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ANCHOR QEA

Memorandum

April 11, 2024

To: Parag Amin, New York State Department of Environmental Conservation (NYSDEC)

From: Tim DiGiulio, PE, and Tim Johnson

cc: Kerry Maloney, NYSDEC; Seth Levine, Cambrex; Christopher Clark, Warner-Lambert Company, LLC; Matt Robinson, ELT Harriman; Jeff Caputi, Brown and Caldwell

Re: First Quarter 2024 Semi-Annual Inspection and Progress Report; Harriman Inactive Waste Disposal Site No. 336006

Introduction

This memorandum and the attached inspection reports constitute the first quarter 2024 progress report for the Harriman Inactive Waste Disposal Site (Site) on behalf of Nepera, Inc., and Warner-Lambert Company, LLC (Corporate Defendants) and ELT Harriman, LLC (ELT). This site inspection report is being submitted concurrently with the 2023 Groundwater Monitoring Report.

Because of the concurrence of other remediation programs and voluntary investigative work being performed at the Site, this report, like previous reports, includes activities that are beyond the scope of the parties' obligations under the Consent Decree and Interim Site Management Plan (ISMP).

Site Inspection

This memorandum covers the full scope of the semi-annual and quarterly site inspection requirements pursuant to the ISMP dated December 2023. The site inspection was performed on February 28, 2024, by Anchor QEA staff. In accordance with the ISMP notification requirements, Anchor QEA notified NYSDEC 7 days prior to conducting the quarterly inspection.

On February 23, 2024, ELT was informed by the Harriman Police Department that a load of soil and building debris had been illegally dumped on the property, at the edge of Arden House Road and the perimeter of the parking lot, and a portion of the fence adjacent to the dump site had been knocked down. During the site inspection, Anchor QEA staff securely covered the soil pile with a polyethylene tarp to prevent runoff. NYSDEC was then informed on March 25, 2024, that ELT had moved the soil pile to a former building slab on the plant site area to prevent interaction with site groundwater or surface runoff. ELT also plans to collect a composite sample of the soil pile and have it analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), metals, PFAS, and Resource Conservation and Recovery Act (RCRA) waste characteristics. Additional updates on the disposal plans will be provided to NYSDEC once characterization is complete.

Monitoring Wells

The quarterly well inspection report covers 76 monitoring wells. Visual observations were conducted at 74 monitoring wells to evaluate each well's collar, plug, lid, lock, tag, and casing. Two monitoring wells could not be inspected because they were submerged under standing water. Clearing and grubbing activities done during the Phase III Emerging Contaminants (EC) Investigation work in November 2023 and the seasonal dieback of vegetation allowed access to the four wells that had been inaccessible in September 2023.

The components of the 74 monitoring wells inspected remain in satisfactory condition, with exceptions noted in the monitoring well summary tabulation forms provided in Attachment 1. Two wells were observed to have casing deficiencies. Six wells had either a damaged plug or no plug, and seven stickup wells need new locks. All locks and plugs are slated to be replaced during the upcoming Parking Lot Feasibility Study Data Gap Investigation, tentatively scheduled for early May. Because no damage that would interfere with planned field activities was observed, additional well repairs or abandonment will be assessed during the next routine groundwater monitoring event.

Although not part of the five-quarter monitoring program outlined in the ISMP, monitoring wells installed in December 2023 are included on the inspection checklist and will continue to be inspected as part of these periodic monitoring requirements.

Former Biosparge System

As outlined in Section 3.3.4 of the ISMP, product has historically been observed in SVE well VER-2, and an absorbent sock has been placed in that well and monitored during site inspections. The absorbent sock was replaced on December 14, 2023, during the Phase III EC Investigation work. The sock was at 20% capacity when inspected on February 28, 2024. In addition, a very thin (0.01-inch) layer of product was observed in each of four other former biosparge wells: SVE-2, SVE-3, VER-1, and VER-3. In response, absorbent socks were placed in each of these wells on March 1, 2024, after confirmatory measurements of the distance to product were obtained. Future inspections will continue to monitor the socks in these five wells. The semi-annual SVE/VER well inspection form is provided for reference in Attachment 1.

