

April 10, 2015

Ms. Lynn Ackerson  
Ohio EPA, NWDO  
347 North Dunbridge Road  
Bowling Green, OH 43402

**Re:   Envirosafe Services of Ohio, Inc.  
      Oregon, Lucas County, Ohio  
      EPA Identification Number: OHD 045 243 706; Ohio Permit Number: 03-48-0092  
      March 2015 Progress Report**

Dear Ms. Ackerson:

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, 2015 and ending March 31, 2015.

**Corrective Measures Study ("CMS"):**

**Project Activities and Summary of Findings to Date:**

During this reporting period, CMS activities included the following:

1. Ohio EPA review of ESOI's response to comments on the proposed changes to the groundwater monitoring program.

**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 review of ESOI's response to comments on the proposed changes to 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 and exterior wells were measured on the following dates: SWMU 5 – March 31, 2015, (with the exceptions of PZ-5 thru 7, 13, and 21 thru 23 [3/30]; SWMU 6 – March 27, 2015 (with the exceptions of PZ-3, 15, DPW-16, NRP-28, and RW-1 [3/26]; and SWMU 7 – March 27, 2015 (with the exceptions of PZ-10 and 11 [3/26]). The following is documentation that:
  - SWMUs 5, 6, and 7 have achieved and 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.

|                             |                   |               |               |               |               |               |               |             |              | Average | Difference<br>(out-in) |    |
|-----------------------------|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|--------------|---------|------------------------|----|
| <hr/>                       |                   |               |               |               |               |               |               |             |              |         |                        |    |
| <b>SWMU 5 - Central</b>     | <b>TLL: 557.1</b> |               |               |               |               |               |               |             |              |         |                        |    |
| <b>Interior Piezometers</b> | <b>PZ-5</b>       | <b>PZ-6</b>   | <b>PZ-7</b>   | <b>PZ-21</b>  | <b>PZ-22</b>  | <b>PZ-23</b>  | <b>NRP-24</b> | <b>RW-3</b> | <b>RW-11</b> |         |                        |    |
|                             | 571.51            | 569.56        | 568.06        | 570.74        | 571.12        | 574.30        | 566.44        | 566.11      | 565.26       | 569     |                        |    |
| <b>Exterior Wells</b>       | <b>F-1S</b>       | <b>G-1S</b>   | <b>MR-1SA</b> | <b>MR-4S</b>  | <b>MR-5S</b>  | <b>MR-7S</b>  |               |             |              |         |                        | 13 |
|                             | 585.28            | 587.21        | 583.49        | 584.38        | 576.63        | 577.2         |               |             |              |         | 582                    |    |
| <b>SWMU 5 - West</b>        | <b>TLL: 564.9</b> |               |               |               |               |               |               |             |              |         |                        |    |
| <b>Interior Piezometers</b> | <b>PZ-13</b>      | <b>NRP-31</b> |               |               |               |               |               |             |              |         |                        |    |
|                             | 568.17            | 563.09        |               |               |               |               |               |             |              |         | 566                    |    |
| <b>Exterior Wells</b>       | <b>MR-2S</b>      | <b>MR-6S</b>  |               |               |               |               |               |             |              |         |                        | 9  |
|                             | 575.85            | 573.60        |               |               |               |               |               |             |              |         | 575                    |    |
| <hr/>                       |                   |               |               |               |               |               |               |             |              |         |                        |    |
| <b>SWMU 6</b>               | <b>TLL: 566.9</b> |               |               |               |               |               |               |             |              |         |                        |    |
| <b>Interior Piezometers</b> | <b>PZ-3</b>       | <b>PZ-15</b>  | <b>DPW-16</b> | <b>NRP-25</b> | <b>NRP-26</b> | <b>NRP-27</b> | <b>NRP-28</b> | <b>RW-1</b> |              |         |                        |    |
|                             | 566.67            | 567.64        | 582.27        | 570.80        | 571.87        | 566.38        | 566.68        | 565.34      | 570          |         |                        |    |
| <b>Exterior Wells</b>       | <b>H-2S</b>       | <b>SW-1S</b>  | <b>SW-2S</b>  | <b>SW-3S</b>  | <b>T-8S</b>   |               |               |             |              |         |                        | 18 |
|                             | 589.64            | 585.08        | 585.48        | 589.09        | 587.93        |               |               |             |              |         | 587                    |    |
| <hr/>                       |                   |               |               |               |               |               |               |             |              |         |                        |    |
| <b>SWMU 7</b>               | <b>TLL: 570.8</b> |               |               |               |               |               |               |             |              |         |                        |    |
| <b>Interior Piezometers</b> | <b>PZ-10</b>      | <b>PZ-11</b>  | <b>DPW-18</b> | <b>DPW-19</b> | <b>DPW-20</b> | <b>NRP-29</b> | <b>NRP-30</b> | <b>RW-2</b> |              |         |                        |    |
|                             | 573.89            | 564.92        | 569.38        | 570.37        |               | 580.34        | 576.59        | 571.58      | 572          |         |                        |    |
| <b>Exterior Wells</b>       | <b>T-5S</b>       | <b>T-8S</b>   | <b>T-15S</b>  | <b>T-43S</b>  |               |               |               |             |              |         |                        | 15 |
|                             | 587.92            | 587.93        | 586.78        | 585.80        |               |               |               |             |              |         | 587                    |    |

