WASTE MANAGEMENT OF HAWAII
92-460 Farrington Highway
Kapolei, Hawaii 96707
(808) 668-2985

February 15, 2012

VIA U.S. MAIL & E-MAIL

U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105
Attn: Lawrence Torres (WTR-7)

Hawaii Department of Health
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378
Attn: Mike Tsuji

RE: Issuance of Findings of Violation and Order for Compliance for Waimanalo Gulch Sanitary Landfill – CWA-309(a)-12-003

Dear Sirs:

Pursuant to the November 29, 2011, Finding of Violation and Order ("Order") in the above referenced matter, enclosed please find a letter report prepared by AECOM on behalf of Waste Management of Hawaii, Inc. ("WMH"), regarding the *Updated Status of Western Surface Water Drainage System Construction, Waimanalo Gulch Sanitary Landfill, Kapolei, HI.* The enclosed letter report documents that the Western Stormwater Diversion System ("WSWD"), including the Northern Drainage Diversion Project, is now considered functionally complete such that the WSWD system will divert stormwater run-on from the watersheds up-gradient of the landfill around its active areas. Insofar as the requirements of the Order have been completed with respect to the WSWD, no "interim measures" are necessary pursuant to Paragraph 5 of the Order.

Pursuant to Paragraph 16 of the Order: I certify under penalty of law that the February 14, 2012 AECOM letter report and attachments were prepared under my direction and supervision in accordance with a system designed so that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Joseph R. Whelan

Joseph R. Whelan
General Manager

Enclosure

cc: *via e-mail only*
David Wampler – EPA Region 9
Dana Viola – City & County of Honolulu

AECOM

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February 14, 2012

Waste Management of Hawaii
Waimanalo Gulch Sanitary Landfill
92-460 Farrington Highway
Kapolei, Hawai'i 96707

Attention: Mr. Joe Whelan

Subject: Updated Status of Western Surface Water Drainage System Construction, Waimanalo Gulch Sanitary Landfill, Kapolei, HI

Dear Mr. Whelan:

1.0 INTRODUCTION

At the request of Waste Management of Hawaii (WMH), AECOM Technical Services, Inc. (AECOM) has prepared this letter report summarizing the construction status of the Western Surface Water Drainage (WSWD) Project at the Waimanalo Gulch Sanitary Landfill (WGSL) located at 92-460 Farrington Highway in Kapolei, Hawai'i.

The purpose of this letter report is to summarize and update the components of the WSWD project that have been completed to date to assist WMH in responding to the U.S Environmental Protection Agency. Also attached is a construction schedule provided by Goodfellow Bros. Inc. (GBI) dated February 14, 2012 that identifies recently completed WSWD construction elements and when they were functionally complete (see Attachment A).This letter report is an update to the previously submitted letter reports dated December 14, 2011, January 10, 2012 and January 16, 2012. AECOM has provided construction quality assurance (CQA) services for the construction phase of the WSWD project (includes the Northern Drainage Diversion project). Construction of the WSWD is being performed by WMH's general contractor for the project, GBI. The construction work was performed in accordance with the following construction drawings:

- *Construction Drawings, Waimanalo Gulch Landfill, Western Surface Water Drainage Project, Ewa Beach, O'ahu, Hawai'i, Dated January 13, 2010 by GEI Consultants, Inc.*
- *Construction Drawings, Waimanalo Gulch Landfill, Lower Western Bypass, Ewa Beach, O'ahu, Hawai'i, Dated June 21, 2011 by GEI Consultants, Inc.*
- *Construction Drawings, Waimanalo Gulch Landfill, Northern Drainage Diversion, Ewa Beach, O'ahu, Hawai'I, Dated December 2011 by GEI Consultants, Inc.*

After construction of the WSWD is completed, AECOM will provide a detailed CQA documentation report that will summarize construction work completed, provide observations and testing performed for the WSWD project including daily reports, photographs, soils and concrete testing results.