Streambank Interim Cover

The interim riverbank turf reinforcement mat and vegetative cover system along the West Branch of the Ramapo River was inspected. Representative photographs of the area are provided along with the inspection form in Attachment 2. Observations of the cover system showed vegetation with no significant signs of erosion, and the system is functioning as designed.

Parking Lot

Section 3.4.1 of the ISMP addresses the interim control and integrity of the parking lot asphalt cover. Following the fourth quarter 2023 inspection, identified deficiencies were patched and repaired on December 4 and 5, 2024. Although the first quarter 2024 inspection identified the beginning of asphalt subsidence, the asphalt continues to provide erosion protection to the area. Representative photographs of the parking lot conditions are included in Attachment 2.

As discussed during the monthly update call with NYSDEC on March 25, 2024, the Corporate Defendants and ELT have submitted a proposed Work Plan to collect data gap samples in and around the parking lot. The aim of collecting these additional data is to inform the alternatives that will be presented in the revised Draft Parking Lot Area Feasibility Study.

Former Excavation Areas F and Building 53

Section 3.4.2 of the ISMP requires the inspection of former excavation and backfill areas to evaluate them for signs of significant erosion or vandalism. Observations show that the areas of Building 53 and Area F contain vegetation with no visual evidence of disturbance or erosion. The inspection form and photographs for these areas are included in Attachment 3.

Site Perimeter Fencing

Section 3.4.6 of the ISMP requires visual inspections of the fence and gates to restrict access to the Site by unauthorized personnel. During the site inspection, the fence perimeter was visually inspected. As noted on page 1, a section of the fence was damaged during illegal dumping at the site. This damage was repaired on March 26, 2024. Two remote locations along the fence line were damaged and required additional repairs, but there was no evidence of unauthorized entry. Both locations are in areas of dense vegetation away from routine access points. Given the dense vegetation and the difficulty of accessing parts of the site, these breaches of the fence may have been caused during historical sampling efforts. Despite the unlikely event of unlawful entry through these breaches, repair is planned for April 2024. All gates were observed to be secured with locks. Additional photographs and inspection forms are provided in Attachment 4.

Summary of Fourth Quarter 2023 and First Quarter 2024 Activities

The following is a summary of activities from the fourth quarter of 2023 and the first quarter of 2024:

- In response to comments received on September 29, 2023, a revised ISMP was submitted to NYSDEC on October 30, 2023. Additional comments were received November 10, 2023, and a final version of the ISMP was submitted December 1, 2023. Final approval of the ISMP was received on December 4, 2023.
- The Parking Lot Data Gap Work Plan was submitted to NYSDEC for review on March 25, 2024.

- Data collection for the Phase III Emerging Contaminants Investigation and the Periodic 5-Quarter Groundwater Monitoring program were completed during the fourth quarter of 2023.
- Sixty-eight existing wells were resurveyed to obtain updated geographical coordinates and top of casing elevations.
- The fence at the front of the site was repaired.
- Team progress calls were held with NYSDEC on November 13, 2023, January 8, 2024, February 26, 2024, and March 25, 2024.

Projected Second Quarter 2024 Activities

The following activities are planned for the second quarter (April to June) of 2024:

- Data collection outlined in the Draft Parking Lot Feasibility Data Gap Work Plan, tentatively planned for early May, pending NYSDEC approval
- Submittal of the Draft Phase III Emerging Contaminants Report
- Second quarter site inspection of the parking lot and streambank cover
- Performance of the well maintenance outlined in Attachment 1
- Complete repair of remote fence breaches
- Characterization of the soil pile and notification to NYSDEC of plans for disposal

Attachments

Attachment 1 First Quarter 2024 Semi-Annual Well Inspection Report
Attachment 2 Streambank and Parking Lot Inspection Photographs and Log
Attachment 3 Area F and Building 53 Area Photographs and Log
Attachment 4 Fence Inspection Photographs and Log

