6, by the leachate sump, a large volume of trash collected at the edges of the south and west parts of the cell (see photographs 3). WMH trucks were observed placing soil at the southwest end of the cell for the purpose of building a berm to prevent discharge of water to the neighboring property if another storm comes (see photograph 4). No pumping of water for Cell E-6 was observed during this visit.

The sedimentation basin was observed filled with storm water to capacity and it seems that the storm water had topped over the overflow spillway area (see photograph 5). The drainage pipes at the bottom of overflow spillway were observed discharging water from the basin and leading to the culvert beneath Farrington Highway (see photograph 6).

December 30, 2010 conditions:

The SWS inspector and engineer noted that landfill conditions have improved some since December 28, 2010 inspection. The upper portion of Cell E-6, where exposed waste from the last storm was observed had been covered with soil. The upper pond in Cell E-6 remained full with water (see photograph 1), and the lower pond by the leachate sump had a reduced water level by about 10 to 15 feet (see photographs 2 & 3). A large volume of accumulated solid waste was visible at the southern edge of the pond and the top of berm area on the west side slope of the cell (see photograph 3 & 4). Jesse Frey, WMH engineer, was advised to submit an incident report for the second storm and to provide an assessment of the damage caused by the

storm according to facility's permit.

The SWS inspector observed the water level in the sedimentation basin to be approximately two feet below the water level observed the previous day (see photograph 5).

January 6, 2010 conditions:

Joe Whelan, WMH, Operations Manager, gave a presentation of the conditions from previous storms and future plans for the landfill to DOH's Deputy Director, Gary Gill, SHWB Chief, Steven Chang, CWB, and SWS inspector and engineer. Pacific Commercial Services (PCS) has pumped a total of approximately 100,000 gallons of contaminated storm water from MSW Cell E-6, lower pond, and transported to Waianae WWTP. The water level within the lower pond was approximately 16 feet above the leachate riser. Trash was visible on the west slope where the water had been pumped (see photograph 2). The upper pond in MSW Cell E-6 was partially under water, as the water level receded (see photograph 1). WMH trucks were observed placing soil cover on MSW Cell E-6 upper pond and preparing to use the area to handle MSW within the next few days. WMH continues to increase the berm height by adding soil material at the lower portion of MSW Cell E-6 as a rainstorm was predicted within the next few days.

According to Mr. Whelan, the unlined area of MSW Cell E-7 (up-canyon), where the temporary 48-inch drain inlet for the 36-inch subsurface drainage line is located, has been cleared of debris, however, it was not certain if the vertical pipe has been cleared of silt and rocks (see photograph 5). The construction drawing for this temporary storm water drain inlet calls for rock riprap around the 48-inch drain inlet grating with a minimum of 8-inch diameter rock at a 2H:1V slope. SWS inspector and engineer did not previously inspect the area for compliance with construction plans. According to the construction plan, the 48-inch diameter inlet grating for the 36-inch subsurface drainage line is required to be elevated 3-feet above base grade.

The temporary drainage diversion berm downstream of the 48-inch drain inlet grating was erected at the time of inspection with compacted soil to divert rainwater from getting into the MSW Cell E-6 (see photograph 4). At the time of inspection, the inspector observed that the diversion berm was not as specified on the construction drawings, which requires that the down stream face of the berm be armored with 24-inch diameter rock over a sacrificial geomembrane.

January 10, 2011 conditions:

The SWS inspector and engineer re-visited the site to observe MSW Cell E-6 conditions and noted PCS contractor trucks pumping liquid from the lower pond. According to Justin Lottig of WMH, the liquid was being transported to Waianae WWTP for disposal (see photograph 1). The ponded water in the southern-most lower pond of E-6 is covering areas south of and outside the boundary of the lined cell. A large amount of trash and other types of debris was noted on the slope of the cell between the lower and upper ponded areas (see photograph 2). Bubbling along the eastern edges of the lower ponded area was observed, which gives an indication that landfill gas was escaping from the cell (see photograph 5). The liner on the upper east portion of Cell E-6 was being exposed for reconstruction (see photograph 3); and an area to the west with exposed waste was being covered with soil (see photograph 6). The SWS inspector also observed the northwestern area of Cell E-6, near the ponded water being covered with soil by WMH trucks.

The existing upper western lined area of Cell E-6 was damaged by boulders being pushed by

heavy equipment operators working on the Western Drainage channel above this area (see photograph 4). The SWS inspector and engineer observed the contractor's heavy equipment pushing large boulders and rocks from bench above the cell, some of which were landing on the western edge of the lined area of Cell E-6. GBI was also observed constructing a road on the east side of Cell E-6 and adjacent to Cell E-5 to facilitate the movement of construction equipment to the up-canyon work area (see photograph 3).

The sedimentation basin was observed with storm water, but no pumping of liquid was observed due to WMH concentrating in getting MSW Cell E-6 ready for MSW acceptance.

The temporary drainage system in Cell E-7 was not observed during this visit.

January 13, 2011 conditions:

On the evening of January 12 and the early morning of January 13, 2011, heavy rains impacted the site. On January 12, 2011, WMH stated that the landfill received about 11 inches of rain. The Palehua weather station recorded 11.8 inches of rain in a 24-hour period.

SWS inspector and engineer visited the site on January 13, 2011 at 12 noon. The sedimentation basin was observed entirely full with water (see photograph 1) and the top of the sedimentation basin overflow spillway and down slope area was noted with a large amount of trash (see photographs 2 & 3). Trash was observed entering the highway culvert and exiting the outfall pipes by the Cove (see photograph 7).

From the sedimentation basin overflow spillway, the SWS inspector observed the concrete channel with a good flow of storm water flowing down to the sedimentation basin without any visible trash and appears to be storm water run-on from up canyon (see photograph 4).

Cell E-6 was completely inundated with water to a level just below the top of the temporary berm constructed at the south end of MSW Cell E-6 to prevent water from flooding Kahe Power Plant. The large volume of storm water ponding was caused by run-on from up canyon. According to WMH, the temporary 48-inch drain inlet for the 36-inch subsurface drainage line located above MSW Cell E-6 was plugged with debris and the Western surface drainage system has not been completed. Jesse Frey was asked on the condition of the 36-inch drainage pipe above MSW Cell E-6 and he stated that the drainage pipe inlet grating must be covered with at least eight (8) foot of soil.

It appears that the Hobas drainage manhole southwest of the cell was open and the water from the Cell along with MSW flowed into the Hobas pipe manhole, down to the sedimentation basin, topped over the sedimentation basin, and into the outfall pipes leading to the ocean.

The area below the temporary berm at the south end of Cell E-6 was observed with ponded water and the water appeared to be seeping from Cell E-6. No trash was observed on the ponded water in this area.

The inspector and engineer observed an area from the western drainage system where rainwater poured down like a waterfall and rocks and boulders were observed on top of the western lined area of Cell E-6 (see photograph 6).

On January 13, 2011, WMH ceased accepting MSW from the public and the City until further notice.

January 18, 2011 conditions:

SWS inspector and engineer met with Jesse Frey and Justin Lottig of WMH. They informed SWS inspector and engineer that WMH ceased discharging water from the sedimentation basin to the outfall on Sunday, January 16, 2011. They also stated that EPA inspected the landfill with Stuart Yamada, Steven Chang, and Gary Gill. Over the weekend, medical waste was discovered along the beaches at Barbers Point and Koolina. WMH was directed by EPA to have all the water pumped from Cell E-6 and transport the wastewater to Waianae WWTP. EPA also directed WMH to have the storm water connection (Hobas pipe) of the western drainage system completed in two weeks.

The upper east and west edge of liner in Cell E-6 was damage by the rainstorms and the contractor was observed exposing the eastern portion of the liner to determine the extent of the damage (see photographs 7 & 8).

According to Mr. Frey, the City Wastewater Management is utilizing a total of 20 vacuum trucks of various sizes (2,000, 3,000 gallons and a larger truck) to pump contaminated storm water from Cell E-6 and transport the contaminated water to WWTPs. In two days, the C&C had pumped 400,000-gallons of water from Cell E-6 and they are continuing to pump more water from Cell E-6 (see photographs 3, 4, and 6). WMH ceased accepting MSW at the landfill until further notice.

According to Mr. Frey, the area with the sub-drain inlet grating for the underground 36-inch storm water line located in Cell E-7, has been cleared of debris, however, due to heavy equipment working in the area no visual observation was made of this area.

The storm water level at the sedimentation basin has decreased by approximately two feet since the last inspections and no storm water was observed discharging from the outflow pipes under the overflow spillway (see photographs 1 & 2).

January 20, 2011:

SWS inspector and engineer, and Clean Water Branch personnel (Mike Tsuji, Matthew Kurano, and Jamie Tanimoto) met with Joe Whelan, Jesse Frey and Justin Lottig of WMH to observe the construction of the Western surface drainage system. According to WMH, the contractor plans to pour concrete for the on-going construction of the weir and walls of the Western surface drainage system and the SWS inspector and engineer, observed the forms for the Western surface drainage system and weir walls being erected (see photographs 3 & 4).

The contractor for WMH has cleared E-7 Cell and the inlet grating to the 36-inch underground drain of mud and debris. The system appeared to be constructed according to design specifications (see photograph 6).

SWS inspector observed a water pump at the lower end of the sedimentation basin (see photograph 1) and WMH was questioned on the purpose of the pump and where WMH was disposing of the water. Justin Lottig said that the basin water was been used as dust control for

the roads and workface area. He also mentioned that EPA OSC gave their approval for the use of water as dust control and the inspector reminded him that the water should only be used at the workface area and that the inspector was not aware that the sedimentation basin water could be used for dust control. Joe Whelan made a call to EPA OSC and discussed the issue on the use of the contaminated storm water and the use of the water was halted until further notice. No discharge of liquids were observed for the sedimentation basin outfall (see photograph 2).

The CWB has asked WMH for clarification on whether or not the manhole to the Hobas pipe adjacent to the leachate riser in MSW Cell E-6 was left open during the last storm and at first, Jesse Frey said that it was not open and then Joe Whelan said that it was open. Mr. Whelan also said that he was aware that solid waste material was being discharged from the sedimentation basin due to the Hobas manhole pipe being open and underwater for a couple of feet. From previous photos taken a few days earlier and from seeing the volume of solid waste accumulated at the end of the cell it seems that a large volume of solid waste could have been washed down the Hobas manhole pipe into the sedimentation basin.

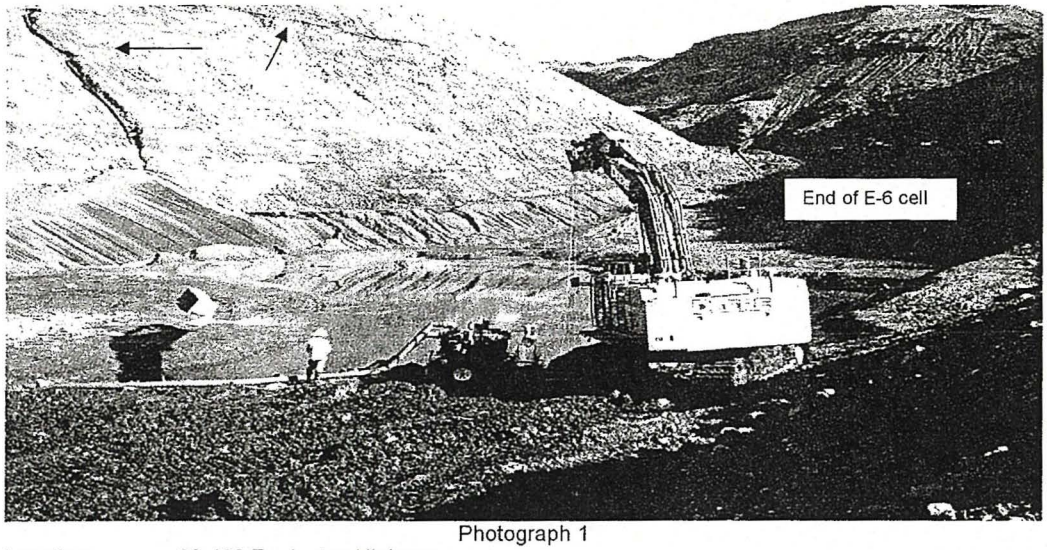
The C&C and PCS continue to pump contaminated storm water from the ponds and transport the wastewater to Waianae WWTP and/or other WWTPs within the island (see photograph 7).

GBI was observed utilizing an excavator on the northeastern corner of MSW Cells E-4/E-6 to determine the extent of liner damage caused by rainstorm (see photograph 8).

The immediate area of the Hobas pipe manhole shows debris and solid waste high-water line approximately two feet above the manhole (see photograph 9). In addition, adjacent to the Hobas pipe, the inspectors observed a 36-inch pipe buried under the temporary soil berm (see photograph 10).

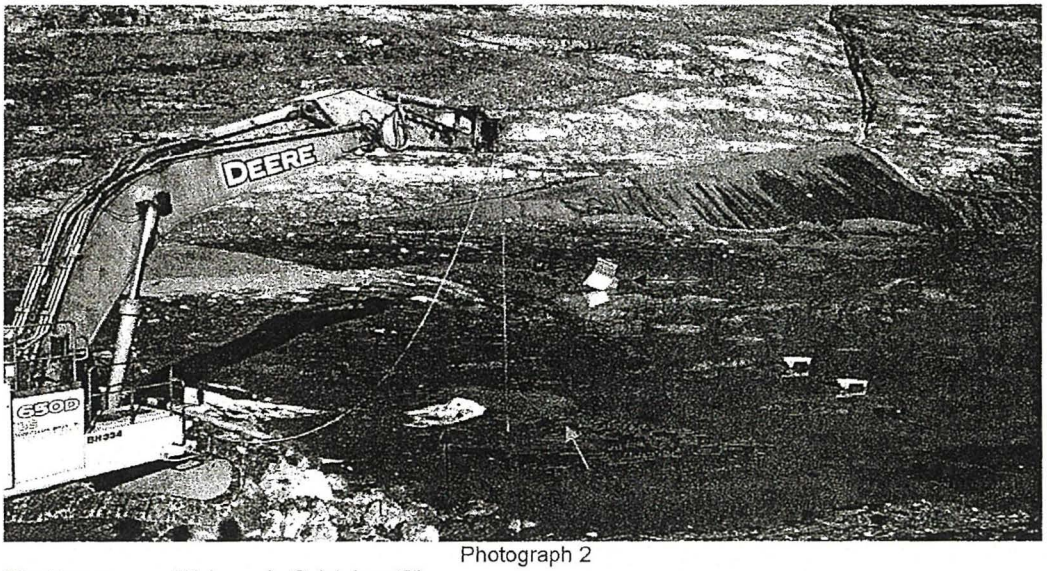
The landfill ceased accepting MSW since January 13, 2011, with the exception of sewage sludge. They received 58 tons of sludge from Honouliuli WWTP and other treatment plants on January 19, 2011.

LIST OF ATTACHMENTS: Photographs



Photograph 1

Location: 92-460 Farrington Highway
Date taken: December 23, 2010
Photographer: JRuiz
Description: Northwestern view of MSW Cell E-6 filled with contaminated storm water from recent rainstorm and contractor pumping the liquid into the southern end of the same cell within the leachate sump area. The red line indicates the north end of Cell E-6, the blue line arrow indicates up canyon area of the landfill and the black arrows indicate the recently installed drainage system for storm water run-on under construction.

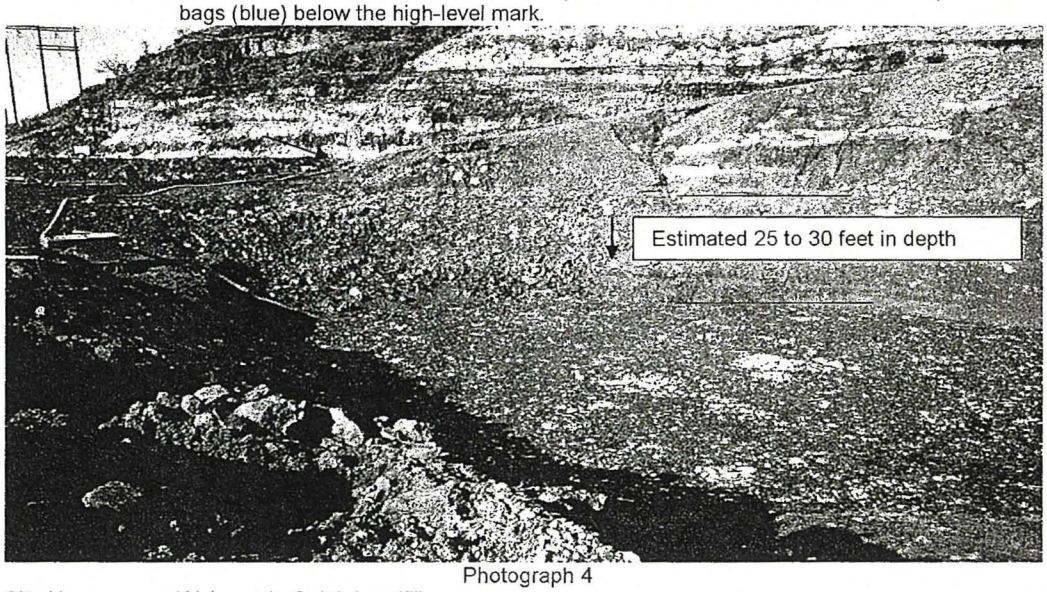


Photograph 2

Site Name: Waimanalo Gulch Landfill
Location: 92-460 Farrington Highway
Date taken: December 23, 2010
Photographer: JRuiz
Description: Western view of MSW Cell E-6 with submerged tarpomatic machine and tarp cover used for alternative daily cover (red arrows), a porta-potty on its side (black arrow), and a green hose (green arrow) pumping contaminated storm water into the southern portion of cell E-6.

Photograph 3

Site Name: Waimanalo Gulch Landfill
Location: 92-460 Farrington Highway
Date taken: December 23, 2010
Photographer: JRuiz
Description: High-level mark from contaminated storm water on the western side of cell E-6 (red arrow). The high-level mark was estimated at 25 to 30 feet from the top level of the contaminated storm water. The side slope of the cell also shows trash and hospital waste bags (blue) below the high-level mark.

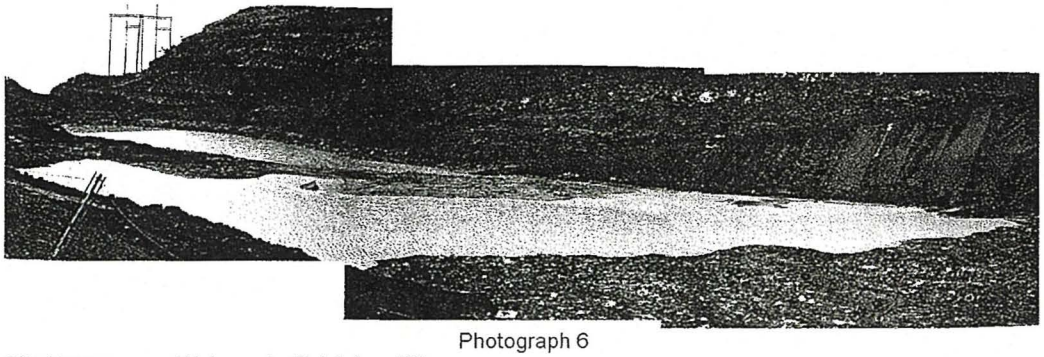


Photograph 4

Site Name: Waimanalo Gulch Landfill
Location: 92-460 Farrington Highway
Date taken: December 23, 2010
Photographer: JRuiz
Description: View of the southwest end of MSW Cell E-6 filled with trash and contaminated storm water. The western side slope shows high-level mark. The contaminated storm water-mark was pumped and discharged into the Hobas storm water pipe (blue arrow), which leads to the siltation basin.

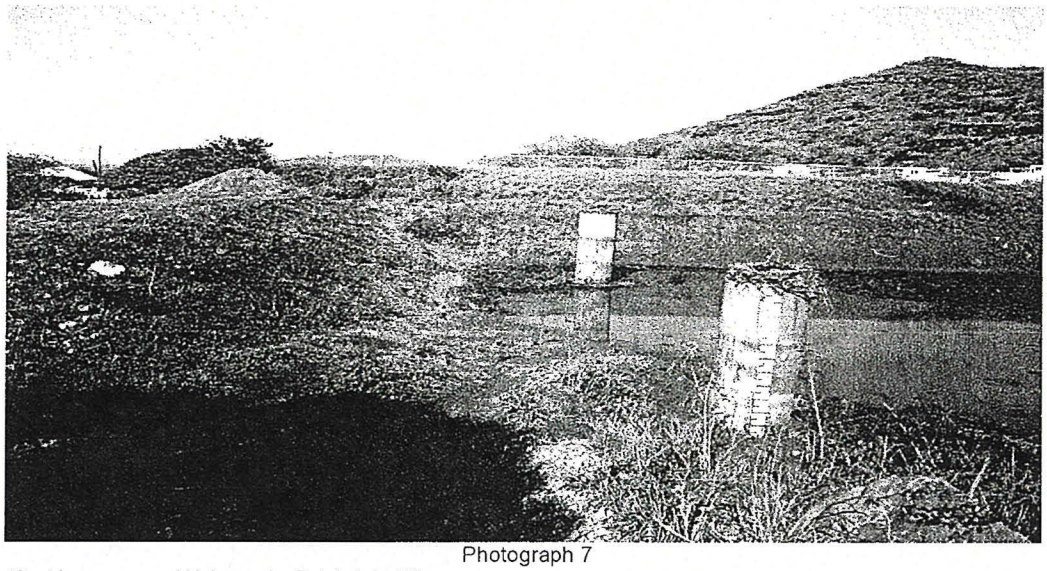
Photograph 5

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date taken:	December 23, 2010
Photographer:	JRuiz
Description:	View of MSW Cell E-6 facing west filled with soil, trash, contaminated storm water caused by the December rainstorm. The cell side slope shows high-water demarcation line (upper red lines) in relation to current water level with floating trash (lower red line)



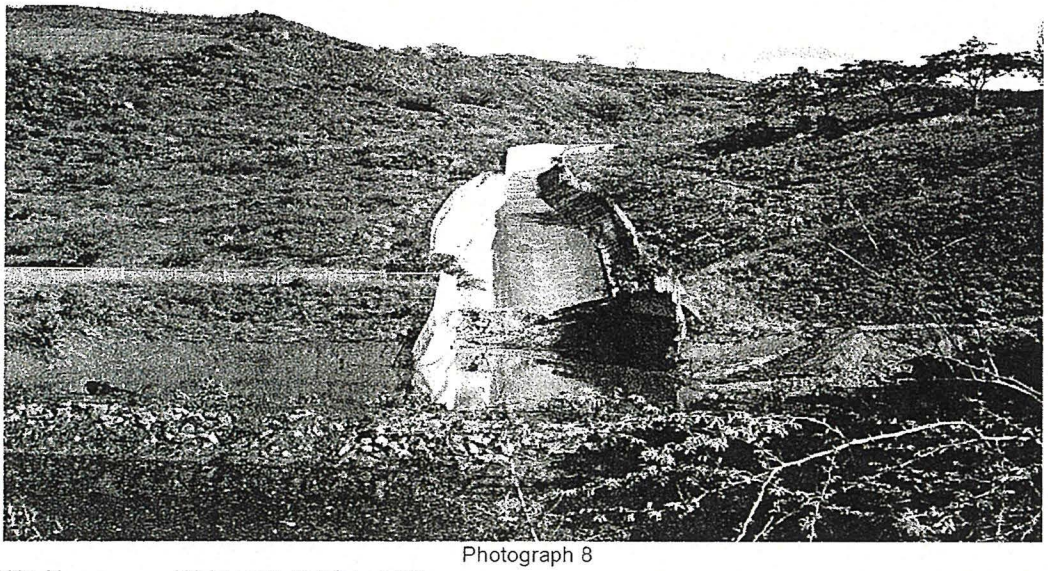
Photograph 6

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date taken:	December 23, 2010
Photographer:	JRuiz
Description:	Panoramic southwestern view of MSW Cell E-6 filled with contaminated storm water and exposed trash on the foreground.



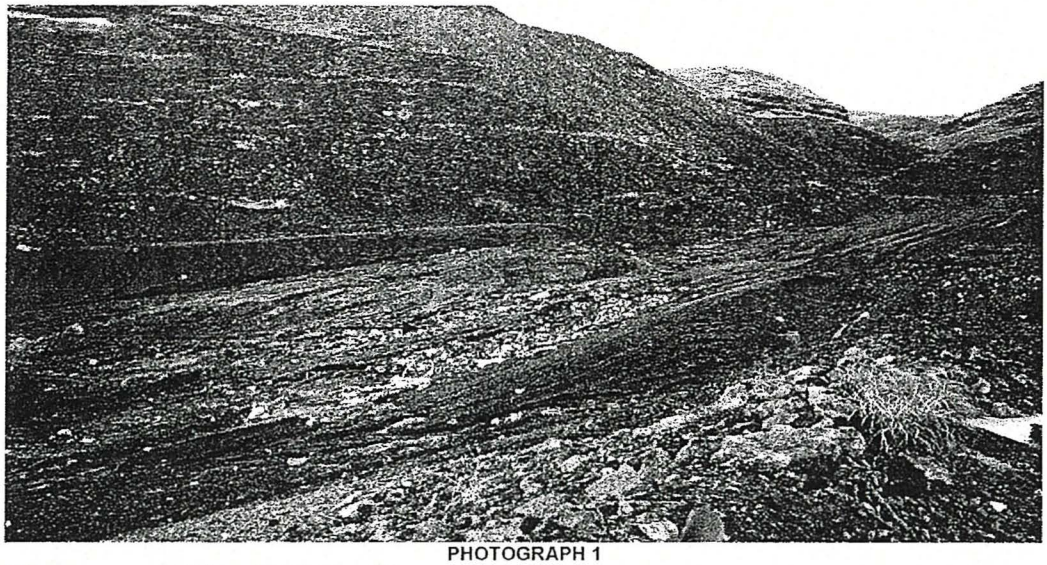
Photograph 7

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date taken:	December 23, 2010
Photographer:	JRuiz
Description:	Western view of the sedimentation basin at the southern end of the landfill property with debris visible at the top of the vertical drainage pipes.



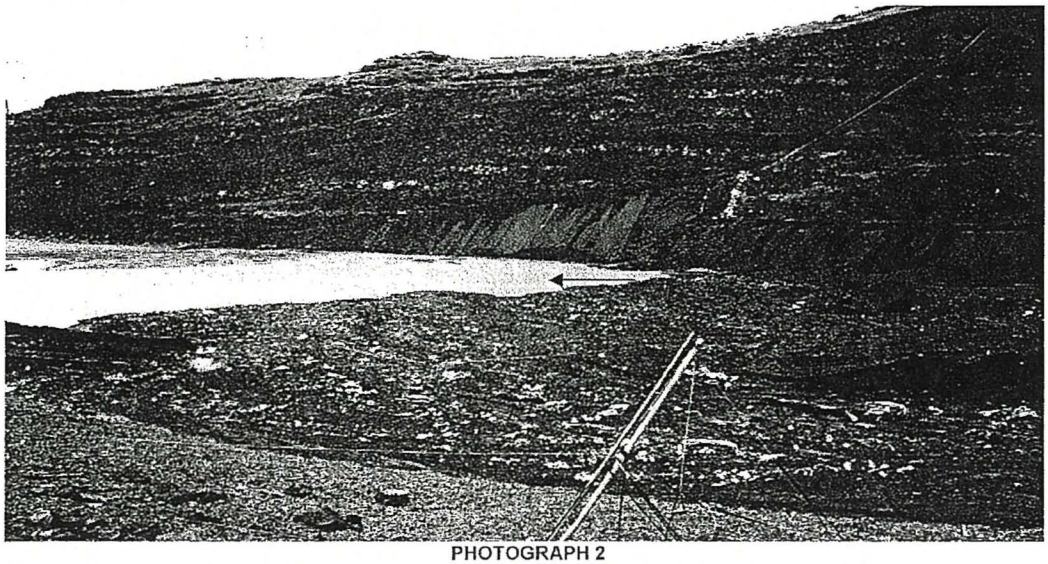
Photograph 8

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date taken:	December 23, 2010
Photographer:	JRuiz
Description:	Northwestern view of the concrete surface water channel and sedimentation basin located on the southwestern area of the landfill property.



