Ohio EPA Response to Comments
regarding

Envirosafe Services of Ohio, Inc.
Final Class 3 Permit Modification - Corrective Measures
Ohio Permit No.: 03-48-0092
U.S. EPA I.D. No.: OHD 045 243 706

August 2006

Background:

On March 30, 2006, Ohio EPA issued a draft Agency-initiated modification to Envirosafe Services of Ohio, Inc. (Envirosafe or ESOI) for its Hazardous Waste Facility Installation and Operation Permit (Permit). The draft modification proposed inclusion of certain corrective measures requirements for old waste management units in the northern portion of the facility. A public hearing was held on Wednesday, May 3, 2006, at the East Toledo Family Center. The comment period began on March 31, 2006, and was scheduled to be closed on May 15, 2006. However, in response to public request, the end date of the comment period was extended to June 14, 2006. The draft permit modification was available throughout the comment period for public review and comment at the Toledo-Lucas County Public Library, Oregon Branch and Ohio EPA offices.

Comments on the draft modification permit were submitted to Ohio EPA orally and in written form. Comments received are summarized below and Ohio EPA's responses follow in italics. To obtain the full text of the meeting transcript, evidence and comments received during the public comment period, please contact Darla Peelle at darla.peelle@epa.state.oh.us or at (614) 644-2160.

The following are responses to hearing testimony and written comments received May 3, 2006, at the public hearing from Ms. Joann Schiavone.

1. **Comment Received:**

   Ms. Schiavone is concerned that the public cannot adequately comment on the proposed corrective measures when information ESOI submitted to Ohio EPA is "faulty and incomplete."

1. ***Ohio EPA's Response:***

   To be clear, Ohio EPA initiated this modification. Typically, upon completion of investigation activities under Resource Conservation and Recovery Act (RCRA) Corrective Action, a facility will provide Ohio EPA with its proposed corrective measure(s). Ohio EPA then has the option, through the permitting process, to

approve a proposed corrective measure or select a different corrective measure. In this instance, the site investigation is not yet complete, but certain information collected during Phase I of the RCRA Facility Investigation (RFI) supports selection and implementation of specific corrective measures now to contain and minimize the impact of releases; hence the issuance of today's final permit. Agency technical staff have reviewed the information Envirosafe has submitted during Phase I of the RFI. Ohio EPA disagrees with the assertion that all the information gathered during RFI Phase I is faulty and/or incomplete.

2. Comment Received:

Ms. Schiavone stated that she has been disappointed by a lack of timeframes and delays during work at Envirosafe in the past. She would like to ensure that there are timeframes associated with this work and that Ohio EPA enforces these timeframes.

2. Ohio EPA's Response:

Permit condition E.13 requires Envirosafe to submit RCRA Corrective Action-related documents per a specific schedule of compliance. In addition, Envirosafe's RFI Phase I and Phase II Work Plans included schedules, which U.S. EPA and Ohio EPA approved, respectively. At times, field work schedules need to be adjusted due to unforeseen complications such as weather delays, equipment failure, and property access. It is not unusual for an environmental investigation of this scope to span several years – reports submitted by the facility may require additional clarification which impacts review time. While Envirosafe generally submits information in a timely manner, Ohio EPA may require Envirosafe to submit supplemental information or to meet with the Agency to provide further explanation of the information submitted.

3. Comment Received:

Ms. Schiavone expressed concern regarding the ownership of BEC Labs and its connection to Envirosafe. She asked if John Heenan owned BEC Lab and if he also owned a portion of Envirosafe.

3. Ohio EPA's Response:

Ohio EPA has no information on the ownership of BEC Laboratories, Inc. According to background disclosure information submitted by Envirosafe (and Envirosource Technologies, Envirosafe's parent corporation) to the Office of the Attorney General, John Heenan is listed as chairman, chief executive officer and director of Envirosource Technologies, Inc. and as chairman and chief executive officer of Envirosafe.

4. Comment Received:

Ms. Schiavone is concerned that "in [Ohio EPA's] letter dated March 28, 2006, to Doug Roberts regarding data validation resolution, [Ohio EPA] clearly said ESOI failed to submit data packages that contain sufficient information to use the procedures specified in the National Functional Guidelines. Furthermore, the quality control data that was received indicated potentially serious problems that could impact the RFI's data quality objectives." In addition, Ms. Schiavone is concerned about the closure of the lab Envirosafe used for this analysis.

4. Ohio EPA's Response:

Ms. Schiavone is correct. Ohio EPA's March 28, 2006, letter was critical of Envirosafe's RFI Phase I data packages and data validation procedures. To resolve data validation concerns, Ohio EPA has required Envirosafe to collect additional soil and sediment samples from RFI Phase I sample locations, analyze those samples for polychlorinated biphenyls (PCB), volatile organic compounds (VOC) and semivolatile organic compounds (SVOC), and evaluate the additional data using U.S. EPA's historical data guidance (http://www.epa.gov/reg5rcra/ca/hist-data.htm). In addition, Envirosafe's RFI Phase II Work Plan includes collection and analysis of numerous ground water samples from Phase I sample locations to confirm Phase I sample results. The additional samples Ohio EPA required and the samples Envirosafe planned for RFI Phase II will be used to corroborate the Phase I data.

5. Comment Received:

Ms. Schiavone inquired about the status of the summary judgment that was filed in 1997. She stated that this judgment claimed ESOI had secret test results regarding 117 monitoring wells at the site. She is concerned that two of these wells showed contamination levels above the maximum contaminant limits (MCL).

5. Ohio EPA's Response:

The document referenced and provided by Ms. Schiavone was titled, "AMENDED MOTION FOR SUMMARY JUDGMENT AND BRIEF IN SUPPORT; AND OPPOSITION TO DEFENDANT'S MOTION FOR SUMMARY JUDGMENT; AND EXPERT REPORTS WITH AFFIDAVITS IN SUPPORT." This motion was made by the City of Oregon and Lucas County in support of a lawsuit they filed in Lucas County Court of Common Pleas against Envirosafe in 1997. Ohio EPA was not a party to that case. Ohio EPA disagrees with the assertion that there are "secret test results" which have been withheld from public view. Contamination has been confirmed in upper zones of ground water at the site – today's final permit goes to addressing contaminant migration from old waste management units in the northern portion of the property.

6. Comment Received:

Ms. Schiavone submitted Michigan State University's Technical Outreach Services for Communities (TOSC) program findings. Ms. Schiavone requested that the Agency review the report and address TOSC's findings.

6. Ohio EPA's Response:

Ohio EPA has considered Technical Outreach Services for Communities (TOSC) program findings (http://www.egr.msu.edu/tosc/envirosafe/). The findings primarily provide a condensed summary of the RFI Phase I data collected by Envirosafe. Documentation of Ohio EPA's evaluation of TOSC's report and findings can be found in letters dated May 3, 2004, and March 24, 2005. Specific TOSC recommendations, such as "bedrock wells should be screened with great care to intercept any contaminants," are adhered to as demonstrated through Ohio EPA oversight of well installation and the use of professional drillers by the facility. Other TOSC concerns, such as "...high levels of contaminants...," will be evaluated via human health and ecological risk assessments as described in Envirosafe's RCRA Facility Investigation (RFI) Work Plan (2003), when the RFI is complete.

7. Comment Received:

Ms. Schiavone expressed concerns that Cell M is leaking and has bubbles. She also feels that Ohio EPA will need help implementing the Phase II Work Plan and that this work will reveal that the area's drinking water is contaminated.

7. Ohio EPA's Response:

Cell M is constructed with a dual liner system, leachate collection and leak detection. In addition, waste placed in Cell M is treated to minimize contaminant mobility. There is no evidence that contaminants have migrated beyond the liner systems of Cell M. Nor is there any evidence to suggest that the site has impacted drinking water sources in the area.

8. Comment Received:

Ms. Schiavone asked, "why didn't the R-wells show any contamination when the 79-page spreadsheet clearly showed contamination?"

8. Ohio EPA's Response:

The document referenced and provided by Ms. Schiavone is called "Compound/Well/Date" and is dated 1997. This document is a quantitation report and is raw data or quality assurance/quality control (QA/QC) data produced by the analytical laboratory and associated with data validation protocols. A direct

comparison between QA/QC data and the sample result or measured concentration of a sample cannot be made.

Today's analytical laboratories and analytical methods can produce superior quality data compared to analytical laboratories and analytical methods in 1997. In addition, Envirosafe is in the process of conducting an extensive environmental investigation of its facility on Otter Creek Road. Should data from Envirosafe's RFI or Integrated Ground Water Monitoring Program (IGWMP) show contaminants in bedrock wells, additional investigation and corrective measure may be necessary. At this time, there is no bedrock well contamination at the Envirosafe site.

The following are responses to hearing testimony and written comments received May 3, 2006, at the public hearing from Mr. Thomas Hays.

9. Comment Received:

Mr. Hays is concerned about the leachate in the old cells leaking and contaminating water sources in the area.

Mr. Hays stated that, "leachate collection alone is not sufficient to stop the spread of pollution from these three old landfills [WMUs 5, 6, and 7]. Oregon strongly urges Ohio EPA to require capping and measures to control and collect the contaminated groundwater and complete an adequate study of the site."

9. Ohio EPA's Response:

Ohio EPA agrees that the site investigation must be completed. Ohio EPA approved Envirosafe's RFI Phase II Work Plan on April 12, 2006. Envirosafe began implementation of the field portion of the Work Plan on July 10, 2006. Based on the Phase II Work Plan schedule, and a field season with no delays, Ohio EPA anticipates receiving the RFI Report in June 2007.

Once the investigation and risk assessment are complete, in accordance with Envirosafe permit condition E.8, Ohio EPA will notify the facility of its requirement to complete a corrective measures study (CMS). The purpose of the CMS will be to develop and evaluate the corrective action alternative(s) and to outline one or more alternative corrective measure(s) that will satisfy performance objectives.

10. Comment Received:

Mr. Hays is concerned that the oil ponds at the site may contain polychlorinated biphenyls (PCBs) and should not "simply be capped."

Ohio EPA's permit modification proposes to cap these units along with limited additional testing in this area. Oregon's consultants conclude that these

measures are insufficient to assure the public health and safety and that the following are necessary to identify and control pollutants: identify the extent and source of the contaminants through a grid-based sampling protocol consistent with USEPA PCB Guidance for the two oil ponds and trench area; determine and design measures to remove or control the pollutants (leachate removal, removal/control of PCB and pollutant source, etc); and finally integrate removal and control measures with capping of the lagoons.

Capping alone at this point is premature and could be counter-productive to the data collection and integrating removal/control measures.

10. Ohio EPA's Response:

*Ohio EPA agrees that capping the Old Oil Pond (WMU*8) and New Oil Pond (WMU 9) prior to conducting any invasive investigation activities would be premature. It is Ohio EPA's intent that Envirosafe evaluate remedy alternatives for the units holistically. As written, the draft permit condition would have required Envirosafe to collect data and study alternatives that are protective of human health and the environment, prior to enhancing/modifying the caps on the units. When the draft permit conditions and statement of basis were issued in March 2006, expediting certain investigation activities was a priority for Ohio EPA because of the time lapse between Phase I and Phase II of the RFI. Expediting the study of these units was supported by data collected during RFI Phase I and subsequent field observations.*

However, RFI Phase II was initiated in July 2006 and Ohio EPA determined that the on-going RFI Phase II investigation and subsequent corrective measures study (CMS) will serve the intended purpose (i.e., collect data and study remedy alternative) of the draft modification for WMUs 8 and 9, following the steps defined in RCRA Corrective Action Plan or CAP (OSWER Directive 9902.3-2A, May 1994). This course of action allows additional time for the public to comment on investigation activities and for RFI Phase II to be completed before remedy alternatives are presented. Therefore, draft permit condition E.8(d)(ii), Address outbreaks of viscous waste material and/or non-aqueous phase liquid from WMUs 8 and 9, has not been included in the final permit.

At this time there is no evidence that WMUs 8 and 9 contain TSCA regulated PCBs (40 CFR Part 761). However, RFI Phase II activities, such as additional PCB sampling of source material at WMU 8 and ground water in City of Toledo Raw Waterline trench III-2, near WMU 9, will be completed during RFI Phase II. Should new data show that the units contain TSCA-regulated PCBs, additional investigation may be necessary.

**WMU" is an abbreviation for the term "Waste Management Unit" as defined in OAC Rule 3745-50-10. WMU is consistent and equivalent to "SWMU" or "Solid Waste Management Unit" found in Section 3004(u) of RCRA.*

The following are responses to hearing testimony and written comments received May 3, 2006, at the public hearing from Dr. Allison Spongberg.

11. Comment Received:

Federal PCB regulations stipulate that when PCBs are found grid-based sampling must be conducted to determine the actual extent. Now there is a proposed 200-foot interval between spacing; however, PCBs are so erratic that the actual regulations have a spacing that's more tightly spaced.

11. Ohio EPA's Response:

See Ohio EPA's Response 10.

12. Comment Received:

Dr. Spongberg expressed concern that BEC Labs held several samples too long. She said that, according to Ohio EPA's March 28 letter, data that was generated in the RFI, including PCB data was held too long and sampled incorrectly. "We believe the data is, in many cases, useless...when it's not following the protocol that the law spells out. It must be resampled."

12. Ohio EPA's Response:

It is premature to call these data "useless." All RFI Phase I data was validated by Envirosafe contractors and a portion of the RFI Phase I data was validated by Ohio EPA. The rigorous data validation process revealed some data validation concerns. To address these concerns and determine the quality and usability of the Phase I data, specifically PCBs, volatile organic compounds (VOC) and semivolatile organic compounds (SVOC), Ohio EPA's March 28, 2006, letter and Phase II RCRA Facility Investigation (RFI) approval letter require Envirosafe to take additional samples to corroborate the Phase I data using U.S. EPA guidance for historical data usage. Therefore, as Dr. Spongberg suggests, Envirosafe has already been required to resample and analyze data from specific Phase I sampling locations.

