From: Lottig, Justin
Sent: Thursday, December 30, 2010 3:20 PM
To: Ichinotsubo, Lene K
Cc: Fujimoto, Janice K; Whelan, Joseph; Frey, Jesse; Von Pein, Rick; Keener, Laura; 'Miyashiro, Thomas'; Ruiz, Jose A
Subject: Incident Alert and Follow Up on Today's DOH Inspection

Aloha Lene,

Today, Jose and Tom were at the site to inspect the progress of cell E6 repairs. Although I was not involved with today's inspection, I spoke with our Engineer, Jesse Frey, and he was. According to Jesse, Jose asked if we were going to submit an incident alert for the storm that happened late on 12/27/10. Our initial notification was to Jose and Tom verbally when they were at the site on 12/28. I've attached a copy of the follow-up.

During the inspection today, the DOH reminded Waste Management that the Emergency Action Plan (EAP) must be implemented per item 13.b.ii. This plan was implemented preceding and following both storms. The EAP requires that:

Prior to a forecasted storm,

- *WGSL personnel will inspect all drainage on-site structures to verify that they are in working order.*
- *Excessive silt in ditches and basins will be removed and the condition of pipes and discharge structures from basins will be verified.*
- *Diversion berms will be constructed around the current disposal area as needed to prevent run-on from entering the waste fill, and to prevent runoff from the waste fill areas of the site.*
- *Interim cover will be placed over exposed waste at the end of the working day prior to the forecasted beginning of a severe storm.*

All of these items were completed before and following both storms. Additionally, the EAP says that:

A Severe Storm Inspection (Post-Hurricane / Severe Storm Forms [Appendix B]) will be conducted, if necessary, during any prolonged storm event to correct or repair any conditions that have been damaged or that may cause damage to on-site or off-site facilities. Excessive silt/sediment will be excavated out of the sedimentation basin and drainage channel/ditches as necessary.

A severe storm form was completed for each storm on the days following each respective storm. Those forms are attached. On the day following the storm on December 20, WM took the extra step of having a certified engineer complete the inspection, although this was not required by the plan or the permit. Site management completed the form on December 28.

It is unclear to me where there is a requirement to use a certified engineer to complete the inspection. According to

permit condition 13.c:

If the acceptance and disposal of waste ceases, the permittee(s) shall submit a written evaluation of whether waste acceptance can resume. The evaluation shall be prepared by a professional engineer registered in the State of Hawaii and the Site Manager, certifying that the landfill and its associated environmental controls are functional, equivalent, or better than required, and that operation of the landfill will not cause a violation of environmental regulations.

However, waste acceptance and disposal was reduced, but it did not cease on any of the affected days.

Please let me know if you have any other questions. Thank you.

Justin H. Lottig
Environmental Protection Manager
Waste Management of Hawaii
92-460 Farrington Highway
Kapolei, HI 96707
808.668.2985

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Waste Management recycles enough paper every year to save 41 million trees. Please recycle any printed emails.

WAIMANALO GULCH SANITARY LANDFILL
POST HURRICANE / SEVERE STORM INSPECTION SHEET

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date of Storm: 12/27/10
Date of Inspection: 12/28/10

Category of Hurricane (if applicable): NA
Recorded Wind Speed(s): 0-10 mph

Time of Hurricane: NA
Time of Inspection: 11:00 AM

Person(s) Conducting Inspection: Justin Lottig, Jesse Frey

	Damage Evident	
	Yes	**No**
Drainage Structures		
• west side drainage rip-rap	X	
• head of drainage channel		X
• interceptor drains	X	
• down drains	X	
• sedimentation basin		X
• inlet/outlet structures (risers)		X

Fueling / Maintenance Area		
• 600-gallon (diesel) mobile lube truck		X
• 5000-gallon (diesel) truck (stationary)		X
• maintenance buildings/containers		X
• 360-gallon waste oil AST (Above Ground Storage Tank)		X
• 360-gallon new/lube oil AST		X
• 360-gallon hydraulic oil AST		X
• miscellaneous 55-gallon drums		X

