

April 10, 2017

Mr. Michael Terpinski
Ohio EPA, NWDO, DERR
347 North Dunbridge Road
Bowling Green, OH 43402

**Re: Envirosafe Services of Ohio, Inc.
 EPA Identification Number: OHD 045 243 706
 March 2017 Progress Report**

Dear Mr. Terpinski:

In accordance with Condition E.13 of its Ohio Hazardous Waste Facility Installation and Operation Permit (the "Permit"), Envirosafe Services of Ohio, Inc. ("ESOI") hereby submits this progress report to the Ohio Environmental Protection Agency ("Ohio EPA") for the period beginning March 1, 2017 and ending March 31, 2017.

Corrective Measures Study ("CMS"):

Project Activities and Summary of Findings to Date:

During this reporting period, CMS activities included the following:

1. On March 27, 2017, Ohio EPA partially approved the CMS Report ESOI submitted on 1/7/11 and revised on 8/2/11 and 4/30/12. The portion not approved, revisions to the ground water monitoring program, were collaboratively revised and drafted outside the final report.

Summary of All CMS-Related Contacts with the Public:

ESOI has not had any related contacts with the public during this reporting period.

Summary of Potential or Encountered Problems and Rectification Actions:

There is nothing to report in association with this topic for this reporting period.

Changes in Personnel:

There have been no changes to CMS personnel during this reporting period.

Projected Work:

During the next reporting period it is anticipated that the following activities will occur:

1. Ohio EPA selection of remedies and initiation of a permit modification to incorporate them as well as the collaboratively drafted revisions for the groundwater monitoring program.

Corrective Measures Implementation ("CMI"):

Project Activities:

During this reporting period, CMI activities included the following:

1. Quarterly inspections, leachate elevation readings, and flow testing of the leachate extraction system;
2. All interior piezometers were measured on the following dates: SWMUs 5 and 6 March 28, 2017 (with the exception of PZ-23 [3/29] and NRP-25 & RW-1 [3/31]), and SWMU 7 March 31, 2017. All exterior wells measured on April 3 and 4 with the IGWM event. The following is documentation that:
 - SWMUs 5, 6, and 7 are maintaining an inward gradient. The leachate level at each SWMU's interior piezometers has an average head potential at least 1-foot lower than the average liquid potential in the established perimeter shallow till wells, as identified in the draft Table 1.0 of the OMPM Plan update.
 - SWMU 5- Central is maintaining Target Leachate Level (TLL).
 - SWMUs 5-West, 6, and 7 did not maintain its average Target Leachate Level (TLL). The quarterly measurement is less than 2 inches over the TLL. In accordance with the OMPM Plan, ESOI will complete an evaluation within 30 days of the end of the calendar quarter and proceed with the appropriate level responses.

										Average	Difference (out-in)	
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SWMU 5 - Central	TLL: 557.1											
Interior Piezometers	PZ-5	PZ-6	PZ-7	PZ-21	PZ-22	PZ-23	NRP-24	RW-3	RW-11			
	569.33	560.84	559.40	557.58	548.64	544.99	555.85	553.36	555.26	556		
Exterior Wells	F-1S	G-1S	MR-1SA	MR-4S	MR-5S	MR-7S						27
	585.75	587.36	582.56	585.77	578.12	577.39					583	
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SWMU 5 - West	TLL: 564.9											
Interior Piezometers	PZ-13	NRP-31										
	565.89	564.94									565	
Exterior Wells	MR-2S	MR-6S										10
	577.01	573.91									575	
<hr/>												
SWMU 6	TLL: 566.9											
Interior Piezometers	PZ-3	PZ-15	DPW-16	NRP-25	NRP-26	NRP-27	NRP-28	RW-1				
	561.87	565.10		585.21	575.16	560.44	560.48	565.94	568			
Exterior Wells	H-2S	SW-1S	SW-2S	SW-3S	T-8S							20
	590.49	585.63	585.42	589.19	589.68						588	
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SWMU 7	TLL: 570.8											
Interior Piezometers	PZ-10	PZ-11	DPW-18	DPW-19	DPW-20	NRP-29	NRP-30	RW-2				
		576.10	572.08	570.20		577.97	583.20	573.37	575			
Exterior Wells	T-5S	T-8S	T-15S	T-43S								13
	589.05	589.68	589.43	586.88							589	