2.0 CONSTRUCTION COMPLETION STATUS

As summarized below, the construction of the WSWD project is now considered functionally complete such that the WSWD system (including the Northern Drainage Diversion Project) will divert stormwater run-on from the watersheds up-gradient of the WGSL around the active areas of landfill in accordance with the referenced construction drawings. The following elements of the WSWD system are considered functionally complete:

- Diversion Structure;
- The series of open channels, culverts and pipes connecting the Diversion Structure to the downstream Flip Bucket;
- The Flip Bucket structure;
- The Stilling Basin (Plunge Pool);
- The Northern Drainage Diversion system;
- All permanent appurtenance features necessary for the functional completion of the WSWD project as specified in the construction drawings.

Certain incidental elements of the WSWD project are not complete, but will not significantly affect the operational capability of the drainage system. These elements include: completion of the sidewalk and sampling station at the Stilling Basin; landscaping of recently graded areas; installation of inspection manholes for the Northern Drainage Diversion system; placement of rock rip-rap at the top of slope where the Northern Drainage Diversion system meets the Diversion Structure; and additional miscellaneous construction finishing features that do not affect the performance of the WSWD system. The status of these features and projected completion dates are shown on the schedule presented in Attachment A.

The following provides a completion status of the primary elements of the WSWD project:

- **Diversion Structure**. The reinforced concrete Diversion Structure located at Station 64+97 to 66+17 (upstream of landfill) is functionally complete to divert up-gradient storm water run-on as of December 14, 2011 (Attachment B, photo no. 1).
- **Conveyance system, box culvert**. The 10-ft high by 10-ft wide, box culvert portion of the WSWD project conveyance system extends from Station 52+44 to Station 64+37. A reinforced concrete lined open channel transitions the box culvert into the Diversion Structure from Station 64+37 to 64+97. The box culvert and open channel portions of the WSWD are functionally complete to divert up-gradient storm water run-on as of December 14, 2011 (see Attachment B, photo no. 2).
- **Conveyance system, HOBAS pipe**. The WSWD conveyance system from Station 0+32 to Station 52+44 consists of HOBAS pipe with diameters ranging from 78 to 104-inches. As of December 14, 2011, the HOBAS pipe sections are functionally complete to divert up-gradient storm water run-on (see Attachment B, photo no 3).

- **Flip Bucket Structure.** The flip bucket structure is a reinforced concrete discharge structure that conveys the storm water from the HOBAS pipe to the Stilling Basin and is located between Stations 0+00 to 0+32. As of December 14, 2011, the Flip Bucket Structure is functionally complete to divert up-gradient storm water run-on (see Attachment B, photo no. 4).

- **Stilling Basin (Plunge Pool).** The rip-rap lined Stilling Basin area (also referred to as the Plunge Pool on the Construction Drawings) and the grouted rip-rap outflow weir control water flow discharging from the flip bucket. As of January 10, 2012, the Stilling Basin is functionally complete to manage drainage of storm water (see Attachment B, photo no. 5).

- **Northern Drainage Diversion.** The Northern Drainage Diversion project diverts surface water from a drainage area located northeast of the WGSL into the WSWD Diversion Structure. Subsequent to our previously submitted letter report, the grouted rock rip-rap and trash rack have been installed at the inlet, therefore as of February 14, 2012, the Northern Drainage Diversion is functionally complete to manage drainage of storm water (see Attachment B, photos no. 6 through 8).

If you have any questions or need more information about this project please call me at (808) 356-5321.

Sincerely yours,

Ronald E. Boyle, P.E.
CQA Project Manager
AECOM Technical Services, Inc.

Attachments:

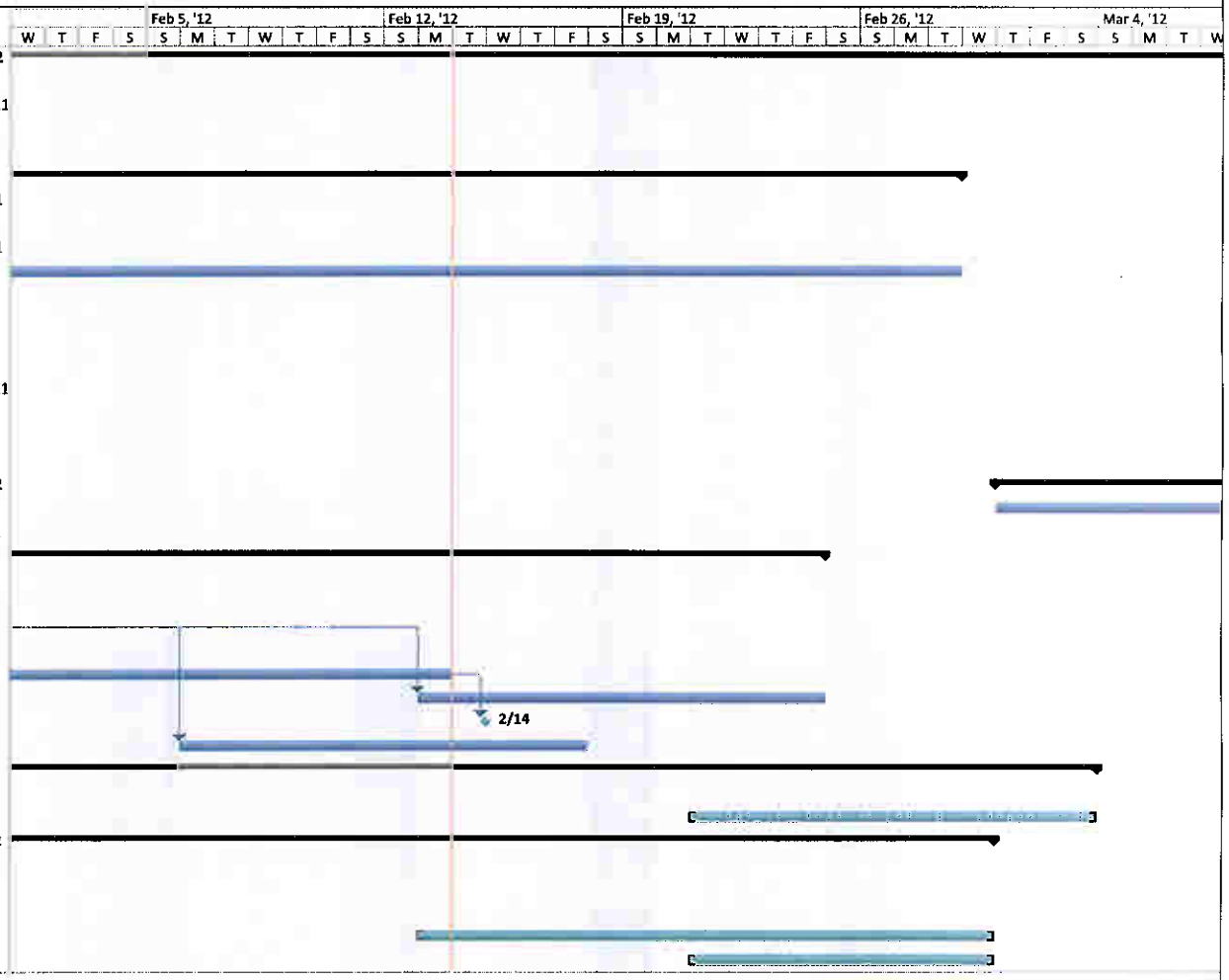
A Construction Schedule dated February 14, 2012
B Photo Log

cc: Jesse Frey, Waste Management of Hawaii
Matt Heahlke, Goodfellow Brothers, Inc.

Attachment A
Construction Schedule
(Provided by Goodfellow Brothers, Inc.)