13. Comment Received:

TOSC has a 3-D image of the landfill...that shows the area of these particular oil pits. They don't have deep samples, so we don't know whether it's gone deeper.

13. Ohio EPA's Response:

Dr. Spongberg is not correct about the lack of deep till ground water samples. Although deep till wells in the vicinity of the Old Oil Pond (WMU 8) and New Oil Pond (WMU 9) are limited, there are several deep till well locations, including

WMU 8 location T-32D and WMU 9 locations T-15D and T-28D. The boring log for well T-32D reports that the borehole ended at 74 feet with the well being screened from 68 to 73 feet. There was no visual evidence of contamination in this boring and no constituents were identified above the screening criteria except for lead. Location T-15D also showed inorganic constituents above the screening criteria. Additional information on these borings can be found in Envirosafe's RFI Phase I Report and Phase II Work Plan (2003). In addition, the RFI Phase II Work Plan specifies that the full extent of contamination will be identified.

14. Comment Received:

Dr. Spongberg is concerned that the R-Wells are not completed or screened at the appropriate level to monitor the bedrock zone. She would like the areal, vertical and lateral extent of the potential PCB contamination defined as she expects the potential contamination to migrate in the S, D and R zones both laterally and horizontally.

14. Ohio EPA's Response:

For clarification, there are four water-bearing zones included in Envirosafe's RCRA Facility Investigation (RFI). In addition to the shallow (S), deep (D) and bedrock (R) wells, there are water table or "W" wells. There is no evidence that the bedrock (R) wells were inappropriately completed.

In regard to concerns about potential PCB contamination at WMUs 8 and 9, please see Ohio EPA's Response 10.

15. Comment Received:

Dr. Spongberg also expressed concern about potential contamination in the "trench."

15. Ohio EPA's Response:

Ohio EPA assumes that Dr. Spongberg is referring to the City of Toledo Raw Waterline trenches. The trenches are numbered 1 though 6. Trenches 1, 2 and 6 are known as monitoring trenches as they have historically been free of contaminants. Trenches 3, 4, and 5 are known as dewatering trenches as they have historically been contaminated. The trenches were designed to intercept contaminants that may be migrating toward the waterlines. Also, as discussed in comment 10, at this time there is no evidence that WMUs 8 and 9 contain TSCA-regulated PCBs (40 CFR Part 761). Should Phase II data show that the units contain TSCA-regulated PCBs additional PCB investigation may be necessary.

The following are responses to hearing testimony on May 3, 2006, at the public hearing from Ms. Sandy Bihn, Western Lake Erie WATERKEEPER © and Western Lake Erie Sierra Conservation Chair.

16. Comment Received:

Ms. Bihn is concerned that Envirosafe has used excess monies in their closure and post closure funds for "unacceptable work". Ms. Bihn believes Envirosafe should refund this money..." Director of Ohio EPA has the right to allow these funds to go out and should have at discretion to recollect the funds because the work was unacceptable. By [the director] approving these invoices and allowing those trust funds to go out, he's basically saying that the work was valid and it's not."

16. Ohio EPA's Response:

Ohio EPA acknowledges that certain data validation information from Phase I of the investigation was lacking, as is detailed in a March 28, 2006, letter from Michael Savage, Chief, Division of Hazardous Waste Management, to Doug Roberts of Envirosafe. As such, Ohio EPA has required Envirosafe to collect additional data during Phase II to corroborate the Phase I PCB, SVOC and VOC data.

Ohio EPA disagrees that the use of excess funds for reimbursement of RCRA Corrective Action activities under the current circumstances is in any way improper or imprudent. To be clear, these funds for corrective action activities are beyond what is required for closure, post closure and perpetual care of the site. Closure, post closure and perpetual care funds are only required for Envirosafe's RCRA Subtitle C units or units legally defined as hazardous waste units. In short, the monies set aside for care after the facility closes have never been used for corrective action activities. As of this writing, the mandated amount to perform closure, post-closure and perpetual care of the sites' RCRA Subtitle C units is $37,347,173.00. Envirosafe's trust fund is valued at $53,223,601.88, leaving an excess of $15,876,428.88. Ohio EPA believes it is most appropriate to use these excess funds to support RCRA Corrective Action activities at the site for the protection of human health and the environment.

17. Comment Received:

Ms. Bihn would like TOSC to review the Phase II work at Envirosafe.

17. Ohio EPA's Response:

U.S. EPA arranged in 2001 for TOSC to provide technical assistance to the community during Phase I of the RCRA facility investigation. Assistance was provided by researchers at Michigan State University who completed their work

in 2003. Unfortunately, U.S. EPA is no longer able to fund the research grant of which TOSC was a part. Because TOSC provided a valuable service to many of the nation's communities, U.S. EPA is evaluating alternates to provide independent technical assistance to communities. Briana Bill, Community Involvement Coordinator, EPA Region 5, will continue to appraise Ohio EPA and community contacts on any updates to the funding situation. She may be reached at (800) 621-8431, Ext. 36646.

18. Comment Received:

"What is Ohio EPA's assessment of the permeability of the clays and the fractured tills at the site? What does Ohio EPA estimate the time of travel for contaminants to move through the site to be?"

18. Ohio EPA's Response:

Until new information is received, Ohio EPA supports the description of the geology at Envirosafe as currently stated in Envirosafe's permit. However, Envirosafe is required to conduct in situ hydraulic conductivity tests at affected wells and selected newly installed RFI Phase II wells during Phase II. In addition, Ohio EPA required Envirosafe to calculate time of travel at affected wells and include that information in its permit renewal. Ohio EPA comments on Envirosafe's time of travel calculation were sent to Envirosafe in a June 7, 2006 e-mail.

As reported in the statement of basis for this permit modification, the description of the geologic units is as follows:

Geology and Hydrogeology

The regional aquifer at the site is the dolomite bedrock consisting of the Greenfield Dolomite and the Lockport Group. Above the bedrock are two glacial till units overlain by lacustrine deposits. The contact between lacustrine deposits and the upper glacial till deposits (shallow till wells) and the contact between the upper and lower glacial tills and any sand deposits at this contact (deep till wells) are monitored as zones of potential contaminant transport. The bedrock is monitored as the uppermost aquifer system.

The initial Appendix IX sampling event for ESOI's permitted ground water monitoring network was conducted in 1989. Contaminants were initially detected during the USEPA-led North Sanitary Landfill (SWMU 6) RFI in 1995 and subsequently detected in ESOI's permitted ground water monitoring wells on the north side of the facility in October 1997. The Phase I RFI findings and findings from years of ground water monitoring at ESOI are in general agreement. Basically, contaminants have been released from units on the north side of the facility (WMU 1, 5, 6, 7, 8 and 9) and have been detected at the northern

property boundary and throughout the older portion of the site, north of York Street.

Lacustrine Zone

The lacustrine material beneath the facility is comprised of brown varved silts interbedded with thin clay layers and traces of sand and gravel. The laminations are rarely preserved in the upper part of the soil profile due to weathering. The thickness of the lacustrine material ranges from 10 feet to 20 feet. The vertical hydraulic conductivity of the lacustrine deposit ranges from 6.9 x 10^{-8} cm/s to 1.4 x 10^{-7} cm/s and the horizontal hydraulic conductivity ranges from 1.54 x 10^{-6} cm/s to 9.29 x 10^{-5} cm/s. Ground water elevations at the contact between the lacustrine zone and the shallow till (the "S" wells) do not appear to show a single potentiometric surface. Shallow ground water flow is assumed to mimic surface water flow towards surface water drainage features.

Shallow Till Zone

The shallow till underlying the lacustrine deposits is 35 feet to 50 feet thick and consists of clayey silt or silty clay materials, which appear slightly less sandy and gravelly than the underlying deeper till. The shallow till exhibits lamination in the upper few feet. The unit is unusually soft in the upper portions becoming more compact with depth. The shallow unit is generally homogeneous with the exception of several discontinuous sand lenses. A large sand lens is located at the contact of the shallow and deep tills underlying Cell G. This lens extends into the northwestern corner of Cell M. Observation of the excavation in June 1992 showed that the sand lens is discontinuous under Cell M. Since the sand zone is at the contact of the upper and lower tills, the fluid level data for wells screened in sand lenses are evaluated along with the data for deep till wells screened across the upper till and lower till contact.

The measured horizontal hydraulic conductivity of the shallow till ranges from 2.28 x 10^{-8} cm/s to 3.6 x 10^{-8} cm/s and the measured vertical hydraulic conductivity ranges from 1.1 x 10^{-8} cm/s to 3.9 x 10^{-8} cm/s. Horizontal hydraulic conductivity determined by slug tests in wells screened at the shallow-deep till contact ranges from 2.8 x 10^{-8} cm/s to 7.19 x 10^{-6} cm/s. Ground water elevations in wells screened at the shallow till/deep till contact (the "D" wells) do not appear to show a single potentiometric surface with a dominant horizontal flow direction.

Deep Till Zone

The deeper glacial deposit is a gray sandy silt and clay-rich till deposited directly on the bedrock. The till ranges from 12 feet to 30 feet in thickness across the site. The measured vertical hydraulic conductivity ranges from 1.49 x 10^{-9} cm/s to 1.3 x 10^{-8} cm/s. The measured horizontal hydraulic conductivity ranges from 1.6 x 10^{-8} cm/s to 2.3 x 10^{-8} cm/s.

Bedrock Aquifer

The bedrock beneath the facility consists of the Greenfield dolomite and the Lockport Group. The Greenfield is typically micro- to very fine crystalline, tan to medium brown and gray dolomite with an average porosity of 8 percent. The Lockport is generally light gray, tan and white, fine to coarse crystalline dolomite with an average porosity of 22 percent.

The transmissivity of the bedrock ranges from 10,000 gallons per day per foot (gpd/ft) to 66,000 gpd/ft as determined from a pump test conducted in 1985. The coefficient of storage determined from the pump test is 9.37×10^{-5}; the hydraulic conductivity is 32 ft/day.

Water level elevations in bedrock wells in late winter generally have a potentiometric surface that is nearly flat across the site. Contouring this relatively flat surface produces multiple flow directions with small rises and depressions in elevations that may also be a reflection of differences in screen elevations. The dominant flow direction is to the north over most of the site and to the northwest in the northwest area of the facility. Once pumping at a large facility to the northeast begins during the warmer months, the dominant flow direction becomes north northeast.

19. Comment Received:

Ms. Bihn is concerned that the Toledo raw water line trenches may create a preferential pathway for contamination migration.

19. Ohio EPA's Response:

There are monitoring trenches between the City of Toledo water lines and the closed landfill cells. This system of trenches was constructed to serve as a warning system to detect and intercept any leakage heading toward the City of Toledo water lines. Envirosafe monitors these trenches weekly. Each week Envirosafe checks the monitoring wells and water levels in the trenches making sure that the water level in the trenches does not reach the City's water lines. Each quarter a complete sampling event of Envirosafe's trenches is performed by the City of Toledo Division of Environmental Services and Envirosafe. Each quarter the "Raw Water Line Security Task Force" meets. This task force is composed of management, environmental scientists and technicians from Envirosafe and the City of Toledo. During this meeting the City of Toledo reviews all data from the past quarter to determine whether any measures are required to maintain the integrity of the water supply system.

Also, the water lines are under pressure and it would be improbable for material to leak <u>into</u> a pressurized line. The water line services the water treatment plant, which is in constant operation. In the event of a rupture, the plant would detect it and personnel would stop pumps and close service valves.

As mentioned, the Collins Park Water Treatment Plant is an around-the-clock operation. After the water in the lines passes through the Envirosafe facility, City of Toledo chemists check the water's quality. Ohio EPA and the City of Toledo Division of Environmental Services each have extensive records concerning all of the activities about Envirosafe and the water lines and the City of Toledo's water quality.

For additional information on Toledo's raw water lines or the Raw Water Line Security Task Force, please contact Toledo Environmental Services at 419-936-3015.

The following are responses to comments received from Mr. Charles Johnson on May 3, 2006, during the public hearing.

20. Comment Received:

Mr. Johnson is concerned about contamination from chemicals associated with this site. He expressed interest in working with the community and local students and informing them of issues at this site.

"I'm personally willing to become involved, whether it's Maumee RAP or the Waterkeeper Program, or any program to broaden the awareness in the community. And I think that we need to start with kids, we need to make sure that this kind of thing doesn't continue to happen."

20. Ohio EPA's Response:

Community involvement and environmental education is very important to Ohio EPA.

Ohio EPA's Office of Environmental Education (OEE) recommends several good resources for teaching students issues related to risk assessment:

Project Learning Tree (PLT) is a highly-regarded national curriculum whose activities are correlated with Ohio's and national standards for science education. It offers curriculum modules on risk at both the elementary and secondary levels. The module for secondary students titled "Exploring Environmental Issues: Focus on Risk" includes subjects such as probability and uncertainty, toxicity testing, epidemiological studies, risk communication, risk/benefit decision making and specific topics such as chlorine, radon and electromagnetic fields. Information about the curriculum is available on the national PLT Web site, www.plt.org. Information about upcoming workshops for educators in Ohio is available at http://www.dnr.state.oh.us/forestry/education/plt.htm.

