

Appendix A

NYSDEC Correspondence (dated July 31, 2013 and August 6, 2013)

Memorandum

To: Mark Domagala (NYSDEC Region 8)

CC: Becky Zayatz (Waste Management)
Chris Prucha (Waste Management)

From: Richard Frappa, P.G.

Regarding: Summary of Draft Site Investigation Plan Discussion for Mill Seat Landfill Lateral Expansion

Date: July 31, 2013

This technical memorandum summarizes discussions held on July 26, 2013 with Mr. Mark Domagala (Region 8 NYSDEC) at the NYSDEC Avon Office regarding the Draft Site Investigation Plan (SIP) submitted to the NYSDEC on June 25, 2013. The agenda for the meeting is attached to this memo. Also in attendance were Becky Zayatz and Chris Prucha of Waste Management.

The purpose of the meeting was to discuss the scope of work presented in the SIP for lateral expansion of the Mill Seat Landfill and update the NYSDEC on issues with the sampling pump in well MW1Z and sampling results for the Stage 4 secondary leachate collection system to be included in the Second Quarter 2013 Environmental Monitoring Report. Meeting topics discussed were those included on the attached agenda.

A key point of the discussion was the critical stratigraphic section (CSS) and the depth of bedrock investigation during implementation of the SIP for the expansion area. Key points and items agreed to during implementation of the SIP are summarized below.

CSS and Drilling Depth in Bedrock

As discussed during the meeting and detailed in the SIP, the CSS at Mill Seat is described to consist of the overburden and upper 30 feet of bedrock. The bedrock portion of the CSS, as described in previous investigations completed for permitting of the existing landfill, was determined from packer tests. Hydraulic conductivities calculated for the intervals of the bedrock tested showed that the upper 30 to 40 feet of upper competent bedrock were greater than 1×10^{-3} cm/s compared to values typically two order of magnitude less in the deeper bedrock. After much discussion about bedrock investigation depths, it was agreed that the site investigation will characterize hydraulic conductivity to establish the vertical extent of the CSS in bedrock. It is assumed, based on testing completed for the existing landfill, that hydraulic conductivity will decrease with depth and the A-zone monitoring well will be set to monitor the most conductive zone in the upper bedrock (within 50 feet of bedrock surface). Prior to bedrock

Memorandum

Mill Seat Landfill – SIP Discussion with DEC

July 31, 2013



well installation, packer tests will be completed at 10 foot intervals. Testing will continue until lower hydraulic conductivity bedrock is encountered indicating the bottom of the CSS. Criteria for discontinuing to core and packer test will be: 1) one to two packer tests having lower hydraulic conductivity (an approximately two orders of magnitude lower K value than shallower bedrock) or 2) drilling and testing has advanced to a depth of 50 feet. In the case of the former, the A-zone well screen will be placed to monitor the zone having the highest hydraulic conductivity. In the case of the latter, the NYSDEC will be contacted and a decision will be reached in the field regarding the length and placement of the A-zone well screen.

Clarifications to SIP Scope of Work

The following provides clarification to activities described in Section 5.0 of the Draft SIP.

Section 5.1 Literature Search – Site-specific data will not be limited to the resources listed on page 17. Other sources, as appropriate, will be reviewed for site relevance.

Section 5.2 Water Well Survey – As described, the previously conducted off-site private water well survey will be updated. It is recognized that all recipients of mailed questionnaires may not respond and a door to door survey of some homes will need to be completed to achieve the objective of the task.

Section 5.3 Subsurface Investigation Activities –

Section 5.4.1 Existing Piezometer/Monitoring well Assessment – If wells need to be decommissioned, wells will be overdrilled, removed, and the open hole grouted to surface.

Section 5.4.2 Soil Borings - All borings will be drilled and sampled to refusal after reaching weathered bedrock. If the presence of a glacial erratic causes refusal, the boring will be relocated within a few feet of the proposed location and re-drilled to the depth of refusal and sampled beyond that depth. The boring proposed in Wetland RG-6 may be completed at a later date after appropriate permit requirements are met for wetland disturbance.

Section 5.4.3 Geotechnical Soil Sample Collection and Analysis – It is recognized that additional permeability data are needed of the till. The number of samples collected for permeability testing will be increased to five (5) samples. Bulk samples of till material may be collected and tested for permeability if Shelby tube sample collection fails to retrieve representative samples.

Section 5.4.4 Monitoring Wells – The volume of water lost during drilling into bedrock and injected during packer testing will be recovered by the driller prior to installing the well. It may be necessary to pump additional water from the well after well installation during development if the equivalent volume of drilling/packer testing water loss is not recovered during the drilling program.