- It appears SWMUs 6 did not maintain its average Target Leachate Level (TLL). In accordance with Section 6 of the Operations Maintenance & Performance Monitoring

Plan (OMPM Plan), ESOI is evaluating the quarterly data and preparing a document to address Level 1, 2, and 3 responses as necessary. ESOI will submit the initial evaluation by the end of April. While the average in SWMU 6 was calculated above the TLL, some of the wells appear to be approaching dry conditions. NRP-27 (nested piezometer) in SWMU 6 was found dry when the pump in the nested operational well was in service. However, it did recover after 24 hours of the pump being turned off. In SWMU 7, PZ-11 was found dry. In addition, the tape used to measure the leachate level elevations broke (ripped) and the measurements for this event were taken with a different probe. The probe used is not the same model and more prone to false readings in wells that are crowded with pumps and associated equipment. SWMU-7 also rose above its TLL and ESOI will monitor the progress as the July 1 target date approaches. Similar to SWMU-6, ESOI believe that the levels will return to pre-winter levels and continue to decline.

3. On March 26 and 27, 2015 in accordance with the compliance plan of action at SWMU 6, ESOI completed monthly elevation monitoring at the following wells. DPW-16, NRP-25, and NRP-26 exceed the TLL of 566.9.
  - DPW-16: 582.27 (well no longer usable – accuracy of elevation is questionable)
  - NRP-25: 570.80 (well frozen; not pumping –accuracy of elevation is questionable)
  - NRP-26: 571.81
4. Submission of the annual report on March 2, 2015;
5. Work on expedited corrective measures outlined in the CMS Report:
  - Storm water management is being improved on and around SWMUs 5, 6, and 7 through improvements to existing swales and construction of new intermediate drainage ditches on the side slopes of SWMUs 6 and 7: All grading and liner work has been completed on SWMUs 5, 6, and 7 with the exception of a new small retention pond at NPDES outfall 012. No work was completed in March; and
6. Continued operation and monitoring of the leachate extraction systems on SWMUs 5, 6, and 7.

**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:**

1. The following notes and maintenance were observed during the month:
  - SWMU 6: DPW-16 is not functioning consistently to reduce leachate levels and this is needed to maintain compliance. A new well has been drilled and is expected to be operational in the spring of 2015. RW-1 is not pumping and the pump is currently undergoing evaluation. NRP-28 is not pumping and the transducer and pump are currently being evaluated;
  - SWMU 7: RW-9 (pump is stuck in middle of well, well is no longer be useful – a new well has been drilled), RW-12 and DPW-20 (cables broke during attempts to forcibly remove pumps - wells have shifted due to dewatered waste consolidation – new recovery wells in targeted locations for leachate removal optimization have been drilled.) All new wells are expected to be in operation in the spring of 2015;

- Due to the cold weather and low flow of leachate, many of the wells were frozen during the quarter and not pumping. As of this date of this report, all wells not otherwise noted above were not frozen and operational. ESOI anticipates that leachate levels will quickly recover to the levels measured in the previous quarter and continue to decline.

There is nothing else 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. Evaluation of the SWMU 6 average TLL data and submission of a report outlining responses to be taken.
2. Finalize conversion of piezometers PZ-21, 22, and 23 on SWMU 5 to dual purpose extraction wells and piezometers in the Spring of 2015;
3. Commence operation of 4 new and/or replacement leachate extraction wells NRP-32 thru NRP-35 in the spring of 2015;
4. Continued operation and maintenance of the leachate extraction systems on SWMUs 5, 6, and 7; and
5. Continued work on the storm water management improvements around 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

cc: Stephen DeLussa, Envirosource Technologies, Inc.  
ESOI File Copy

Peter Ramanauskas, USEPA Region 5  
Michael Momenee, The Mannik & Smith Group  
Mark Nielsen, ENVIRON International Corp.