Any leaks/spills? No

Damage Evident

	Yes	No
Side Slopes	X	
Landfill Cover	X	
Access Roads	X	
Landfill Heavy Equipment		X
Fencing		X
Tire Container Storage Area		
• frac tank(s)		X
Facility Buildings		
• admin office		X
• scale house		X
• telephones		X
• lounge/ breaker trailer		X
• computers		X
• scales		X
• parking lot		X
Water Supply		
• main water meter		X
• mainline		X
• water truck		X
• backflow preventer		X
Sewer Line(s)		X
Power Line(s)	X	
Leachate Collection Systems		
• E1 riser		
○ frac tank		X
○ sump/riser		X
○ transducer system/panel		X
○ pipes/hoses		X
○ pumps		X
○ power		X
○ berms		X

Damage Evident

	Yes	No
• Ash riser		
○ frac tank		X
○ sump/riser		X
○ transducer system/panel		X
○ pipes/hoses		X
○ pumps		X
○ power		X
○ berms		X
• 4B riser		
○ frac tank		X
○ sump/riser		X
○ transducer system/panel		X
○ pipes/hoses		X
○ pumps		X
○ power		X
○ berms		X
• E-6		
○ frac tank		X
○ sump/riser	X	
○ transducer system/panel	X	
○ pipes/hoses		X
○ pumps		X
○ power	X	
○ berms		X

Any leaks/spills? No

Any vapors evident? No

Flare Station /System

• concrete pad/skid		X
• condensate injection system		X
• condensate poly tank(s)		X
• gas header pipe		X
• gas wells		X
• power supply		X
• system panel		X
• flare stack		X

Any leaks/spills? No_____

Any evidence of physical change around the gas wells such as:

- differential settlement? No_____
- compromised seal integrity? No_____

	Damage Evident	
	Yes	**No**
Temporary Perimeter Gas Probes (14)	_____	X_____
Groundwater Wells (6)		
• concrete pads	_____	X_____
• housing	_____	X_____
• casing	_____	X_____
• guard posts/fencing	_____	X_____

Any evidence of damage to wells such as:

- ponded water? _____No_____
- settlement around the wells? ____No_____

Was there any damage to landfill structures, cover or systems caused by the above seismic event?

YES NO X_____

If yes, complete a Hurricane / Severe Storm Damage Report Form.

WAIMANALO GULCH SANITARY LANDFILL
92-460 Farrington Highway
Kapolei, HI 96707

POST HURRICANE / SEVERE STORM DAMAGE REPORT FORM

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date / Time / Duration: 12/27/2010, 5:30 PM to 8:00 PM, 2.5 hours
Date / Time of Inspection: 12/28/2010 1100

Note: Fill out one form for each damage observation.

1. What is damaged? Entire Cell E-6 area is inundated with water.

2. Location of damage: Cell E-6 (Partial)

3. Description of Damage: Flooding of cell due to flash flood up-canyon of cell resulting in sediment, water and debris across the floor of the cell. Entire cell was initially completely under water. Sump power and controls disconnected so that they would not be underwater. Sump risers are completely under water.

Log of Corrective Actions Implemented:

1. Berm below Cell 6 was reinforced in case of more rain

Date damage was repaired: Awaiting sample results_____

Damage repaired by: _____

WAIMANALO GULCH SANITARY LANDFILL
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POST HURRICANE / SEVERE STORM DAMAGE REPORT FORM

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date / Time / Duration: 12/27/2010, 5:30 PM to 8:00 PM, 2.5 hours
Date / Time of Inspection: 12/28/2010 1100

Note: Fill out one form for each damage observation.

1. What is damaged? Drainage Structures

2. Location of damage: Drainage rip-rap, interceptor drains, downdrain at Ash Toe Berm

3. Description of Damage: Concrete drainage swales/rip-rap and interceptor drains on the western haul road plugged with soil/rocks. Corrugated HDPE downdrain pipe below the Ash Berm Sump was separated during last week's storm and sections of pipe are scattered down the sideslope, several pieces are located in the sediment basin.