Section 5.5 Hydraulic Conductivity Testing – AQTESOLV or similar program will be engaged to facilitate analysis of hydraulic conductivity testing data. Equations to be used to generate estimated hydraulic conductivity values will be from Hvorslev, Bouwer & Rice, or Cooper Papadopoulos.

Section 5.7 Surface Water Study – The assessment of surface water quality on and near the

Memorandum

Mill Seat Landfill – SIP Discussion with DEC

July 31, 2013



landfill property will include trend analysis of existing surface water quality data.

Existing Landfill Environmental Monitoring Items

During the meeting we described a report from the Test America sampling crew that the pump at monitoring well M1Z failed and became stuck in the well. The well was unable to be sampled during the Second Quarter 2013 monitoring event. A Project Hydrogeologist from GEI visited well location M1Z to assess a remedy for the inoperative pump. It was confirmed that the pump could not be removed manually and plans are being made to attempt retrieval using a drilling rig. The NYSDEC will be notified when this work is scheduled.

We also discussed sampling results of the Secondary Stage 4 leachate collection system that show evidence of leachate impact. Sampling occurred soon after damage occurred to the "run-out" area of the Stage 4 liner system. The "run-out" is the leading edge of the liner system that extends into the construction area for the next cell so that all of the layers of the liner system can be tied together as a continuous system when the adjacent cell is constructed. A temporary geomembrane flap is welded to the primary liner in this "run-out" area to protect the primary and secondary geosynthetic materials. In addition, the primary liner is welded to the secondary liner to prevent surface water from entering between the two membranes and into the secondary leachate collection system. In April 2013, landfill staff were assessing elevated liquid volumes in the Cell 4 secondary leachate collection system. A check of the preliminary analytical results for the second quarter sample indicated the potential for mixing with leachate. Damage to the exposed liner system in the run-out area was suspected and Golder Associates (Golder) was contacted to inspect the area. WMNY also notified Region 8 NYSDEC. Golder identified a small area where the weld of the temporary flap had failed, tearing a slice in the primary liner. It is believed that during a spring storm, elevated leachate levels in the primary sump area reached the location of the damaged liner, allowing leachate to enter the secondary system. Golder inspected the length of the run-out area and all defects were repaired. The NYSDEC observed the inspection and subsequent repairs to the system. Cell 4C is currently under construction and permanent tie-in to the liner system will be completed as part of this project. It was agreed that samples will be collected from the Primary, Secondary and Underdrain system during the Third Quarter sampling event (July 2013) and analyzed for the Part 360 Baseline parameter list.

Memorandum

Mill Seat Landfill – SIP Discussion with DEC

July 31, 2013



Meeting Agenda

**Mill Seat Landfill – Lateral Expansion
Draft Site Investigation Plan Discussion
NYSDEC Region 8
July 26, 2013**

- Overview of Draft Site Investigation Plan (SIP)
- Critical Stratigraphic Section
- Historical Investigations (AMEC Geomatrix October 2010 – Potential Soil Borrow Areas)
- Scope of Work Discussion
 - ✓ Data Gaps
 - ✓ Part 360 and Design Needs
- Drilling in Wetland RG-6 (permitting – ACOE Nationwide Permit; NYSDEC Permit (Article 24) with rare and endangered species assessment)
- Schedule
- Existing Landfill Environmental Monitoring Program
 - ✓ Discussion of inoperable sample collection pump in well MW1Z
 - ✓ Stage 4 Secondary Leachate Collection System 2nd Quarter 2013 Sampling

Frappa, Rick

From: Mark Domagala <madomaga@gw.dec.state.ny.us>
Sent: Tuesday, August 06, 2013 2:15 PM
To: Christopher Prucha; Rebecca Zayatz; Frappa, Rick
Cc: Edward Kieda; Scott Foti
Subject: Re: Mill Seat Landfill - SIP Meeting MEMO

Rick,

The Draft Site Investigation Plan, Mill Seat Sanitary Landfill – Lateral Expansion was submitted to the Department on June 26, 2013 and the discussion with you and Waste Management staff was held on July 26, 2013. A follow-up memo dated July 31, 2013 summarized that discussion.

I have a few follow-up comments concerning the scope of work.

There will be a need to investigate the stratigraphic Z-zone (deep bedrock flow zone) for the proposed expansion area. As you know, the Z-Zone has been identified in previous investigations which have been used to develop the facility's Environmental Monitoring Plan (EMP).