3. On March 28 and 31, 2017 in accordance with the compliance plan of action, ESOI completed monthly elevation monitoring at the following wells which exceeded their respective TLLs in the prior month.
 - SWMU 5 Central: 557.1
 - PZ-5: 569.33
 - PZ-6: 560.84
 - PZ-7: 559.40
 - SWMU 6: 566.9
 - DPW-16: (well not usable - nearby replacement NRP-32 is operating)
 - NRP-26: 575.16
 - SWMU 7: 570.8
 - PZ-10: (well not usable - nearby wells are operating)
 - PZ-11: 573.10
 - DPW-20: (well not usable - nearby wells are operating)
4. During the quarterly inspections, a camera was used in each well to identify any issues and verify the top of liquid level elevations. The following are findings for each SWMU:
 - SWMU 5 – NRP-24 and NRP-31 are due for well redevelopment. Warping of the well was identified in PZ-6, DPW-21 (not operational and pump removal unlikely), DPW-22, and DPW-23 (caution should be taken to remove the DPW pumps);
 - SWMU 6 – Pneumatic pumps at RW-1, NRP-32, and NRP-25 should be disassembled and cleaned. RW-1 was kinked and did not allow for proper discharge flow, NRP-32 contained leachate within the air bladder which prevented adequate pumping. NRP-25 was impacted by coarse sand (well pack) just before the globe valve which slowed discharge greatly (the check valve is not functioning). Warping of the well was identified for PZ-3, RW-7, and RW-8. NRP-27 has an obstruction (electrical conduit or old PZ liner) within the PZ at around 77 feet;
 - SWMU 7 – Impacted by electrical problems this quarter. It appears that a buried electrical junction box filled with water and caused intermittent failure until full failure. Temporary wiring has been installed and all pumps are functioning except NRP-29. Maintenance has been scheduled for NRP-29. NRP-30 has very high bio-content within the PZ. This may have been the reason for frustrating and sometimes inaccurate measurements at this location. Warping of the well was identified for DPW-18 (caution while removing pump), PZ-10 is also warped and non-functioning as previously identified.
5. Leachate system maintenance included checking the leachate wells for proper operation on 3/1 and 3/8. Please note that extreme wetness and personnel limitations precluded further well maintenance activities during the latter half of the month;
6. Pneumatic bladder pumps operated in PZ-13 and PZ-15 in warm weather periods;
7. Continued work on modifications to the OMPM Plan to document incorporation of the new and converted wells and effectiveness evaluation of storm water management improvements. In conjunction with this modification, MSG is evaluating the leachate extraction systems after 9 years of operation. The report will include an evaluation of how waste consolidation, decreased pore space, and depth of wells installed since TLLs were established impact measures of success and compliance of the leachate extraction systems. It will also provide an overall assessment of the number and location of leachate wells and monitoring locations;
8. Continued operation and monitoring of the leachate extraction systems on SWMUs 5, 6, and 7.

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Summary of All CMI-Related Contacts with the Public:

ESOI has not had any related contacts with the public during this reporting period.

Summary of Potential or Encountered Problems and Rectification Actions:

There is nothing to report in association with this topic for this reporting period.

Projected Work:

During the next reporting period it is anticipated that the following activities will occur:

1. Edit draft OMPM Plan updates and 9-Year Evaluation Report;
2. Initiate operation of pneumatic pumps at PZ-13 and PZ-15 when temperature permits;
3. Redevelopment of leachate extraction wells in accordance with a priority list that has been developed with the most silty wells being addressed first; NRP-24 and NRP-31 are priorities for redevelopment and the pneumatic pumps in RW-1, NRP-32, and NRP-25 for disassembly and cleaning. If time permits an attempt will be made to remove an obstruction from in the NRP-27 piezometer riser;
4. Correct the electrical issue at SWMU 7 and repair the pump at NRP-29;
5. Install fencing on well development trailer; and
6. Continued operation and maintenance of the leachate extraction systems on SWMUs 5, 6, and 7.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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, 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.

If you have any questions, please do not hesitate to contact Stephen DeLussa at (215) 659-2001 ext. 15.

Sincerely,



Douglas E. Roberts
President

ec: Lynn Ackerson, Ohio EPA NWDO
Stephen DeLussa, Envirosource Technologies, Inc.

Michael Momenee, The Mannik & Smith Group
Mark Nielsen, RAMBOLL ENVIRON