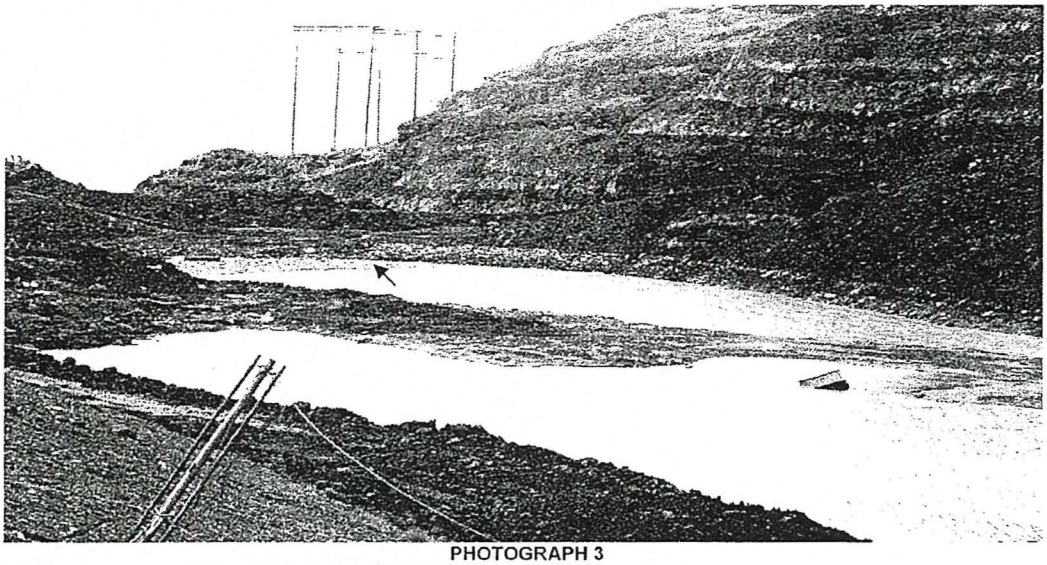
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 28, 2010
Photographer: JRuiz
Description: Facing northwest, view of northern side of MSW Cell E-6 washed out by rainstorms and exposed waste (red arrow)



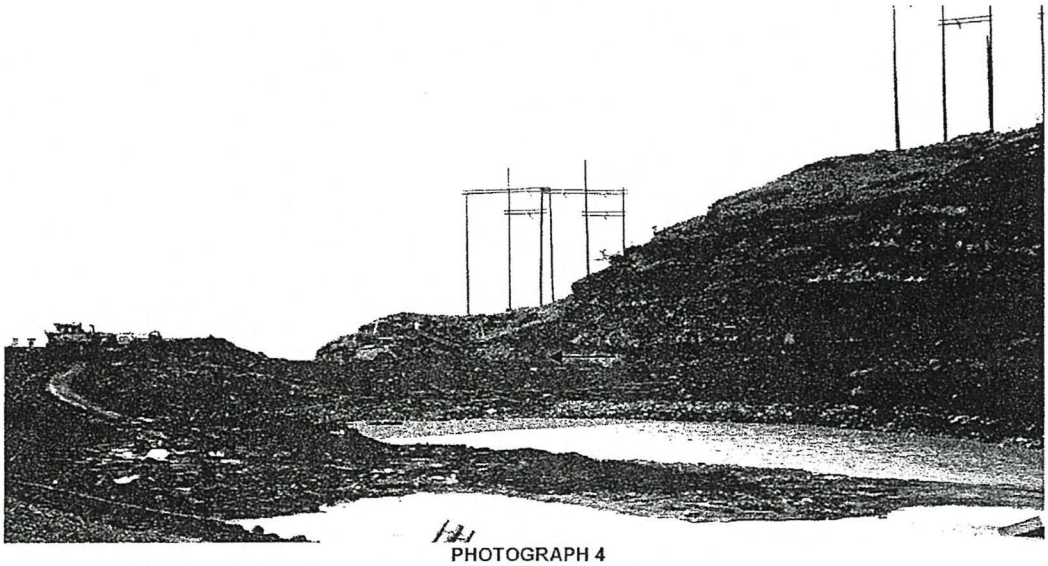
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 28, 2010
Photographer: JRuiz
Description: Facing southwest, view of upper part of MSW Cell E-6 with exposed waste and the upper pond (red arrow) within the cell.



PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 28, 2010
Photographer: JRuiz
Description: Southwestern view of the lower and upper ponds within Cell E-6 with a large amount of floating solid waste accumulated at the lower end of the cell (blue arrow).

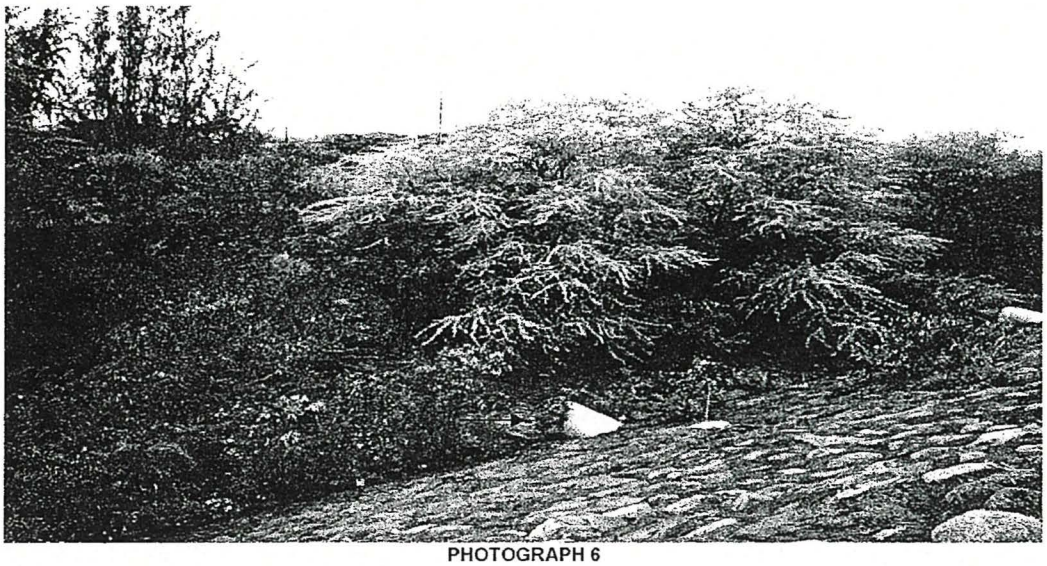


PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 28, 2010
Photographer: JRuiz
Description: WMH staff/contractors placing soil at the southern, exterior end of Cell E-6 (blue arrow) to raise the berm height.

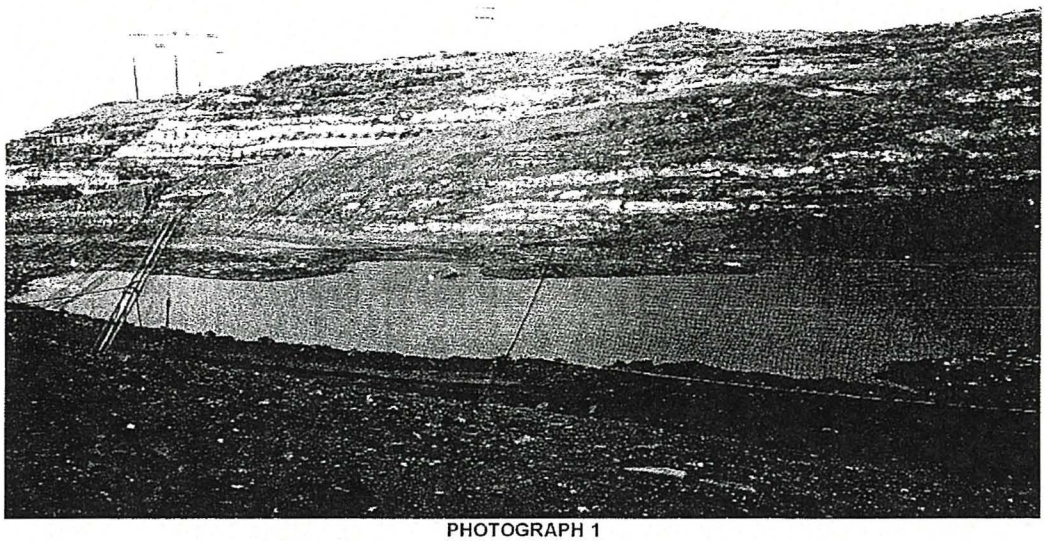
PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 28, 2010
Photographer: JRuiz
Description: Sedimentation basin full of water with debris from upper landfill area. Debris observed collected on the vertical drainage pipes (blue arrows).



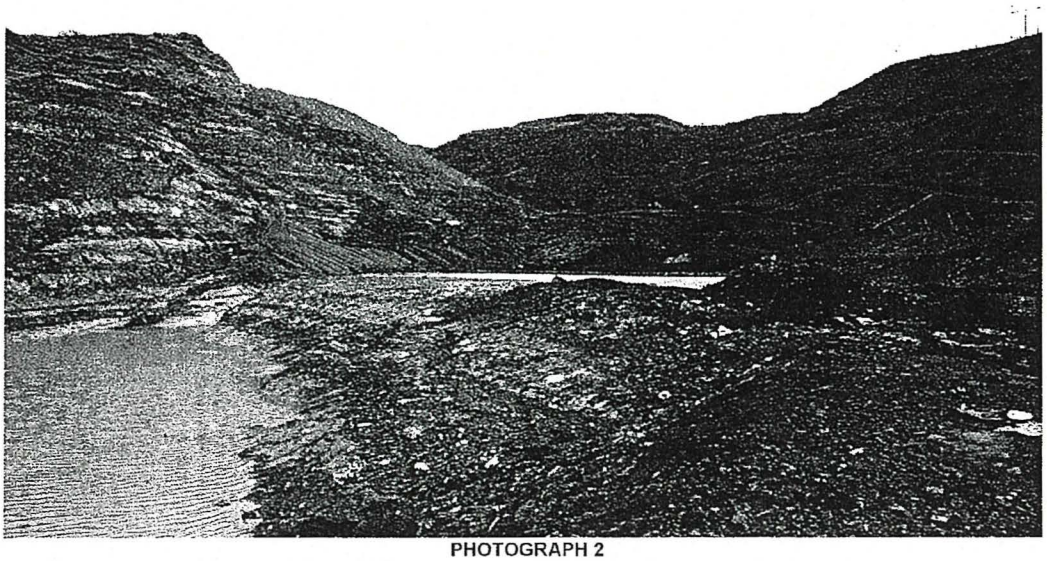
PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 28, 2010
Photographer: JRuiz
Description: Water flowing from discharge pipes (blue arrows) at the bottom of the sedimentation basin to the culvert near Farrington Highway.



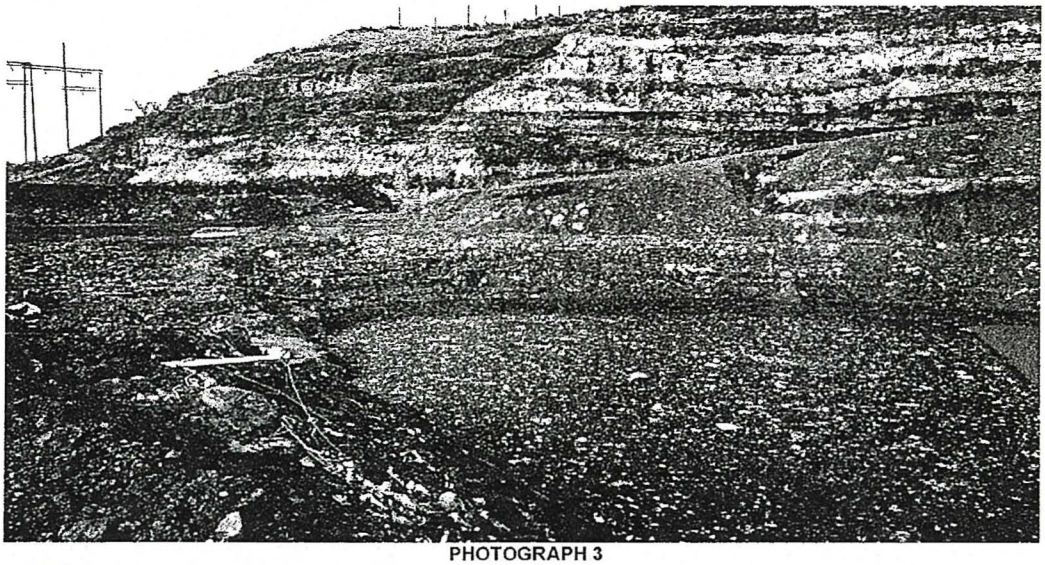
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 30, 2010
Photographer: JRuiz
Description: Western view of MSW Cell E-6 inundated with water run-on from up canyon.



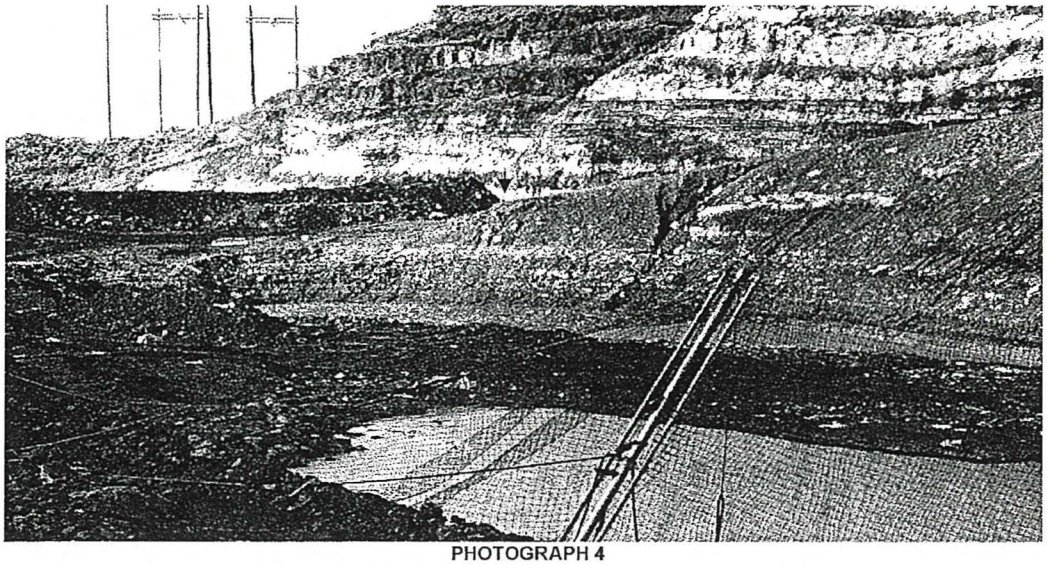
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 30, 2010
Photographer: JRuiz
Description: Northwestern view of MSW Cell E-6 with the lower and upper ponds and exposed solid waste in the middle.



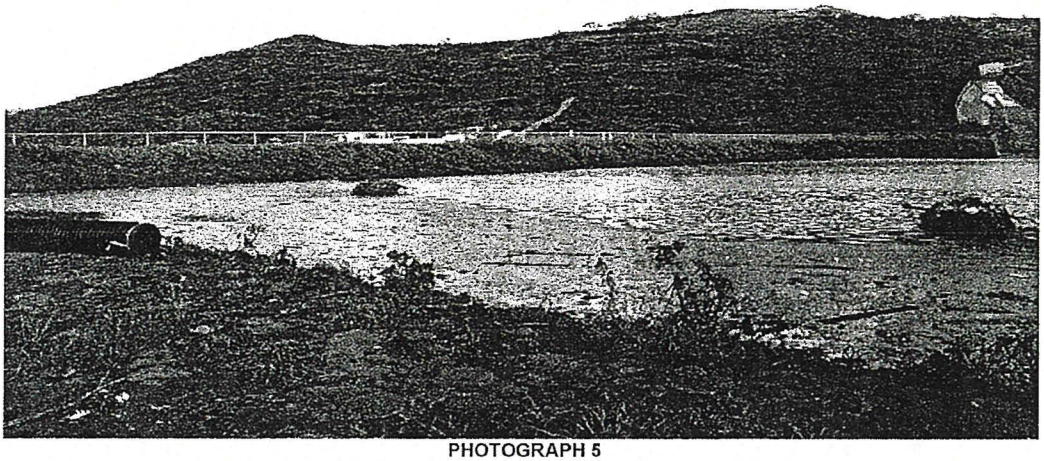
PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 30, 2010
Photographer: JRuiz
Description: Western view of the lower pond with accumulated floating solid waste from the previous storms. The high-level demarcation line with trash can be seen on the western side slope of Cell E-6.



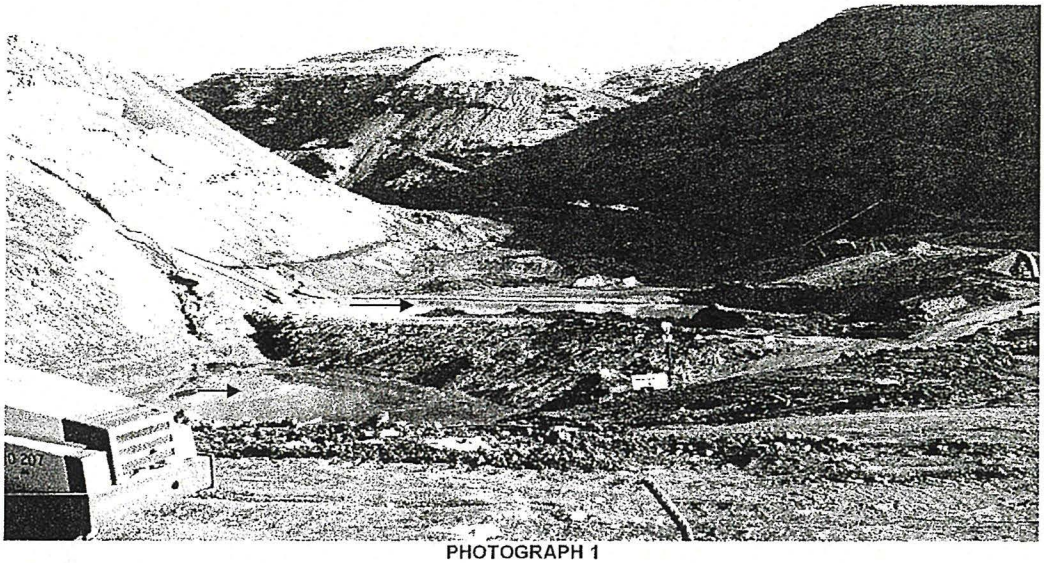
PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: December 30, 2010
Photographer: JRuiz
Description: Southern end of MSW Cell E-6 with accumulated trash and water. In the background is the recently constructed berm (blue arrow) and the Hobas manhole (red arrow) that leads to storm water system.



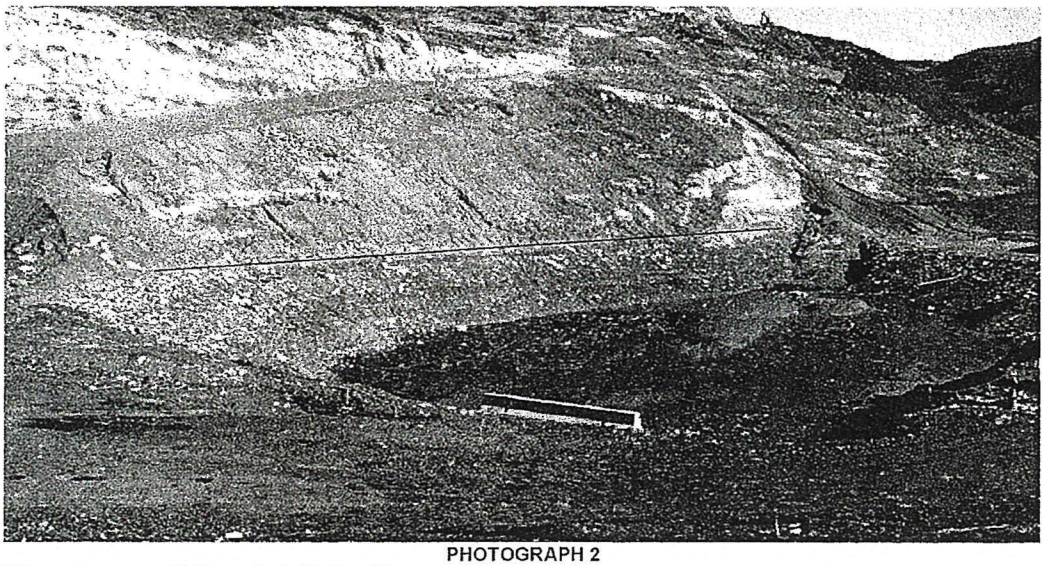
PHOTOGRAPH 5

Site name:	Waimanalo Gulch Landfill
Location:	94-460 Farrington Highway
Date taken:	December 30, 2010
Photographer:	JRuiz
Description:	Sedimentation basin filled with rainwater, debris and mud from the recent storm. Debris observed at the top of the vertical drain pipe.



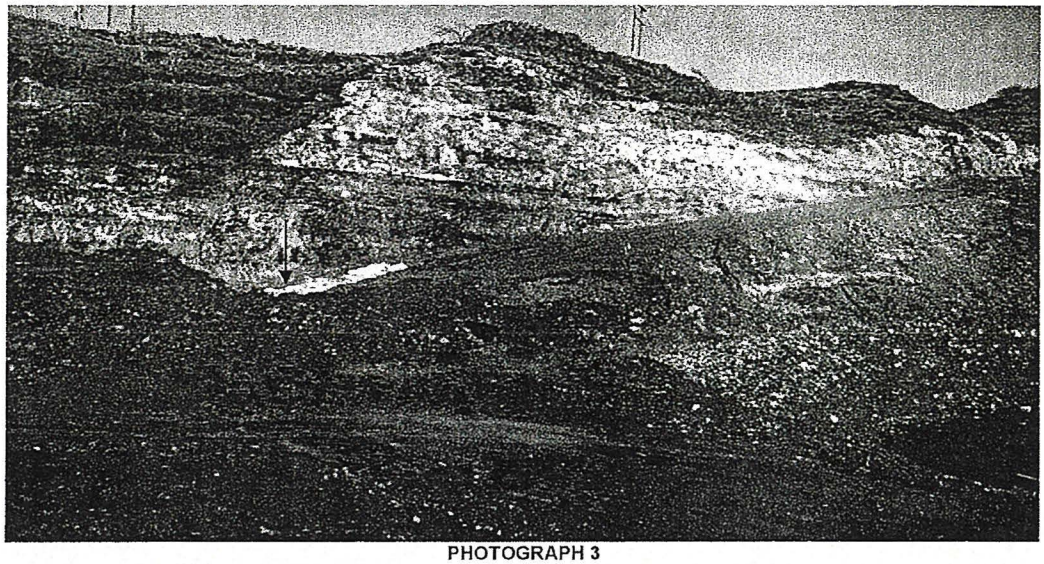
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 6, 2011
Photographer: JRuiz
Description: Northern view from the top of the recently constructed berm, the conditions of the entire MSW Cell E-6 with two ponds, lower (red arrow) and upper (blue arrow)



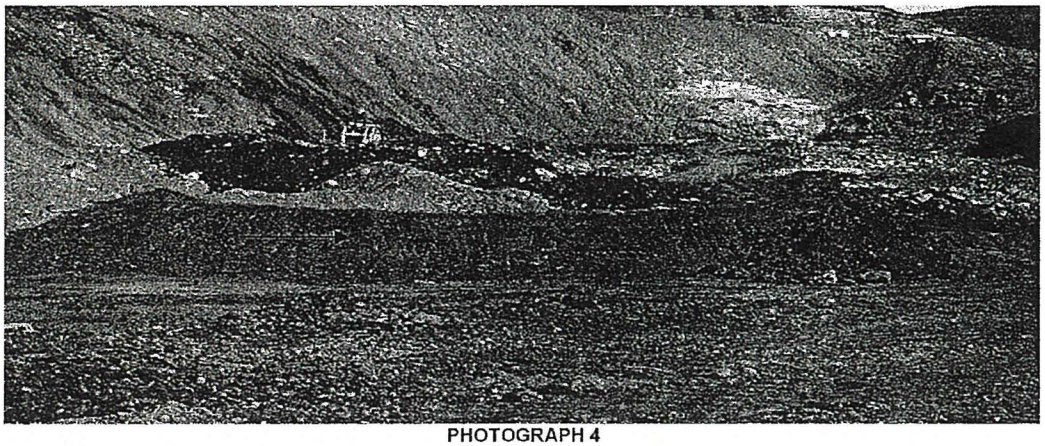
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 6, 2011
Photographer: JRuiz
Description: Lower pond of MSW Cell E-6, where the leachate riser is located. High- level mark (red line) indicates the initial water level from the previous storms.



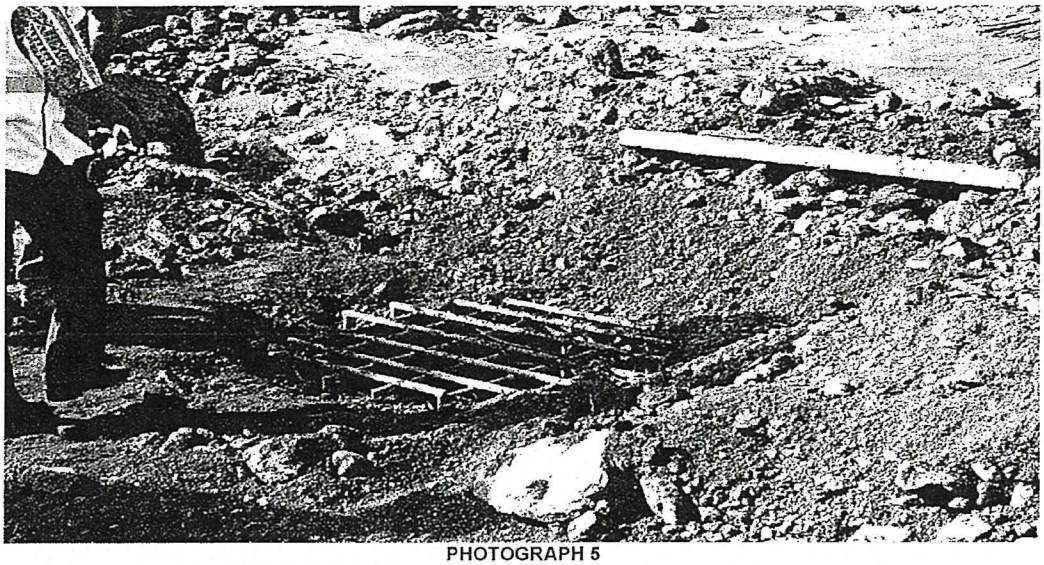
PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 6, 2011
Photographer: JRuiz
Description: The blue arrow shows the location of the 36-inch manhole that connect to the Hobas pipe (storm water system) and the red arrow shows a 36-inch pipe that penetrates the temporary berm adjacent to the lower pond of Cell E-6.



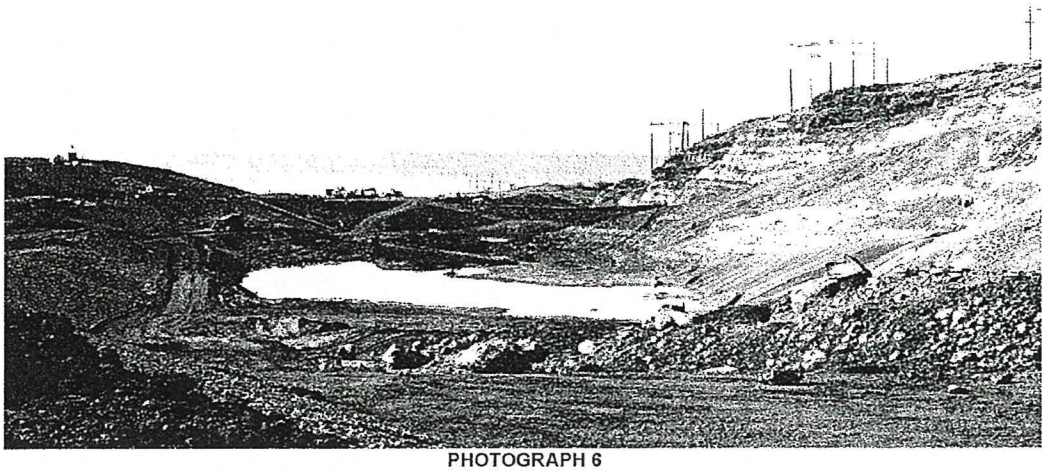
PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 6, 2011
Photographer: JRuiz
Description: Soil berm (blue arrow) downstream of the 48-inch drain inlet for the 36-inch subsurface drainage line to prevent run-on storm water from entering MSW Cell E-6 and located in future MSW Cell E-7.