Attachment 1
First Quarter 2024 Semi-Annual Well Inspection Report

Spring 2024 Semi-Annual Well Inspection Report

Monitoring Well	Diam (in)	Finish	Routine Monitoring Well	Well Condition (see notation types below)						Comments	Action Items
				Collar	Lid	Plug	Lock	Tag	Casing		
AMW-1	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-2	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-3	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-4	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-5	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-6	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-7	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-8	2	Stickup		OK	OK	OK	OK	X	OK	No visible tag or marking faded.	Well will be tagged with a paint pen at the next inspection.
AMW-9	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-10	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-11	2	Stickup		OK	OK	OK	OK	OK	OK		
AMW-12	2	Stickup		OK	OK	OK	OK	X	OK	No tag or visible marking.	Well will be tagged with a paint pen at the next inspection.
AP-101	2	Stickup		OK	OK	OK	OK	X	OK	No tag or visible marking.	Well will be tagged with a paint pen at the next inspection.
AP-201D	2	Stickup		OK	OK	OK	OK	OK	OK		
AP-201S	2	Stickup		OK	OK	OK	OK	OK	OK		
BP-101*	2	Stickup		OK	OK	OK	OK	OK	OK		
MW-1S	6	Stickup	Chemistry, Water level	OK	OK	OK	X	OK	OK	No lock.	Lock will be replaced during field work in May.
MW-2S	4	Stickup	Water level	OK	OK	X	OK	OK	D	Upper PVC well casing disconnected.	To be evaluated/assessed for repair at next routine sampling event.
MW-3S	4	Stickup	Water level	OK	OK	X	X	X	OK	No plug, no lock, no tag.	Lock, plug, and tag will be replaced during field work in May.
MW-4S	4	Stickup	Water level	OK	OK	OK	OK	OK	OK		
MW-5S	4	Stickup	Chemistry, Water level	OK	OK	X	OK	OK	OK		Plug will be replaced during field work in May.
MW-6D	4	Stickup	Chemistry, Water level	OK	OK	NA	OK	OK	OK	Bedrock well, no inner casing.	
MW-7S	4	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		

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Monitoring Well	Diam (in)	Finish	Routine Monitoring Well	Well Condition (see notation types below)						Comments	Action Items
				Collar	Lid	Plug	Lock	Tag	Casing		
MW-8S	4	Stickup	Chemistry, Water level	OK	OK	OK	OK	X	OK	No tag.	Well will be tagged with a paint pen at the next inspection.
MW-9S	4	Stickup	Water level	OK	OK	OK	OK	OK	OK		
MW-10D	6	Stickup		D	D	D	D	D	D		Damage noted. Available for water levels. Assess damage before sampling in future.
MW-11S	4	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
MW-12S	2	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	OK	OK		
MW-13S	2	Flush-mount	Water level	OK	OK	OK	NA	OK	OK		
MW-16S	4	Stickup	Chemistry, Water level	OK	OK	OK	X	OK	OK	No lock.	Lock will be replaced during field work in May.
MW-17S	4	Stickup		OK	OK	X	X	X	OK	PVC casing broken off ~2' within metal casing.	Lock and tag will be replaced during field work in May. To be evaluated/assessed for abandonment at next sampling event.
MW-18D	6	Stickup		OK	OK	X	X	X	OK	PVC casing compromised.	Lock and tag will be replaced during field work in May. To be evaluated/assessed for repair at next sampling event.
MW-20D	4	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	X	OK	Surface water observed up to plug. Did not remove plug.	Well will be tagged with a paint pen at the next inspection.
MW-20DR	2	Flush-mount	Chemistry, Water level	NI	NI	NI	NA	NI	NI	Submerged under a large puddle. Did not inspect.	To be evaluated/assessed for repair at next sampling event.
MW-20S	4	Flush-mount	Chemistry, Water level	NI	NI	NI	NA	NI	NI	Submerged under a large puddle. Did not inspect.	To be evaluated/assessed for repair at next sampling event.
MW-21D	4	Stickup		OK	OK	OK	OK	OK	OK		
MW-21S	4	Stickup	Water level	OK	OK	OK	OK	OK	OK	Dedicated tubing noted in casing.	
MW-22S*	4	Stickup		OK	OK	OK	OK	OK	OK		
MW-23D*	4	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
MW-23S*	4	Stickup		OK	OK	OK	OK	OK	OK		