Project WILD is another well-respected national curriculum aligned with state and national standards. Project WILD has an excellent set of activities for high

school students called "Science and Civics: Sustaining Wildlife." It uses the federal Endangered Species Act as a case study to teach legislative/executive/judicial process and federal/state/local authority, including participation by citizens and interest groups in environmental regulatory decision making. Information is available at www.projectwild.org and www.dnr.ohio.gov/wildlife/Resources/projectwild/project_wild.htm.

OEE offers "Protecting Your Environment," an interactive CD-ROM designed for high school students and adults, that presents Ohio-specific information on a number of environmental health risks and ways to avoid them. Topics range from air quality to waste management, and include modules on corrosive, explosive and other hazardous materials. Copies of the CD-ROM are available by calling OEE at (614) 644-2873 or e-mailing oeef@epa.state.oh.us.

Finally, you can become involved in the Maumee RAP by contacting Cherie Blair, Maumee RAP coordinator, at (419) 373-4113.

The following are responses to comments received in writing on May 16, 2006, from Mr. Thomas Hays.

21. Comment Received:

This is a follow-up of our conversation on SWMUs 8 and 9. These units are not municipal landfills, but instead are sludge lagoons that received PCBs, tank bottoms, spent solvents and contaminated oils. These are principle threat wastes.

Appropriate Guidance

The Superfund presumptive remedy guidance that deals directly with sludge lagoons is "Presumptive Remedies for Soils, Sediments and Sludges at Wood Treater Sites." The principle threat waste at SWMUs 8 and 9 are sludges similar to those discussed in the guidance, summarized below:

Wood Treatment Sludge Lagoons From Wood Treater Guidance	SWMU 8 and 9 From DOCC and RFI Phase 1 Results
PAH's	"Dominated by PAH's"
Polar organics (to include N-nitrosodiphenylamine)	Present to include "high levels of N-nitrosodiphenylamine"
High risk halogenated compounds (Pentachlorophenol and its "lesser" dioxin impurities)	Polychlorinated biphenyls: Arochlor 1260 present at 38 ppm in recovered oils
BETX	Present at high levels
Polar organic compounds	Present at high levels
NAPL	NAPL releases

Because of the similar characteristics, the sludges at ESOI pose the same threats: releases of dense nonaqueous phase liquid (DNAPL), light nonaqueous phase liquid (LNAPL), [polynuclear aromatic hydrocarbons (PAH), and other pollutants to ground and surface waters and soils. "

WT Guidance states removing these sludges for treatment is a priority. This phase removes the principal threat waste. After the sludge is removed, leachate/groundwater collection and removal is frequently installed and the area capped. In the next phase, the full extent of impact to soils and ground waters are defined and appropriate remedial alternatives to treat these media is identified and implemented.

21. Ohio EPA's Response:

Ohio EPA agrees that similar contaminants are found in the Old Oil Pond (WMU 8) and New Oil Pond (WMU 9) as those listed in the presumptive remedy guidance for wood treater sites, particularly the presence of PAHs.

For information on additional investigation of WMUs 8 and 9, please see response 10.

22. Comment Received:

The "Handbook of Groundwater Protection and Clean-up Policies for RCRA Corrective Action" is the most applicable Corrective Action guidance. This guidance is more general in nature. The Handbook provides that "EPA's longstanding goal is for EPA's cleanup programs to yield similar goals in similar programs." (Overview, page ix.) Thus, the WT Guidance is appropriate and the Handbook itself references Superfund policies.

The Handbook reinforces WT Guidance on the need for removal and treatment of the sludge lagoons, stating: "EPA expects that treatment will be used to address source materials that are 'principle threats,' i.e., materials that are highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk were exposure risk to human health or the environment should exposure occur. (Page 4.1.)"

In the ESOI permit and prior guidance, source removal taken prior to the final remedy is called "interim action." Under the new Handbook, it is an "intermediate performance goal." <u>Intermediate performance, not containment or the Municipal Landfill Guidance, is the proper basis for all of the actions that the Agency is proposing</u>."

22. *Ohio EPA's Response:*

The Groundwater Handbook does not reinforce the WT Guidance on the need for removal in particular so much as it restates the U.S. EPA's remedial expectations and references numerous federal Corrective Action and Superfund Guidance and alludes to others not directly cited (the WT Guidance is in the latter category).

"Much of the (Groundwater) Handbook is derived from guidance developed jointly by EPA's cleanup programs (e.g., Use of Monitored Natural Attenuation at Superfund, RCRA and Underground Storage Tank Sites (EPA, 1999d)). The Groundwater Handbook, therefore, is consistent with EPA's long-standing goal for EPA's cleanup programs to yield similar remedies in similar circumstances" (Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action Overview Page ix).

The most comprehensive guidance to RCRA Corrective Action can be found in the Federal Register in a 1996 notice often referred to as the Advance Notice of Proposed Rulemaking (61 FR 19432, May 1, 1996). In that Federal Register US EPA expressed its remedial expectations, among them "EPA expects to use treatment to address the principal threats posed by a site whenever practicable and cost effective" (May 1, 1996 61 FR 19448).

"In some situations, it may be appropriate to contain rather than treat even principal threat wastes due to difficulties in treating the wastes. For example, the following situations could, depending on facility specific circumstances, justifiably lead a regulator to decide that containment rather than treatment would be acceptable for principal threat wastes"; those situations include the case where "the extraordinary volume of materials or complexity of the site may make implementation of treatment technologies impracticable (e.g., large landfills)". (Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action Page 8.2)

Free-phase nonaqueous phase liquids (NAPL) and "highly mobile" source material, such as leachate, may be considered principle threat wastes; therefore the general expectation is that these "source materials" be reduced to the extent practicable and that an appropriately designed ***containment*** *strategy be developed for NAPLs that cannot be removed from the subsurface (Rules of Thumb for Superfund Remedy Selection, August 1997. Page 13.).*

The Presumptive Remedy for Comprehensive Environmental Response Compensation and Liability Act (CERCLA) [aka Superfund] Municipal Landfill Sites (1993) is also a Superfund Policy and is thus also an appropriate guidance to consider.

In addition, the Envirosafe facility is a permitted hazardous waste management facility operating under the federal Resource Conservation and Recovery Act

(RCRA 1976, as amended) and equivalent state hazardous waste laws. The units in question are defined under state law as Waste Management Units (WMUs) as that term is defined in OAC Rule 3745-50-10; WMUs are consistent and equilvalent to SWMUs or "Solid Waste Management Units" as that term is used in RCRA 3004(u).

Envirosafe's permit and Description of Current Conditions (2001) identify Cell F (WMU 1) as a RCRA Subtitle C or hazardous waste landfill. Millard Road Landfill (WMU 5) is reported to have received construction and demolition material and solid waste. Northern Sanitary Landfill (WMU 6) is reported to have received solid waste and Central Sanitary Landfill (WMU 7) is reported to have received industrial and commercial waste and municipal solid waste. The Old Oil Pond (WMU 8) and New Oil Pond (WMU 9) are reported as having received waste oil. While it is likely that these units also contain some hazardous waste (e.g., household hazardous waste and industrial waste), the guidance cited for this action envisioned this scenario. Specifically, "Waste in CERCLA landfills usually is present in large volumes and is a heterogeneous mixture of municipal waste frequently co-disposed with industrial or hazardous waste. For further information please reference Presumptive Remedy for CERCLA Municipal Landfill sites, dated September 1993 (OSWER Directive No. 9355.0-49-FS)."

Therefore, the scope of the RCRA Facility Investigation Work Plan (2002) approved by U.S. EPA includes fundamental aspects of U.S. EPA's Presumptive Remedy for CERCLA Municipal Landfill Sites. The Municipal Landfill Guidance is appropriate and, to date, sampling efforts have focused on characterizing areas where contaminant migration is suspected.

For information on applicability of CERCLA (aka Superfund) to the RCRA Corrective Action program, please reference Rules of Thumb for Superfund Remedy Selection, August 1997 (EPA 540-R-97-013).

For information on additional investigation of WMUs 8 and 9, please see response 10.

23. Comment Received:

The phased approach that stresses quick removal of principle threat wastes is repeated in other guidance documents; for example, the Contaminated Groundwater Presumptive Remedies Guidance. This guidance calls for the removal of principle threat wastes and leachate as "early actions." This document and the Contaminated Soils Guidance is applicable for the identification of treatment modalities for the contaminated soils and ground waters on site.

The Municipal Landfill Guidance is not geared toward the toxic threats posed at Envirosafe. Envirosafe is a hazardous waste facility. SWMU's 5, 6, 7, 8, and 9 are not municipal landfills. Even if SWMU 8 and 9 were at a municipal site, these

sludge lagoons would be "hot spots" and targeted for removal. (Note that the presumptive remedy of containment is inconsistent with the final clean-up goals at the Handbook page 4.2.)

23. Ohio EPA's Response:

Please see response 22.

24. Comment Received:

Ohio Revised Code Chapter 6111, especially section 6104, imposes strict prohibitions on the placement of oils and sludges and on the release of contaminants to the ground and surface waters of the state. The releases at Envirosafe are defined as public nuisances."

24. Ohio EPA's Response:

Any releases from the site will be identified and addressed though the RCRA Corrective Action process, which is on-going at the Envirosafe facility.

25. Comment Received:

ESOI estimates that it left 35,000 cubic yards of sludge at SWMU 9 when it closed the unit in 1987-1988. The volume of sludge is not known. At SWMU 8, ESOI did not remove the sludge or provide a volume estimate. ESOI does report a six foot layer of leachate in the backfilled wastes that is composed of 16.5% oil and grease. As the chart above and the documented releases show, SWMU 8 and 9 contain principle threat wastes that are "highly toxic and highly mobile."

The Phase 1 found nonaqueous phase liquid (NAPL), PCB's at 450 ppb or 150 times the surface water standards, SVOC at 9000 times the MCL, and significant VOC releases. Oils reached the Toledo trench in 1991. Benzene, ethylbenzene, toluene, and xylene (BETX) levels are rising in the trenches. Because the sludge is highly concentrated, "product" backs up into the drains of Building C and outbreaks at Butz Crock.

ESOI "Transport Calculations" (March 29, 2006) determined that the vertical time of travel to the deep till wells for benzene at 2.48E-06. ESOI states that horizontal movement toward the ditches and other surface receptors are even faster, stating "the vertical conductivity of the tills is generally less than the horizontal conductivity." This rapid time of travel is caused by geologic irregularities. DNAPL's are notorious for subsurface migration and exploit such pathways for rapid movement. (See both the WT Guidance and Contaminated Ground Water Guidance.)

25. *Ohio EPA's Response:*

Please see response to comment numbers 21 and 22. Also, Ohio EPA reviewed Envirosafe's time of travel estimate and determined that the estimate was not calculated correctly. Comments were sent to Envirosafe from Ohio EPA in an e-mail dated June 7, 2006.

26. Comment Received:

One component in the definition of principle threat waste is that containment is "generally unreliable" to control these risks. The WT Guidance specifies treatment for sludges because containment is inappropriate. ESOI made extensive efforts at containment and these efforts failed.

At SWMU 9, Envirosafe pursued containment options in closing the unit: removed oils; land farmed sludges that amenable to bioremediation; performed a study to determine the best stabilization agent for the remaining sludges; stabilized the waste with cement kiln dust; installed an oil collection system; and constructed a six to eight feet thick cap.

At other sludge lagoons in the WT Guidance, the owners took similar efforts. These failed and resulted in release patterns like those at ESOI. (At SWMU 8, ESOI pumped the oily component into SWMU 9, backfilled with waste and capped the area.)

These efforts are ineffective. The WT Guidance, page 2, lists stabilization as a presumptive remedy for <u>inorganic</u> or metal wastes not organic sludges. ESOI currently stabilizes high metal wastes like K061, not oily sludges. Oils, grease, and organics interfere with stabilization processes. A cap will not stop DNAPLS, VOCs, and SVOCs from moving downward toward groundwater or horizontally toward ditches and surface receptors. The oil recovery system is a "half-step" measure. An effective liner/leachate collection and removal system requires a composite liner, a collection layer and pipes, a sloped bottom, and a removal system. However, RCRA now prohibits land disposal of spent solvents, tank bottoms, and similar wastes. These can attack synthetic and clay liners. Heavy sludges can also "gunk" pipes and collection layers.

26. *Ohio EPA's Response:*

Please see response 22.

27. Comment Received:

The WT Guidance lists three presumptive remedies for organic-contaminated soils, sediments and sludges: bioremediation; thermal desorption; and incineration.

At ESOI, source removal is required to accomplish effective treatment and eliminate threats to ground and surface waters.

Thermal desorption or incineration are almost certainly the most appropriate treatment methods for the sludges. These remedies parallel the modalities used in the current disposal of used oils, sludges, spent solvents and tank bottoms. Today, thermal processes are used on similar wastes for heat recovery and/or thermal destruction under RCRA, the solid waste regulations and TSCA.

Under the present environmental conditions, bioremediation is inappropriate. Bioremediation certainly cannot occur "in place." The sludges are too concentrated. ESOI states in the DOCC that it already "landfarmed" that which it could off-site. Bioremediation is slow allowing continued releases of NAPL's and other contaminants.

Bio-remediation may be appropriate for residual soils and ground waters on the site, but not for the sludge lagoons themselves. Bioremediation is most frequently used on the contaminated soils and sediments found at wood treater sites. The WT Guidance, the Contaminated Groundwater Guidance, and the Contaminated Soils Guidance provide other effective methods for treating contaminated soils and ground waters. Note that site-wide the RFI is not properly directed at treating contaminated soils and groundwater.

27. Ohio EPA's Response:

Please see response 22.

28. Comment Received:

A non-presumptive remedy would be to remove the material, and to treat some or all of it, and dispose of it in a RCRA unit (with or without waivers).