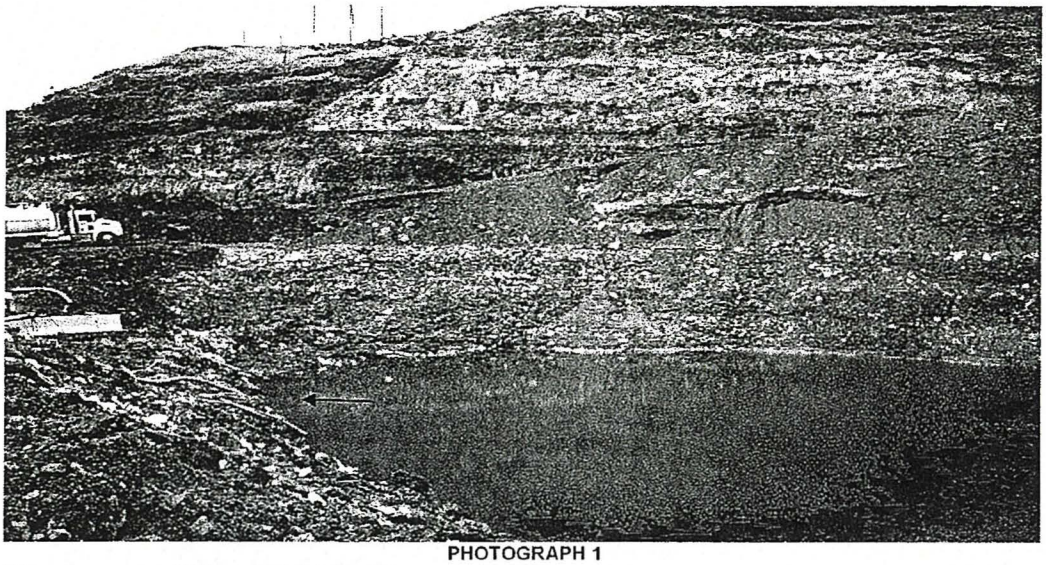
PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 6, 2011
Photographer: JRuiz
Description: View of the storm water intake to the **48**-inch drain inlet for the 36-inch subsurface drainage line located in MSW Cell E-7. The intake was being cleared of soil and rock from the recent storm.



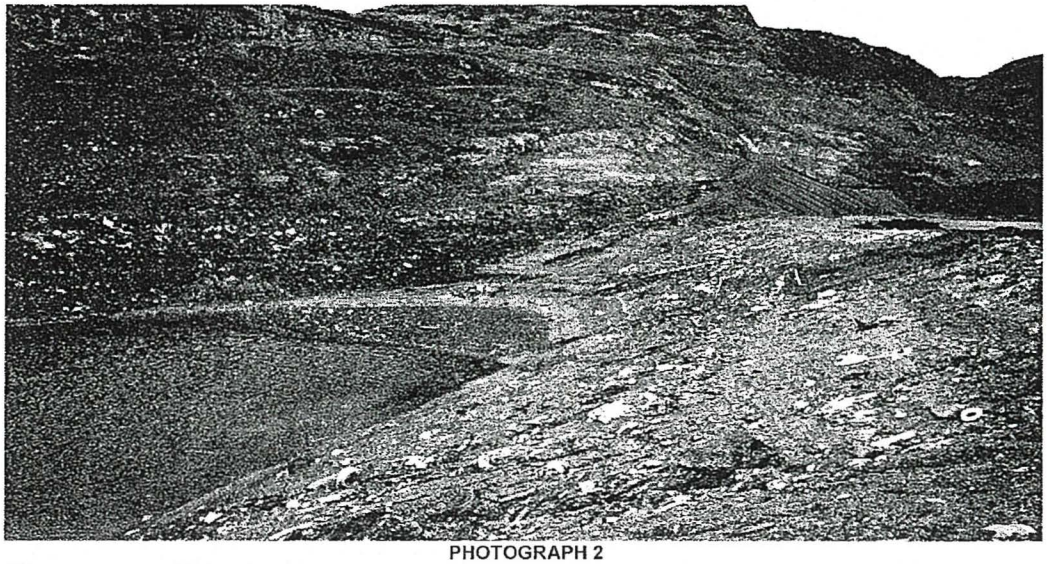
PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 6, 2011
Photographer: JRuiz
Description: View facing south of MSW Cell E-6



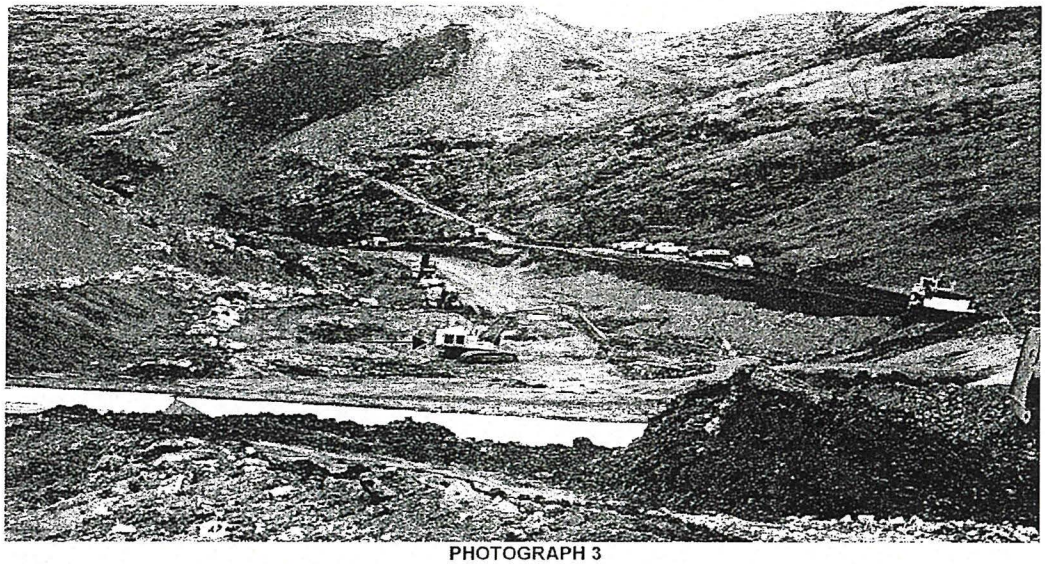
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 10, 2011
Photographer: JRuiz
Description: Southwestern view of MSW Cell E-6 (lower pond) being pumped with hoses (black arrow) into the truck at the background and liquids transported to Waianae Waste Water Treatment Plant (WWTP).



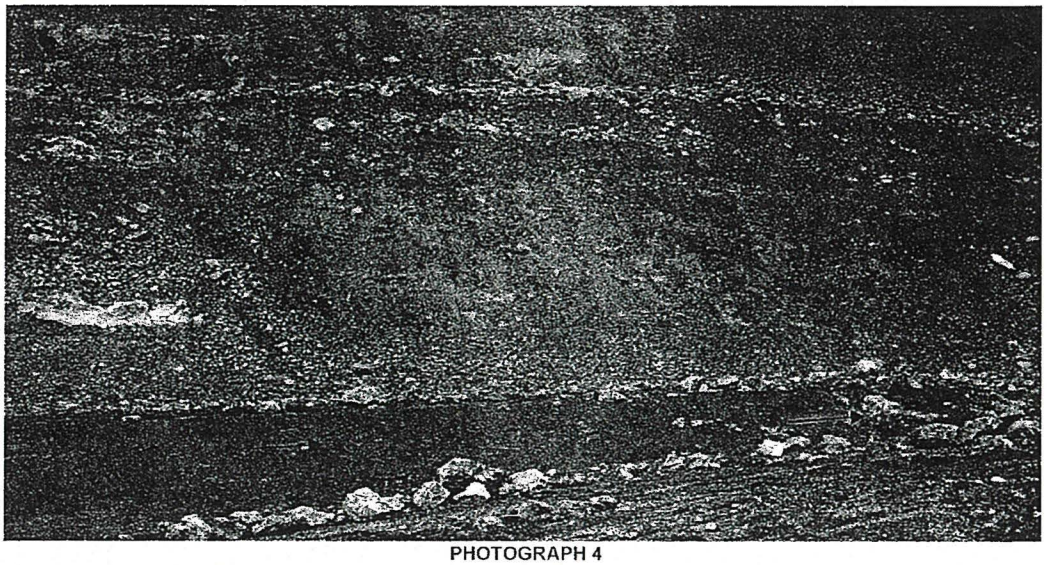
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 10, 2011
Photographer: JRuiz
Description: Northwestern view of MSW Cell E-6 lower pond with exposed solid waste.



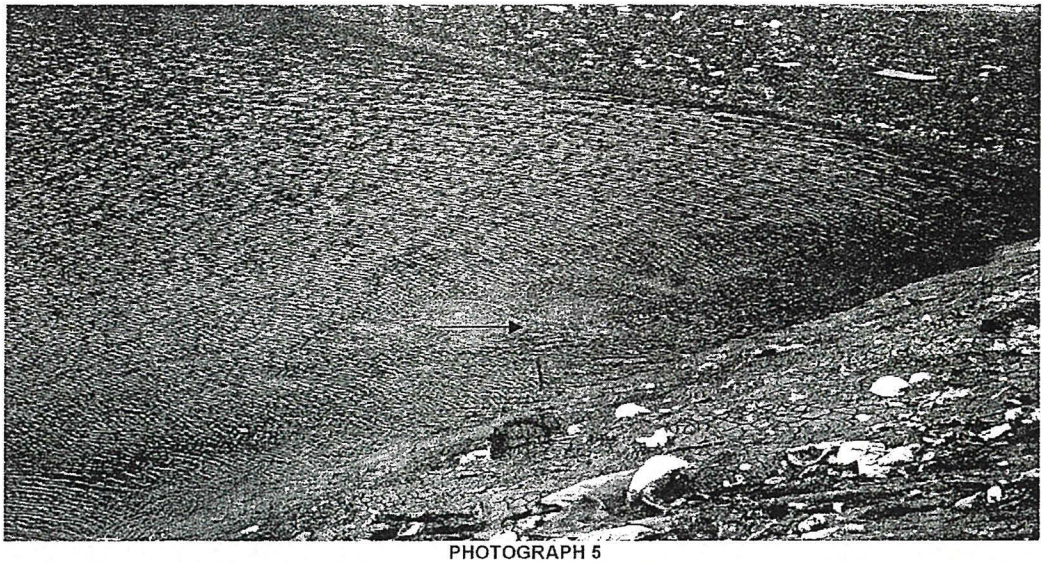
PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 10, 2011
Photographer: JRuiz
Description: Northern view of MSW Cell E-6 showing contractor utilizing an excavator (black arrow) to exposed the liner on the upper east portion of MSW Cell E-6.



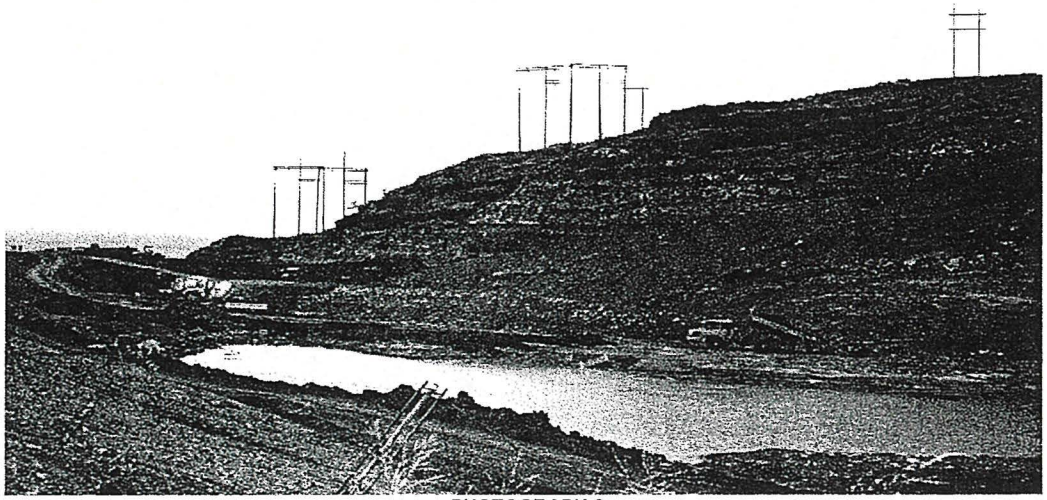
PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 10, 2011
Photographer: JRuiz
Description: Western view of the upper MSW Cell E-6 liner, damaged by boulders and rocks (red arrows) from on-going cell construction above E-6 cell.



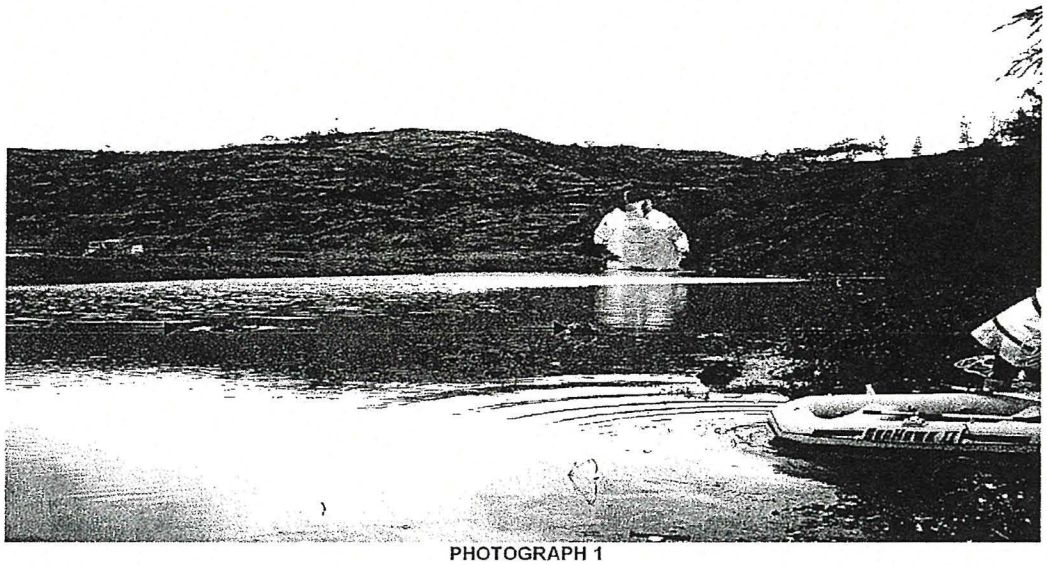
PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 10, 2011
Photographer: JRuiz
Description: Northwestern view of MSW Cell E-6 lower pond shows bubbling water (blue arrow) which indicates that gases are seeping from MSW Cell E6.



PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 10, 2011
Description: Southwestern view of MSW Cell E-6 lower pond being pumped by water truck (red arrow) and heavy equipment placing soil cover at the upper pond to cover exposed waste and fill soft spots on the cell.

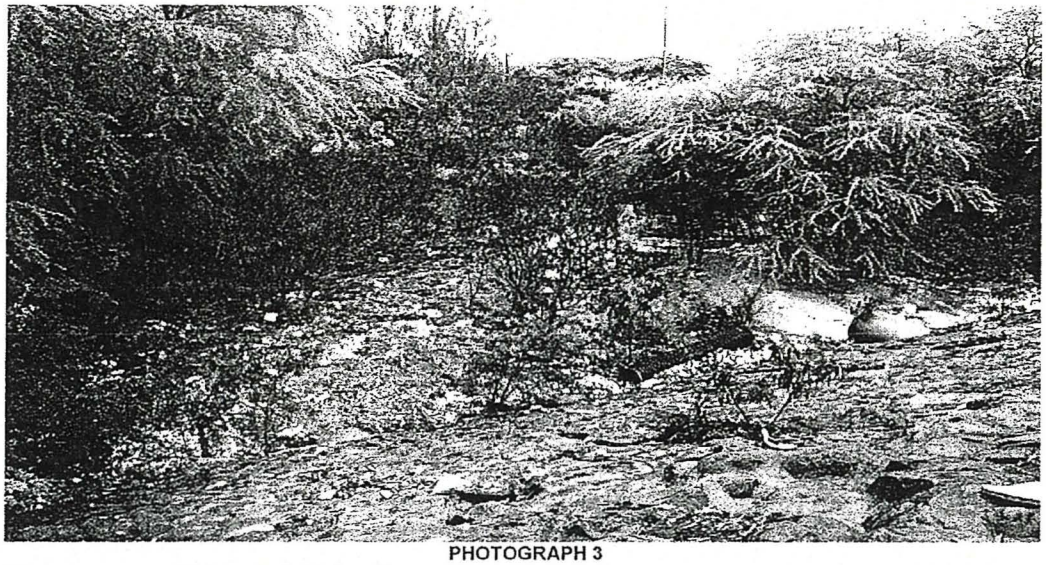


PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 13, 2011
Photographer: JRuiz
Description: Northern view of the sedimentation basin filled with storm water and vertical drainage pipes (blue arrow) covered with debris. WMH personnel used the rubber raft to clear the vertical drains of debris.

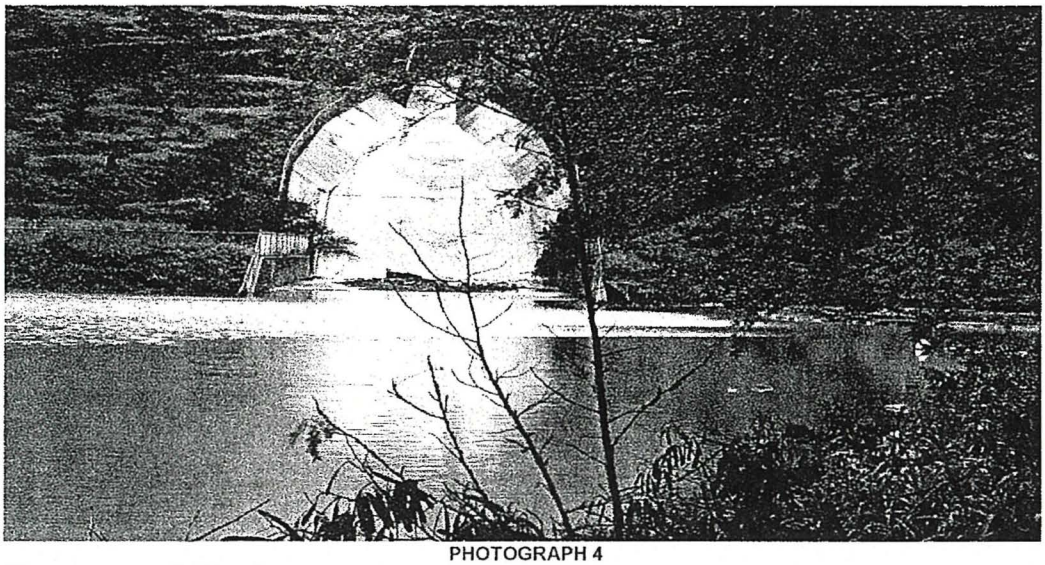
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 13, 2011
Photographer: JRuiz
Description: Western view of the sedimentation basin overflow spillway area, overtopped with large amount of trash and debris.



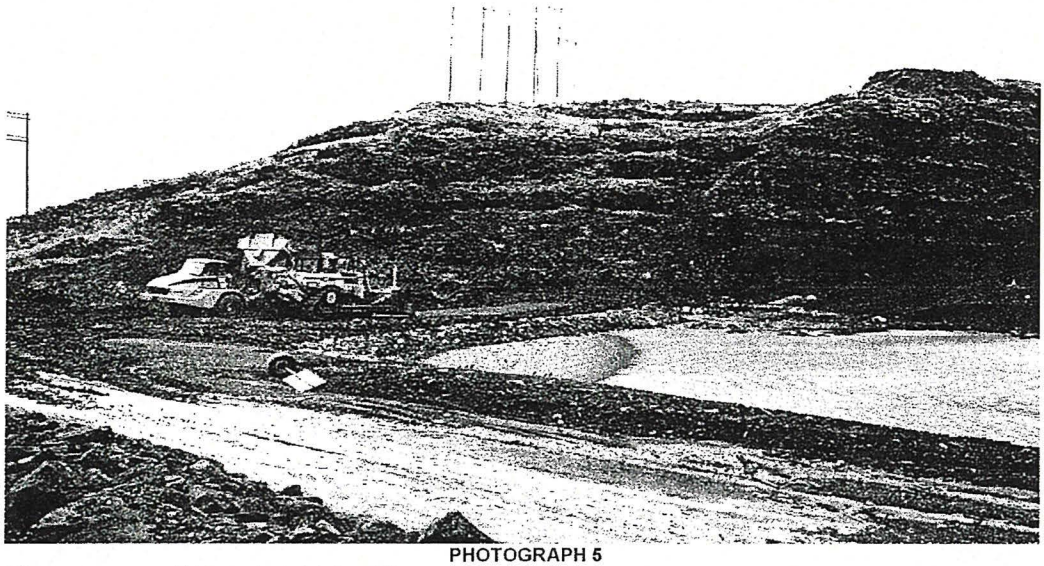
PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 13, 2011
Photographer: JRuiz
Description: Southern view of trash including medical waste that appeared to have overtopped the sedimentation basin overflow spillway area.



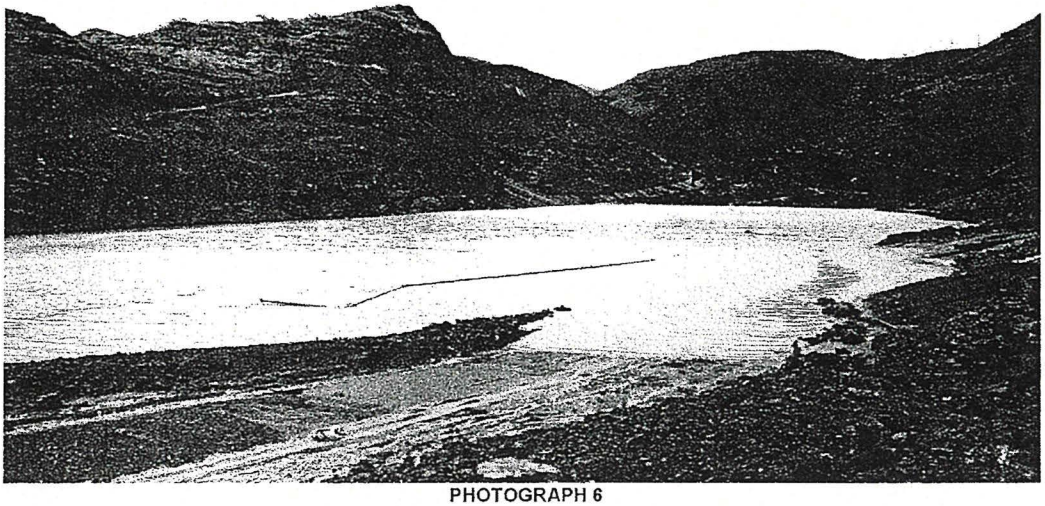
PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 13, 2011
Photographer: JRuiz
Description: Northern view of the concrete storm water channel with a heavy flow of stormwater discharging into the sedimentation basin.



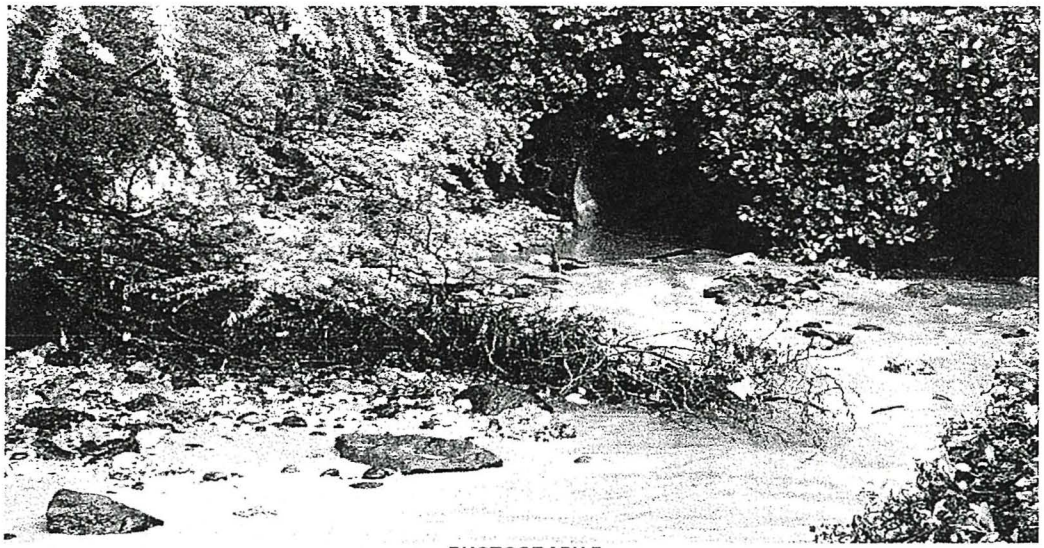
PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 13, 2011
Photographer: JRuiz
Description: Southwestern view of MSW Cell E-6, lower pond filled storm water and trash with red arrow indicating the manhole location to the Hobas drainage pipe.



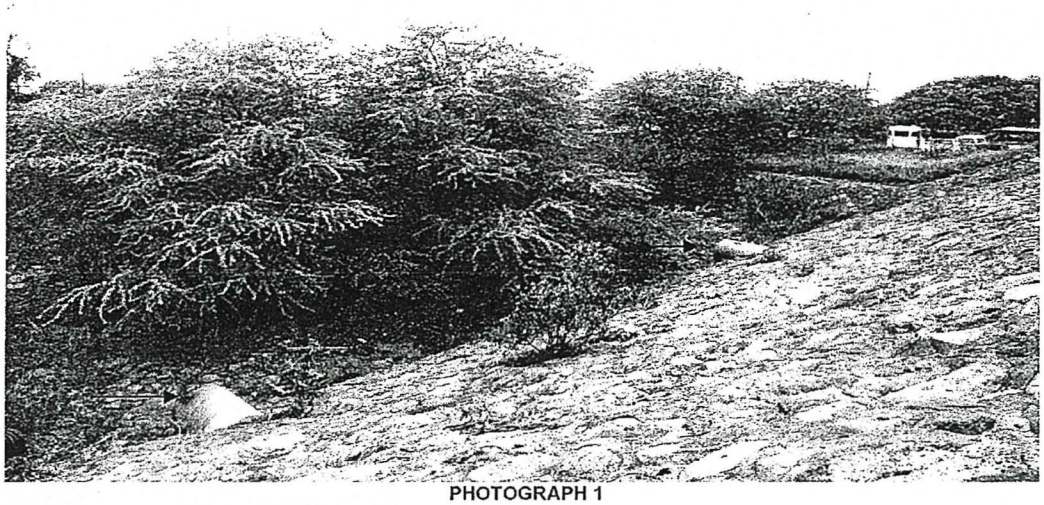
PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 13, 2011
Photographer: JRuiz
Description: Northwestern view of MSW Cell E-6, inundated with storm water and part of the upper western MSW Cell E-6 was observed with waterfall (red arrow) with rocks and boulders noted on the upper cell of MSW Cell E-6 (black arrow).



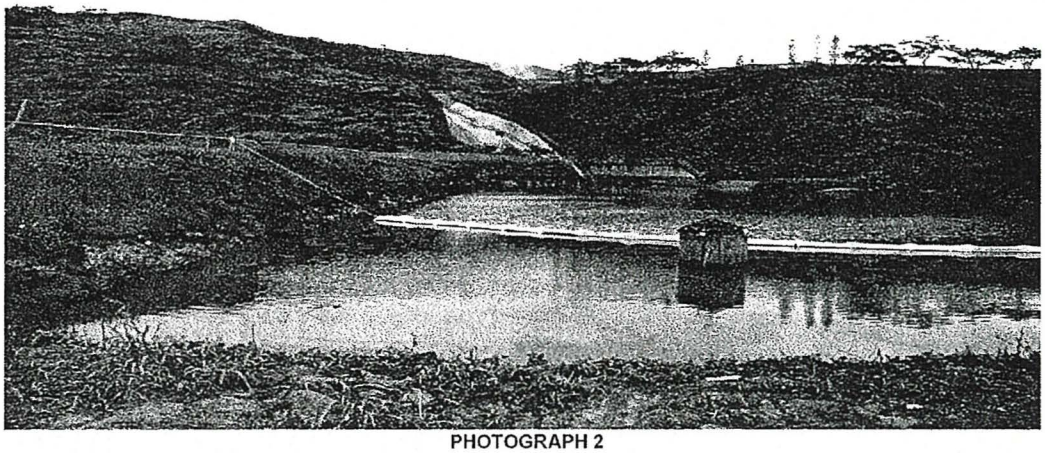
PHOTOGRAPH 7

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 13, 2011
Photographer: JRuiz
Description: View of the outfall drainage pipes by the cove, located near the ocean and immediately below Koolina residence with some trash leading into the ocean.