Log of Corrective Actions Implemented:

1. Laborers working on clearing drainage swales and interceptor drains of sediment.
2. Contractor cleaning inlets with vacuum truck.

Date damage was repaired: Sediment removal is on-going

Damage repaired by: _____

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POST HURRICANE / SEVERE STORM DAMAGE REPORT FORM

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date / Time / Duration: 12/27/2010, 5:30 PM to 8:00 PM, 2.5 hours
Date / Time of Inspection: 12/28/2010 1100

Note: Fill out one form for each damage observation.

1. What is damaged? Sideslopes/Landfill Cover/Access Roads

2. Location of damage: Across site

3. Description of Damage: West facing sideslope of the West Berm, south of Gas Probe 7, water is seeping out and running off-site towards the HECO property. Landfill cover across the site has eroded, exposing MSW in some sections. Cover material has settled on access roads. Access road to the ash sump leachate tank is limited to 4x4 vehicles due to muddy material on road.

Log of Corrective Actions Implemented:

1. No action taken to date due to muddy conditions on sideslopes.

Date damage was repaired: _____

Damage repaired by: _____

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POST HURRICANE / SEVERE STORM DAMAGE REPORT FORM

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date / Time / Duration: 12/27/2010, 5:30 PM to 8:00 PM, 2.5 hours
Date / Time of Inspection: 12/28/2010 1100

Note: Fill out one form for each damage observation.

1. What is damaged? Underground electrical conduit

2. Location of damage: Along main haul road

3. Description of Damage: Erosion has further exposed the underground electrical conduit along the haul road.

Log of Corrective Actions Implemented:

1. No action taken to date.

Date damage was repaired: _____

Damage repaired by: _____

WAIMANALO GULCH SANITARY LANDFILL
POST HURRICANE / SEVERE STORM INSPECTION SHEET

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date of Storm: 12/19/10
Date of Inspection: 12/20/10

Category of Hurricane (if applicable): NA
Recorded Wind Speed(s): 0-10 mph
.
Time of Hurricane: NA
Time of Inspection: NA

Person(s) Conducting Inspection: Ron Boyle, Dan Frerich, Justin Lottig

	Damage Evident	
	Yes	**No**
Drainage Structures		
• west side drainage rip-rap	X	
• head of drainage channel		X
• interceptor drains	X	
• down drains	X	
• sedimentation basin		X
• inlet/outlet structures (risers)		X
Fueling / Maintenance Area		
• 600-gallon (diesel) mobile lube truck		X
• 5000-gallon (diesel) truck (stationary)		X
• maintenance buildings/containers		X
• 360-gallon waste oil AST (Above Ground Storage Tank)		X
• 360-gallon new/lube oil AST		X
• 360-gallon hydraulic oil AST		X
• miscellaneous 55-gallon drums		X

Any leaks/spills? No

Damage Evident

	Yes	No
Side Slopes	X	
Landfill Cover	X	
Access Roads	X	
Landfill Heavy Equipment		X
Fencing		X
Tire Container Storage Area		
• frac tank(s)		X
Facility Buildings		
• admin office		X
• scale house		X
• telephones		X
• lounge/ breaker trailer		X
• computers		X
• scales		X
• parking lot		X
Water Supply		
• main water meter		X
• mainline		X
• water truck		X
• backflow preventer		X
Sewer Line(s)		X
Power Line(s)	X	
Leachate Collection Systems		
• E1 riser		
○ frac tank		X
○ sump/riser		X
○ transducer system/panel		X
○ pipes/hoses		X
○ pumps		X
○ power		X
○ berms		X