28. Ohio EPA's Response:

The City's proposed remedy will be considered along with other remedy alternatives for this unit in the Corrective Measures Study (CMS).

For information on additional investigation of WMUs 8 and 9, please see response 10.

The following are responses to comments from Ohio Fracture Flow Working Group, Functioning under the Ohio Academy of Science, c/o Julie Weatherington-Rice, Ph.D. received June 1, 2006.

29. Comment Received:

We also wish to inform Ohio EPA that members of the OFFWG provided technical support to the TOSC research efforts undertaken by Michigan State University in their study of the ground water failure of the Envirosafe site. We are familiar with their final findings and support their concerns that contamination has migrated far beyond the 'TOT 100' required by US EPA for this facility.

29. Ohio EPA's Response:

Ohio EPA does not agree that "contamination has migrated far beyond the 'TOT 100' required by U.S. EPA for this facility." The calculation to determine the time to travel 100 feet, beginning at the top of the lower till, would be as follows:

Deep till wells with contaminants, as detected in Envirosafe's Integrated Ground Water Monitoring Program (IGWMP), are MR-2D, MR-3D and SW-3D. The lower till is the thinnest at well SW-3D. Using bedrock well R-8 (bedrock well nearest to deep till well SW-3D) the lower till has a thickness of 22 feet. This calculation for the time to travel 100 feet will be based on vertical downward flow for 22 feet through the lower till and 78 feet of horizontal flow through the Greenfield dolomite.

<u>Time for vertical downward flow through the lower till</u>

Velocity = K I / N

Where: *K = conductivity*
I = gradient
N = effective porosity

$K = 1.3 \times 10^{-8}$ cm/s (ACL model Appendix 11 of Section E of the permit) = 1.345×10^{-2} ft./yr.

I = 1.24

Head differences for Wells SW-3D and R-8	*SW-3D (Oct. 2005 fluid level) = 575.31 ft.*	*R-8 (Oct. 2005 fluid level) = 533.29 ft.*	*42.02 ft.*
	575.31 ft. - 533.29 ft. = 42.02 ft.		
Screen differences for SW-3D and R-8	*SW-3D top of screen (2005 annual report) = 528 ft.*	*R-8 top of screen (2005 annual report) = 494.*	*34 ft.*
	528 ft. - 494 ft. = 34 ft.		
lower till vertical gradient i = *42.02 ft. / 34 ft. =*			***1.24***

N = 0.24 (ACL model Appendix 11 of Section E of the permit)

Velocity = 0.01345 (ft./yr.) 1.24 / 0.24 = 0.0695 ft./yr.

Time = Distance / Velocity

Time = 22 ft. / 0.0695 ft./yr. = 316 yr.

Time for horizontal flow through the Greenfield dolomite

V = K I / N

K = 2.0 x 10^{-3} = 2070 ft./yr. (Determination of Hydraulic Conductivity and Flow Velocities of Greenfield and Lockport Formations for Envirosafe - Otter Creek Facility Oregon, Ohio, January 1993)

I = 0.0019 October 205 Sampling Event

N = 0.08 (Determination of Hydraulic Conductivity and Flow Velocities of Greenfield and Lockport Formations for Envirosafe - Otter Creek Facility Oregon, Ohio, January 1993)

Velocity = 2070 (ft./yr.) 0.0019 / 0.08 = 49 ft./yr.

Time = Distance / Velocity

Time = 78 ft. / 49 ft./yr. = 1.59 yr.

*Total time to travel 100 ft. (vertical 22 ft. plus 78 horizontal ft). = 316 yr. + 1.59 yr. = **317.59 yr.***

30. Comment Received:

Reviews and recommendations for the facility that do not take into consideration the information provided in *Ohio Journal of Science*, June/September 2006 and April 2006, stand a very limited chance of success.

I have undertaken a quick review of the information provided on the Web page http://www.epa.state.oh.us/dhwm/esoi.html and its links. I read the "Statement of Basis for Corrective Measures" prepared by Ohio EPA. I can assure you that the vertical and hydraulic conductivities provided in your section on "Geology and Hydrogeology" are wrong. These are old readings that go back to the HWFB hearings and it was, in part, based on their false sense of security that the facility was allowed to expand. These measurements come from either laboratory reading of the matrix materials and/or weighted averages from slug tests. Since these measurements drive the understanding of the site and the proposed

corrective actions, it is critical that Ohio EPA develop real hydraulic conductivity values, measuring the fastest times of travel that can be used to accurately understand the site. We recommend papers by Brockman and Szabo (2000), Tornes and others (2000), Allred (2000), Haefner (2000), Fausey and others (2000), Szabo (2006), Kim and Christy (2006), Weatherington-Rice and Hall (2006), and Weatherington-Rice and Bigham (2006) as basic readings to understand why the measurements being relied upon by the Agency will provide an incorrect outcome and how realistic and more accurate measurements can be developed. The paper by Kim and Christy (2006) includes soil texture data from earlier Envirosafe laboratory reports that correspond to fractures noted on boring logs from the site. This paper documents the identification of the Envirosafe facility as a fractured location.

30. Ohio EPA's Response:

Ohio EPA appreciates the 'Ohio Journal of Science' issues submitted by the OFFWG. Ohio EPA's Division of Drinking and Ground Waters is reviewing the material for its usefulness during RFI Phase II and for final site-wide remedy selection at the completion of the RFI.

As always, Ohio EPA accepts comments at any time. Although, the OFFWG submitted these comments during the formal comment period on corrective measures, which will be implemented at the Envirosafe facility prior to the completion of the RFI and final site-wide remedy selection, it is not necessary to wait for a formal comment period to send comments, questions, concerns or suggestions to Ohio EPA.

Please send written comments on Envirosafe's RCRA Corrective Action to: Lynn Ackerson, Ohio EPA Northwest District Office, 347 North Dunbridge, Bowling Green, Ohio 43402 or to lynnackerson@epa.state.oh.us.

The following are responses to comments received in writing June 7, 2006, from Mayor Marge Brown, City of Oregon.

31. Comment Received:

Oregon is very concerned about the Ohio EPA's mistreatment of the public's right to comment on the Envirosafe landfill. By law, our citizens have a statutory right to participate in decisions that affect their welfare, community and environment at Envirosafe.

31. Ohio EPA's Response:

Citizens who filled out cards in order to be called upon to give testimony were given ample opportunity to provide comments during the hearing portion of the

May 3, 2006, meeting. In fact, following the hearing's official closure, it was reopened to allow additional testimony by Mr. Charles Johnson. Following Mr. Johnson's testimony, the hearing officer asked whether anyone else wished to testify. No one responded, so the hearing was closed. In addition, the comment period for this action was extended to June 14, 2006. This provided the public additional time to submit written comments.

32. Comment Received:

At the May 3, 2006 meeting, five people handed in cards to make oral comments. The Ohio EPA limited comments to five minutes each. <u>That is, on an important public issue, the cleanup of Envirosafe, the Ohio EPA limited the public testimony to 25 minutes</u>.

Ms. Joann Schiavone came to the meeting after recent back surgery and had prepared a statement and additional comments. Ohio EPA disrupted her to impose its five-minute limit, and after she protested, offered her a minute more.

Ms. Judy Junga offered her five minutes to Ms. Schiavone, but Ohio EPA declared it would not allow grants of time and argued with Ms. Junga who became upset and left the meeting before she could make her comments.

The public will never know what Ms. Junga had to say. Ms. Junga, like many citizens, has done valuable research on the site. For example, the Agency has had a full-time inspector at the Envirosafe site for over a decade. However, it was Mrs. Junga who documented the unreported wells on site.

While both Envirosafe and the Ohio EPA agreed that this site could never leak, many citizens and Oregon pointed to the geology that demonstrated that the site was leaking. OEPA must listen to those who are not trying to profit from pollution, but seek to serve the greater good.

Oregon certainly wanted to hear their full comments and we think that the concerned citizens wanted to hear what Oregon's consultants and elected officials had to say. Oregon's three representatives also had their comments cut short.

Ohio EPA's conduct contradicted the letter and spirit of the public participation requirements set out in Chapter 3734 of the Ohio Revised Code. We believe that the Ohio EPA should apologize to Ms. Schiavone and Ms. Junga, reopen the public comment period to permit their full comments.

32. Ohio EPA's Response:

All written comments received by the Agency were given the same consideration as any oral testimony given at the hearing. Ohio EPA feels that ample

opportunity was provided to allow citizens their full participation in this public comment forum.

It is customary that citizens be given a five-minute opportunity to provide oral comments during public hearings. The decision to extend the comment time limit is at the discretion of the hearing officer. All speakers were able to deliver their comments within the five-minute time limit or were given a longer time to speak due to audience interruptions.

Ms. Schiavone was treated with utmost respect during her testimony. When she reached the five-minute interval, the hearing officer requested that she wrap up her comments. Ms. Schiavone requested more time, but, before the hearing officer could respond, Ms. Judy Junga interrupted to offer Ms. Schiavone her five minutes of speaking time. When the hearing officer declined, Ms. Junga continued to speak before leaving the meeting of her own volition. Once Ms. Junga left, Ms. Schiavone was provided the opportunity to continue her testimony in its entirety.

Ohio EPA recognizes Ms. Junga's historic interest and knowledge regarding Envirosafe. Had she chosen to remain in the public hearing, her comments would have been taken into consideration during the decision-making process. Leaving the meeting was solely Mrs. Junga's choice.

Dr. Spongberg, Sandy Bihn and Tom Hays were all given an opportunity to provide comments. In each case, their comments were heard in their entirety even though they exceeded the five-minute period. In addition to providing ample time for those who had filled out requests to provide testimony, the hearing was re-opened to accommodate an additional speaker, and, at Ms. Bihn's request, Ohio EPA agreed to extend the public comment period an additional 30 days.

Hearing transcripts are available to the public. Please contact Darla Peelle at darla.peelle@epa.state.oh.us or at (614) 644-2160.

33. Comment Received:

The Modification Denies Lawfully Required Public Participation: The Ohio Revised Code and Administrative Code provide that the public has the right to participate in all permit changes except for the most minor or ministerial changes called Class 1 modifications. The law makes clear that the choice of clean-up remedies for this site or the engineering designs are major modifications. These decisions affect the public welfare. Thus, the public is guaranteed full public participation for these major modifications.

As drafted terms E.9 (b) (i), (ii), (iii), and (iv) of the permit modification call for Envirosafe to submit Class 1 modifications for the selected remedy, design, etc.

of the "presumptive remedies" on site. In term E.9 (c) the permit modification requires a new Operations and Maintenance Plan, a performance monitoring plan, etc. that are to become "an enforceable term of the permit," again without public comment. These proposed terms strip the public of its due process right to participate.

In simple terms, Envirosafe is free to cut a secret deal with the Ohio EPA outside of public scrutiny. Oregon must and will contest any modification that does not protect and restore the due process rights of our citizens.

33. *Ohio EPA's Response:*

Ohio EPA adamantly disagrees with the notion that public participation is somehow being restricted under today's action. The public has been given full opportunity to provide input on today's selection of certain corrective measures for the site via the announced public comment period and the May 3, 2006 public hearing. The comments and associated responses included in this responsiveness summary are clear evidence of this. Pursuant to a request at the hearing, the comment period was also extended an additional 30 days.

The Class 1 modifications required in permit condition E.9 do not impact remedy selection but go to support activities that are consistent with today's action. The commenter also is incorrect in asserting that the public has no opportunity for input on Class 1 modifications. OAC rule 3745-50-51 (D)(1) includes requirements for notification of specific public officials and those on the facility mailing list when Class 1 modifications are submitted. In addition, as specified in the rule:

> *"Any person may request the director to review, and the director may, for cause, reject any Class 1 modification."*

Clearly, public participation requirements are not being restricted in any way by today's action.

The following are responses to written comments received June 13, 2006, from Julia R. Bates, Prosecutor, Lucas County, and Mayor Marge Brown, City of Oregon.

34. Comment Received:

"...the bad news is that proposed draft modification mischaracterizes the Envirosafe <u>hazardous waste facility</u> as a "municipal landfill." ... This mischaracterization shields Envirosafe from the action needed to protect Otter Creek and Lake Erie from chemical plumes. ... The final permit modification must address the real dangers that this <u>hazardous waste facility</u> presents."

34. *Ohio EPA's Response:*

The Envirosafe facility is a permitted hazardous waste management facility operating under the federal Resource Conservation and Recovery Act (RCRA 1976, as amended) and equivalent state hazardous waste laws. The units in question are defined under state law as waste management units (WMUs) as that term is defined in OAC Rule 3745-50-10.

Envirosafe's permit and Description of Current Conditions (2001) identify Cell F (WMU 1) as a RCRA Subtitle C or hazardous waste landfill. Millard Road Landfill (WMU 5) is reported to have received construction and demolition material and solid waste. Northern Sanitary Landfill (WMU 6) is reported to have received solid waste and Central Sanitary Landfill (WMU 7) is reported to have received industrial and commercial waste and municipal solid waste. The Old Oil Pond (WMU 8) and New Oil Pond (WMU 9) are reported as having received waste oil. While it is likely that these units also contain some hazardous waste (e.g., household hazardous waste and industrial waste), the guidance cited for this action envisioned this scenario. Specifically, "Waste in CERCLA landfills usually is present in large volumes and is a heterogeneous mixture of municipal waste frequently co-disposed with industrial or hazardous waste." For further information please reference Presumptive Remedy for CERCLA Municipal Landfill sites, dated September 1993 (OSWER Directive No. 9355.0-49-FS). Therefore, the scope of the RCRA Facility Investigation (RFI) Work Plan (2002) approved by U.S. EPA includes fundamental aspects of U.S. EPA Presumptive Remedy for CERCLA Municipal Landfill Sites. The Municipal Landfill Guidance is appropriate and, to date, sampling efforts have focused on characterizing areas where contaminant migration is suspected.