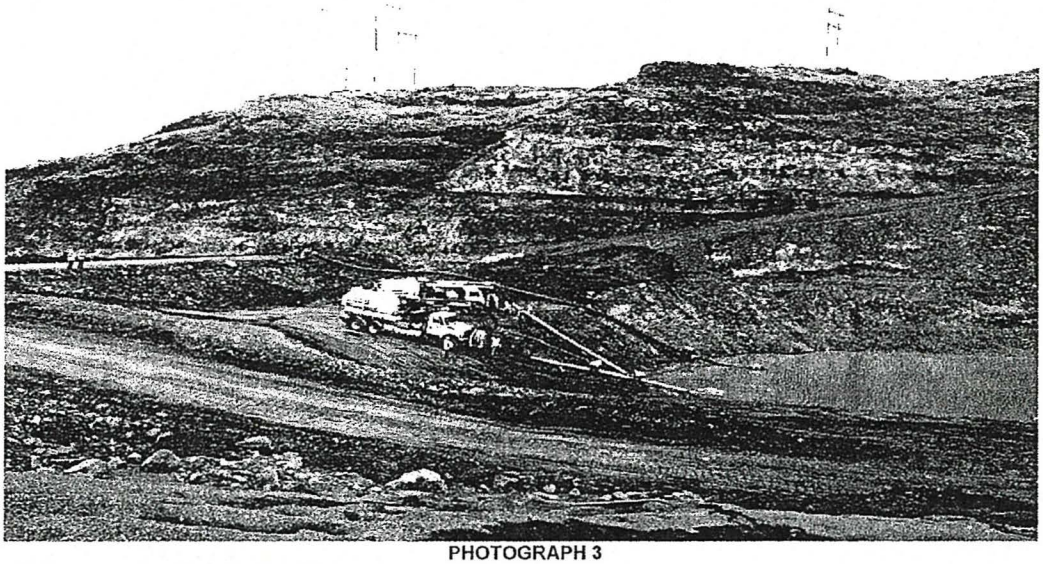
PHOTOGRAPH 1

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date Taken:	January 18, 2011
Photographer:	JRuiz
Description:	Effluent pipes (blue arrows) from the sedimentation basin overflow spillway were observed without any stormwater discharge.



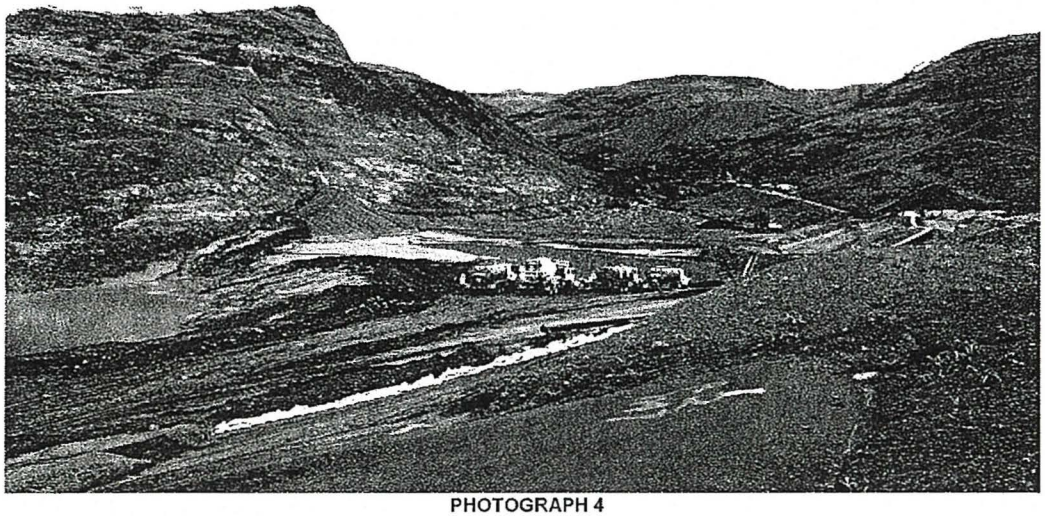
PHOTOGRAPH 2

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date Taken:	January 18, 2011
Photographer:	JRuiz
Description:	Northern view of the sedimentation basin



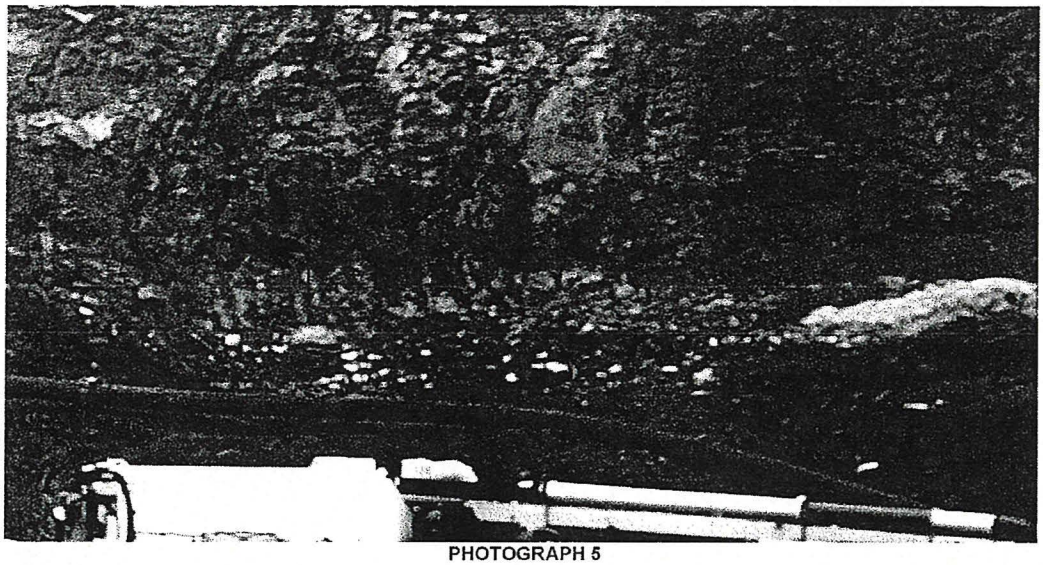
PHOTOGRAPH 3

Site Name: Waimanalo Gulch Landfill
Location: 92-460 Farrington Highway
Date Taken: January 18, 2011
Photographer: JRuiz
Description: Southwestern view of C&C personnel with vacuum trucks, pumping storm water from the lower pond of MSW Cell E-6 and once filled, the water is transported to various WWTPs on Oahu.



PHOTOGRAPH 4

Site Name: Waimanalo Gulch Landfill
Location: 92-460 Farrington Highway
Date Taken: January 18, 2011
Photographer: JRuiz
Description: Northern view of MSW Cell E-6 with vacuum trucks pumping liquids from the upper pond.



PHOTOGRAPH 5

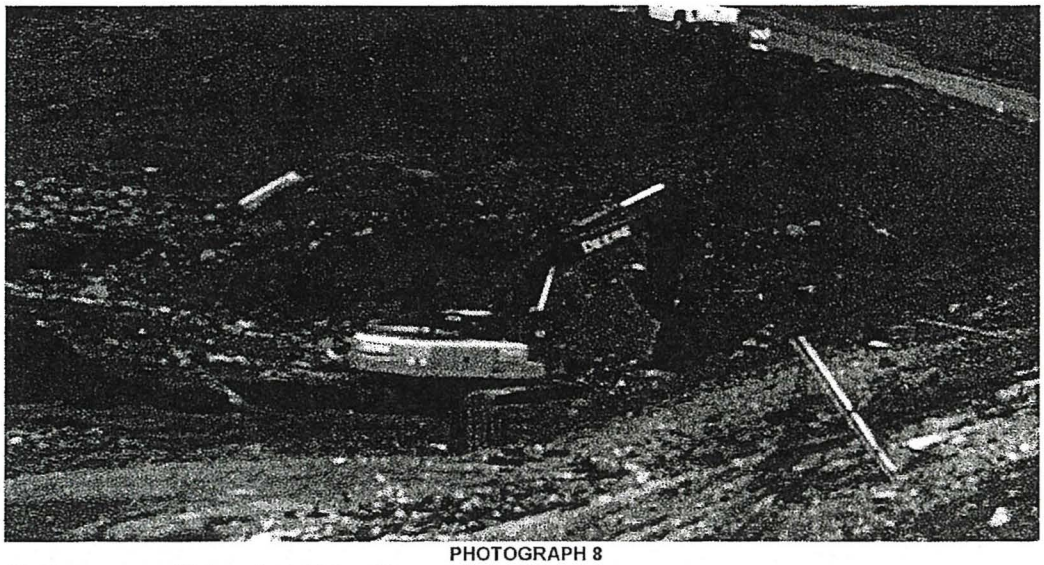
Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date Taken:	January 18, 2011
Photographer:	JRuiz
Description:	View of the 36-inch manhole (red arrow) located on the southwest area near MSW Cell E-6 and connected to the Hobas pipe with noticeable residual trash within the immediate area.

PHOTOGRAPH 6

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date Taken:	January 18, 2011
Photographer:	JRuiz
Description:	Northwestern view of C&C vacuum trucks pumping liquid from the upper pond and along the slope of Cell E-6, the liner (red arrows) was observed damage by rocks and boulders that washed down from the upper area of the cell.

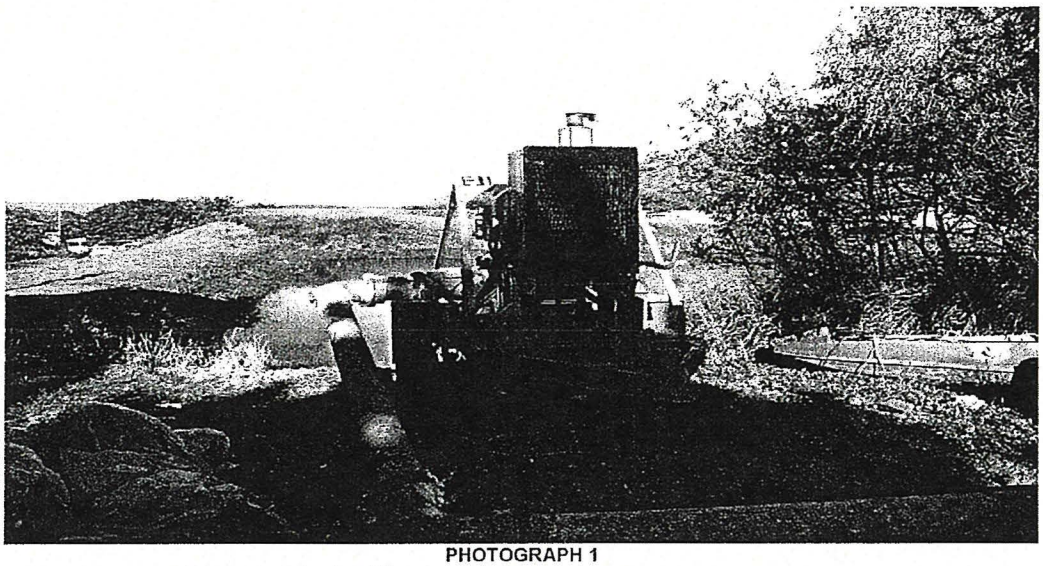
PHOTOGRAPH 7

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date Taken:	January 18, 2011
Photographer:	JRuiz
Description:	Closed-up view of the damaged liner to MSW Cell E-6 due to the rainstorm and earlier upper cell construction.



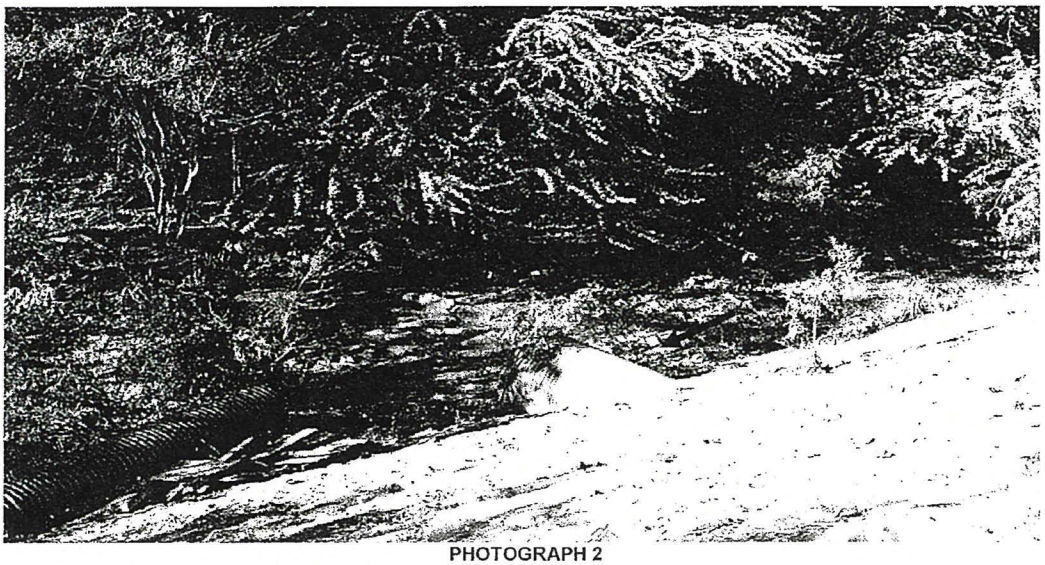
PHOTOGRAPH 8

Site Name:	Waimanalo Gulch Landfill
Location:	92-460 Farrington Highway
Date Taken:	January 18, 2011
Photographer:	JRuiz
Description:	Northeastern view of an excavator, excavating the edge of liner in MSW Cell E-4/E-6 to determine the extent of damage caused by the rainstorm on the upper east side of MSW Cell E-6.



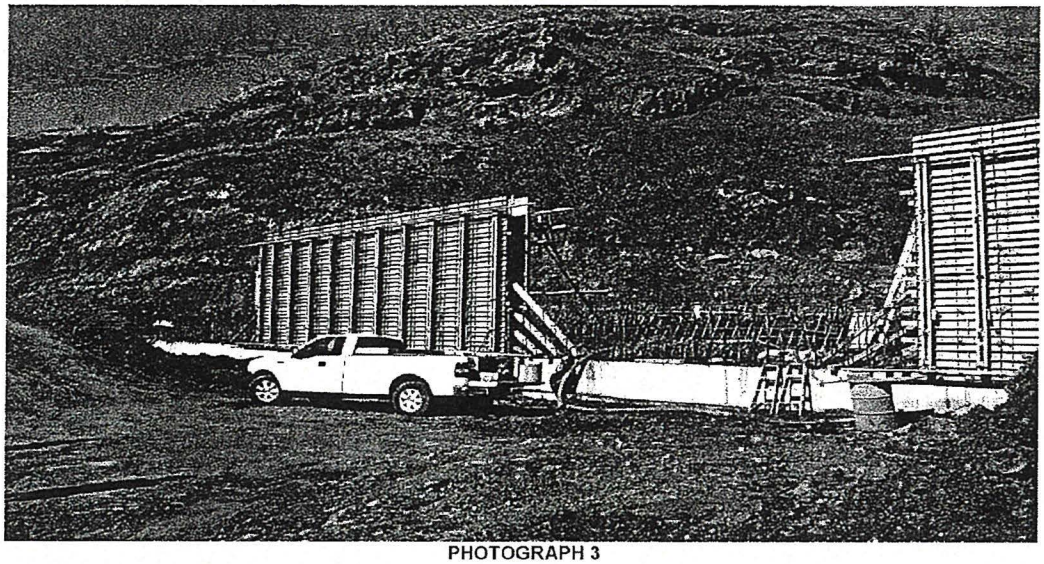
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Western view of a water pump, utilized by WMH for the removal of liquid from the sedimentation basin. The liquid was being used as dust control throughout the landfill.



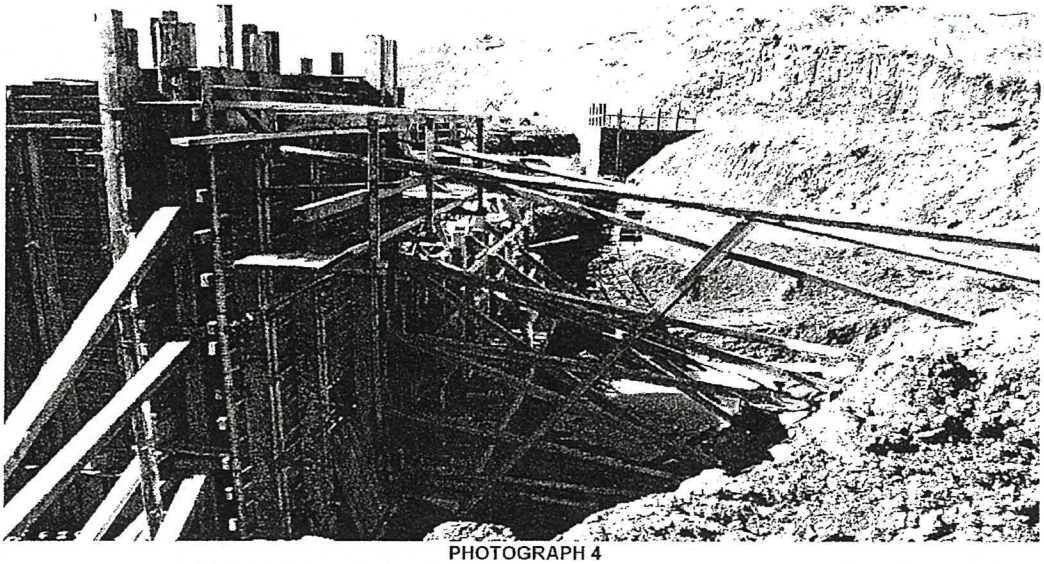
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Southern view of the out flow pipe (red arrow) from the sedimentation basin without any liquid discharging out of the pipe.



PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Northern view of the on-going construction for the western surface water drainage system located on the upper canyon of the landfill and just above the future MSW Cell E-9.

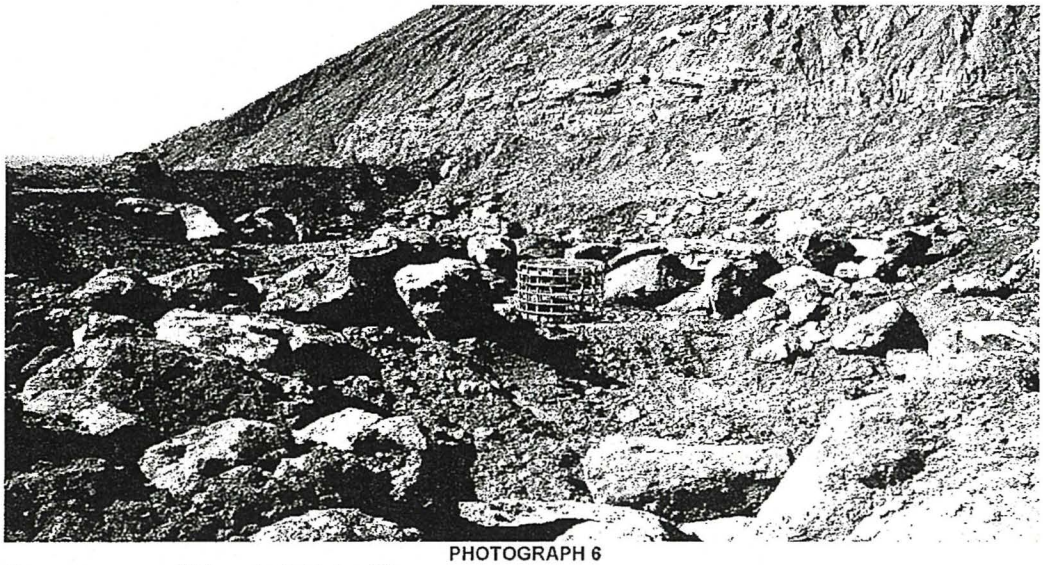


PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Another view of the storm water diversion structure

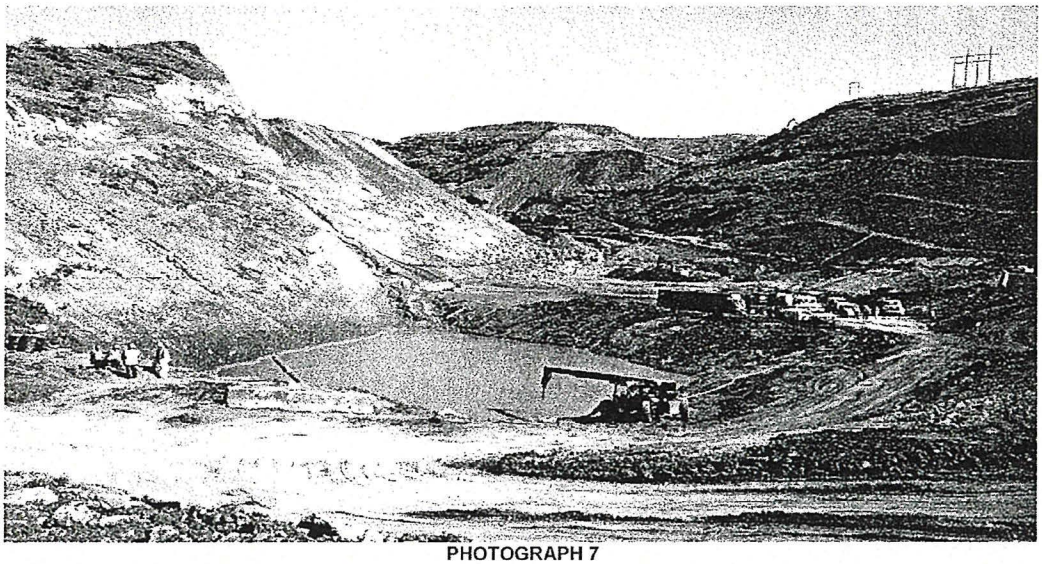
PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Southern view of the eastern part of landfill from the upper canyon, overlooking MSW E-cells and MSW Cells 3, 4A ,C, and 9 to 11.



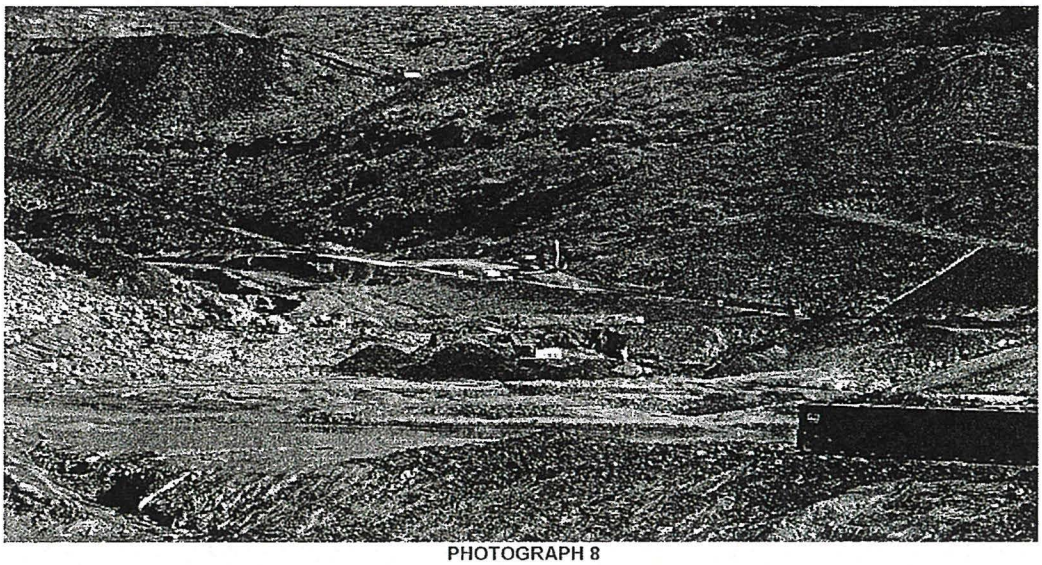
PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Southwestern view of the temporary 48-inch drain inlet (blue arrow) for the 36-inch subsurface drainage line, located in MSW Cell E-7, for the diversion of storm water from the upper canyon. The immediate area around the intake cover was recently cleaned-up and reconstructed after the rainstorms.



PHOTOGRAPH 7

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Northern view of MSW Cell E-6 lower pond being pumped into the PCS frac container and C&C water trucks pumping liquid from the upper pond and transporting the liquid to Waianae WWTP for disposal.

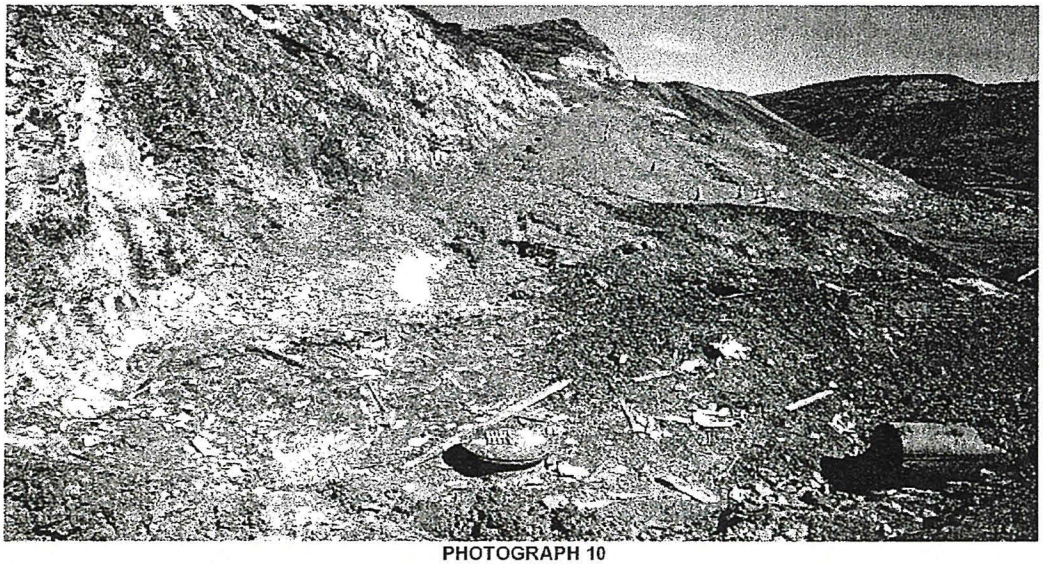


PHOTOGRAPH 8

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Northeastern view of the contractor utilizing an excavator (red arrow) to determine the extent of liner damage on the northeastern portion of E-4/E-6 cells (blue arrow).

PHOTOGRAPH 9

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Close–up view of the Hobas manhole pipe (red arrow) located southwest of MSW Cell E-6, with debris and solid waste observed around the manhole.



PHOTOGRAPH 10

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 20, 2011
Photographer: JRuiz
Description: Northwestern view of the Hobas manhole with some trash in the immediate area and to the right, a 36-inch pipe (red arrow) was observed buried under the temporary soil berm.

DEPARTMENT OF HEALTH
SOLID AND HAZARDOUS WASTE BRANCH
SOLID WASTE SECTION
919 ALA MOANA BOULEVARD, ROOM 212
HONOLULU, HAWAII 96814
TEL. NO. 586-4226 FAX NO. 586-7509

INSPECTION REPORT

FACILITY NAME:	Waimanalo Gulch Sanitary Landfill (WGSL)
INSPECTION DATE:	January 24, 25, February 1, 3, and 7, 2011
PERMIT NUMBER:	LF-0182-09
DATE OF ISSUE:	June 4, 2010
EXPIRATION DATE:	June 3, 2015
MAILING ADDRESS:	Joseph Whelan Operations Manager Waste Management of Hawaii, Inc. 92-460 Farrington Highway Kapolei, Hawaii 96707
LOCATION ADDRESS:	92-460 Farrington Highway Kapolei, Hawaii 96707
PERSONS CONTACTED:	Justin Lottig, Market Area Environmental Protection Manager Jesse Frey, Market Area Engineer Waste Management of Hawaii, Inc. (WMH)
TELEPHONE NO.:	808-668-2985, ext 16
INSPECTOR AND TITLE:	Jose Ruiz, Inspector, Thomas Miyashiro, Engineer
REPORT DATE:	February 14, 2011

REASON FOR INSPECTION:

( )	ROUTINE	( )	COMPLIANCE SCHEDULE
( )	VARIANCE CONDITION	( )	PERMIT REQUIREMENT
( )	COMPLAINT EXPLAIN:	(x)	OTHER:

To observe post rain cleanup events, Cell E-6 damage repairs, and construction of the western drainage system.

Background: Rainstorms events on December 19, 2010, December 27, 2010 and January 13, 2011 created large accumulation of water in Cell E-6, making the landfill inoperable in this cell. Rain events also caused the sedimentation basin to fill and overflow water and trash into the storm water outfall beneath Farrington Highway. The western surface water drainage system was not functional at the time of the rain events, and the temporary up canyon storm water diversion system in Cell E-7 became clogged during the events, causing storm water to enter Cell E-6.

Any deficiencies, which may be noted in this inspection report, are not necessarily inclusive and

any omissions shall not be construed as a determination of compliance with any applicable laws.

OBSERVATIONS / FINDINGS:
On the dates of inspections noted above, Solid Waste Section (SWS) inspector Jose Ruiz and SWS Engineer, Thomas Miyashiro, visited WGLF and were escorted around the landfill by Justin Lottig, Environmental Protection Manager and/or Jesse Frey, Market Area Engineer. The purpose of the inspections was to observe the damages, repairs and status of the on-going cleanup at the landfill caused by the rainstorms. The observations made during the inspections are noted below by date of inspection.

January 24, 2011

• SWS inspector and engineer visited the landfill with EPA (Kathy Baylor), met with Jesse Frey and Justin Lottig, and observed: damaged liner in MSW Cell E-6, exposed edge of liner in the northwest corner of MSW Cell E-4, and contractors working on the damage liner located at the northeast corner of MSW Cell E-6, where it joins E-4 (see photographs 2, 3, 5 & 6).