Waimanalo Gulch Sanitary Landfill
3-Week Look Ahead Schedule

ID	Task Name	Duration	Start	Finish
1	**Western Surface Water Drainage Project**	**118 days**	**Mon 11/7/11**	**Wed 4/18/12**
2	**Lower Western Bypass**	**45 days**	**Mon 11/7/11**	**Fri 1/6/12**
3	Install 84" Hobas	28 days	Mon 11/7/11	Wed 12/14/11
4	Backfill 84" Hobas	15 days	Mon 12/5/11	Fri 12/23/11
5	Inspection Manholes 1 & 2	10 days	Mon 12/26/11	Fri 1/6/12
6	**Stilling Basin**	**57 days**	**Mon 12/12/11**	**Tue 2/28/12**
7	Backfill Weir	2 days	Mon 12/12/11	Tue 12/13/11
8	Rock Invert of Stilling Basin-Functional	3 days	Wed 12/14/11	Fri 12/16/11
9	Rock Side Slopes of Stilling Basin	7 days	Mon 12/19/11	Tue 12/27/11
10	Side Walk/ Sampling Station	45 days	Wed 12/28/11	Tue 2/28/12
11	Stairs	5 days	Wed 1/11/12	Tue 1/17/12
12	**Western Surface Drainage Project Functionally Complete**	0 days	Fri 12/16/11	Fri 12/16/11
13	**Misc. Site Onsite Drainage**	**20 days**	**Mon 12/12/11**	**Fri 1/6/12**
14	36" HDPE 0+00 to 6+00-Operational	1 day	Mon 12/12/11	Mon 12/12/11
15	36" HDPE 0+00 to 6+00-Backfill	10 days	Mon 12/19/11	Fri 12/30/11
16	Operational Drainage	10 days	Mon 12/19/11	Fri 12/30/11
17	Extend Existing 36" Pipes	5 days	Mon 1/2/12	Fri 1/6/12
18	**Landscaping**	**35 days**	**Thu 3/1/12**	**Wed 4/18/12**
19	Temp Irrigation/Grassing	5 days	Thu 3/1/12	Wed 3/7/12
20	Landscaping Establishment	30 days	Thu 3/8/12	Wed 4/18/12
21	**North Drainage**	**80 days**	**Mon 11/7/11**	**Fri 2/24/12**
22	Trench Excavation	30 days	Mon 11/7/11	Fri 12/16/11
23	Install 36" Pipe	5 days	Mon 12/19/11	Fri 12/23/11
24	Thrust Block Connection at Diversion	11 days	Mon 12/26/11	Mon 1/9/12
25	Backfill Pipe with CLSM	8 days	Mon 1/9/12	Wed 1/18/12
26	Inlet Structure	18 days	Thu 1/19/12	Mon 2/13/12
27	Rock at Diversion	10 days	Mon 2/13/12	Fri 2/24/12
28	**North Drainage Functionally Complete**	1 day	Tue 2/14/12	Tue 2/14/12
29	Cast In Place Inspection Manhole	10 days	Mon 2/6/12	Fri 2/17/12
30	**East Drainage**	**55 days**	**Mon 12/19/11**	**Sat 3/3/12**
31	Parking Lot Drainage	10 days	Mon 12/19/11	Fri 12/30/11
32	Additional Drain Manholes	10 days	Tue 2/21/12	Sat 3/3/12
33	**Western Site Surface Drainage**	**63 days**	**Mon 12/5/11**	**Wed 2/29/12**
34	Smart Swale 0+00 to 26+00	27 days	Mon 12/5/11	Tue 1/10/12
35	Stilling Basin sta 10+50	22 days	Wed 12/14/11	Thu 1/12/12
36	Grade/Rock Road 11+00 to 26+00	20 days	Mon 12/5/11	Fri 12/30/11
37	Smart Swale 6+00 to 9+00	13 days	Mon 2/13/12	Wed 2/29/12
38	Basin Misc Features	7 days	Tue 2/21/12	Wed 2/29/12



Project: 6705 Drainage Improvem
Date: Tue 2/14/12

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			

Attachment B
Photo Log

Photo 1: View of diversion structure and concrete lined open channel transition to box culvert, looking southwest.

Photo 2: Concrete lined open channel transition to box culvert, looking west.

Photo 3: Backfilled section of 84-inch HOBAS from station 1+00 to 8+00, looking north.

Photo 4: Downstream end of HOBAS pipe transitioning into the flip bucket structure, looking west.

Photo 5: Stilling basin (plunge pool), looking south.

Photo 6: Northern Drainage inlet structure and 36-inch pipe under construction, looking west.

Photo 7: Northern Drainage outlet into the Diversion Structure (following placement of gunite wall, compacted fill and rock rip-rap), looking south.

Photo 8: Northern Drainage outlet into the Diversion Structure (following placement of gunite wall, compacted fill and rock rip-rap), looking northwest