Damage Evident

	Yes	No
• Ash riser		
○ frac tank		X
○ sump/riser		X
○ transducer system/panel		X
○ pipes/hoses		X
○ pumps		X
○ power		X
○ berms		X
• 4B riser		
○ frac tank		X
○ sump/riser		X
○ transducer system/panel		X
○ pipes/hoses		X
○ pumps		X
○ power		X
○ berms		X
• E-6		
○ frac tank		X
○ sump/riser	X	
○ transducer system/panel	X	
○ pipes/hoses		X
○ pumps		X
○ power	X	
○ berms		X

Any leaks/spills? No

Any vapors evident? No

Flare Station /System

• concrete pad/skid		X
• condensate injection system		X
• condensate poly tank(s)		X
• gas header pipe		X
• gas wells		X
• power supply		X
• system panel		X
• flare stack		X

Any leaks/spills? No_____

Any evidence of physical change around the gas wells such as:

- differential settlement? No_____
- compromised seal integrity? No_____

	Damage Evident	
	Yes	**No**
Temporary Perimeter Gas Probes (14)	_____	_____
Groundwater Wells (6)		
• concrete pads	_____	_____
• housing	_____	_____
• casing	_____	_____
• guard posts/fencing	_____	_____

Any evidence of damage to wells such as:

- ponded water? _____
- settlement around the wells? _____

Was there any damage to landfill structures, cover or systems caused by the above seismic event?

YES NO X_____

If yes, complete a Hurricane / Severe Storm Damage Report Form.

WAIMANALO GULCH SANITARY LANDFILL
92-460 Farrington Highway
Kapolei, HI 96707

POST HURRICANE / SEVERE STORM DAMAGE REPORT FORM

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date / Time / Duration: 12/202010, 1:30 am-5:00 pm, 15.5 hours
Date / Time of Inspection: 12/21/2010, 1030

Note: Fill out one form for each damage observation.

1. What is damaged? Entire Cell E-6 area is inundated with water.

2. Location of damage: Cell E-6 (Partial)

3. Description of Damage: Flooding of cell due to flash flood up-canyon of cell resulting in sediment, water and debris across the floor of the cell. Entire cell was initially completely under water. Sump power and controls disconnected so that they would not be underwater. Sump risers are completely under water.

Log of Corrective Actions Implemented:

1. Sump control panel was disconnected and removed from service due to rising water.
2. Two, 8-inch water pumps pumping water from cell into nearby manhole connected to HOBAS pipe Western Surface Water Drainage System.

Date damage was repaired: Pumping is on-going

Damage repaired by: _____

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Date / Time / Duration: 12/202010, 1:30 am-5:00 pm, 15.5 hours
Date / Time of Inspection: 12/21/2010, 1030

Note: Fill out one form for each damage observation.

1. What is damaged? Drainage Structures

2. Location of damage: Drainage rip-rap, interceptor drains, downdrain at Ash Toe Berm

3. Description of Damage: Concrete drainage swales/rip-rap and interceptor drains on the western haul road plugged with soil/rocks. Corrugated HDPE downdrain pipe below the Ash Berm Sump has become separated and sections of pipe are scattered down the sideslope, several pieces are located in the sediment basin.

Log of Corrective Actions Implemented:

1. Laborers working on clearing drainage swales and interceptor drains of sediment.

Date damage was repaired: Sediment removal is on-going

Damage repaired by: _____

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POST HURRICANE / SEVERE STORM DAMAGE REPORT FORM

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date / Time / Duration: 12/202010, 1:30 am-5:00 pm, 15.5 hours
Date / Time of Inspection: 12/21/2010, 1030

Note: Fill out one form for each damage observation.

1. What is damaged? Sideslopes/Landfill Cover/Access Roads

2. Location of damage: Across site

3. Description of Damage: West facing sideslope of the West Berm, south of Gas Probe 7, water is seeping out and running off-site towards the HECO property. Landfill cover across the site has eroded, exposing MSW in some sections. Cover material has settled on access roads. Access road to the ash sump leachate tank is limited to 4x4 vehicles due to muddy material on road.