For information on applicability of CERCLA (aka Superfund) to the RCRA Corrective Action program, please reference Rules of Thumb for Superfund Remedy Selection, August 1997 (EPA 540-R-97-013).

35. Comment Received:

The first step is to amend the draft action and Statement of Basis to:

- Make clear that the Envirosafe site is a hazardous waste facility.
- State that SWMU's 1, 5, 6, 7, 8, and 9 contain wastes that today are hazardous or prohibited from land disposal and that none of these units are municipal landfills.
- Determine that the two sludge lagoons (SWMU 8 and SWMU 9) are principal threat wastes.
- Determine that the NAPL at T-33 and west of the Millard Avenue landfill are principle threat wastes.
- Remove all references to the Municipal Landfill Presumptive Remedy Guidance.

- Remove all references to containment as the appropriate remedy for this site.
- State that the actions are required as interim actions under the permit and appropriate under the "Handbook of Groundwater Protection and Clean-up Policies for RCRA Corrective Actions."

These actions will insure the site is investigated and remediated to RCRA standards."

35. *Ohio EPA's Response:*

The approved RFI Work Plan is designed to ensure that the Envirosafe site is investigated and remediated to RCRA standards. According to Envirosafe's RFI Work Plan "The overall goal of the RCRA Facility Investigation (RFI) is to determine whether potential risks to human health and the environment associated with hazardous waste or hazardous constituent releases from WMUs and AOCs identified for investigation warrant corrective measures...To meet these goals, the primary objective of the RFI is to gather data of sufficient quantity and quality to adequately characterize potential human health and environmental risks associated with confirmed releases from the WMUs/AOCs." (Envirosafe RFI Work Plan, Volume 1, Pages 1-3).

36. Comment Received:

Action at SWMU 8 and SWMU 9: The draft modification proposes that these two sludge lagoon be capped. This proposal action is premature and likely counter-productive as set out in Oregon's May 16, 2006 letter to Lynn Ackerson, NWDO. The agency in the final modification and Statement of Basis should find:

- The two sludge lagoons are principle threat wastes that generate NAPL and DNAPL, mobilize and release PCB's, and release high concentrations of VOC's, SVOC's and other contaminants.
- The oils and sludges have backed up into the maintenance building and through the caps.
- The lagoons created and threaten to create releases to ground waters of the state, the Toledo trenches, and nearby surface receptors.
- The lagoons created and threaten to create releases of NAPL, especially DNAPL.
- Extensive prior efforts at containment failed.

The modification should require:

- Removal and treatment of the sludge;
- Followed by a grid -based protocol to determine that the source removal was successful and to determine the residual ground water and soil contamination that remains; and
- Capping and leachate/ground water removal system.

This course of action is appropriate and reflects the course of action developed as standard remedies at other sludge lagoons. It should have been performed many years ago.

36. Ohio EPA's Response:

Ohio EPA agrees that capping of WMUs 8 and 9 would be premature if completed prior to conducting any invasive activities in the units.

For information on additional investigation of WMUs 8 and 9, please see response 10.

37. Comment received:

Actions Regarding NAPL: The removal of the two sludge lagoons will remove a primary source of NAPL, especially DNAPL. However, the location and control of DNAPL at the site remains a priority. A principal threat from sludge lagoons is DNAPL. DNAPL is also associated with landfills like SWMU 5, 6, and 7 that operated in periods prior to RCRA land disposal prohibitions. (In fact, the land prohibitions were enacted because of these observed problems.) DNAPL was located both near SWMU 8 and west of SWMU 5.

To address the DNAPL issues, the final modification should require: a grid based study of the areas of SWMU 5 and SWMU 8 around the entire unit and the design of a NAPL/groundwater extraction system for each. (Note: For SWMU 8, this could be coordinated with the removal action.) A tight grid based study around SWMU 9, the second sludge lagoon, again coordinated with the removal action; and a grid based system around SWMU's 1, 6, and 7 and design for DNAPL/groundwater removal. These investigations must include new deep till and R-wells. The heaviest areas of contamination and DNAPL have not been examined for vertical extent of contamination.

Envirosafe estimates time of travel for benzene to the deep till wells is 2.4E-06 and states the lateral spread to surface receptors is even faster. DNAPL's are known to move quickly and in unpredictable patterns. This means that continued delay allows the fast spread of contamination.

37. Ohio EPA's Response:

Ohio EPA does not believe the NAPL poses an immediate threat to human health or the environment and supports studying the units during RFI Phase II and the corrective measures study (CMS). Therefore, Ohio EPA has determined that WMUs 8 and 9 should be removed from the proposed presumptive remedies at this time. Information collected during RFI Phase II and a risk assessment will provide valuable information to Envirosafe, Envirosafe RCRA Corrective Action

stakeholders and Ohio EPA to support a corrective measures study and remedy for these units.

Also, the commenter did not cite a source for the statement "DNAPL was located both near WMU 8 and west of WMU 5." Therefore, Ohio EPA does not have information that supports the County and City's claim that DNAPL poses an immediate concern about the quick spread of contamination. Samples of NAPL at WMUs 5 and 8 are required to be collected by Envirosafe's Phase II work plan. These samples will be analyzed for specific gravity in order to characterize the NAPL.

Ohio EPA reviewed Envirosafe's time of travel estimate and determined that the estimate was not calculated correctly. Comments were sent to Envirosafe from Ohio EPA in an e-mail dated June 7, 2006. Also, for information on bedrock aquifer time of travel calculations please see response 29.

38. Comment Received:

Study of Soils and Groundwaters, and Remedial Designs: The clear implication in the proposed modification is that Envirosafe can treat the entire site as a municipal landfill. It simply has to collect some leachate, improve some caps and it can walk off. This approach leaves the problems to the local communities.

The "Handbook of Groundwater Protection and Clean-up Policies for RCRA Corrective Actions" and the appropriate guidance on sludge, contaminated soils, and contaminated ground water mandate a course toward treatment and permanent remedies. The Handbook and other guidance, stress that while leachate collection and principle threat wastes (the two sludge lagoons and the DNAPL) are removed, there must be a study and designs prepared for the final remedy. In order to accomplish these requirements the final permit modification should: require a complete delineation of groundwater and soil contamination; this will require many additional R-wells and D-wells, which we have previously provided to the agency; it will require analytical results not just for the RFI Phase I parameters, but for the additional information needed to treat (or remove and treat) contaminated soils and groundwaters; it will also require the design of barriers to prevent further migration to the city ditches, to Otter Creek, and off-site.

These steps can be carried out at the same time that the removal actions are underway.

38. Ohio EPA's Response:

Ohio EPA appreciates that Lucas County and the City of Oregon are engaged in the RCRA Corrective Action public involvement process. Your input at this time ensures that remedies at the Envirosafe facility meet environmental regulatory

requirements and address concerns voiced by Envirosafe RCRA Corrective Action stakeholders.

*The County and City requested that the final permit modification "**Require a complete delineation of groundwater and soil contamination**." Ohio EPA agrees that this is an important objective of Envirosafe's RFI. In fact, Envirosafe's RFI Work Plan (2002) states that the RFI will "Characterize the source(s) of a release and determine the nature and extent of constituents in soil, sediment, surface water and ground water as necessary to support the baseline risk assessment, where significant release of hazardous constituents is confirmed." Therefore, it is not necessary to add this requirement to the final permit modification as it is already an RFI requirement.*

*The County and City requested that the final permit modification "...**require many additional R-wells and D-wells, which we have previously provided to the agency**." Ohio EPA assumes that this comment is referring to the Arcadis recommendations dated December 2005. At this time, there is no evidence that bedrock wells other than at well nests MR-3 (WMU 5) and SW-3 (WMU 6) are necessary for delineation of contaminants or any other purpose. Regarding the proposed wells at WMU 5, Envirosafe is prohibited from installing wells west of WMU 5 as property access has been denied and other possible locations have the disadvantage of numerous underground pipelines causing worker safety concerns that outweigh the potential risk from the site. Other complications with proposed off-site well installation include the presence of Westover and Gradel landfills adjacent to the site. Additionally, Envirosafe has not received authorization from the property owner north of WMU 3 to install the proposed well cluster north of WMU 3. Finally, Arcadis proposed deep till delineation wells at T-55S, T-20S, T-21S, T-22S, T-28S and T-43S. All of these proposed deep till delineation wells were installed during RFI Phase I (2001/2002) as reported in the Phase I Report and Phase II Work Plan dated July 18, 2003. The necessity of a deep till delineation well at T-33S will be determined once the NAPL at this location has been characterized. Characterizing the NAPL at T-33S is a requirement of the Phase II Work Plan.*

*The County and City requested that the final permit modification "...**require analytic results not just for the RFI Phase I parameters, but for the additional information needed to treat (or remove and treat) contaminated soils and groundwaters**." It is not clear to Ohio EPA what information the County and City are requesting; therefore, Ohio EPA is not able to address this concern at this time.*

*The County and City requested that the final permit modification "...**require the design of barriers to prevent further migration to the city ditches, to Otter Creek, and off-site**." While a barrier to prevent migration may be necessary in the final site remedy, the corrective measures proposed in this modification are only those recommended in Presumptive Remedy for CERCLA Municipal Landfill*

Sites (1993) and subsequent guidance. As stated in the Statement of Basis dated March 2006, these corrective measures, which collectively are described by U.S. EPA as a containment (e.g., source control) remedy include leachate collection and removal, preventing direct contact with landfill contents and minimizing infiltration (landfill cap), and controlling landfill gas. At the completion of the RFI, corrective measures in addition to those approved by this modification, which represent a containment (e.g., source control) strategy, may be necessary.

The following are responses to attachment to written comments received June 13, 2006, from Julia R. Bates, Prosecutor, Lucas County and Mayor Marge Brown, City of Oregon and entitled "Comments by the City of Oregon and Lucas County."

39. Comment Received:

The use of so-called "excess funds" in the Envirosafe closure, post-closure and perpetual care trust funds to "reimburse" Envirosafe for RCRA Corrective Action is improper and imprudent. These monies are meant to protect the public welfare, safety and environment after ESOI ceases business.

39. Ohio EPA's Response:

Ohio EPA disagrees that the use of excess funds for reimbursement of RCRA Corrective Action activities is improper or imprudent. To be clear, these funds for corrective action activities are beyond what is required for closure, post closure and perpetual care of the site. Closure, post closure and perpetual care funds are only required for Envirosafe's RCRA Subtitle C units or units legally defined as hazardous waste units. In short, the monies set aside for care after the facility closes have never been used for corrective action activities. As of this writing, the mandated amount to perform closure, post-closure and perpetual care of the sites' RCRA Subtitle C units is $37,347,173.00. Envirosafe's trust fund is valued at $53,223,601.88, leaving an excess of $15,876,428.88. Ohio EPA believes it is most appropriate to use these excess funds to support RCRA Corrective Action activities at the site for the protection of human health and the environment.

40. Comment Received:

The OEPA authorized payments from the trust funds to ESOI for laboratory expenses for work performed at its contractor BEC labs. These payments amount to many hundreds of thousands of dollars. Why did OEPA authorize these payments while the agency questioned, and then found, the BEC work was not conducted in accordance with RFI data requirements?

40. Ohio EPA's Response:

Ohio EPA acknowledges that certain data validation information from Phase I of the investigation was lacking as is detailed by letter dated March 28, 2006 from

Michael Savage, Chief, Division of Hazardous Waste Management to Doug Roberts of Envirosafe. As noted in the March 28 letter:

"Although this lapse alone does not automatically render collected data useless, it does raise documentation and thus validity questions that, at this juncture, can be best answered by conducting limited additional sampling...."

Because the data was collected as part of an approved Corrective Action Work Plan Ohio EPA believes reimbursement from the excess funds is appropriate.

41. Comment Received:

Why did OEPA continue these payments after the Envirosafe's out of state owners purchased BEC laboratories? Didn't that directly reward the out of state owners for the shoddy work? What investigation has OEPA done to determine the working relationship between BEC labs and ESOI and its out of state owners?

41. Ohio EPA's Response:

Ohio EPA has no information regarding ownership of BEC Laboratories, Inc. As noted in the previous response, the data was collected as part of an approved Corrective Action Work Plan. Ohio EPA believes reimbursement from the excess funds is appropriate.

42. No Comment/Response.

43. Comment Received:

"Envirosafe continues to submit documents stating that BEC "informs it" of information related to the testing and analysis conducted. BEC is in bankruptcy. The local newspapers report that the lab is shut down and employees let go. Has the OEPA identified just who at BEC is making these representations? Is it people who are employees of ESOI or the out of state owners? Is it people who were not involved in the testing or procedures conducted?"

43. Ohio EPA's Response:

Ohio EPA does not know what documents the County and City are specifically referring to. However, the most recent BEC document found in Ohio EPA files is from BEC to The Mannik & Smith Group, an Envirosafe contracted consultant, and is dated December 16, 2005. The letter is signed by John F. Blair, Quality Assurance Manager. Ohio EPA has no information on the employees or ownership of BEC Laboratories, Inc.

44. Comment Received:

The proposed modification and Statement of Basis are based on containment as the presumptive remedy under the "Presumptive Remedy for CERCLA Municipal Landfill Sites." Envirosafe is a hazardous waste facility. The use of the Municipal landfill guidance results in the significant short-comings in the proposed permit modification, the approved RFI Phase 2 and the approved Presumptive Remedies Plan.