Spring 2024 Semi-Annual Well Inspection Report

Monitoring Well	Diam (in)	Finish	Routine Monitoring Well	Well Condition (see notation types below)						Comments	Action Items
				Collar	Lid	Plug	Lock	Tag	Casing		
MW-24S	4	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK	Concrete pad around well casing is cracked.	Concrete will be repaired during field work in May.
MW-25D	4	Stickup		OK	OK	OK	OK	OK	OK		
MW-25S	4	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
MW-26D	2	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
MW-26S	4	Stickup		OK	OK	OK	OK	OK	OK		
MW-27D	6	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
MW-27S	4	Stickup	Water level	OK	OK	OK	OK	X	OK	Better marking needed.	Well will be tagged with a paint pen at the next inspection.
MW-28S	2	Stickup		OK	OK	OK	OK	OK	OK		
MW-29S	2	Stickup		OK	OK	NI	D	OK	OK	Lock rusted shut. Could not inspect plug.	Lock will be replaced and plug inspected during field work in May.
MW-33S	2	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	OK	OK		
MW-34	2	Flush-mount		OK	OK	OK	NA	OK	OK	Water at surface. Plug not pulled.	
MW-35AQ	2	Flush-mount		OK	OK	OK	NA	OK	OK		
MW-35S	2	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	OK	OK		
MW-36AQ	2	Flush-mount		OK	OK	OK	NA	X	OK	No tag.	Well will be tagged with a paint pen at the next inspection.
MW-36S	2	Flush-mount	Water level	OK	OK	OK	NA	X	OK	No tag.	Well will be tagged with a paint pen at the next inspection.
MW-37AQ	2	Flush-mount		OK	OK	OK	NA	OK	OK		
MW-37S	2	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	OK	OK		

Spring 2024 Semi-Annual Well Inspection Report

Monitoring Well	Diam (in)	Finish	Routine Monitoring Well	Well Condition (see notation types below)						Comments	Action Items
				Collar	Lid	Plug	Lock	Tag	Casing		
MW-53D	4	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	OK	OK		
MW-53S	4	Flush-mount		OK	OK	OK	NA	OK	OK		
MW-101	2	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	OK	OK		
MW-102	2	Stickup	Chemistry, Water level	OK	OK	OK	NI	OK	OK		
MW-103	2	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	OK	OK		
MW-104	2	Flush-mount	Chemistry, Water level	OK	OK	OK	NA	OK	OK		
MW-105	2	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
MW-106	2	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
MW-201	2	Stickup		OK	OK	OK	OK	OK	OK		
MW-202D	2	Stickup		OK	OK	OK	OK	OK	OK		
MW-202S	2	Stickup		OK	OK	OK	OK	OK	OK		
MW-203	2	Stickup		OK	OK	OK	OK	OK	OK		
OW-6	2	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
OW-7	2	Stickup	Chemistry, Water level	OK	OK	OK	OK	OK	OK		
PZ-1	2	Stickup	Water level	OK	OK	OK	OK	OK	OK	Dedicated tubing noted in casing.	
PZ-3	2	Flush-mount	Water level	OK	OK	OK	NA	OK	OK		
PZ-4	2	Stickup		OK	OK	OK	OK	OK	OK		
R-3D	10	Stickup		NA	NA	NI	NA	NI	OK	Not a conventional well. 1" PVC pipe. No cap or lock. May be be electrified. Staff did not touch.	Condition noted. Assess condition before sampling in future.

Spring 2024 Semi-Annual Well Inspection Report

Monitoring Well	Diam (in)	Finish	Routine Monitoring Well	Well Condition (see notation types below)						Comments	Action Items
				Collar	Lid	Plug	Lock	Tag	Casing		
RW-1R	6	Vault	Chemistry, Water level	OK	OK (vault)	NI	NA	OK	OK (vault)		

Notes:
* Off-site Well
B: bolt missing
D: damaged
Diam: diameter
in: inch
NA: not applicable
NI: not Inspected
OK: acceptable condition
X: item missing