As you are aware, the Z-zone is a component of the EMP and is part of the groundwater monitoring scheme for the landfill. Therefore, there should be a sufficient number of deep bedrock wells, both upgradient and down gradient, to determine hydraulic gradient and hydraulic, geologic and groundwater characteristics. The evaluation of the deep bedrock will also provide the data to support or modify the facility's EMP.

Also, all relative data from the site hydrogeologic investigation must be tied together with the existing landfill to show the hydrogeologic conditions across the entire site, not just representing the expansion area.

5.6 Background groundwater quality testing

Characterizing the existing groundwater quality for the 2013 Site Investigation must follow the existing site EMP. Additional parameters and alternative analyses may also be included in the testing.

5.9 Monitoring Well/Piezometer Abandonment

The Site Investigation report is part of the permit application. All Monitoring wells and piezometer must be listed in the EMP. Those subject to proposed abandonment will be addressed in the EMP and will require NYSDEC notification and approval prior to actual abandonment.

Existing Landfill Environmental Monitoring Items

If the attempt to retrieve the stuck downhole equipment in M-1Z are unsuccessful, well replacement will be necessary.

If you have any questions, please contact me at 585 226-5426 or Scott Foti at 585 226-5408

Sincerely
Mark Domagala

>>> "Frappa, Rick" <rfrappa@geiconsultants.com> 7/31/2013 5:17 PM >>>
Mark,

As discussed at our meeting, we prepared this Memo to document the July 26, 2013 meeting and the discussion items affecting the scope of work of the Site Investigation Plan (SIP) as well as some 2nd quarter landfill monitoring results. We will also provide a set of full size drawings of the figures included in the SIP.

We will contact you after a schedule for SIP implementation has been established with Waste Management.
Thanks again for meeting with us,
Rick

Richard Frappa, PG

Senior Consultant

GEI Consultants, Inc. P.C.

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From: Mark Domagala [mailto:madomaga@gw.dec.state.ny.us]
Sent: Thursday, July 25, 2013 3:46 PM
To: Frappa, Rick; Christopher Prucha; Rebecca Zayatz
Subject: Re: Mill Seat Landfill - Meeting

Rick,

Confirming our meeting tomorrow at 10am at Avon.

Mark Domagala

>>> "Frappa, Rick" <rfrappa@geiconsultants.com> 7/25/2013 3:35 PM >>>
Hi Mark

Just confirming our meeting at your office tomorrow at 10am with Waste Management.
Rick

Sent from my iPhone

On Jul 10, 2013, at 9:33 AM, "Mark Domagala" <madomaga@gw.dec.state.ny.us> wrote:

Yes, that works great.

Thanks

Mark Domagala

>>> "Frappa, Rick" <rfrappa@geiconsultants.com> 7/10/2013 10:27 AM >>>
Mark,
If July 26 works, I'll send a meeting invite.
Thanks
Rick

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From: Mark Domagala [<mailto:madomaga@gw.dec.state.ny.us>]
Sent: Wednesday, July 10, 2013 10:02 AM
To: Frappa, Rick
Cc: Becky Zayatz (rzayatz@wm.com)
Subject: Re: Mill Seat Landfill - Well M1Z inoperative sampling pump

Rick,

I have to apologize for postponing our Friday meeting this week. I have to take some personal leave for family.
We can re-schedule for later this month as that may fit your current schedule. I am pretty much open the last two weeks of July except 7/23 and 7/30. Please let Becky and Chris know that I have to reschedule.

Thanks
Mark Domagala

>>> "Frappa, Rick" <rfrappa@geiconsultants.com> 7/9/2013 4:02 PM >>>
Mark,

As discussed in our call on July 8, 2013, a groundwater sample was not recovered from monitoring well M1Z during the Second Quarter 2013 sampling event at the Mill Seat Landfill. The Test America sampling crew reported that the sampling pump did not yield water following connection of the air compressor discharge line to the pumping system during sampling. A GEI Hydrogeologist inspected the well and attempted to re-position the pump within the stainless steel well screen. Several attempts were made to pull up on the tubing without the aid of mechanical equipment. The pump could not be moved and remained lodged in-place.

Monitoring well M1Z was installed in July 1989 and is located upgradient of the existing landfill. The well is 119 feet deep and monitors deep bedrock groundwater below the Critical Stratigraphic Section (CSS) established for the site.

We would like to discuss an alternative to sampling the well during our meeting on Friday and use those discussions to develop a plan.

Looking forward to seeing you Friday.

Rick

Richard Frappa, PG

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