Is it the Ohio EPA's position that the Envirosafe site is a municipal landfill? Is it the OEPA's position that SWMU 1, 5, 6, 7, 8, and 9 and associated areas of concern are municipal landfills?

44. Ohio EPA's Response:

Please see response 34.

45. Comment Received:

Is it the Ohio EPA's position that the final remedy for this site is simply containment?

45. Ohio EPA's Response:

As stated in the Statement of Basis (March 2006) for this permit modification, the presumptive remedy for municipal landfills does not address exposure pathways outside the source area (landfill), nor does it include long-term groundwater response actions (Landfill Presumptive Remedy Saves Time and Cost, January 1997). A risk assessment, which is required by Envirosafe's approved RFI Work Plan, may indicate a need for additional corrective measures to complete a site-wide final remedy. Once the RFI is complete, should additional corrective measures be necessary, the corrective measures that are part of this modification will become a component of the final remedy.

46. Comment Received:

What is the Agency's position on the collection and/or treatment of contaminated groundwaters, the removal and/or treatment of contaminated soils and the removal and treatment of principle threat wastes?

Also, please list specifically what data collection, engineering design and evaluation it is requiring for each of these.

46. Ohio EPA's Response:

Should risk to human health and/or the environment necessitate collection and/or treatment of contaminated ground water, soil or principle threat waste, Ohio EPA will require data collection, engineering design and evaluation commensurate with cleanup goals.

47. Comment Received:

The attached May 16, 2006, letter to Lynn Ackerson is incorporated by reference. The appropriate guidance requires treatment for the old sludge lagoons (SWMU 8 and SWMU 9). These units are not municipal landfills; but instead, the sludges are principle threat wastes. Treatment, not containment, is the identified remedy for these units. Does the Ohio EPA agree that SWMU 8 and SWMU 9 are not municipal landfills? Does it agree that these are sludge lagoons? Does the Agency agree that the "Presumptive Remedy for CERCLA Municipal Landfill Sites" is not appropriate guidance for these units?

47. Ohio EPA's Response:

The Old Oil Pond (SWMU 8) and the New Oil Pond (SWMU 9) are closed oil ponds. The RFI Phase I investigation strategy and selected guidance are appropriate for the actions proposed.

For information on additional investigation of WMUs 8 and 9, please see response 10.

48. Comment Received:

"The Millard Avenue landfill (SWMU 5), the northern landfill (SWMU 6), the central landfill (SWMU 7), and Cell F (SWMU 1) are not municipal landfills. Cell F is a RCRA unit without a modern liner. The other units received similar industrial wastes that today are listed as hazardous waste or are now prohibited from land disposal. Leachate collection and landfill gas control are long overdue and appropriate <u>as components of the overall final remedy</u>. These actions are required as "intermediate performance goals" by the "Handbook of Groundwater Protection and Cleanup Policies from RCRA Corrective Action" and as "early actions" under the "Presumptive Response Strategy and ex-situ Treatment Technologies for Contaminated Groundwater at Superfund Sites." These are treatment and source control remedies."

48. Ohio EPA's Response:

The <u>Presumptive Remedy for CERCLA Municipal Landfill Sites</u> (September 1993) recognizes that units such as Envirosafe's landfills are good candidates for early action (see page 3 of the guidance). At landfills such as WMUs 1, 5, 6 and

7, the up-front knowledge that the source area will be contained may facilitate such early actions as installation of a landfill cap or a ground water containment system (e.g., leachate collection).

Today's final permit requires Envirosafe to implement these early actions as described in the referenced guidance.

49. Comment Received:

Please specify what additional remedial actions that the Agency believes may be appropriate for these units.

49. Ohio EPA's Response:

It is premature to speculate on additional remedial actions as the RFI is not complete. At the completion of the RFI, Envirosafe is required to complete a risk assessment. Should risk to human health and/or the environment necessitate additional remedial actions, Ohio EPA will require data collection, engineering design and evaluation commensurate with cleanup goals.

50. Comment Received:

The Handbook, the Groundwater Guidance, and the "User's Guide to VOC's in Soils Presumptive Remedy" stress the treatment of contaminated soils, contaminated groundwater, source materials, and principle threat wastes. The proposed modification and Statement of Basis do not address the adequate collection of data or designs necessary to accomplish these objectives.

50. Ohio EPA's Response:

Ohio EPA required leachate collection at Millard Road Landfill (WMU 5), North Sanitary Landfill (WMU 6), and Central Sanitary Landfill (WMU 7) because there is sufficient data to support this particular corrective measure, which is part of an overall containment (e.g., source control) strategy. In addition, as stated in Permit Condition E.9(b)(i), Envirosafe completed work described in the approved Presumptive Corrective Measures Design (PCMD) Work Plan and submitted a report summarizing the data and outlining design alternatives for the leachate collection systems on August 7, 2006. The PCMD Work Plan was reviewed by the City's contracted consultant, Arcadis. For copies of the PCMD Work Plan or PCMD report, please contact Linda Tilse, Ohio EPA's Northwest District Office, (419) 373-4113.

At the completion of the RFI, a risk assessment is required by Envirosafe's approved RFI Work Plan. If risk from contaminated soil or ground water exceed the Agency's acceptable risk values, remedy alternatives must be proposed by Envirosafe and an appropriate remedy selected, with public input. Should any

intermediate performance goal be determined to be necessary during the on-going investigation, appropriate action will be taken.

Regarding NAPL, please see response 23.

51. Comment Received:

DNAPL was found to the west of the Millard Avenue landfill. No study program to define and recover the DNAPL is proposed. SWMU's 1, 6, and 7 received the same waste streams. No program to define possible releases of DNAPLs is proposed.

51. Ohio EPA's Response:

Lucas County and the City of Oregon did not provide a source to substantiate claims regarding DNAPL and waste streams. Envirosafe's Phase II Work Plan requires Envirosafe to characterize the NAPL discovered during Phase I of the RFI. In addition, the RF I is designed to locate and define releases from SWMUs and AOCs identified in Envirosafe's permit.

52. Comment Received:

The source material at SWMU 8 and SWMU 9 is sludge. These materials generate DNAPL, LNAPL, PCB's, VOCs, and SVOC's. DNAPL is released from SWMU 8. High levels of PCB's, SVOCs, and VOC's releases are associated with both units. As set out in the attached May 16 letter, the sludge in SWMU 8 and SWMU 9 must be removed and treated as principle threat waste. A grid based sampling program should then be instituted to identify all DNAPL, VOC, SVOC, PCB contaminated soils and groundwater so that they can be treated and remediated.

52. Ohio EPA's Response:

Please see response 21.

53. Comment Received:

Without source removal, further study of SWMU 8 and 9 only allows contaminants and DNAPL from the principle threat wastes to spread further. Worse, the study under the RFI Work Plan, the modification, and the Presumptive Remedies Work Plan for these two units is inappropriate and inadequate. At the public hearing, Dr. Alison Spongberg explained the inadequacies of the proposed study. The study does not require source delineation. A grid based study based on TSCA should be utilized. The samples should be analyzed for the Phase 1 parameters plus requiring the additional data needed to define treatment through thermal desorption or incineration. (See May

16 letter.) After further study, the removal and treatment of the sludges will still be necessary.

53. Ohio EPA's Response:

One objective of the RFI Phase I was to delineate the waste limits of SWMUs and/or AOCs. This objective was accomplished and is reported in Envirosafe Phase I Report and Phase II Work Plan (2003).

Regarding further study of WMUs 8 and 9, please see response 21.

54. Comment Received:

The study of the DNAPL release from SWMU 8 is inadequate. The plan does not even have to be approved by Ohio EPA; instead it is unlawfully left to the sole discretion of ESOI.

54. Ohio EPA's Response:

The draft permit condition does not specifically propose a DNAPL study because DNAPL has not been found at the site. Envirosafe is required to characterize the NAPL discovered during RFI Phase I, during RFI Phase II.

For additional information on WMU 8, please see response 21.

55. Comment Received:

A grid-based study around the entire area abutting SWMU 8 unit is required. (If the unit is not first removed, then the grid based study must include the source material). The threat of DNAPL releases is not limited to the area where it was found. Instead, the entire unit is filled with source materials that generate DNAPL (and LNAPL). The DNAPL study must systematically (grid) cover the entire unit and adjacent on and off-site area. This would extend off-site onto the York Road right of way and city ditches.

55. Ohio EPA's Response:

The extent of waste in the Old Oil Pond (WMU 8) was delineated during RFI Phase I. Envirosafe's RFI Phase II Work Plan requires Envirosafe to determine the extent of contaminants emanating from SWMUs and AOCs and to characterize the NAPL discovered during RFI Phase I.

For additional information on WMU 8, please see response 21.

56. Comment Received:

There is no DNAPL study proposed for SWMU 9.

56. Ohio EPA's Response:

Please see response 54.

57. Comment Received:

Did the Ohio EPA review the closure plans for SWMU 8 and 9 to determine if these plans were followed? Are there closure plans?

57. Ohio EPA's Response:

According to Envirosafe's Description of Current Conditions (DOCC, March 2001), "the Old Oil Pond (WMU 8) operated from the early 1960's through 1969. It was abandoned in the late 1960's by pumping the remaining oil into a newly constructed oil pond located immediately north of the old pond. The area was backfilled with assorted sanitary and municipal waste and covered with a clay cap."

Ohio EPA did not exist until 1972 (http://www.epa.state.oh.us/pic/30years/complete.pdf) and the Resource Conservation and Recovery Act, which requires closure plans for waste management units, was not enacted by Congress until 1976. Therefore, WMU 8 does not have a RCRA closure plan.

According to Envirosafe's DOCC, the 1.6-acre New Oil Pond "was operated through 1980. The pond bottom was excavated into native clay soils. When operations of the unit ended, the waste oil sludge was solidified in place with cement kiln dust and the pond was closed in October 1988." These closure activities were conducted under Ohio EPA's January 10, 1985, Findings and Orders.

58. Comment Received:

Why did Ohio EPA allow the sludges to be left in place at SWMU 8 in 1986 when the unit was closed?

58. Ohio EPA's Response:

In 1988, the unit met the closure objective of closing the pond in an environmentally sound fashion. RCRA Corrective Action authority allows federal and state regulators to require RCRA permitted sites like Envirosafe to investigate waste management units (WMU) as defined in OAC Rule 3745-50-10. To the extent that a facility is subject to a RCRA permit, a facility is also

subject to RCRA Corrective Action. Therefore, this unit is being investigated during the RFI.

59. Comment Received:

Under what authority was the 1986 closure of SWMU 9 conducted?

59. Ohio EPA's Response:

Please see response 57.

60. Comment Received:

Under what authority were the sludges left along side ditches and other surface and groundwater receptors?

60. Ohio EPA's Response:

Please see response 57.
Upon completion of the RFI and risk assessment, appropriate action will be taken to address any threats to human health and the environment.

61. Comment Received:

The Ohio EPA has failed to require adequate study to determine the vertical and horizontal extent of contamination. There is a lack of shallow, deep till, and bedrock wells screened at appropriate depths. The wells should be monitored for all chemicals identified in the leachate of the historic units and found in the RFI.

61. Ohio EPA's Response:

Envirosafe's approved RFI Phase II Work Plan requires Envirosafe to determine the extent of any contaminants emanating from its WMUs or AOCs. At this time, Ohio EPA disagrees that there is a lack of wells screened at appropriate depths and that additional parameters should be added to Envirosafe routine ground water monitoring program. However, at the conclusion of the RFI, Envirosafe is required to evaluate the adequacy of the ground water monitoring system and ground water monitoring program.

62. Comment Received:

Why has the OEPA not insisted on groundwater wells at the old oil ponds at the shallow, deep, and bedrock levels? Aren't these wells required to close even a solid waste management unit? Because DNAPL can move quickly to deeper

levels, how does the Agency justify not requiring additional deep till and R-wells in this area?

62. Ohio EPA's Response:

The point of compliance at Envirosafe is the property boundary. Ground water monitoring wells, in addition to those installed during RFI Phase I, near the Old Oil Pond (WMU 8) and New Oil Pond (WMU 9) are not necessary at this time. Should additional wells be necessary to complete the stated objectives of the RFI, Envirosafe will be required to install additional wells. Additionally, at the conclusion of the RFI, Envirosafe is required to evaluate the adequacy of the ground water monitoring system and ground water monitoring program.

63. Comment Received:

Existing groundwater contamination, soil contamination and source wastes threaten surface receptors, the Toledo trench, and other groundwaters. RCRA requires the RFI to collect the necessary data and complete the design of treatment options (for example, pump and treat, soil remediation, source removal and/or treatment) and other remedial actions (for example, effective barriers to releases to the ditches, Otter Creek and the Toledo trenches). The proposed modification fails to accomplish these requirements of law.

63. Ohio EPA's Response:

At the completion of the RFI portion of Envirosafe's RCRA Corrective Action, a human health and ecological risk assessment will be completed. Should the site pose unacceptable risks, Envirosafe is required to evaluate remedial alternatives and implement an appropriate remedy.

64. Comment Received:

The Government Performance and Results Act required that OEPA by 2005 verify the measures to prevent the migration of groundwater at the ESOI facility. The Ohio EPA has failed to take measures to accomplish this requirement.

64. Ohio EPA's Response:

Regarding the control of contaminated ground water under the Government Performance and Results Act, the data collected for the RFI Phase I was not sufficient to make a determination as to whether contaminated ground water was present and leaving the Envirosafe property boundary. U.S. EPA made the determination that more information would be needed. Additional ground water data collected during the Phase II investigation will likely yield enough information for U.S. EPA to make a determination regarding the control of contaminated ground water. Measures will be taken to ensure that any

contaminated ground water at the Envirosafe facility will be controlled on-site. For questions regarding the current status of the GPRA goals, you may contact Tom Manning, U.S. EPA Region 5, at (800) 621-8431, ext. 66943.