• Pacific Commercial Services (PCS), WMH's contractor, was observed pumping liquid and mud from MSW Cell E-6's upper pond into a 20,000-gallon frac tank (see photograph 1). PCS then removes most of the liquid from the frac tank and transports in a tanker truck for disposal at Waianae Waste Water Treatment Plant (Waianae WWTP). The mud is then pumped from the frac tank and placed on the top deck of the northeastern cells to dry for later use as daily cover material.

• On-going cell construction at the upper northwestern area of MSW Cell E-6 and below the construction work on the western drainage bypass channel continues, and damage to the liner by dozers pushing boulders from the western drain was observed by the inspector and engineer (see photograph 4).

• Construction of the western surface water drainage system and the northern canyon diversion structure wall (weir) continues, with part of the wall already in place.

• MSW Cell E-6 leachate riser continues to be under a large amount of mud and water.

• Liquid level within the sedimentation basin remains high and PCS continues to pump and transport the liquid to Waianae WWTP.

• Landfill continues to be closed for the acceptance of any type of waste.

January 25, 2011

• SWS inspector and engineer visited the landfill with EPA (Kathy Baylor), met with Jesse Frey, and observed the repair of liner on the northeastern portion of MSW Cell E-6, where it joins E-4 (see photographs 4 & 5).

• PCS was observed pumping liquid and mud from MSW Cell E-6's upper pond into a 20,000-gallon frac tank (see photograph 6).

• The sedimentation basin continues to be pumped by WMH's contractor with nine feet of water and silt remaining (see photograph 1). The water is being pumped from the basin and

transported to Waianae (WWTP) for disposal. No storm water was observed from the horizontal discharge pipes of the siltation basin (see photograph 2).

• Construction of the western storm water diversion channel along the upper canyon continues.

• GBI was observed removing boulders from the western area of MSW Cell E-6, to determine the extent of liner damage caused by the construction of the upper west side of Cell E-6 (see photograph 3)

• Landfill continues to be closed for the acceptance of any type of waste.

February 1, 2011

• SWS inspector and engineer visited the landfill, met with Justin Lottig, and observed the on-going progress of the sedimentation basin liquid removal, pumping of liquid and mud from the Cell E-6 lower and upper ponds, and the temporary mud ponds located on MSW Cell 4-A and 4-C.

• The siltation basin continues to be pumped by WMH's contractor, with 7 ½ feet of water and silt remaining (see photograph 1). The liquid is being transported to Waianae WWTP. No liquid was observed from the horizontal discharge pipes of the siltation basin (see photograph 2).

• The lower pond in Cell E-6 was noted with mostly mud (see photographs 3 & 4). PCS has been pumping the liquid and mud into a frac tank. The solids (silt and mud) are separated from the liquid within the frac tank. The liquid is pumped and transported to Waianae WWTP and the mud is pumped into the temporary bermed area on MSW Cell 4-A.

• The landfill was accepting limited amounts and certain types of waste, such as sludge, medical waste and transfer station waste. Solid waste from the general public was not being accepted at the time of inspection.

• Goodfellow Bros., Inc. (GBI) continues to construct the western storm water diversion structure, (see photograph 6 & 7).

• The temporary mud pond located on top of MSW Cells 4-A and 4-C was bermed with soil and no excess liquid (slurry mud) was noted flowing from the ponded area (see photograph 8).

• Leachate riser within MSW Cell E-6 is almost clear of mud and WMH plans to have the mud pumped to clear the leachate riser, and determine if there is any damage inside the line (see photograph 4).

February 3, 2011:

• SWS inspector visited the landfill, met with Jesse Frey, and inspected the siltation basin water levels, the pumping of the MSW Cell E-6 ponds and contractor excavating the western edge of Cell E-6 (where the West Berm is to be constructed) to determine the extent of liner damage (see photograph 3).

• The liquid level in the sedimentation water basin was at 6 ½ feet and WMH continues to pump and transport the liquid to Waianae WWTP (see photograph 1).

• WMH contractor continues to remove the mud from the leachate riser for MSW Cell E-6 and contractor expects to clear the mud from around the riser and check for damages and operation of the system within the next few days (see photographs 2 & 4).

• GBI was excavating the western slope of Cell E-6 liner to determine the extent of the liner damage (see photograph 3).

• WGSL continues to be closed to the general public and was only accepting transfer station waste, some medical waste, and dead animals for disposal (see photograph 5 & 6).

• The upper eastern side of MSW Cell E-6 continues to be filled with soil by WMH for preparation of solid waste acceptance (see photograph 7).

February 7, 2011 conditions:

• The landfill had less than 2 inches of rain the night before and no major issues were encountered by WMH, just muddy roads.

• The siltation basin continues to be pumped of liquids by PCS and the liquid level was at 6 feet (see photograph 1).

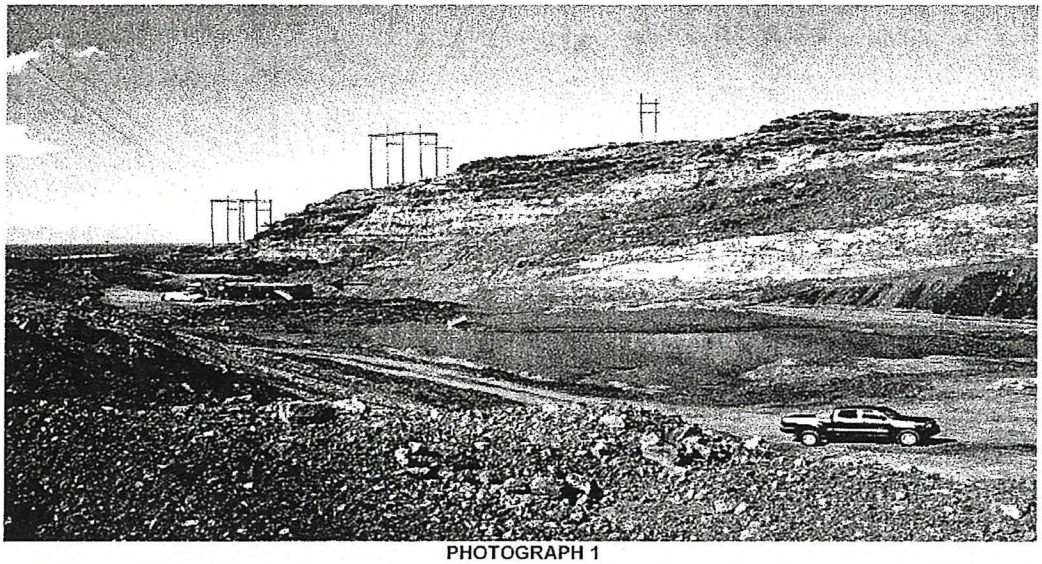
• WMH was prepared for the rain event and they had placed a soil berm with a sacrificial liner just above the active workface of MSW Cell E-6 to prevent water run-on (see photograph 2). The new soil berm is down-gradient of the temporary storm water berm, located between Cell E-6 and Cell E-7.

• The contractor stopped pumping the upper MSW Cell E-6 pond (see photograph 4) due to muddy road conditions. GBI was also not working this day due to the wet site conditions from the rain the night before.

• The leachate riser in MSW Cell E-6 continues to be covered with mud and WMH plans to excavate the area tomorrow or sometime this week to expose the leachate riser cover and do an assessment.

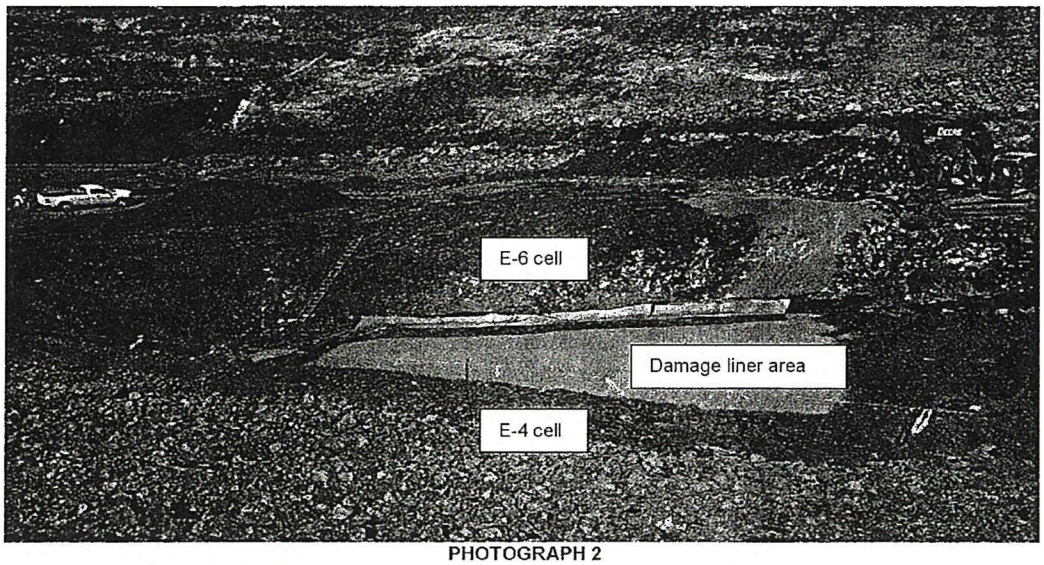
• No general commercial or public MSW was allowed at the landfill, only C&C transfer station waste, medical waste and dead animals have been accepted for the past few days (see photograph 3).

LIST OF ATTACHMENTS: Photographs



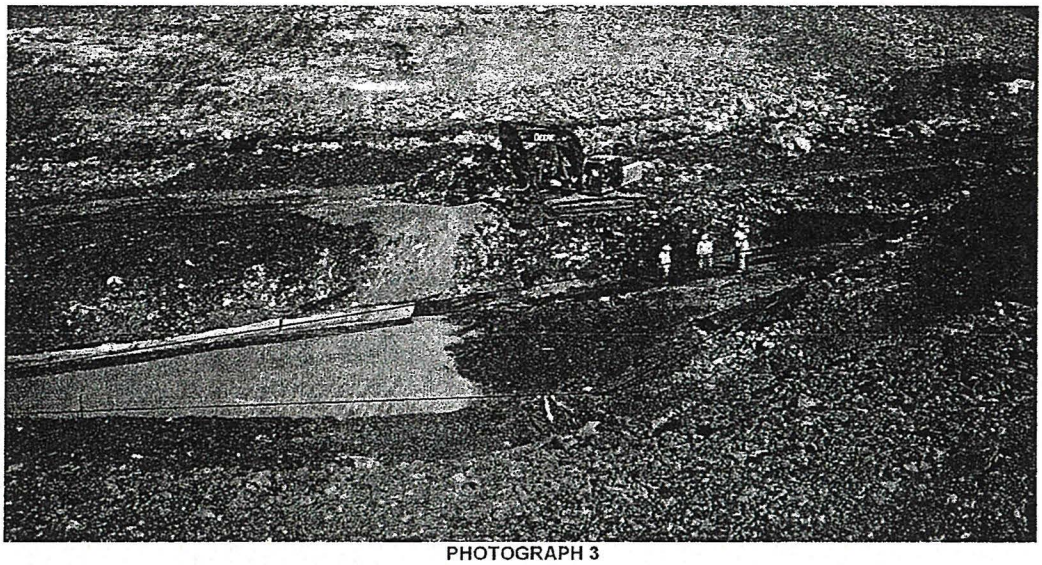
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 24, 2011
Photographer: JRuiz
Description: PCS continues to pump liquids and silt into a 20,000-gallon frac tank (red arrow) from MSW Cell E-6.



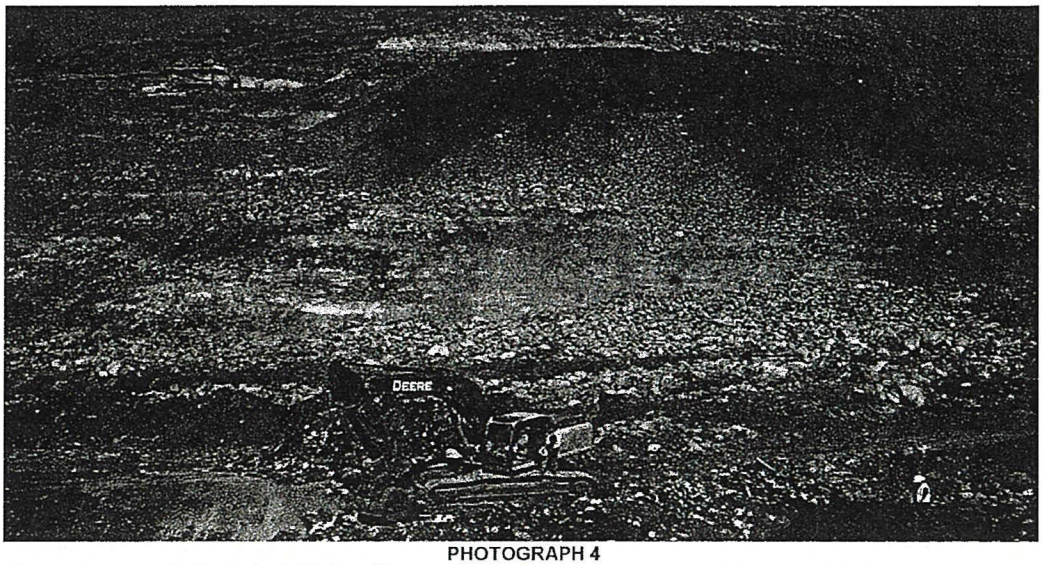
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 24, 2011
Photographer: JRuiz
Description: Contractor exposing edge of liner (E-4) and making repairs to E-6 liner at the northeast corner of MSW Cell E-6 (where it joins cell E-4).



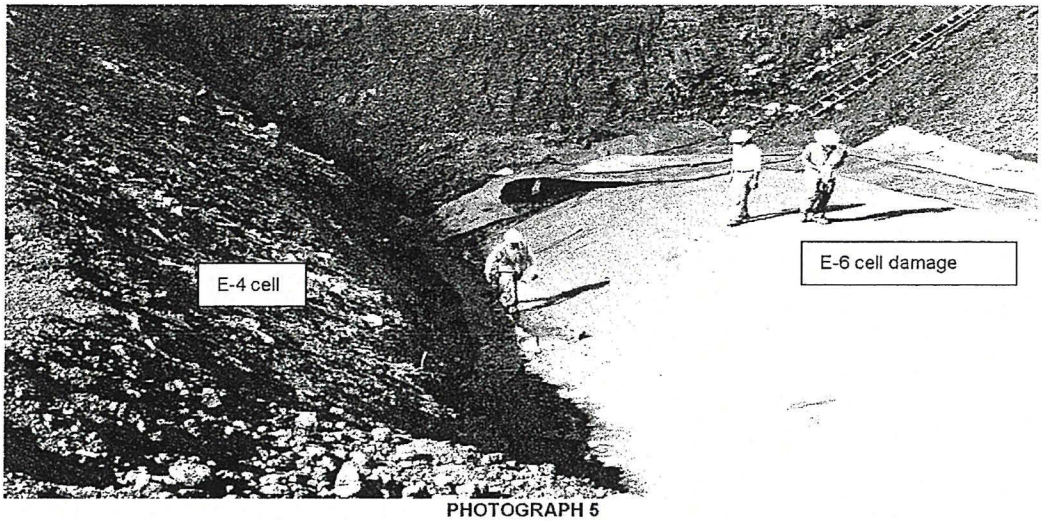
PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 24, 2011
Photographer: JRuiz
Description: Area of damaged liner in MSW Cell E-6 (red lines)



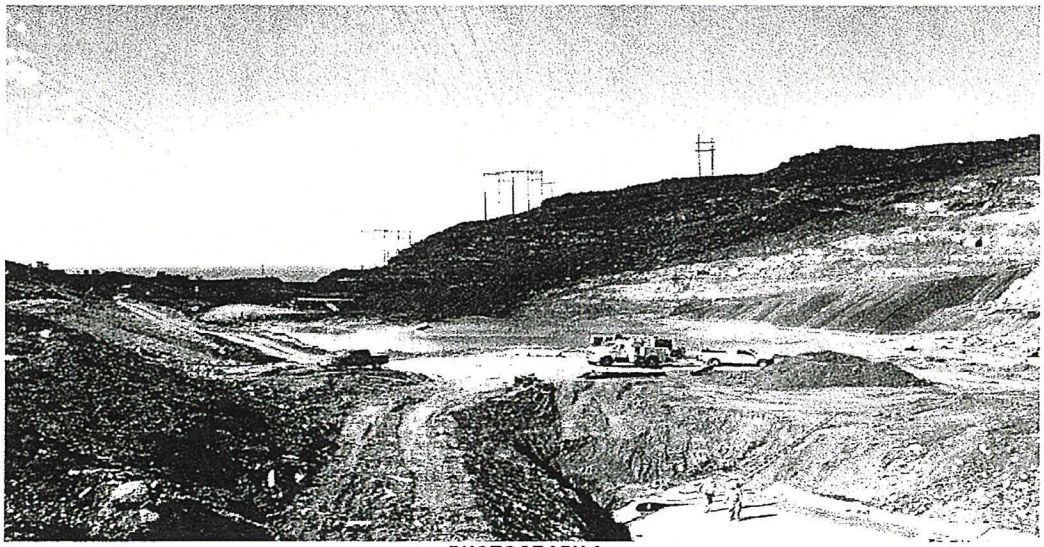
PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 24, 2011
Photographer: JRuiz
Description: On-going construction of the upper Cell E-6 (blue arrow) has added to the damage sustained by the western portion of Cell E-6 liner (red arrow).



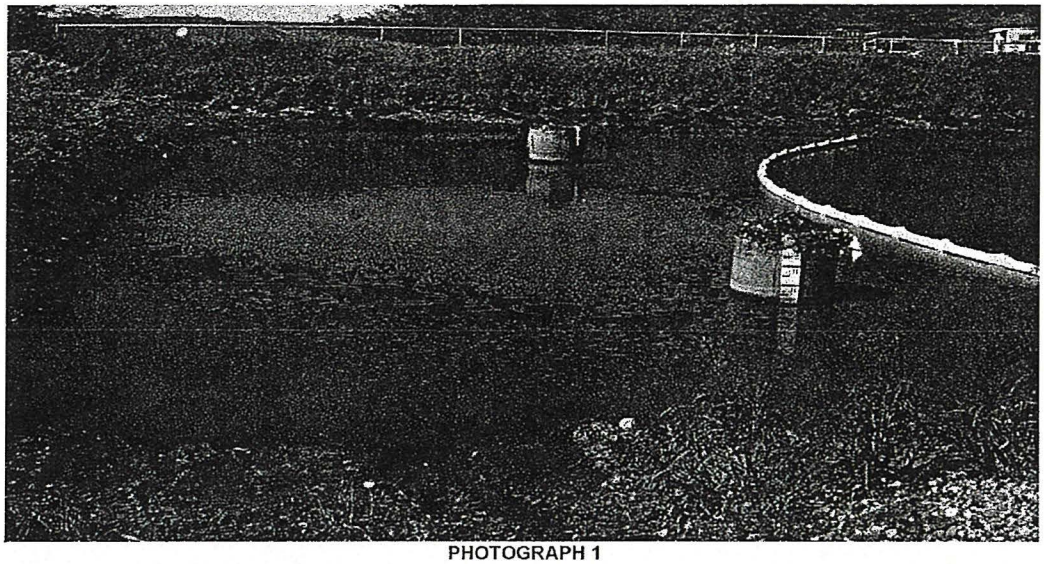
PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 24, 2011
Photographer: JRuiz
Description: Contractor working on damaged Cell E-6 liner.



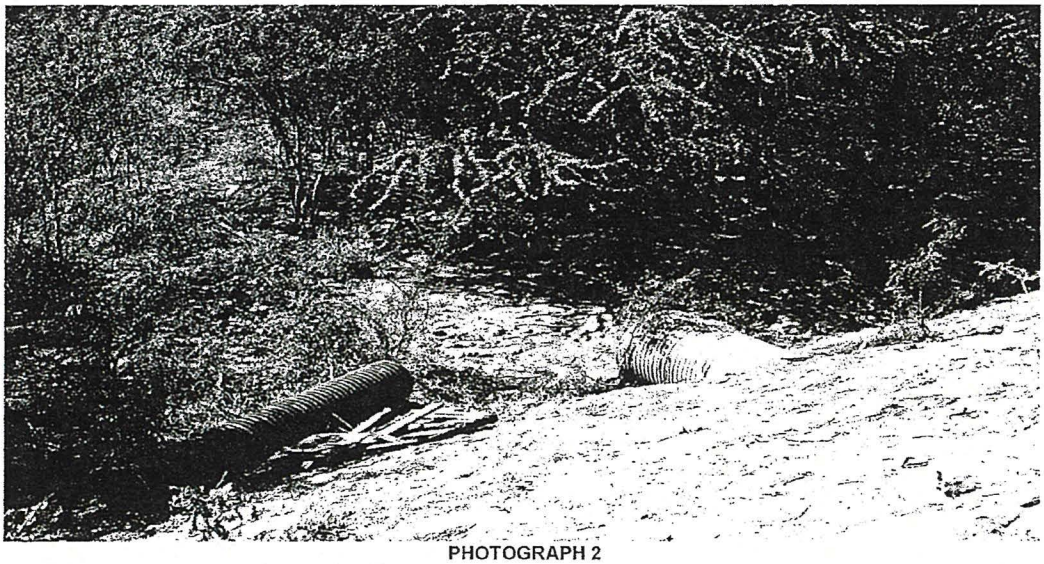
PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 24, 2011
Photographer: JRuiz
Description: View of the damaged liner area facing southwest of MSW Cell E-6



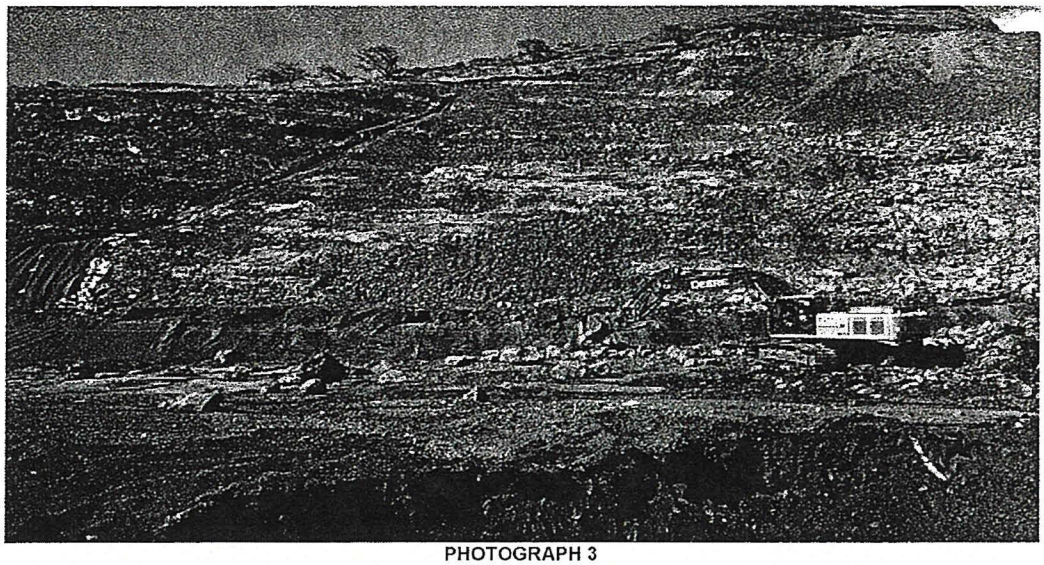
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 25, 2011
Photographer: JRuiz
Description: Liquid level within the siltation basin at 9 feet and WMH contractor continues to pump the basin.



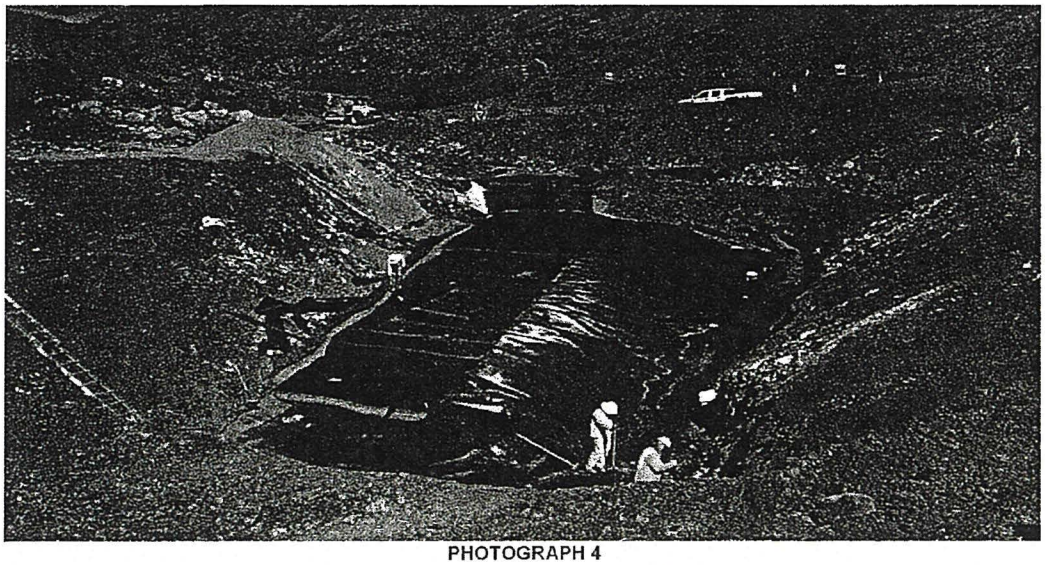
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 25, 2011
Photographer: JRuiz
Description: No water was observed coming out of the horizontal discharge pipes from the siltation basin.



PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 25, 2011
Photographer: JRuiz
Description: Contractor removing boulders from the western area of MSW Cell E-6 to determine the extent of damage to the liner.



PHOTOGRAPH 4

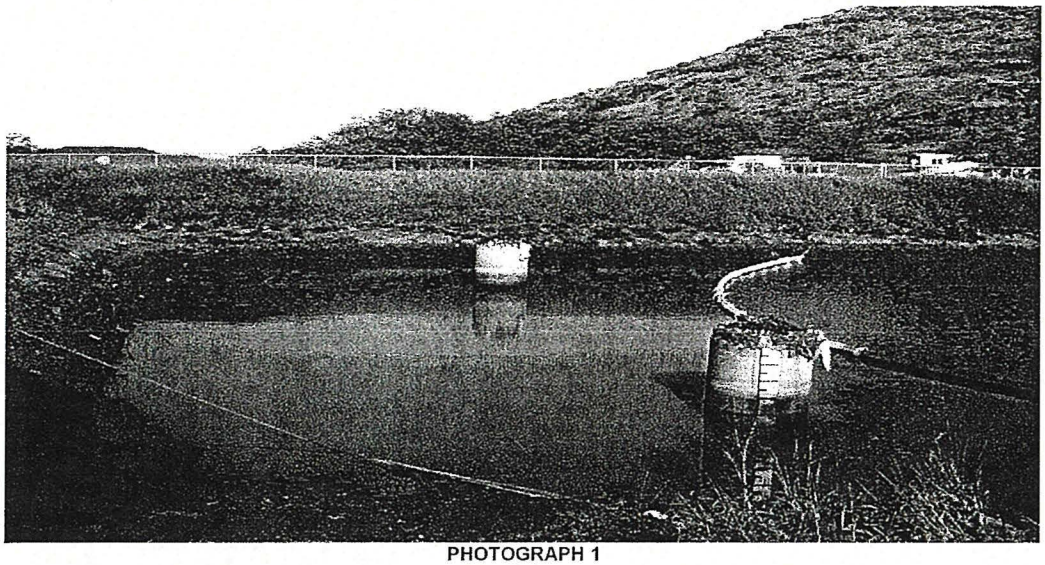
Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 25, 2011
Photographer: JRuiz
Description: Contractor has replaced the damaged liner on the northeastern portion of MSW Cell E-6, where it joins E-4.

PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 25, 2011
Photographer: JRuiz
Description: Contractor exposing liner at MSW Cell E-4

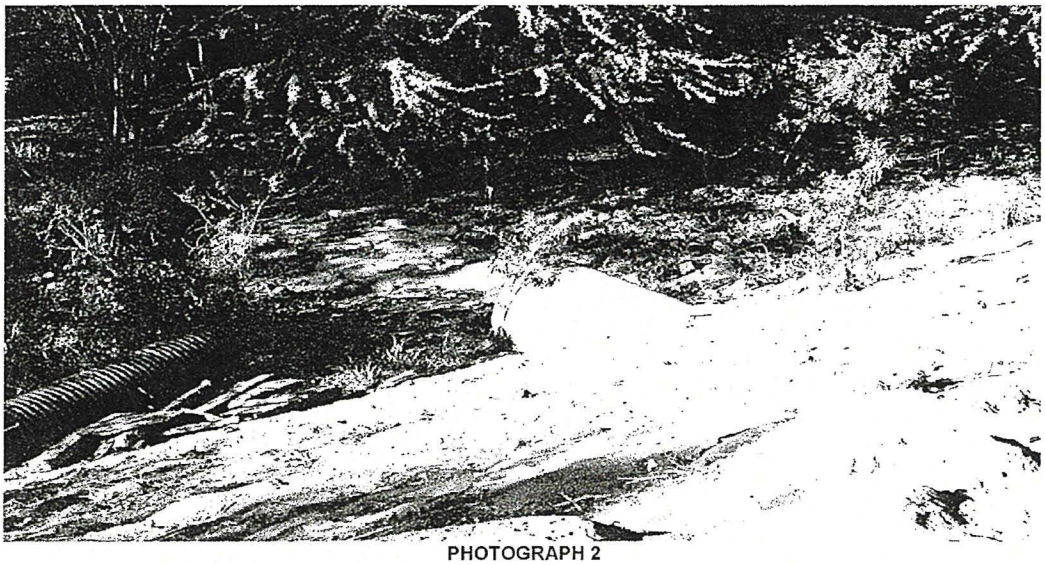
PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: January 25, 2011
Photographer: JRuiz
Description: View of MSW Cell E-6, upper pond, with remaining muddy water. Contractor continues to pump the area.



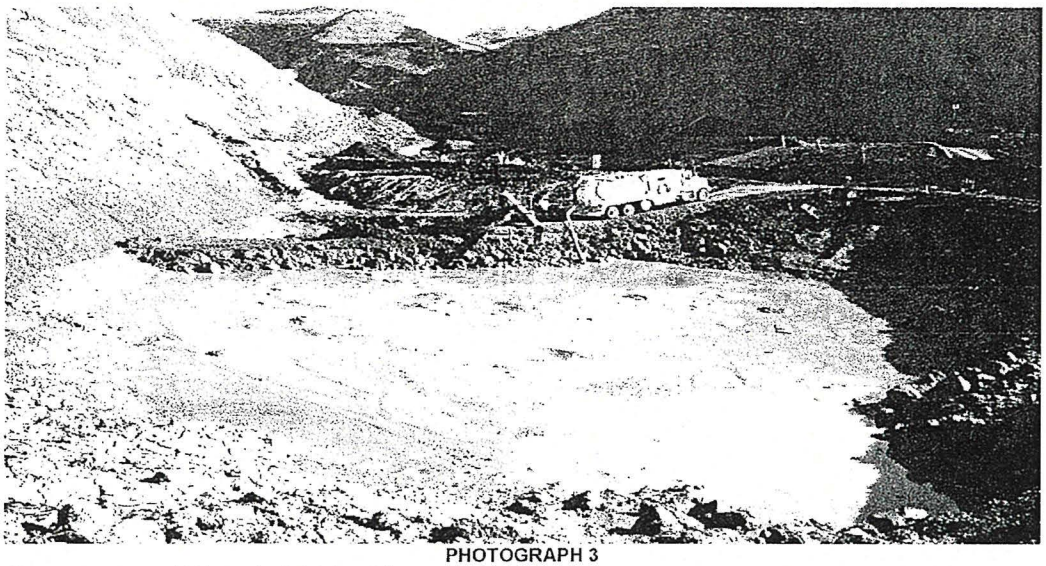
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 1, 2011
Photographer: JRuiz
Description: Sedimentation basin with 7 ½ feet of liquid still remaining. WMH continues to pump and transport the liquid to Waianae WWTP.



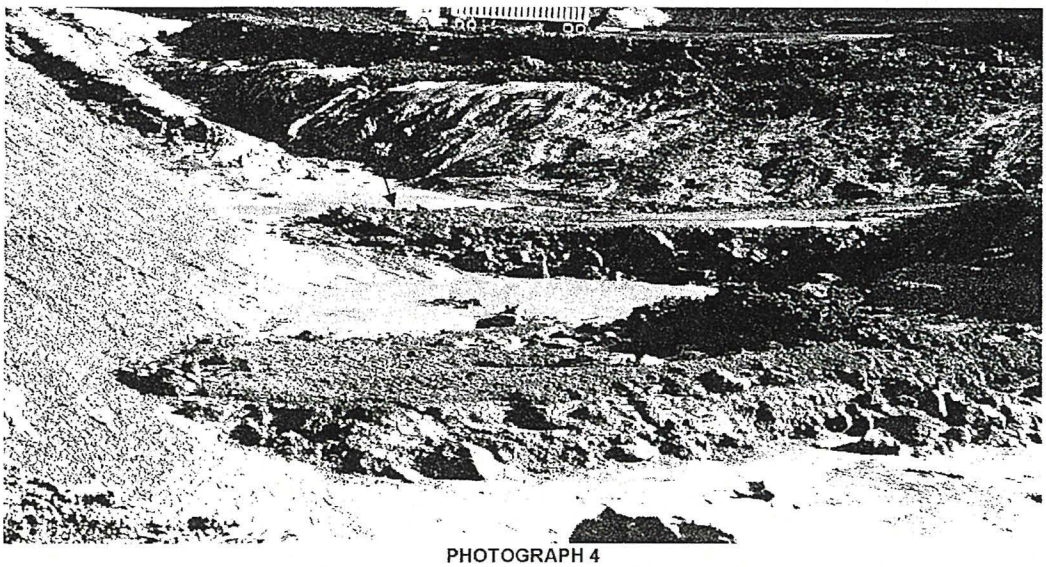
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 1, 2011
Photographer: JRuiz
Description: No liquids seem to be discharging from the sedimentation basin.



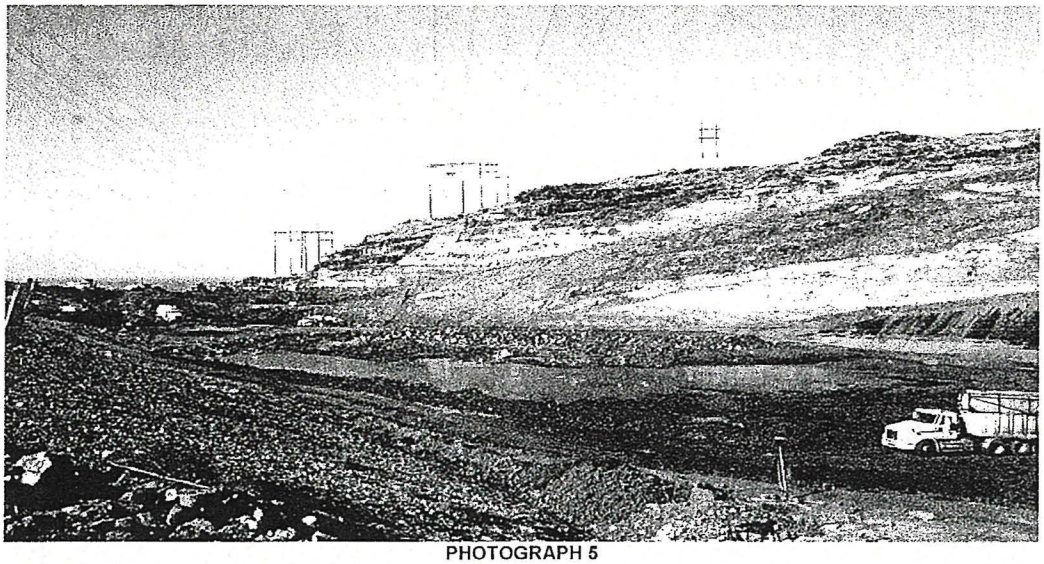
PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 1, 2011
Photographer: JRuiz
Description: View of the lower pond in MSW Cell E-6, which continues to be pumped by PCS. The contents appear to be mostly mud.



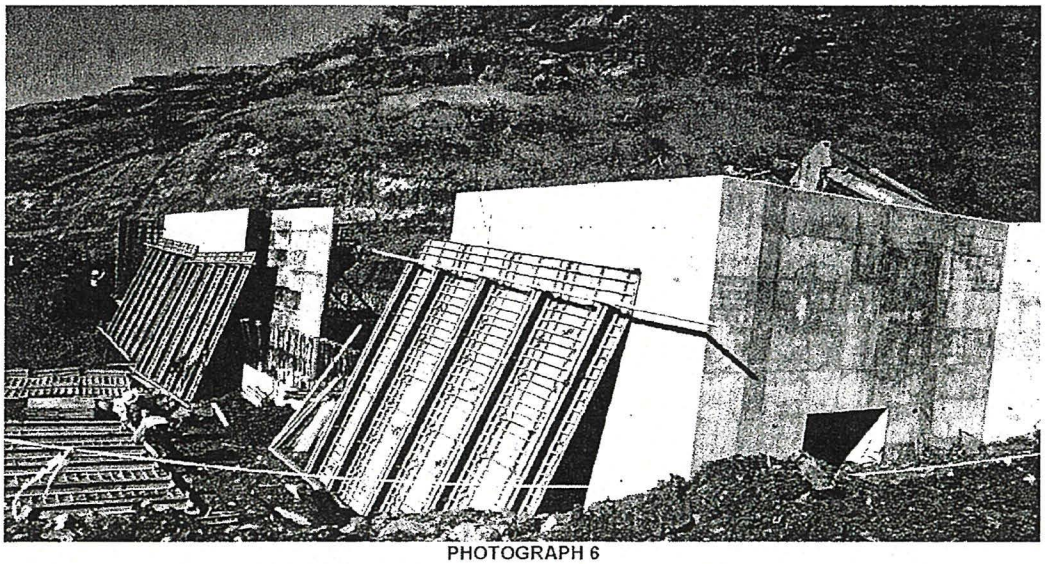
PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 1, 2011
Photographer: JRuiz
Description: Leachate riser in MSW Cell E-6 continues to be under mud and WMH plans to have the mud and water pumped, and to place the leachate system back in operation. Red arrow indicates approximate location of leachate riser



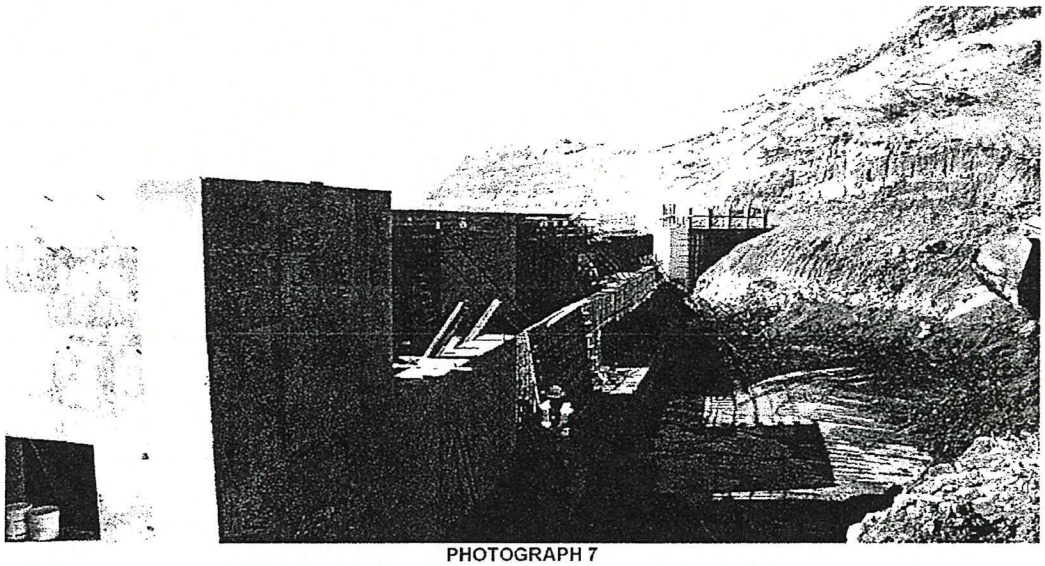
PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 1, 2011
Photographer: JRuiz
Description: View of the entire MSW Cell E-6 from top of MSW Cell E-4



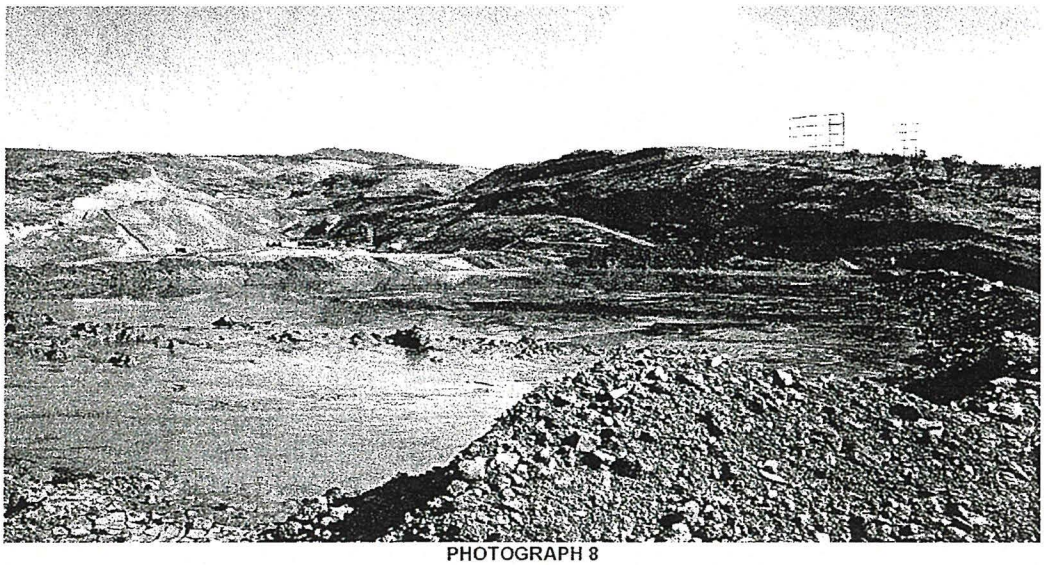
PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 1, 2011
Photographer: JRuiz
Description: Contractor working on forms to construct the western surface water drainage structure.



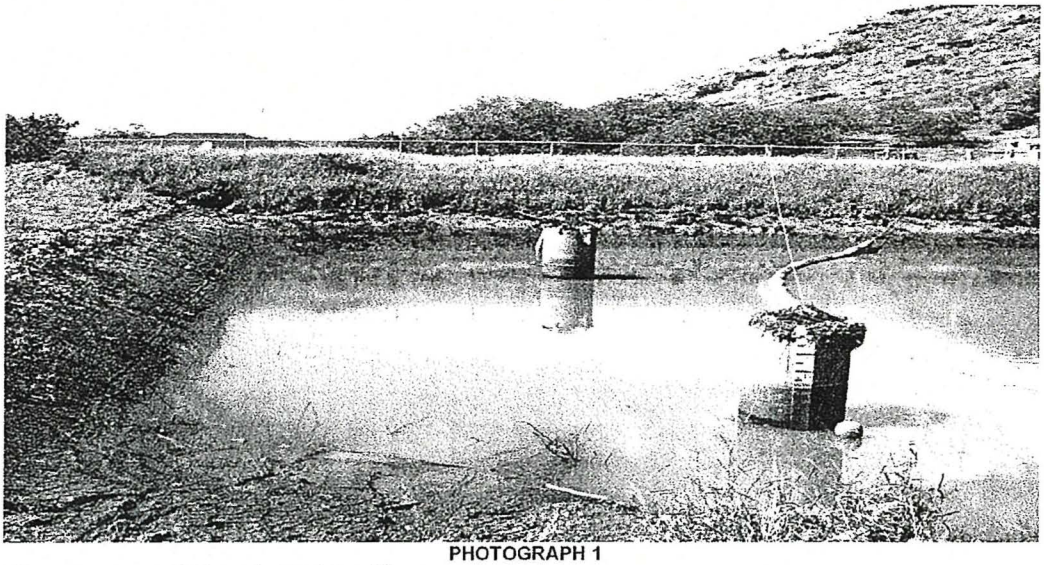
PHOTOGRAPH 7

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 1, 2011
Photographer: JRuiz
Description: Contractor working the weir portion of the storm water structure, looking from the northwest.



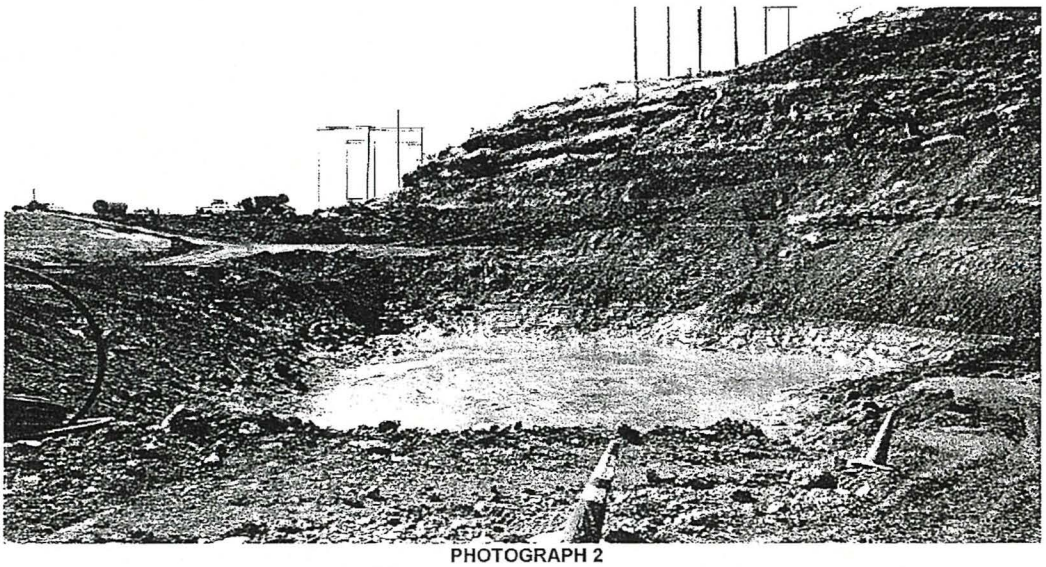
PHOTOGRAPH 8

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 1, 2011
Photographer: JRuiz
Description: View of the slurry mud removed from MSW Cell E-6, located on top of the landfill within MSW Cells 4-A and 4-C. A berm was constructed to prevent run-off.



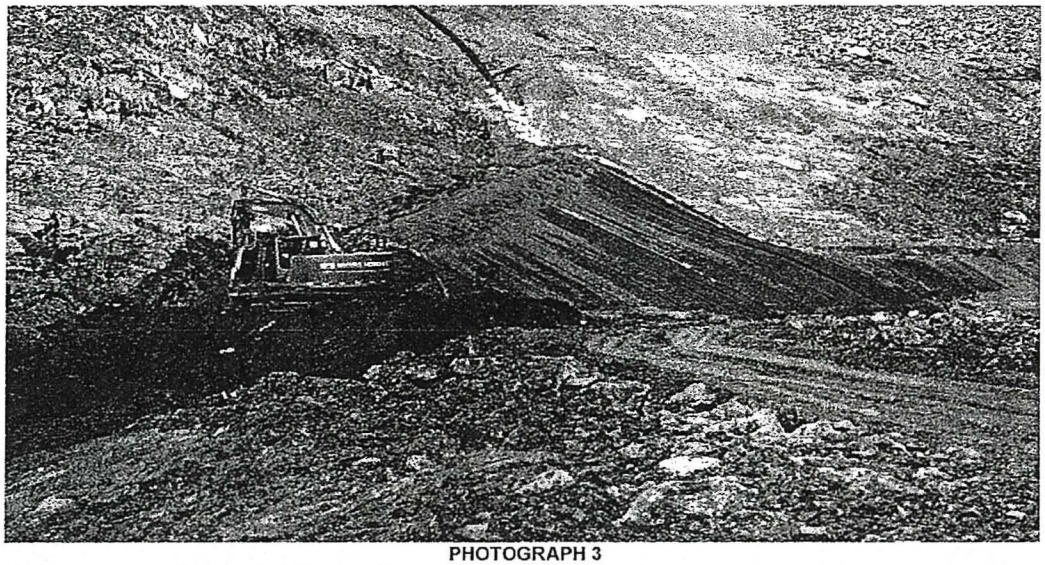
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 3, 2011
Photographer: JRuiz
Description: Liquid level within sedimentation basin was at 6-1/2 feet. WMH continues to pump and transport the liquid to Waianae WWTP.



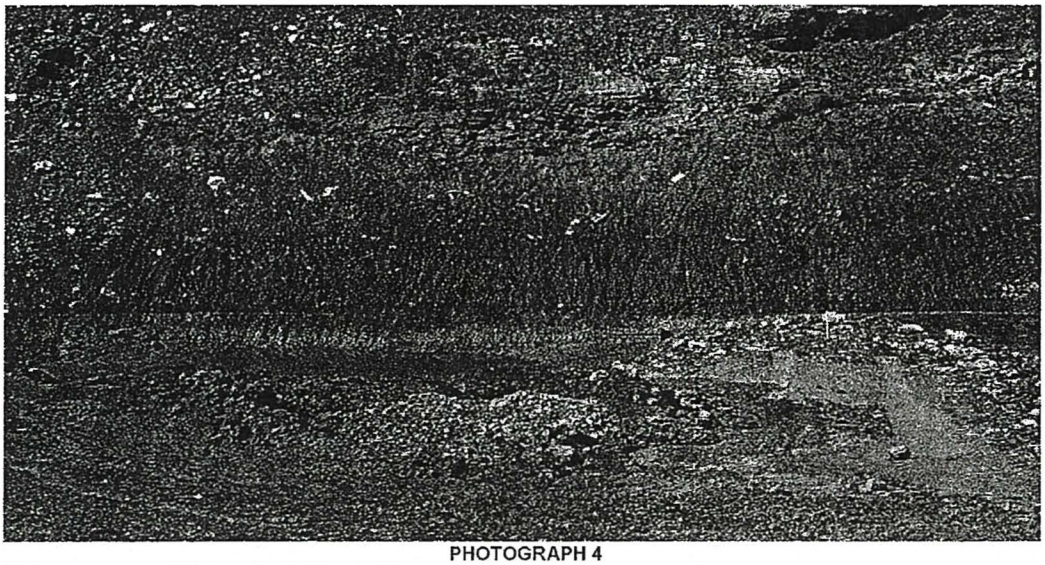
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 3, 2011
Photographer: JRuiz
Description: View of MSW Cell E-6 lower pond with mud remaining. Contractor expects to reach and clear the leachate riser within the next few days.



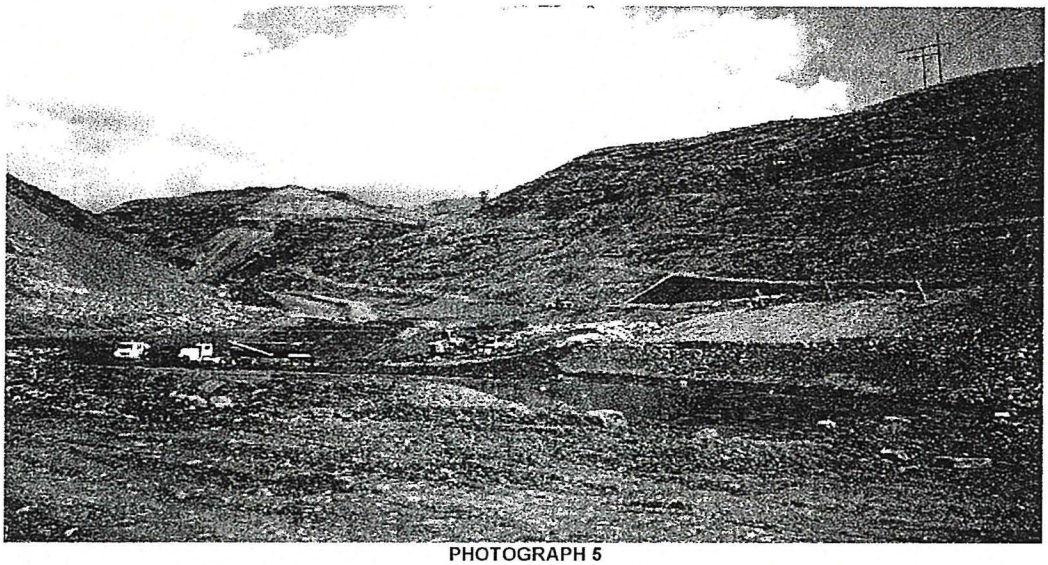
PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 3, 2011
Photographer: JRuiz
Description: Excavator exposing liner at the western edge of MSW Cell E-6 (where the western berm is to be constructed) to determine the extent of liner damage.



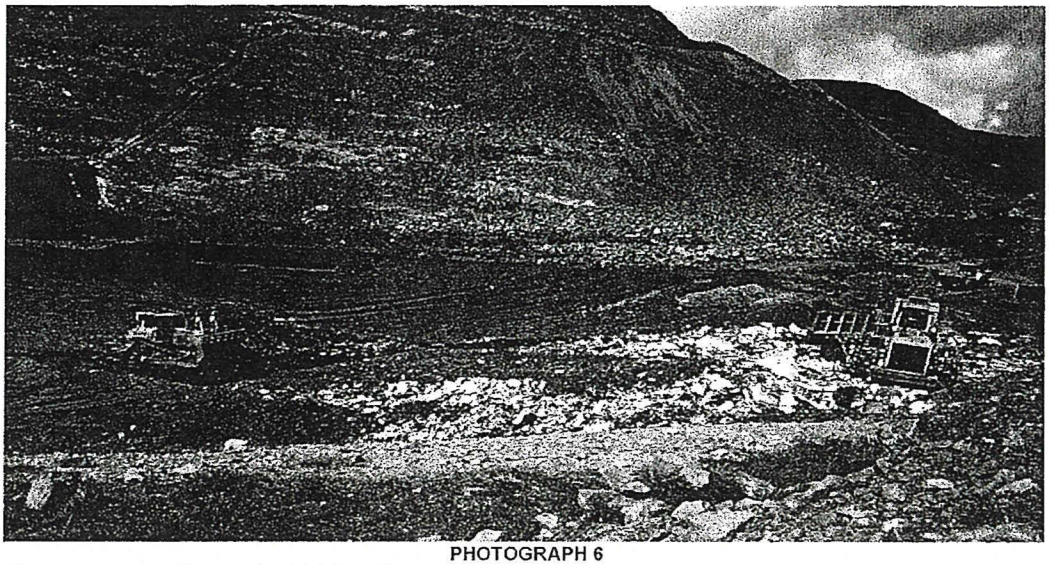
PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 3, 2011
Photographer: JRuiz
Description: Red arrow shows the estimated area where the leachate riser is located and remains under mud.



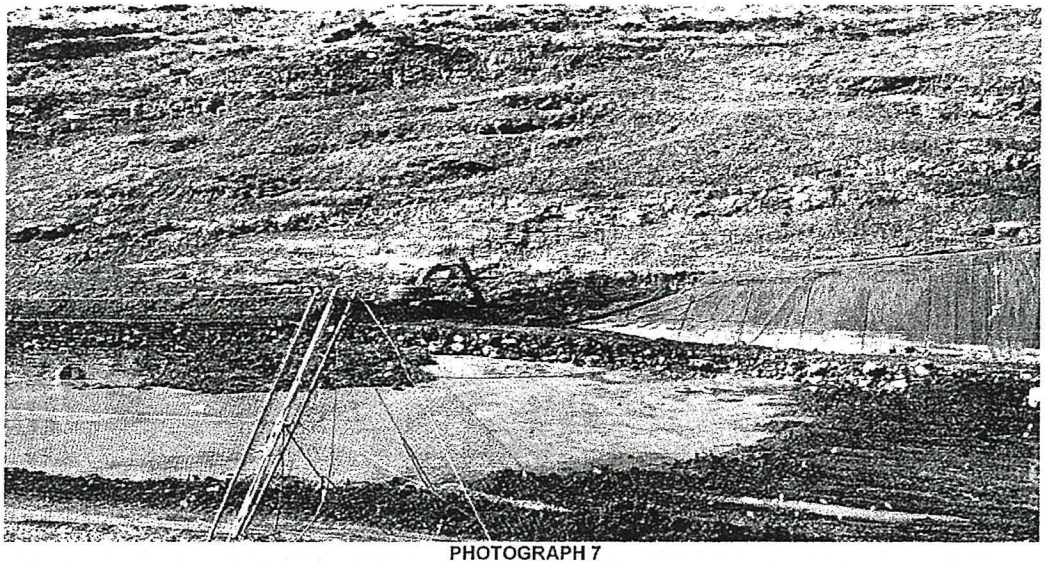
PHOTOGRAPH 5

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 3, 2011
Photographer: JRuiz
Description: View of the workface area on the background with limited acceptance of MSW. Contractor continues to pump water and mud from the upper pond.