Log of Corrective Actions Implemented:

1. No action taken to date due to muddy conditions on sideslopes.

Date damage was repaired: _____

Damage repaired by: _____

WAIMANALO GULCH SANITARY LANDFILL
92-460 Farrington Highway
Kapolei, HI 96707

POST HURRICANE / SEVERE STORM DAMAGE REPORT FORM

Type of Storm (Depression, Tropical Storm, Hurricane): Winter (Kona) Storm
Date / Time / Duration: 12/202010, 1:30 am-5:00 pm, 15.5 hours
Date / Time of Inspection: 12/21/2010, 1030

Note: Fill out one form for each damage observation.

1. What is damaged? Underground electrical conduit

2. Location of damage: Along main haul road

3. Description of Damage: Erosion has exposed the underground electrical conduit along the haul road.

Log of Corrective Actions Implemented:

1. No action taken to date.

Date damage was repaired: _____

Damage repaired by: _____

INCIDENT ALERT FORM

SECTION 1 - CHECK THE BOX(ES) BELOW THAT APPLY TO THE INCIDENT:

ENVIRONMENTAL:

☐ An uncontained release to air, land, or water that requires agency notification under applicable federal, state or local laws, or regulations.

OPERATIONAL:

☐ Failures of environmental protection systems (e.g., landfill liner systems, tanks, air pollution control systems, containment systems, etc.).
☐ Disposal of hazardous, industrial/special waste in nonconformance with an operational permit or regulation,
☐ Fires requiring fire department action to extinguish, or
☐ US DOT hazardous materials incidents requiring agency notification.

OTHER:

☒ _The Cell E6 filled quickly as a result of heavy rain (over 5 inches) on Sunday, December 19. The sump became inoperable at this time and remains inoperable as of the date of this submittal. Additionally, areas of the landfill that previously had typical erosion seen after a storm had increased erosion that lead to exposed waste.

SECTION 2 - PLEASE COMPLETE THE FOLLOWING TEXT BOXES AND ATTACH RELATED DOCUMENTS (IF NECESSARY).			
INCIDENT LOCATION:	Waimanalo Gulch Sanitary Landfill, 92-460 Farrington Highway, Kapolei, HI 96707		
INCIDENT DATE:	12/19/10	INCIDENT TIME:	05:00
CONTACT NAME:	Justin Lottig	PHONE NO:	(808) 668-2985 ext 16
INCIDENT DESCRIPTION & RESPONSE ACTIONS:	This serves as an update to the previously submitted incident alert regarding the December 19 rain event and a new alert for the rain event on December 27. On the night of December 27, the site received about 2.25 inches of rain in 2.5 hours. The rainfall intensity caused turbulent flow conditions and plugged the drain on the 36 inch stormwater diversion pipe that is designed to temporarily redirect the up-canyon stormwater under the landfill and into the storm channel. As a result, the storm water overtopped the containment berm that was constructed to contain any up-canyon water and the storm water flowed into Cell E6. The heavy rains had also deepened existing erosion rills from the first rainfall on December 19th and has exposed waste underneath previously under the intermediate cover. The rills were not able to be repaired from the first rainfall because of the saturated slopes. This continues to be the case as the slopes remain saturated. Depending upon the weather (sun, dry, wind), WM will begin site erosion repairs around the end of next week. Preliminary results from the storm water sampling conducted on December 23, 2010 are not yet completed. WM will communicate the results of the sampling after we have received them. The sump E6 remains inoperable at this point as it remains under ponded water which would short any electrical connections and ruin the pump. WM is waiting for results from the stormwater sampling to determine how to handle the remaining water on Cell E6. Currently, disposal of stormwater is dependant on laboratory results and DOH approval. Options are to either pump and haul all remaining stormwater or to resume discharging the water through the stormwater system.		

HARD COPY OF INCIDENT REPORT AND SUBSEQUENT FOLLOW-UP OF INCIDENT STATUS WILL BE MAILED TO THE DOH WITHIN SEVEN DAYS.