SVE/VER PRODUCT MEASUREMENT CHECKLIST

HARRIMAN, NEW YORK

Recorded By: Natalie Lynch **Date:** 3/1/2024

DTP	DTW		
-	01	○	SVE-1
2.62'	2.63'	●	SVE-2
1.59'	1.60'	●	SVE-3
-	2.06'	○	*SVE-4

		DTP	DTW
VER-1	●	3.91'	3.92'
VER-2	●	4.34'	4.35'
VER-3	●	3.79'	3.80'
VER-4	○		3.69'

● **Indicates absorbent sock in well.**

NOTES: **Graphic represents orientation of wells when facing south.**
VER-1 and SVE-1 are both 4" wells. All others are 2" diameter.
Wells are checked for depth to water (DTW) and depth to product (DTP) after absorbent sock is removed.
***Bottom of SVE-4 partially filled in during prior demolition work (bottom at 2.65 ft).**

COMMENTS: **Absorbent sock in well VER-2 was replaced on 12/14/2023 and was 20% spent at this inspection.**
After confirmation of presence of product, new absorbent socks were placed in wells SVE-2, SVE-3, VER-1, and VER-3.
Water was above the top of the well casing at well SVE-1. No product was visible.

Attachment 2
Streambank and Parking Lot Inspection Photographs and Log

RIVERBANK AND PARKING LOT INSPECTION FORM

HARRIMAN, NEW YORK

DATE: 2/28/2024

INSPECTOR: T. DiGiulio

INSPECTION (Check): **SEMI-ANNUAL** ____ **QUARTERLY** X

	STATUS	COMMENTS
A. General condition of riverbank cover material	OK	Stable
B. Settlement of riverbank cover	OK	None observed
C. General condition of parking lot cover material	OK	Recent repairs holding up
D. Settlement of parking lot cover	Beginning	Some settlement observed to repairs made. Re-inspect next quarter.

Photograph 1
Representative Streambank Photograph

Photograph taken February 28, 2024

Photograph 2
Representative Streambank Photograph

Photograph taken February 28, 2024

Photograph 3
Representative Streambank Photograph

Photograph taken February 28, 2024

Photograph 4
Representative Streambank Photograph

Photograph taken February 28, 2024

Photograph 5
Representative Parking Lot Photograph Facing North

Photograph taken February 28, 2024

Photograph 6
Representative Parking Lot Photograph Facing South

Photograph taken February 28, 2024

Photograph 7
Representative Parking Lot Photograph Showing Signs of Settlement

Photograph taken February 28, 2024

Attachment 3
Area F and Building 53 Area Photographs and Log

FORMER DRUM EXCAVATION AREAS INSPECTION FORM

HARRIMAN, NEW YORK

DATE: 02/28/204

INSPECTOR: T. DiGiulio

INSPECTION (Check): **SEMI-ANNUAL** X

QUARTERLY

	STATUS	COMMENTS
A. AREA F	OK	No disturbance - natural vegetation
B. BUILDING 53 AREA	OK	No disturbance - natural vegetation

Photograph 1
Former Drum Excavation Area Facing Southwest

Photograph taken February 28, 2024

Photograph 2
Former Drum Excavation Area Facing East

Photograph taken February 28, 2024

Attachment 4
Fence Inspection Photographs and Log

SITE FENCE INSPECTION FORM

HARRIMAN, NEW YORK

DATE: 02/28/2024

INSPECTOR: T. DiGiulio

INSPECTION (Check): **SEMI-ANNUAL** X

QUARTERLY

	STATUS	COMMENTS
A. Perimeter Fence around NEPERA Facility	Limited Damage	Fence in fair condition, southern section of the fence cut in two areas.
B. Perimeter fence around NEPERA Parking Lot	Limited Damage	South side of parking lot along Arden House Road damaged due to vandalism.
C. Perimeter fence around lagoon area	OK	

Photograph 1
Illegal Dumping and Fence Damage Facing Northwest

Photograph taken February 28, 2024

Photograph 2
Illegal Dumping and Fence Damage Facing Southeast

Photograph taken February 28, 2024

Photograph 3
Repairing Damaged Fence at the Front of the Site

Photograph taken March 26, 2024