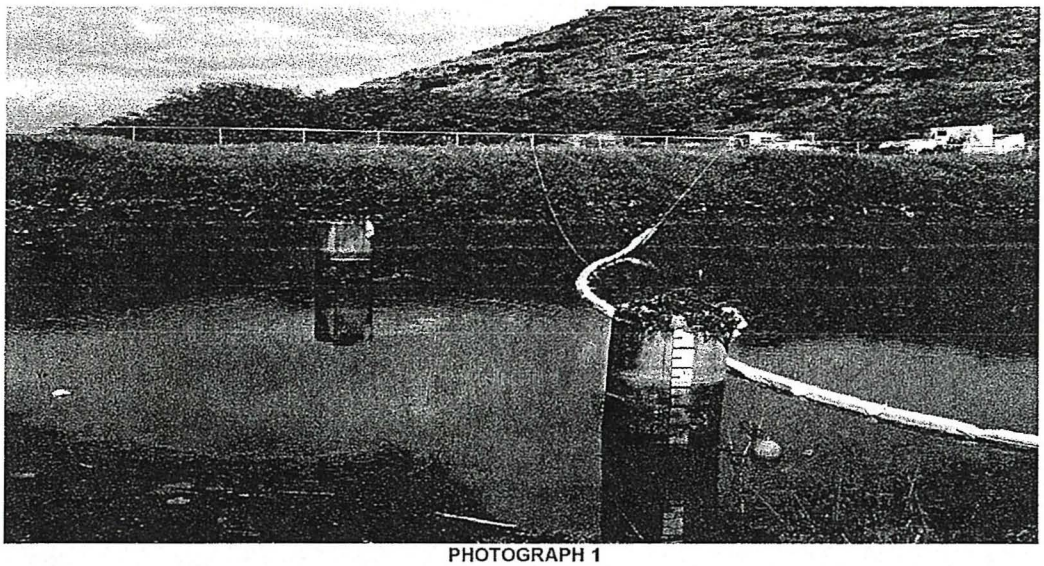
PHOTOGRAPH 6

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 3, 2011
Photographer: JRuiz
Description: Landfill continues to be closed to the public with only limited acceptance of transfer station waste, medical waste and dead animals.



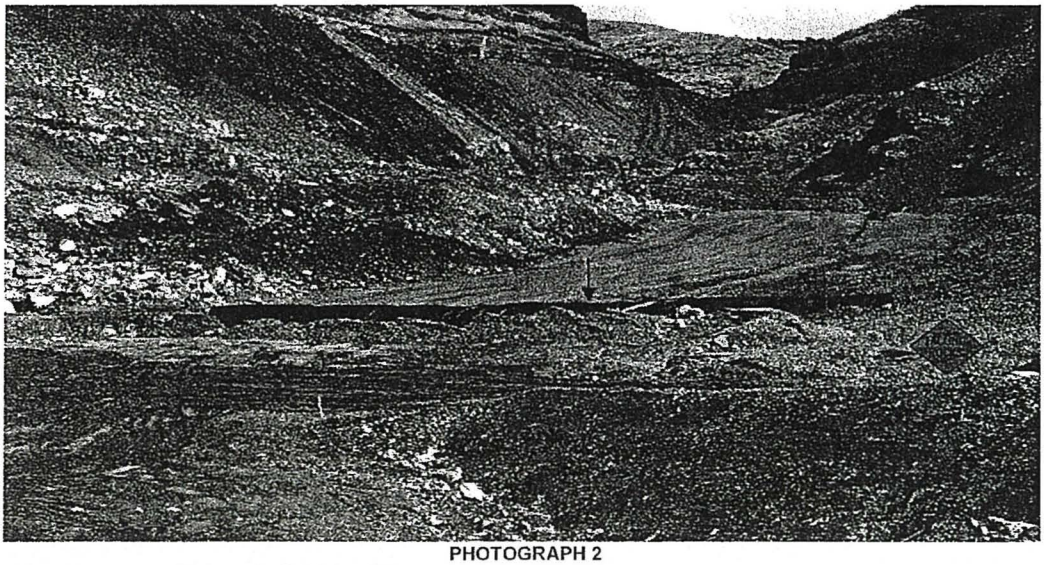
PHOTOGRAPH 7

Site name:	Waimanalo Gulch Landfill
Location:	94-460 Farrington Highway
Date taken:	February 3, 2011
Photographer:	JRuiz
Description:	View of upper pond within MSW Cell E-6, which continues to be pumped of mud. WMH continues to fill the area with soil cover in preparation of solid waste acceptance (see red arrow).



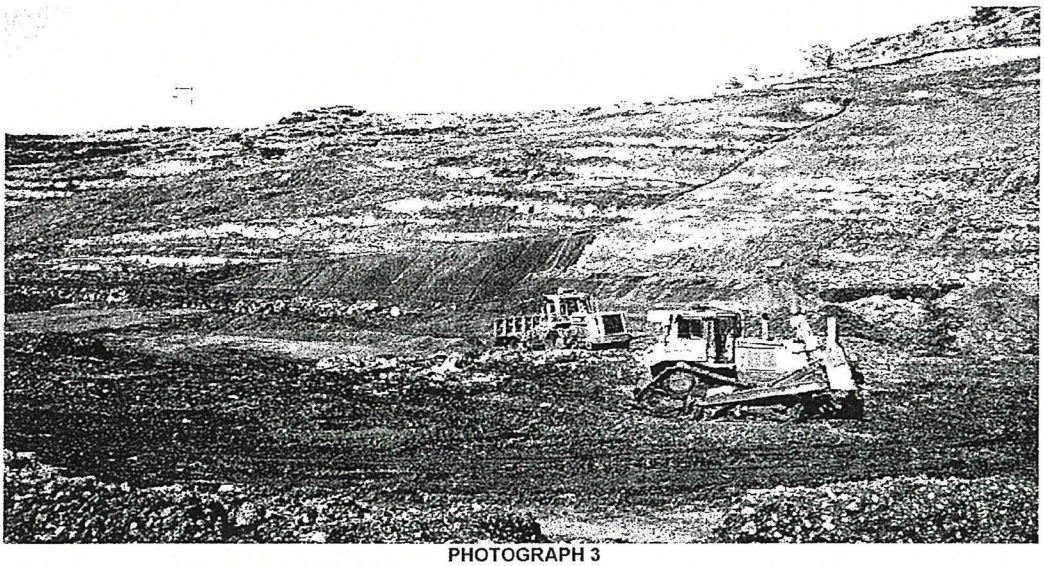
PHOTOGRAPH 1

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 7, 2011
Photographer: JRuiz
Description: View of the sedimentation basin with 6 feet of liquid still remaining



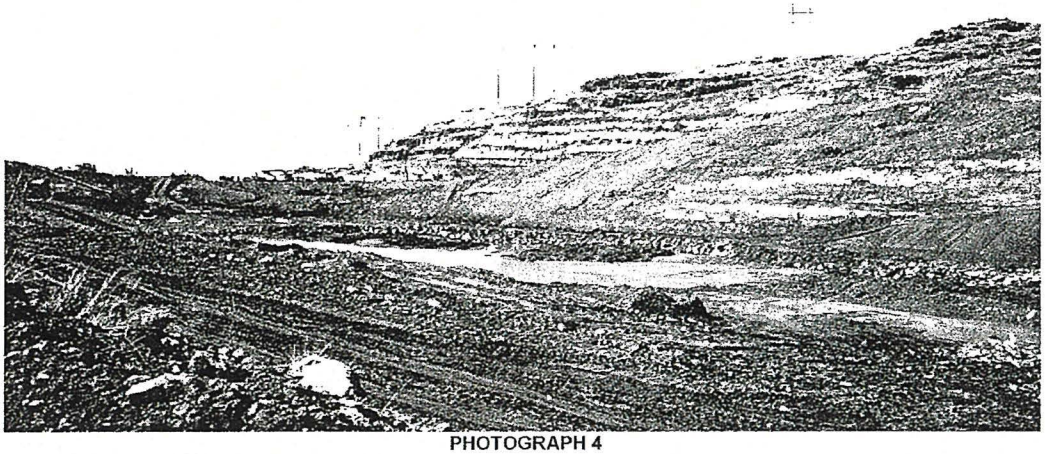
PHOTOGRAPH 2

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 7, 2011
Photographer: JRuiz
Description: View of the upper MSW Cell E-6 with a soil berm and sacrificial liner (red arrow) to prevent water from entering the active cell area.



PHOTOGRAPH 3

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 7, 2011
Photographer: JRuiz
Description: Upper MSW Cell E-6 workface with limited acceptance of waste



PHOTOGRAPH 4

Site name: Waimanalo Gulch Landfill
Location: 94-460 Farrington Highway
Date taken: February 7, 2011
Photographer: JRuiz
Description: View of MSW Cell E-6 with remaining liquid/mud in the upper cell

DEPARTMENT OF HEALTH
SOLID AND HAZARDOUS WASTE BRANCH
SOLID WASTE SECTION
919 ALA MOANA BOULEVARD, ROOM 212
HONOLULU, HAWAII 96814
TEL. NO. 586-4226 FAX NO. 586-7509

INSPECTION REPORT

FACILITY NAME:	Waimanalo Gulch Sanitary Landfill (WGSL)
INSPECTION DATE:	February 25, March 23, and 30, 2011
PERMIT NUMBER:	LF-0182-09
DATE OF ISSUE:	June 4, 2010
EXPIRATION DATE:	June 3, 2015
MAILING ADDRESS:	Joseph Whelan Operations Manager Waste Management of Hawaii, Inc. 92-460 Farrington Highway Kapolei, Hawaii 96707
LOCATION ADDRESS:	92-460 Farrington Highway Kapolei, Hawaii 96707
PERSONS CONTACTED:	Justin Lottig, Market Area Environmental Protection Manager Joseph Whelan, Operations Manager, Waste Management of Hawaii, Inc. (WMH)
TELEPHONE NO.:	808-668-2985, ext 16
INSPECTOR AND TITLE:	Jose Ruiz, Inspector, Thomas Miyashiro, Engineer
REPORT DATE:	April 12, 2011

REASON FOR INSPECTION:

( )	ROUTINE	( )	COMPLIANCE SCHEDULE
( )	VARIANCE CONDITION	( )	PERMIT REQUIREMENT
( )	COMPLAINT EXPLAIN:	(x)	OTHER:

To observe post rain cleanup events, Cell E-6 damage repairs, construction of the western surface drainage system and partial and full diversion of MSW due to H-Power boiler maintenance scheduled.

Background: Rainstorms events on December 19, 2010, December 27, 2010 and January 13, 2011 created large accumulation of water in Cell E-6, making the landfill inoperable in this cell. Rain events also caused the sedimentation basin to fill and overflow water and trash into the stormwater outfall beneath Farrington Highway. The western surface water drainage system was not functional at the time of the rain events, and the temporary up canyon storm water drainage inlet in Cell E-7 became clogged during the events, causing stormwater to enter Cell E-6.

For the most part the western surface water drainage system is almost complete in the Cell E-6 area and the lower and upper pond within MSW Cell E-6 has been drained out of stormwater. The leachate sump for MSW Cell E-6 is now operational, the immediate area around the leachate riser was cleared of mud and leachate is being pumped from the sump as required.

Any deficiencies, which may be noted in this inspection report, are not necessarily inclusive and any omissions shall not be construed as a determination of compliance with any applicable laws.

OBSERVATIONS / FINDINGS:
On the dates of inspections noted above, Solid Waste Section (SWS) inspector Jose Ruiz and SWS Engineer, Thomas Miyashiro, visited WGLF and were escorted around the landfill by Justin Lottig, Environmental Protection Manager and/or Joseph Whelan, Operations Manager, WMH. The purpose of the inspections was to observe the damages, repairs, status of the on-going cleanup at the landfill caused by the rainstorms, and observe partial and full diversion of solid waste acceptance at the WGLF due to H-Power being down for boiler maintenance. The observations made during the inspections are noted below by date of inspection.

February 25, 2011

• SWS inspector and engineer visited the landfill and met with Justin Lottig, who informed the SWS staff that for the past three days they have experienced heavy rains in the afternoons with muddy road conditions. He said that PCS water trucks were not able to get into the leachate sump area due to muddy conditions and MSW Cell E-6 leachate sump had an exceedance of 34 inches due to afternoon rain.

• Daily progress reports from WMH to various branches of the Department of Health state that the contractors excavated around the leachate riser and were successful in exposing the entry flanges of the leachate riser (see photograph 3). On February 18, 2011, the contractor was able to re-connect the electricity and plumbing to the MSW Cell E-6 leachate riser, and pumping of leachate was initiated. The immediate area of the leachate riser was observed with ponded stormwater due to the recent afternoon rain (see photograph 3) and PCS was observed pumping the area, to remove the stormwater.

• At the upper western side of MSW Cell E-6, the SWS staff observed the damaged liner caused by the rainstorm and from cell construction (see photograph 5).

• The contractor was observed placing wet weather material (gravel) at the upper area of MSW Cell E-6 due to muddy road and workface conditions (see photographs 6 & 7).

• The SWS inspector and engineer observed the on-going construction of the western surface water drainage project, and the northern canyon diversion structure weir wall (see photographs 8 & 9) and based on daily reports from WMH, the construction of a functional western surface water drainage system is complete.

• SWS inspector observed the liquid levels within the sedimentation basin at 9 feet high (see photograph 1) and the discharge pipe from the sedimentation basin berm (see photograph 2) into Farrington Highway did not have water flowing from it.

• The landfill was accepting limited amounts and certain types of waste, such as sludge, medical

waste, transfer station waste, bulky items, and fluff from Schnitzer Steel Hawaii Corp. Solid waste from the general public was not being accepted at the time of inspection.

March 23, 2011

• SWS inspector and engineer visited the landfill and met with Justin Lottig. At the time of inspection, it rained heavy for about five minutes while observing workface operations from the western berm (view from photograph 3). The inspector observed that the entire MSW Cell E-6 had no stormwater puddles. Landfill operations were back to normal with a partial diversion from H-power due to scheduled boiler maintenance (see photograph 6). The H-Power maintenance/outage schedule received from Covanta Honolulu Resource Recovery Venture shows that H-Power plans to be closed eight straight days starting March 25 to April 6, 2011, and all solid waste intended for disposal at H-Power will be diverted and disposed at WGLF.

• The inspector noted the western lower area of MSW Cell E-6 being used as the workface and one dozer and one compactor was noted working the workface (see photograph 5). A horse was transported to the landfill and euthanized by a veterinarian. The SWS staff observed the burial (disposal) of the dead animal at the workface, and observed the placement of over two feet of refuse on the animal at the lower area of the workface.

• SWS inspector and engineer observed contractor exposing the edge of liner on the southwestern edge of MSW Cell E-6 in preparation to tied-in the final cover system (see photograph 4).

•According to Justin Lottig, the electrical panel for MSW Cell E-6 leachate sump (see photograph 2) has been temporarily placed on the southern berm area of MSW Cell E-6. Leachate level readings obtained were 18 inches from the bubbler and 28 inches from the transducer, indicating that leachate was within compliance levels.

•The PCS leachate collection tank is located in the same area described above for the electrical leachate sump panel, and the frac tank used for the leachate collection is bermed with soil and lined with geomembrane (see photograph 7).

• SWS inspector observed liquid levels within the sedimentation basin at 4 ½ to 5 feet high (see photograph 1). The discharge pipe from the sedimentation basin was observed with no liquid flowing.

March 30, 2011

• SWS inspector and engineer visited the landfill were driven around the landfill by Joseph Whelan, Operations Manager. At Cell E-6, the inspector noted that workers had removed part of the damaged liner located on the upper northwest of MSW Cell E-6 (see photographs 5 & 6).

In addition, the inspector observed the contractor anchoring the geosynthetic clay liner (GCL) layer of the cover liner for the portion of MSW Cell E-6 over which the extended West Berm will be constructed (see photograph 8). According to Mr. Whelan, the contractor also plans to complete the cover liner installation within the week (see photograph 4) and continue with the construction of the west berm by placing compacted rock fill over the cover liner. The contractor also plans to have the leachate risers extended to the upper west road, and the West

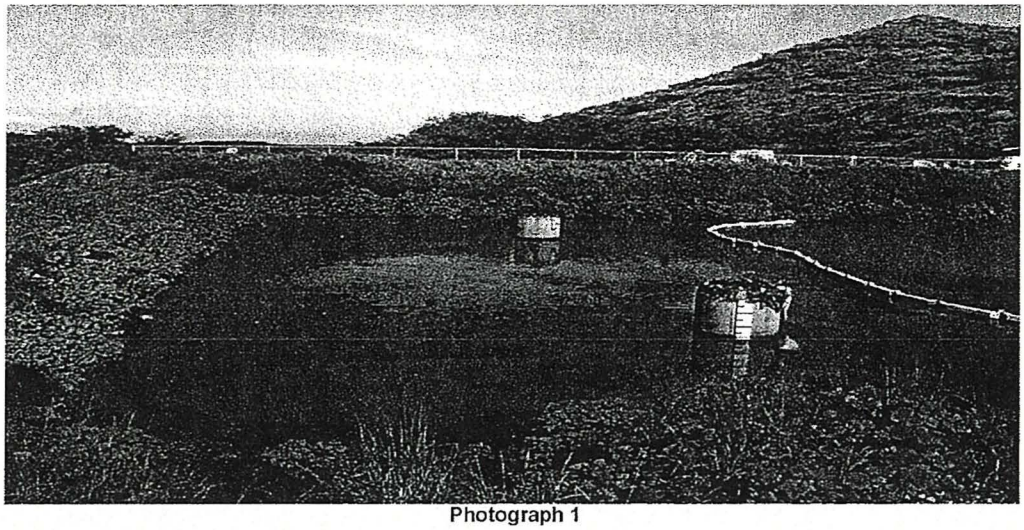
Berm (see photograph 7) will then be constructed so as not to damage the risers.

•The inspector also observed part of the upper western side slope for MSW Cell E-6 already prepared and ready for the installation of the new liner (see photograph 9).

The inspector observed the landfill workface being operated with two dozers and two compactors. Based on the schedule provided to SWS by Covanta Energy, for the past six (6) days, the landfill operated at full diversion due to H-Power boiler maintenance schedule (see photograph 3).

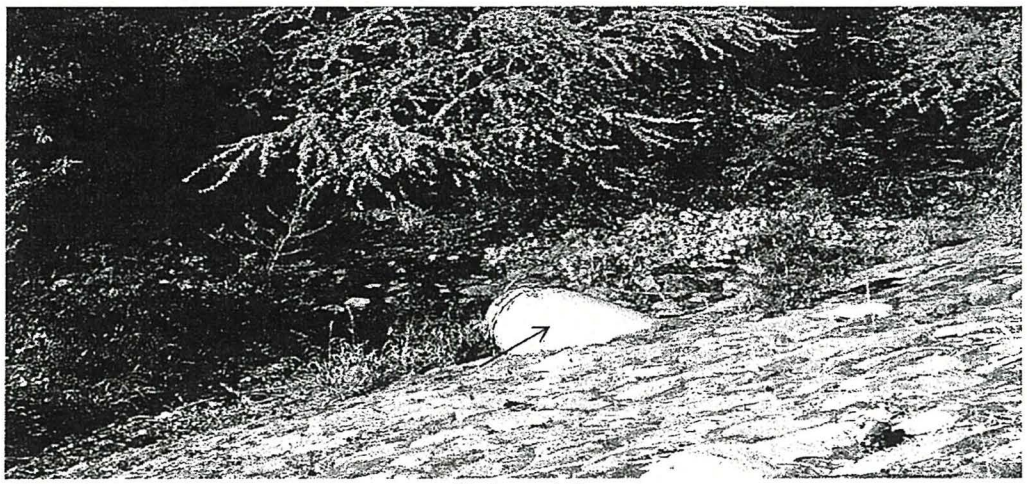
• SWS inspector observed liquid levels within the sedimentation basin at 4 to 4 ½ with a large volume of mud within the sedimentation basin (see photograph 1) and the discharge pipe from the sedimentation basin into Farrington Highway remains plugged.

LIST OF ATTACHMENTS: Photographs



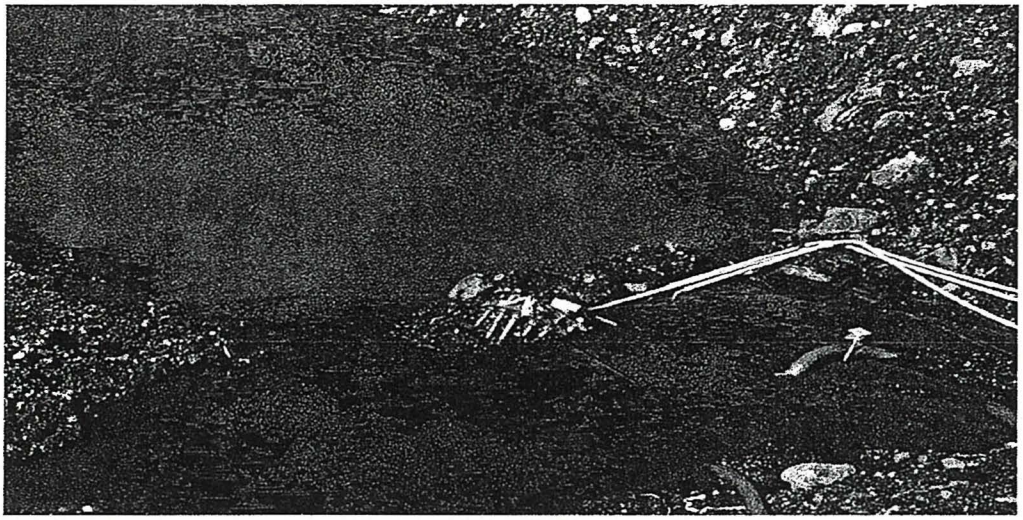
Photograph 1

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: View of the sedimentation basin with nine (9) feet of stormwater.



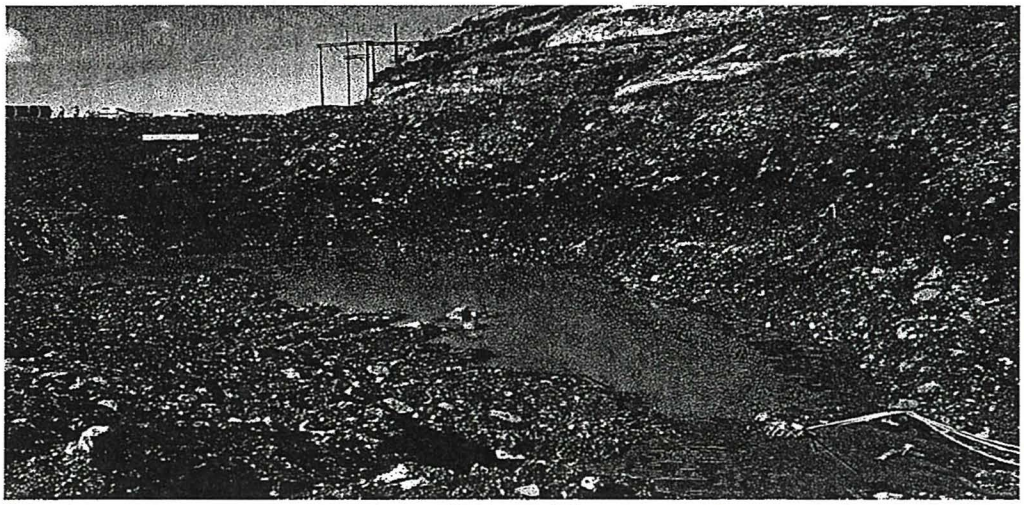
Photograph 2

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: No water observed flowing out of drainage line (red arrow) from sedimentation pond



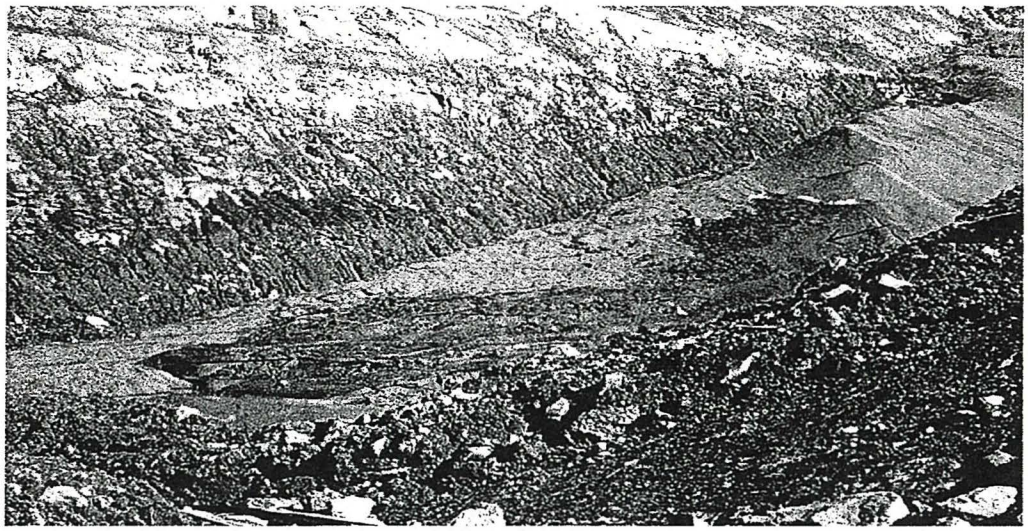
Photograph 3

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: The area where the leachate riser is located was drained a week before, but due to recent afternoon rain the area filled again. Part of the leachate riser top cover for MSW Cell E-6 is visible (red arrow).



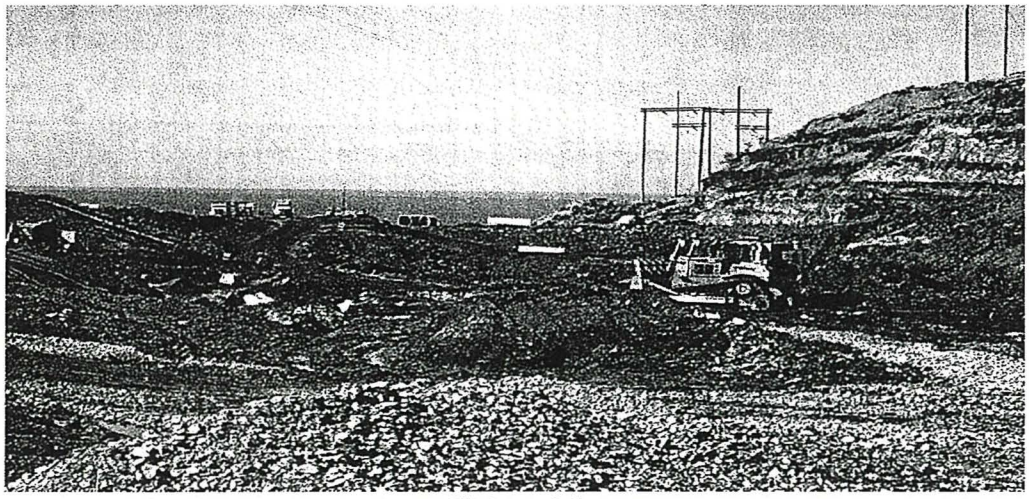
Photograph 4

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: MSW Cell E-6 lower pond with leachate riser at the water surface (red arrow).



Photograph 5

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: Damaged liner (red arrow) caused by the rainstorm and from cell construction at the upper western side of MSW Cell E-6.

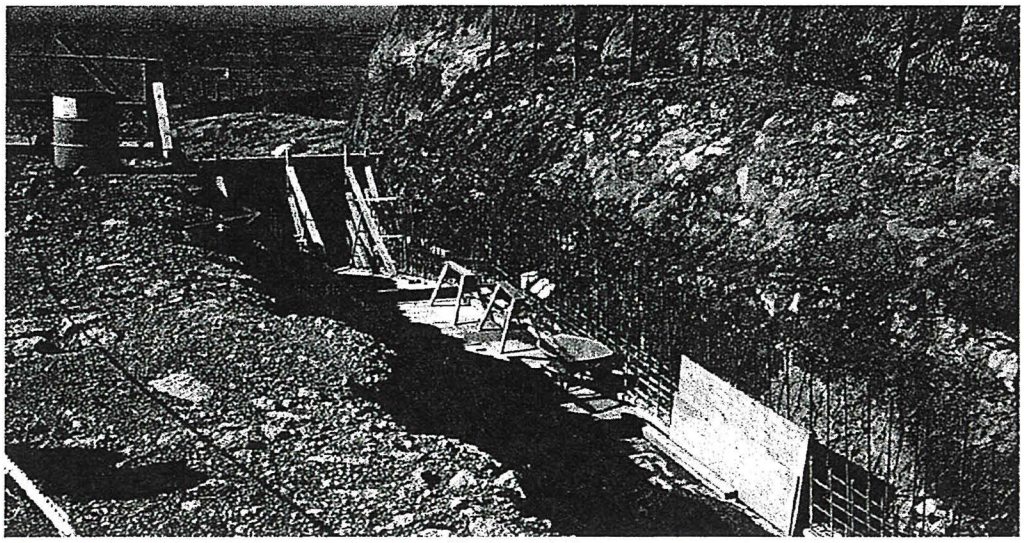


Photograph 6

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: Due to rain showers for the past few days, MSW Cell E-6 cell became muddy. Wet weather material (gravel) had to be placed on the cell for the movement of heavy equipment and refuse trucks within MSW workface.