65. Comment Received:

Ohio Revised Code 6111.04 prohibits the discharge of pollutants to the "waters of the state," which include all ground and surface waters. This section prohibits the placement of oils and sludges near ditches and streams or where waters of the state may be impacted. The sludges in SWMU 8 and 9 constitute a nuisance under the statute. The modification will allow the continued degradation of the surface and groundwaters and the maintenance of a nuisance at Envirosafe in violation of ORC Chapter 6111.

65. Ohio EPA's Response:

Free-phase nonaqueous phase liquids (NAPL) and "highly mobile" source material, such as leachate, may be considered principle threat wastes; therefore the general expectation is that these "source materials" be reduced to the extent practicable and that an appropriately designed containment strategy be developed for NAPLs that cannot be removed from the subsurface (Rules of Thumb for Superfund Remedy Selection, August 1997. Page 13.).

For information on additional investigation of WMUs 8 and 9, please see response 10.

66. Comment Received:

Oregon, TMACOG, the University of Toledo and the Duck and Otter Creek Partnership are initiating important new proposals to continue the improvements of Otter Creek. The course the Ohio EPA has taken at ESOI falls short of these other efforts and imperils Otter Creek and Lake Erie.

66. Ohio EPA's Response:

Today's action will, in part, require removal of leachate from the landfill adjacent to Otter Creek, which may improve Otter Creek by eliminating a non-point source discharge. Ohio EPA disagrees that actions taken by the Agency imperil Otter Creek.

The following are responses to comments from Envirosafe Services of Ohio, Inc. received June 13, 2006.

67. Comment Received:

Conditions E.9(b)(ii), (iii), and (iv): *"...within XX days of the effective date of this director initiated permit modification.*

There are several occurrences within the proposed modification that contain the above cited language. To avoid potential confusion regarding which director-initiated permit modification, as there may be more than one, it is suggested that all occurrences be modified as follows: *"...within XX days of the effective date of this permit condition."*

67. Ohio EPA's Response:

The effective date of the director-initiated permit modification and the permit condition are the same. However, the suggested language is specific to the permit condition and adds clarity to the permit condition. This change has been implemented.

68. Comment Received:

Condition E.9(b)(i): *"...The completed leachate collection systems must be installed and fully operating by December 31, 2006."*

This permit condition may not adequately provide the necessary time to complete required scope of work or account for the design process typical to remediation systems engineering. As described for RCRA corrective action in the *Corrective Action for Releases From Solid Waste Management Units at Hazardous Waste Management Facilities* (U.S. EPA; Federal Register / Vol. 61, No. 85 / Wednesday, May 1, 1996, Page 19452), "Remedy implementation typically involves detailed remedy design, remedy construction, remedy operation and maintenance, and remedy completion. In the CERCLA program, remedy implementation is known as "remedial design/remedial action, operation and maintenance"; in the corrective action program, it is known as "corrective measures implementation" or CMI. As proposed in 1990, corrective measures implementation is generally conducted in accordance with an approved CMI plan. Components of corrective measures implementation might include: **conceptual design**, **intermediate design plans and specifications**, **final design plans and specifications** [emphasis added], operation and maintenance plan, construction work plan, construction completion report, corrective measure completion report, health and safety plan, public participation plan and progress reports; however, in many cases, only a subset of these documents will be required for individual corrective measures implementations.

As outlined in the Presumptive Corrective Measure Design (PCMD) Work Plan, July 29, 2005, ESOI believes that operation of leachate collection systems to reduce leachate head on the base of SWMUs 5, 6, and 7 will mitigate potential

migration of hazardous constituents out of the landfill into the surrounding till and contact zones. Implementation of the PCMD Work Plan is on-going and as outlined in the proposed language, will be integrated as a permit condition. As described in ESOI's February 2006 schedule, the conceptual (30%) design will be submitted for review within 60-days of completing the PCMD Work Plan field work, *prior to* proceeding with the pre-final design (90 %) design, consisting of construction drawings and specifications). The conceptual design will include the pump test results, leachate recovery system performance objectives, proposed design layout (including the layouts for extraction wells, header pipes and storage/transfer facilities), anticipated design pumping rates and a performance monitoring and maintenance plan outline.

It is the intention of ESOI to install and operate a system to remove leachate from SWMUs 5, 6, and 7 as soon as possible. Under ideal conditions, this may be completed by December 31, 2006. As work progresses, encountered field conditions often require modifications of the Work Plan. The units were not designed to collect leachate so the on-going testing provides information on how specific methods of removal are likely or not likely to succeed. It is evident that all three of the cells do not react to leachate withdrawal in the same manner and will likely require different methods for leachate removal. Each time a test indicates that a particular method will not work, a review is conducted on the data collected to assess what other data can be collected to test an alternate removal method. As such, this extends the time necessary to design a system that will operate in a manner to achieve specific and achievable performance standards. Based on information collected to date, it appears likely that different units may require different systems. As such, some systems may be installed and operating before others. While the goal for completion remains December 31, 2006, it is unlikely that this will be possible for all three units. ESOI suggests modifying the permit language to reflect an implementation goal once testing determines that a system capable of achieving specific performance standards is identified. For example, the language could be modified to require: *Within 60 days of Ohio EPA concurrence with the pump test study report and conceptual design the Permittee must submit a Class 1modification requiring the director's approval that includes detailed performance objectives and a performance monitoring program for a performance-based approach to leachate collection and removal. The completed leachate collection system for each unit must be designed, installed and fully operating within 270 days of the director's approval of the Class 1 Modification for each unit.*

68. *Ohio EPA's Response:*

Data collection per the approved Presumptive Corrective Measures Design Work Plan is completed and the report and conceptual design were submitted on August 7, 2006. However, permit condition E.9(b)(i) requires Envirosafe to submit a permit modification request to incorporate performance objectives and a performance monitoring program into the permit within 60 days from Ohio EPA

approval of the report and conceptual design. It is anticipated that this required modification will be submitted by late October or early November 2006. Because of this permit requirement, contracting for installation of the leachate collection system, and anticipation of the end of the 2006 construction season, Ohio EPA revised the date to complete installation and commence operation of the leachate collection systems to July 1, 2007.

The language in permit condition E.9(b)(i) has been revised to reflect the submittal of the report and, as requested, Ohio EPA approval of the PCMD report and conceptual design. The permit language states:

E.9(b)(i) *Installation of a Leachate Collection System for WMUs 5, 6 and 7. The Permittee submitted a Presumptive Corrective Measure Design (PCMD) Work Plan on July 29, 2005. On October 5, 2005 Ohio EPA conditionally approved the PCMD work plan for leachate collection system pre-design work. Pre-design work commenced on December 19, 2005. On August 7, 2006 the Permittee submitted the PCMD report and conceptual design. Within 60 days of Ohio EPA approval of the report and conceptual design, the Permittee must submit a Class 1 permit modification request requiring director's approval that includes detailed performance objectives and a performance monitoring program for a performance-based approach to leachate collection and removal. The completed leachate collection systems must be installed and fully operating by July 1, 2007.*

69. Comment Received:

Condition E.9(b)(ii): *"...The study results and evaluation of remedial design alternatives must be submitted to Ohio EPA within 90 days of the effective date of this director-initiated permit modification...."*

ESOI believes that 90 days may not provide sufficient time to submit remedial design alternatives that will properly address outbreaks of viscous waste material and/or non-aqueous phase liquid from SWMUs 8 and 9. Most importantly, the exact cause of this seepage has not been determined, and may require more than a single field event to gather sufficient data for an adequate remedial alternative study. Further, based on the experience ESOI has gained from implementing the RFI and the on-going PCMD Work Plan, a 90-day schedule for completing field activities and a remedial alternatives evaluation is unrealistic. For example, once the permit condition is effective, ESOI must develop and provide the scope of work to a contractor(s) and obtain a proposal(s) for review and selection. Once a contractor is selected, the detailed study plan will be developed and subsequently reviewed by ESOI for approval. Based on the final study plan, the contractor must initiate any necessary sub-contracting for support services (e.g., drillers, analytical laboratories, etc.). With all contracts in place,

the work will then commence. Any necessary sampling will require analysis and data validation, which requires approximately 30-days for analysis and up to 90-days for validation (consistent with the Phase II RFI schedule requirements). Therefore, completion of just the field program component in support of the remedy alternatives evaluation will require up to 90 days, not including any routine delays in investigative field work resulting from adverse weather conditions, contractor availability, equipment breakdown, and modifications to the study plan due to encountered field conditions that do not allow the study to proceed as originally planned. Based on the results from the field activities, ESOI will evaluate the data in the context of the corrective measures objectives and determine if sufficient information is available to proceed with the corrective measures alternatives assessment. Therefore, it is possible that the field program may be extended if additional data are needed for the corrective measures alternatives assessment. In summary, the field work phase alone is expected to require at least 90 days to complete.

Assuming that the data are adequate for proceeding with the remedial alternatives evaluation, appropriate remedial alternatives will be identified and evaluated in accordance with the criteria specified in permit condition E.9. The data will need be evaluated in the context of the corrective measures objectives, and remedial design alternatives will be drafted. The drafted alternative report will be reviewed by ESOI. Any necessary editing will be completed and the document will be finalized for submission with production of all necessary copies for distribution. The remedial design alternatives analysis and reporting is expected to take up to 60 days to complete, depending on the number and complexity of the alternatives considered. Based on the possible scope of work required to comply with this permit condition, ESOI expects that a significant amount of time will be required to complete the remedial alternatives study for submittal to Ohio EPA. Further, as no imminent threat to human health or the environment has been identified, conducting these activities at an accelerated pace is not recommended or warranted.

Finally, in addition to all the work associated with this condition, it is proposed that ESOI also submit within 90 days of the permit modification preliminary design alternatives for cap enhancements or modifications for SWMUs 1, 8, and 9; and a pre-design work plan for landfill gas mitigation for SWMUs 1, 5, 6, 7, 8, and 9. ESOI has limited staff to manage these various design studies, while at the same time completing the ongoing RFI, conducting permit required monitoring programs, and various other projects. While it is expected that work on all projects will proceed simultaneously where and when possible, it will reduce the overall time available to work on each individual project over the proposed 90 day period.

Therefore, it is ESOI's recommendation that the condition be modified to read: *"within 270 days of the effective date of this permit condition."*

69. *Ohio EPA Response:*

Draft permit condition E.9(b)(ii), Address outbreaks of viscous waste material and/or non-aqueous phase liquid from WMUs 8 and 9, would have required Envirosafe to "conduct a study, summarize the results of the study and perform an evaluation of remedial design alternatives." However, Ohio EPA also believes that this work, in general, can be completed during Phase II, and the corrective measures study phase of RCRA Corrective Action, which will occur after the RFI report has been issued. Therefore, draft Permit Condition E.9(b)(ii) has not been included in the final permit.

70. Comment Received:

"Condition E.9(b)(iii): *"...The Permittee must prepare and submit preliminary design alternatives to Ohio EPA within 90 days of the effective date of this director-initiated permit modification...."*

For the same reasons cited in Comment 3, ESOI believes that 90 days may not provide sufficient time to prepare and submit preliminary design alternatives that will adequately address infiltration of liquids and promote positive drainage at SWMUs 1, 8, and 9. Further, ESOI does not believe it is beneficial to address the caps associated with SWMUs 8 and 9 until Ohio EPA reviews the study results from the evaluation of remedial design alternatives to address the outbreaks of viscous waste material and/or non/aqueous phase liquid from SWMUs 8 and 9. As proposed in Condition E.9.(b)(ii), Ohio EPA will review the study results and select a remedy design. The selected remedy may affect or include cap enhancements for these SWMUs. It is suggested that the proposed condition be modified as follows:

> "Cap enhancements or modifications must be made for WMUs 1, 8, and 9 to minimize infiltration of liquids and promote positive drainage. The Permittee must prepare and submit preliminary design alternatives for WMU 1 to Ohio EPA within 120 days of the effective date of this permit modification. The Permittee must prepare and submit preliminary design alternatives for WMUs 8 and 9 either in conjunction with Permit Condition E.9(b)(ii) or within 120 days of receiving the notification of the Ohio EPA selected remedy design associated with Permit Condition E.9(b)(ii). Ohio EPA will review the alternatives and select a remedy design. After receiving the notification of the selected remedy design by Ohio EPA, the Permittee must, within 60 days of receiving the notification, submit a Class 1 modification requiring director's approval that includes final design plans for the enhanced or modified caps and an implementation schedule."

70. Ohio EPA's Response:

Ohio EPA believes that the work specified in draft permit condition E.9(b)(ii) can be completed during Phase II, and the corrective measures study phase of RCRA Corrective Action, which will occur after the RFI report has been issued. Therefore, ***draft*** *Permit Condition E.9(b)(ii) has not been included in the final permit. Because the cap enhancements/modifications were not intended to be completed until any invasive work at WMUs 8 and 9, these units have not been included in* ***final*** *Permit Condition E.9(b)(ii). The permit language states:*

E.9(b)(ii) *Cap Enhancements or Modifications for WMU 1*

Cap enhancements and/or modifications must be made for WMU 1, to minimize infiltration of liquids and promote positive drainage of precipitation. The Permittee must prepare and submit preliminary design alternatives to Ohio EPA within 90 days of the effective date of this permit condition. Ohio EPA will review the alternatives and select a remedy design. The Permittee must, within 60 days of receiving notification from Ohio EPA of its selected remedy design, submit a Class 1 permit modification request requiring director's approval that includes final design plans for the enhanced or modified cap and an implementation schedule.