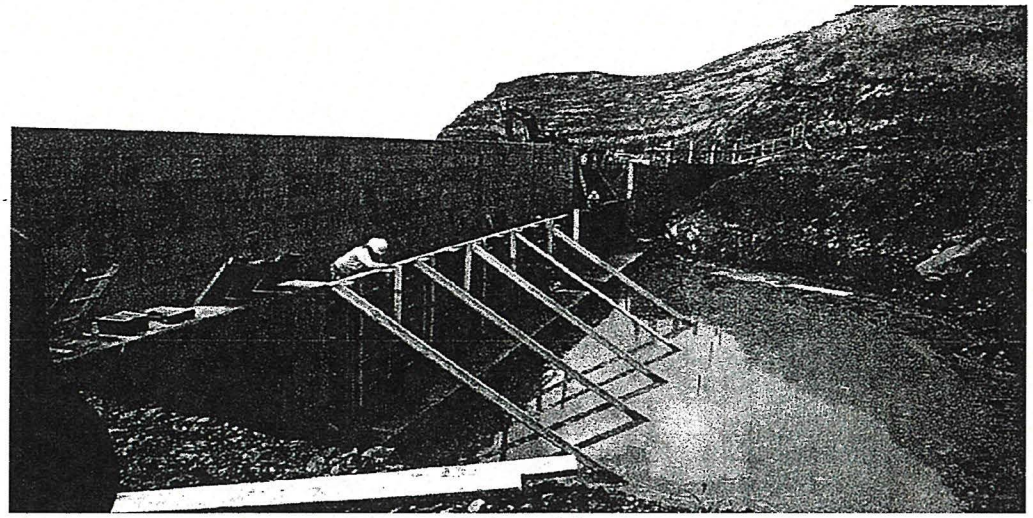
Photograph 7

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: Semi-trailers delivering wet weather material for the workface at MSW Cell E-6.



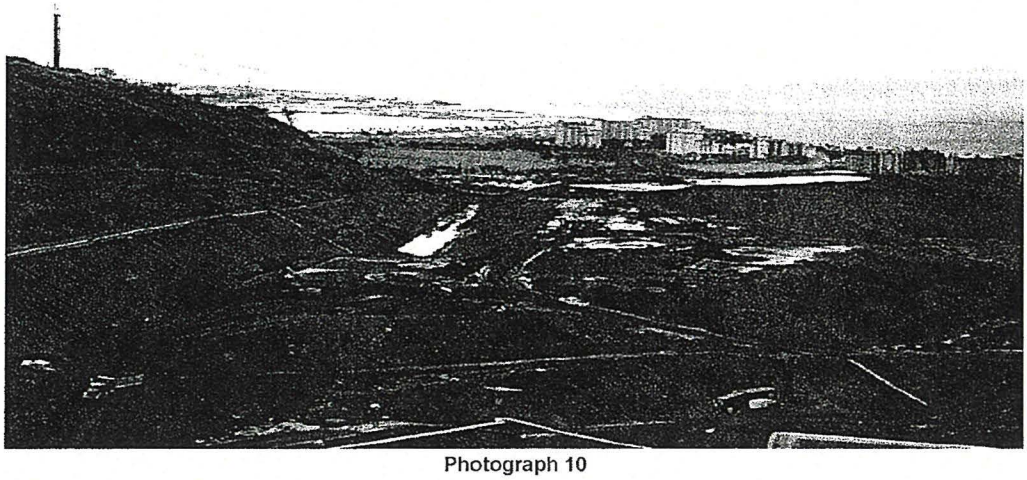
Photograph 8

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: Contractor continues to work on the western surface water drainage transition from box culvert to round Hobas pipe (red arrow).



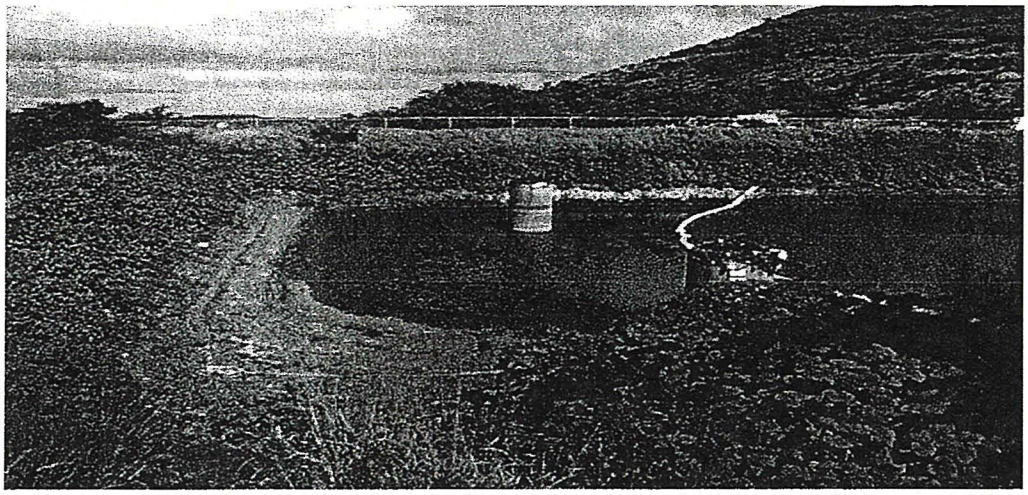
Photograph 9

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: Contractor forming the wall for future pouring of concrete for the diversion structure weir



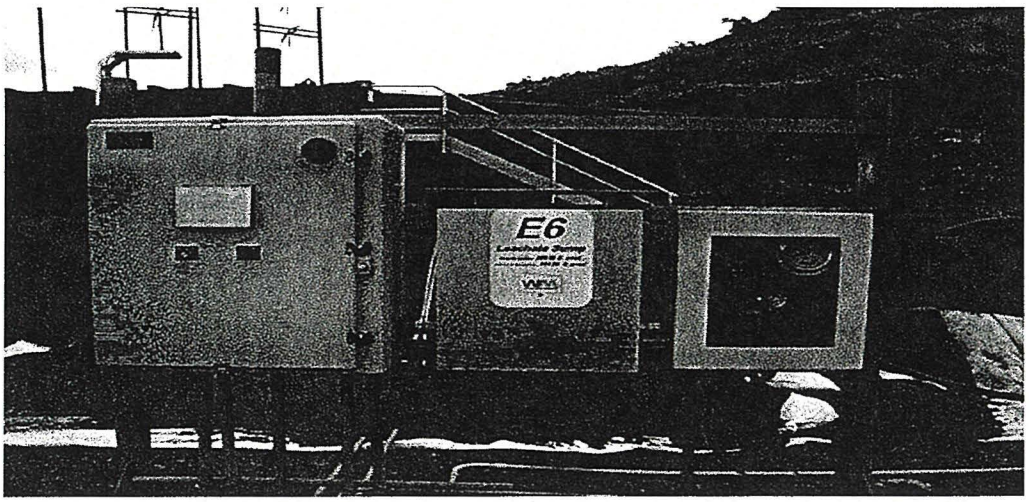
Photograph 10

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: February 25, 2011
Photographer: JRuiz
Description: View from the top canyon of the landfill looking south with visible mud ponds at the top deck of various MSW Cells.



Photograph 1

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: March 23, 2011
Photographer: JRuiz
Description: View of the sedimentation basin with 4 ½ to 5 feet of stormwaterand silt remaining

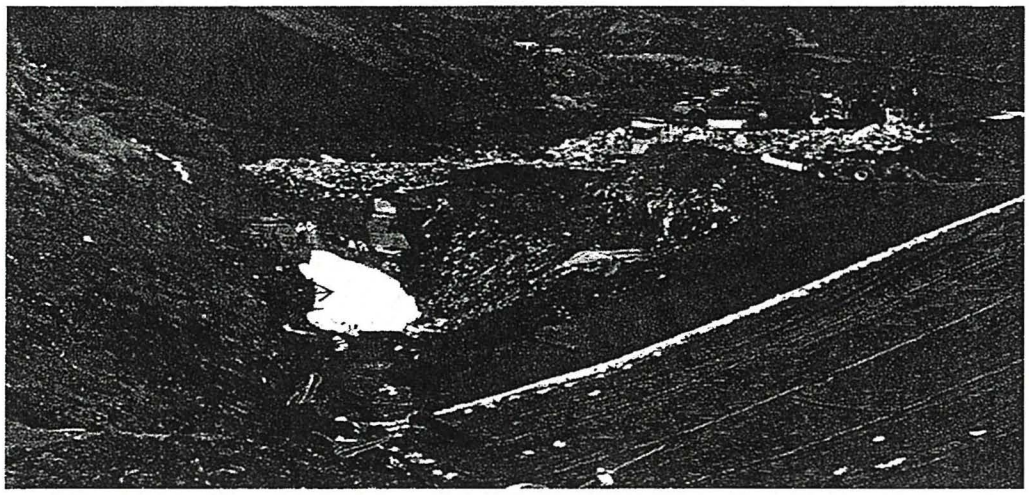


Photograph 2

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: March 23, 2011
Photographer: JRuiz
Description: View of the electrical panel for MSW Cell E-6 leachate sump with transducer and bubbler. The panel is located temporarily on top of the temporary berm, south of MSW Cell E-6, and in the backgound is the leachate collection tank located within a bermed and lined area.

Photograph 3

Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: March 23, 2011
Photographer: JRuiz
Description: Northern view of MSW Cell E-6 with contractor placing geomembrane liner. Once final cover is completed, the western berm will be constructed.



Photograph 4

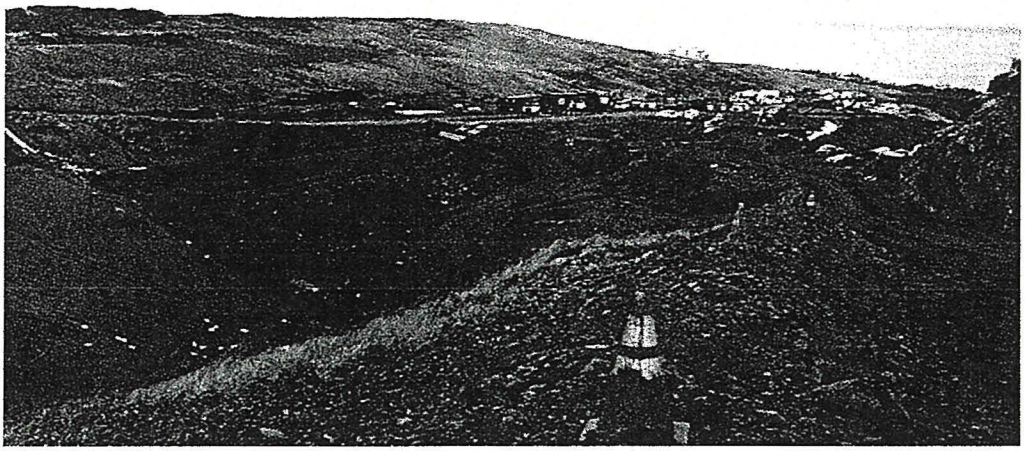
Site Name: Waimanalo Gulch Sanitary Landfill
Location: 92-460 Farrington Highway, Kapolei
DateTaken: March 23, 2011
Photographer: JRuiz
Description: Contractor replacing damaged GCL (red arrow) on the western edge of MSW Cell E-6 and placing geomembrane liner for the Western Berm construction.

Photograph 5

Site Name:	Waimanalo Gulch Sanitary Landfill
Location:	92-460 Farrington Highway, Kapolei
DateTaken:	March 23, 2011
Photographer:	JRuiz
Description:	One dozer and one compactor were observed at the workface of MSW Cell E-6 during partial diversion from H-Power.

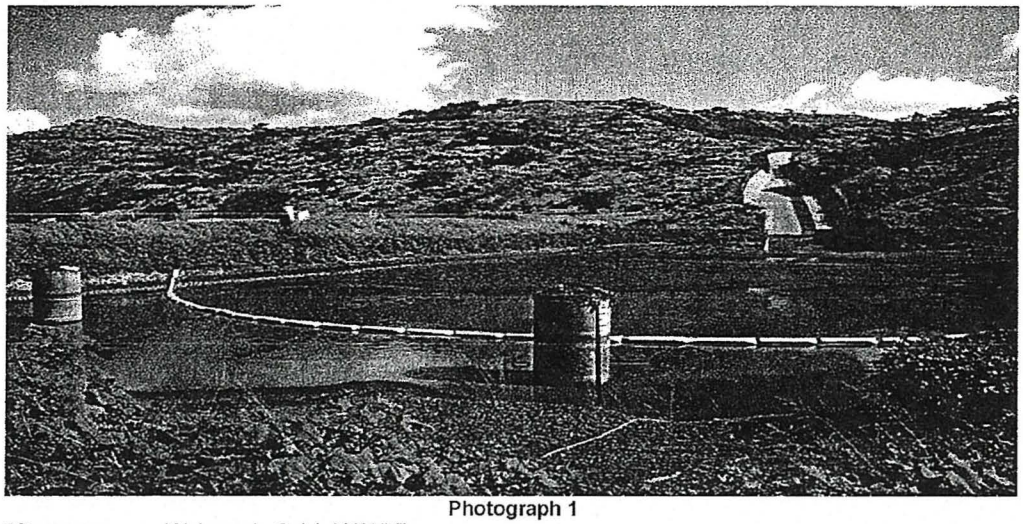
Photograph 6

Site Name:	Waimanalo Gulch Sanitary Landfill
Location:	92-460 Farrington Highway, Kapolei
DateTaken:	March 23, 2011
Photographer:	JRuiz
Description:	Panoramic view of the active workface and lining of theWestern Berm at the south portion of MSW Cell E-6



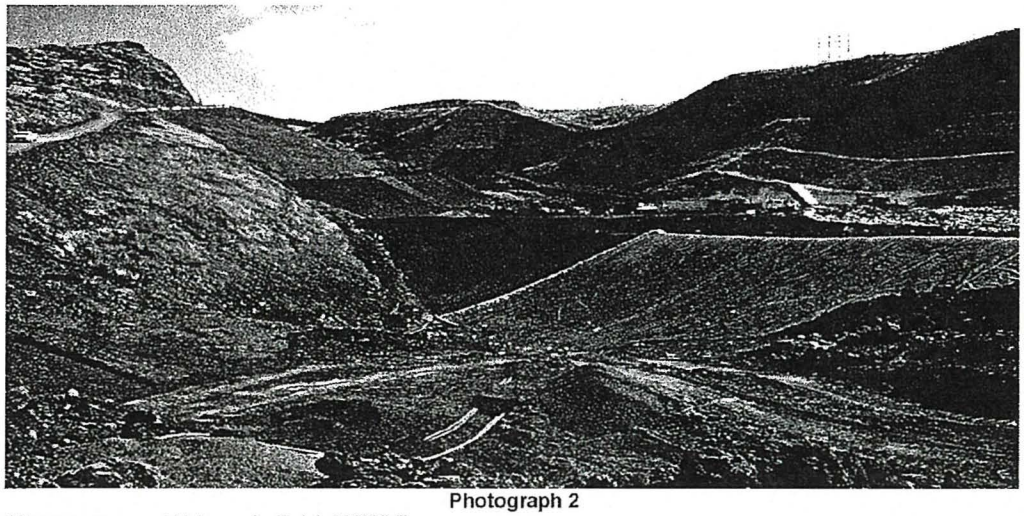
Photograph 7

Site Name:	Waimanalo Gulch Sanitary Landfill
Location:	92-460 Farrington Highway, Kapolei
DateTaken:	March 23, 2011
Photographer:	JRuiz
Description:	View of the leachate holding tank for MSW Cell E-6 (red arrow) on top of a soil berm and geomembrane lined area.



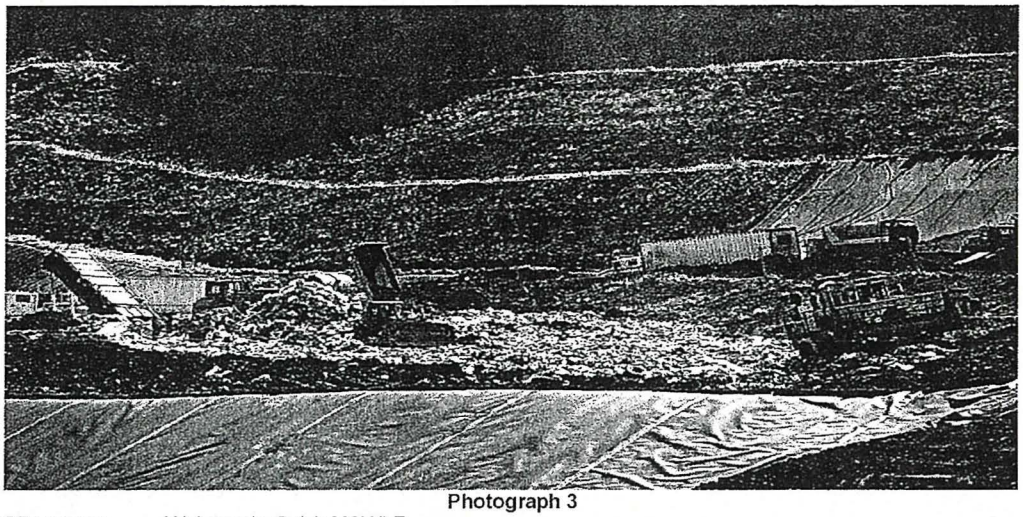
Photograph 1

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: Sedimentation basin with 4 to 4-1/2 feet of stormwater and mud.



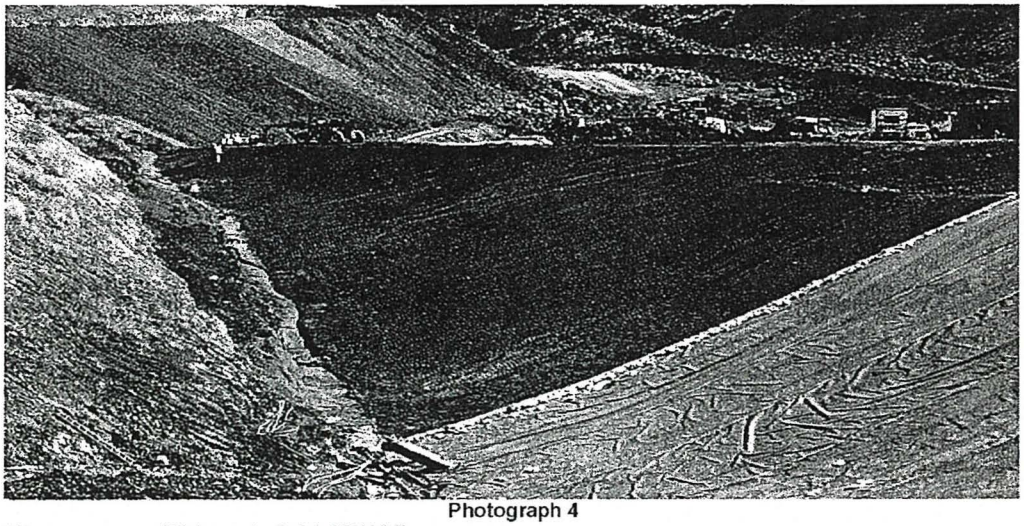
Photograph 2

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: View of the recently installed liner for the construction of the lower western berm area on MSW Cell E-6.



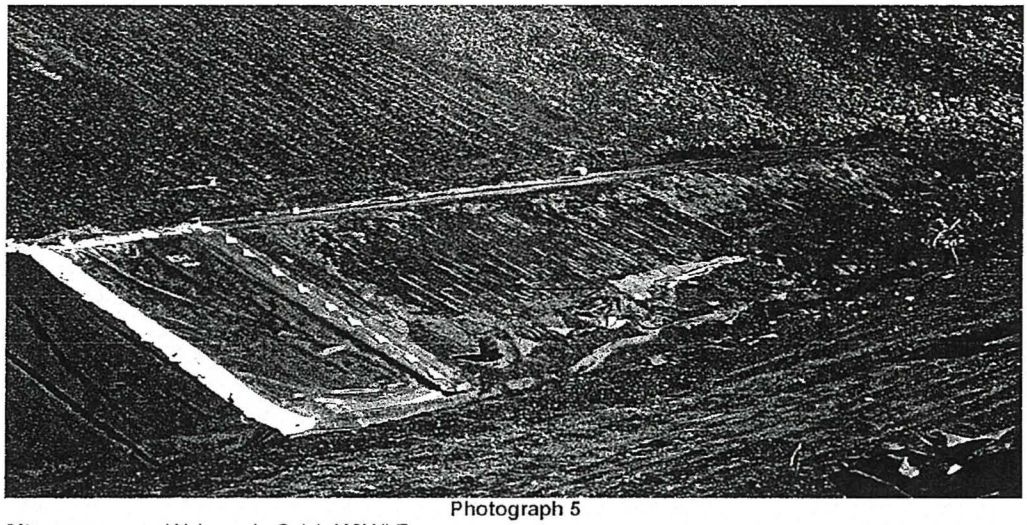
Photograph 3

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: Landfill active work face working at full diversion with two dozers and two compactors.



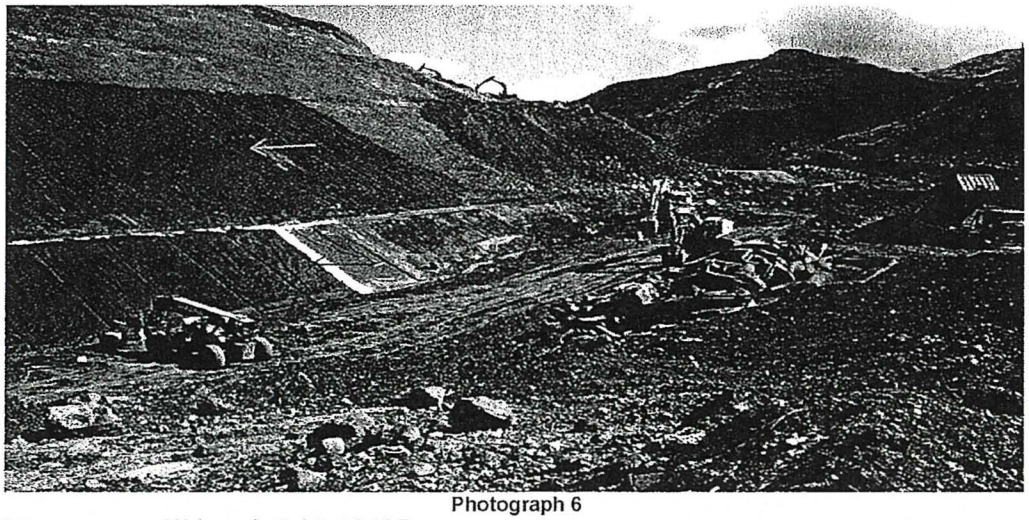
Photograph 4

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: Contractor exposing edge of liner in MSW Cell E-6 for the installation of the cover system.



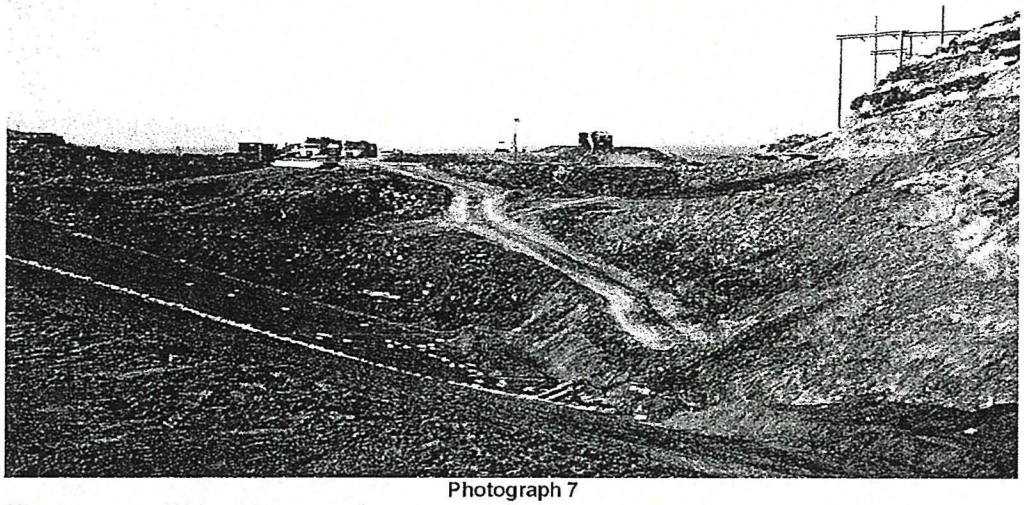
Photograph 5

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: Contractor removed part of the damaged liner (red arrow) and was installing new liner (blue arrow) on the northwestern edge of MSW Cell E-6.



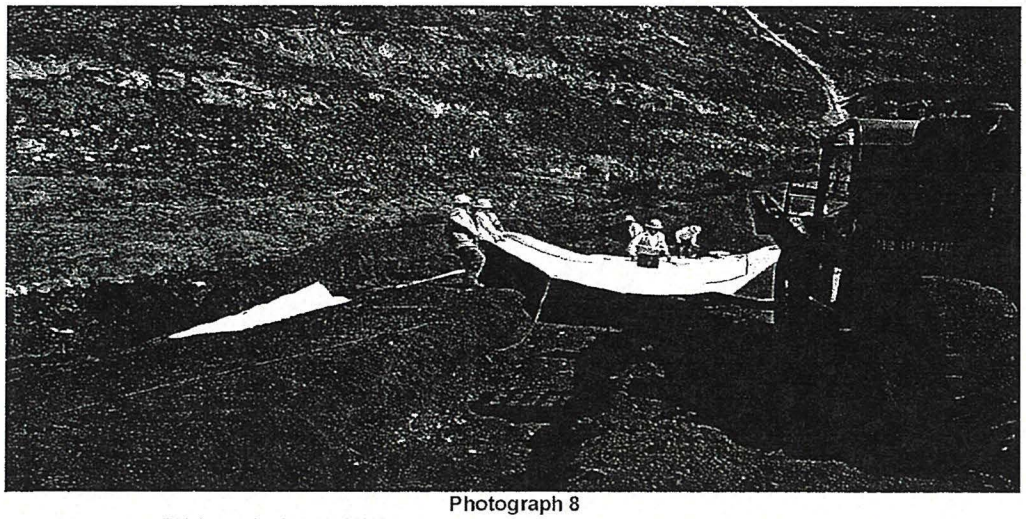
Photograph 6

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: View of the damaged liner replaced in MSW Cell E-6 (red arrow), new liner (blue arrow) and the on-going construction of the upper cell for MSW Cell E-6 (green).



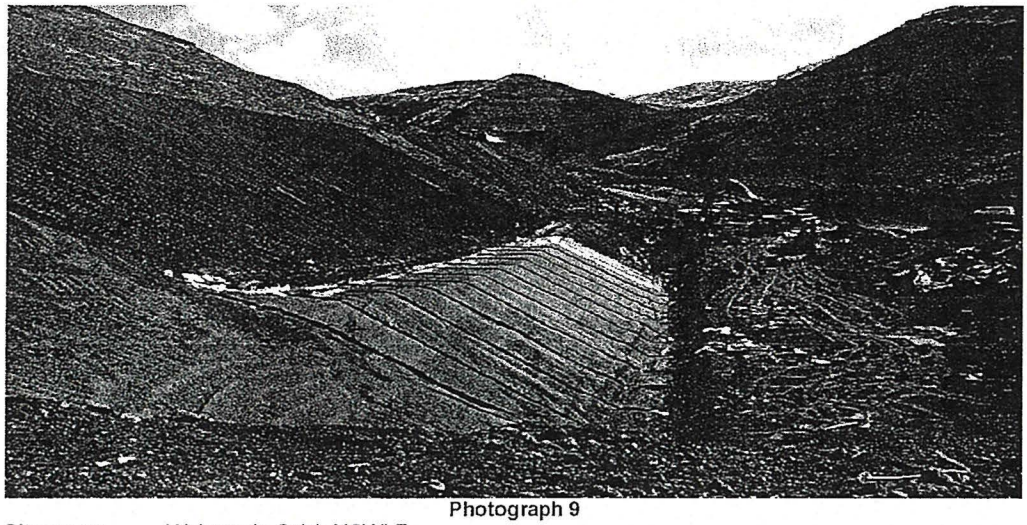
Photograph 7

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: View of the leachate riser (red arrow) for MSW Cell E-6, soon to be extended to the upper road (blue arrow).



Photograph 8

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: Liner contractor personnel placing GCL on anchor trench as part of the MSW Cell E-6 cover liner over which the extended West Berm is to be constructed.



Photograph 9

Site name: Waimanalo Gulch MSWLF
Location: 92-460 Farrington Highway, Kapolei
Date Taken: March 30, 2011
Photographer: JRuiz
Description: Contractor continues to replace damage liner at the northwestern edge of MSW Cell E-6.