The following are responses to written comments received on June 14, 2006, from Ms. Sandy Bihn, Western Lake Erie WATERKEEPER © and Western Lake Erie Sierra Conservation chair.

71. Comment Received:

Furthermore the director of Ohio E.P.A. has allowed funds to be taken from the Envirosafe trust fund to pay for this faulty work with no determination of the sufficiency of funding for the corrective action remedies whose cost is yet to be determined.

71. Ohio EPA's Response:

With the finalization of today's permit modification, selecting certain corrective measures, the permittee is required by Permit Condition E.9(e) to provide financial assurance for these selected remedies.

The funds being used for reimbursement of corrective action activities are beyond what is legally required for closure, post closure and perpetual care of the site. Closure, post closure and perpetual care funds are only required for Envirosafe's RCRA Subtitle C units or units legally defined as hazardous waste units. In short, the monies set aside for care after the facility closes have never been used for corrective action activities. Ohio EPA acknowledges that certain

data validation information from Phase I of the investigation was lacking as is detailed in letter dated March 28, 2006, from Michael Savage, Chief, Division of Hazardous Waste Management to Doug Roberts of Envirosafe. As noted in the March 28 letter:

"Although this lapse alone does not automatically render collected data useless, it does raise documentation and thus validity questions that, at this juncture, can be best answered by conducting limited additional sampling..."

As the data were collected as part of an approved Corrective Action Work Plan Ohio EPA believes reimbursement from the excess funds is appropriate.

72. Comment Received:

It should also be noted that Ohio E.P.A. receives $9 per ton from Envirosafe. The revenues amount to close to $2 million per year that pay for the hazardous waste program including staff. The foot dragging on Ohio E.P.A. completing this corrective action process over the past two years, should not be allowed over concern for a continuing source of funds to the agency.

72. Ohio EPA's Response:

There is no relationship between hazardous waste fees and the pace of RCRA Corrective Action at the Envirosafe site. As required by state law, every ton of hazardous waste that is disposed from off-site sources is assessed a fee of $9. This fee goes to support the Division of Hazardous Waste Management's annual operating budget, in lieu of General Revenue Funds from state taxpayers. This fee is essentially a tax on those entities that generate hazardous waste requiring disposal. For ease in administration and collection, the fee is collected by the disposal facility (in this case, Envirosafe) and then forwarded to the state. This is similar to a retail store collecting a sales tax on purchases from customers and then remanding the tax back to state tax collection officials. The store is not paying the tax to the state, but acts as the collection agent. Envirosafe acts in the same manner in collecting the $9/ton fee.

Ohio EPA disagrees with the suggestion that corrective action activities have been purposely delayed. Today's final action selecting corrective measures for certain waste management units (WMU) in the northern portion of the property represents significant progress in addressing environmental concerns at the site.

73. Comment Received:

Ohio EPA.'s review of the proposals submitted by E.S.O.I. in response to corrective action requirements should include an assessment on the impacts of aquatic habitat, sediment and water quality in Otter Creek, Maumee Bay and the Western basin of Lake Erie.

73. Ohio EPA's Response:

Like other RCRA facilities undergoing RCRA Corrective Action in the Otter Creek watershed, Envirosafe is required to address site-related impacts to Otter Creek. In part, assessing site-related impacts on Otter Creek includes sampling surface water and sediment immediately upstream and downstream of the facility. This data will be evaluated in an ecological risk assessment, which is required by the approved RFI Work Plan. In addition, during Phase I Envirosafe completed an aquatic habitat assessment of Otter Creek which included the reach adjacent to the facility. The findings of this assessment are in Appendix E of Envirosafe's Phase I Report and Phase II Work Plan (2003).

Requiring one facility in the Otter Creek watershed to determine its particular impact on the full reach of Otter Creek, Maumee Bay and the Western basin of Lake Erie is not reasonable. However, Ohio EPA acknowledges that a "watershed-wide" approach is preferable to address conditions in Otter Creek and will support that effort, as appropriate, through any future remedy selection modifications.

74. Comment Received:

Because of problems with the lab work, Envirosafe should be required to contribute to the cost of the T.M.D.L. and Risk Assessment analysis for Otter Creek in addition to redoing unacceptable testing. Envirosafe should not be allowed to once again delay the process because of its faulty lab work without the consequence of contributing to the overall analysis of Otter Creek. TMDL and risk assessment testing of the sediments should be coordinated with the Duck Otter Creek Partnership.

74. Ohio EPA's Response:

Today's permit action does not specifically address impacts to Otter Creek – the site impacts to the creek are still being evaluated under the on-going site investigation. As noted in other responses, today's action is not considered a "final" remedy for the site. It is anticipated that additional corrective measures or remedy activities will be required at a later date to address such things as potential impacts to Otter Creek. Ohio EPA acknowledges that a "watershed-wide" approach is preferable to address conditions in Otter Creek and will support that effort as appropriate through any future remedy selection modifications.

75. Comment Received:

"The standards for corrective action should be drinking water standards because the surface waters that Otter Creek drains into are the waters that millions drink."

75. Ohio EPA's Response:

It is not clear to which standards Ms. Bihn refers. Envirosafe's screening/delineation criteria for human health is maximum contaminant levels (MCL) or drinking water standards and equivalent drinking water levels. Envirosafe's screening criteria for ecological risk is U.S. EPA Ecological Screening Levels. Finally, cleanup standards, if necessary, will be based on human health and ecological risk. Cleanup standards will not exceed drinking water standards at appropriate exposure pathways. Surface waters are required to meet surface water standards.

76. Comment Received:

ESOI should be required to pay back to the closure and post closure trust funds moneys that were drawn for unacceptable lab work.

76. Ohio EPA's Response:

Please see response to 40.

77. Comment Received:

The Director of OEPA should end his approval of the use of closure and post closure funds until the total cost of corrective action required for the old waste areas is determined.

77. Ohio EPA's Response:

Please see response to 71.

78. Comment Received:

ESOI should be held to submittal dates with fines for continuously failing to meet the deadlines.

78. Ohio EPA's Response:

Certain key dates/events related to the corrective measures selected are specified in today's final permit. As is always the case, Ohio EPA will take appropriate enforcement actions as necessary to assure compliance with permit requirements.

79. Comment Received:

Ohio EPA's turn around time for Envirosafe submittals should be thirty days.

79. Ohio EPA's Response:

Ohio EPA makes every effort to review submittals from the permittee in a timely manner. Because these submittals can vary greatly in both length and complexity, and sometimes require meetings with the facility, it is not appropriate to set an arbitrary review timeframe that does not account for these factors.

80. Comment Received:

"In attachment 1 of the March 28, 2006 letter, Ohio E.P.A. describes ESOI's use of the Method of Standard Additions (MSA) as a nonstandard and its uses on quality control is specifically prohibited, yet OEPA somehow determines that the MSA method is allowed and will not require metal testing. If the standard is not met, then the metal testing with quality control must be redone. OEPA in another part of Attachment 1 acknowledges that samples were not properly preserved. OEPA cannot look the other way, when a methodology used by ESOI is specifically, by OEPA's own admission prohibited. These tests should be redone to meet standard practices cited by Ohio E.P.A."

80. Ohio EPA's Response:

This comment refers to a data validation assessment of metals analysis by Graphite Furnace Atomic Absorption (GFAA) spectroscopy. The commentor rightly asserts that the systematic use of the Method of Standard Additions (MSA) is nonstandard. Since this method is arduous, the analytical method only anticipates its use when there is a clear indication that a matrix interference is present. However, in this case, Envirosafe's contract laboratory employed MSA as a standard practice. Unbeknownst to the data validator at the time of this comment, this practice was thoroughly discussed in the laboratory QAPP which was accepted and approved of by U.S. EPA. This information was brought out in a December 19, 2005, response from BEC Laboratories and in the memorandum to Lynn Ackerson from the Mannik and Smith Group, Data Validation - Response to Questions Raised During our December 13, 2005, meeting; January 4, 2006. Therefore, it was concluded that the standard application of the MSA was acceptable and did not warrant data qualification.

This comment also points out that there was no indication that samples were preserved with acid prior to analysis. This finding is significant and it was discovered in the data validation assessment. The implication is that a bias may be imparted on the analytical results for aqueous samples. This deviation from standard practice warrants data qualification which was applied to the metals data. Positive and undetected values were qualified as estimated. It should be noted that the data was not qualified as rejected and, as such, was deemed acceptable for use in the RFI. Because the data qualifications did not rise to a level that would reject the use of the data, there was no justification to require confirmatory sampling and analysis.

81. Comment Received:

Sampling for PCBs should be required in the Toledo waterline trenches. If PCB's and/or other contaminants are found in the trenches, then a determination should be made on whether the Toledo waterline trenches are causing a preferential pathway for migration of wastes, that would more than likely drain into Otter Creek.

81. Ohio EPA's Response:

Envirosafe's RFI Phase I and Phase II sampling plans require PCB sampling and analysis in the City of Toledo Waterline trenches.

82. Comment Received:

VOCs and semi VOCs should be resampled. OEPA states that there were numerous occasions when holding times were exceeded.

82. Ohio EPA's Response:

All data that Envirosafe identified as rejected data during RFI Phase I must be resampled during RFI Phase II.

83. Comment Received:

The public would like a calendar that spells out who does what when to get to the required corrective action.

83. Ohio EPA's Response:

A general outline of the RCRA Corrective Action process can be found in RCRA Corrective Action Plan or CAP (OSWER Directive 9902.3-2A, May 1994). Specifically, permit condition E.13 of Envirosafe's permit requires Envirosafe to submit to Ohio EPA RCRA Corrective Action related documents per a specific schedule of compliance. In addition, Envirosafe's RFI Phase I and Phase II included schedules for completing specific tasks in the Work Plans, which U.S. EPA and Ohio EPA approved, respectively. However, sometimes field work schedules must be adjusted due to unforeseen complications such as weather delays, equipment failures, and property access issues.

Ohio EPA makes every effort to review submittals from the permittee in a timely manner. Because these submittals can vary greatly in both length and complexity, and sometimes require meetings with the facility, it is not appropriate to set an arbitrary review timeframe that does not account for these factors.

84. Comment Received:

Envirosource stock was close to $20.00 a share in the 1990s. By 2002, the stock was penny stock and bankruptcy was declared when debt payments were looming in default. The company is now privately held with no public financial information. Under these circumstances, why is the Ohio E.P.A. director allowing trust funds to be paid for the corrective action investigation?

84. Ohio EPA's Response:

The basis for release of monies from the trust fund is not predicated on the facility's current financial information. In fact, the purpose behind the financial assurance requirements is to ensure adequate funds are available for closure and post closure activities irrespective of the facility's financial health. Only Ohio EPA's Director can authorize a release from the trust fund.

As stated previously, the funds reimbursed for corrective action activities are beyond what is legally required for closure, post closure and perpetual care of the site. Closure, post closure and perpetual care are only required for Envirosafe's RCRA Subtitle C units or units legally defined as hazardous waste units. In short, the monies set aside for care after the facility closes have never been used for corrective action activities.

85. Comment Received:

And why is the [RCRA Corrective Action] process taking so long while Envirosafe continues to operate, but has not been required to fully fund corrective action?

85. Ohio EPA's Response:

Without a defined remedy, if would be impractical to set aside monies for corrective action. As noted in previous responses, with the finalization of today's permit modification selecting certain corrective measures, the permittee is required by Permit Condition E.9(e) to provide financial assurance for these selected remedies.

The following are responses to comments received via e-mail on June 14, 2006, and in a letter on June 20, 2006, from the Duck and Otter Creeks Partnership.

86. Comment Received:

In general, the Duck and Otter Creeks Partnership supports the proposed corrective actions and time frames. It is important that when Ohio EPA reviews the proposals submitted by ESOI, it is with the understanding of the importance of protecting and improving water and sediment quality in Otter Creek.

86. Ohio EPA's Response:

Envirosafe's approved RFI Work Plan requires that Envirosafe complete an ecological risk assessment. To the extent that Envirosafe's data shows unacceptable ecological risk from site-related contaminants, Envirosafe will be required to address those risks.

87. Comment Received:

In addition to the above supportive comments on Ohio EPA's corrective action permit proposals, it is important that ESOI be required to conduct, through an independent lab, testing along Otter Creek that is coordinated with the TMDL process as well as the Partnership's Ecological and Human Health Risk Assessment. ESOI should be required to conduct these tests at its own expense because it appears that this landfill has been leaching into Otter Creek for many years. The Partnership also recommends that ESOI conduct sediment testing along the creek bed that is potentially impacted by ESOI operations."

87. Ohio EPA's Response:

Envirosafe contracted with Sevem Trent Laboratories for analyses of RFI Phase II samples. Otter Creek sediment and surface water sampling and analyses, required in both the RFI Phase I and Phase II Work Plans, will be coordinated with the TMDL process and Partnership's Ecological and Human Health Risk Assessment to the extent that Ohio EPA supports the "watershed approach" and is aware of the TMDL being conducted by Ohio EPA's Surface Water Division. Finally, Envirosafe is responsible for funding its RCRA Corrective Action.

88. Comment Received:

The Duck and Otter Creek Partnership would like to be kept informed about the data collection and when the commencement of the tests will begin. After Ohio EPA has received the data, the Partnership would like a copy that can be reviewed by the Partnership's members. Further, the Partnership requests a meeting to discuss the data with Ohio EPA.

88. Ohio EPA's Response:

Envirosafe implemented the field portion of its RFI Phase II Work Plan on July 10, 2006. Based on the Phase II Work Plan schedule, and a field season with no delays, Ohio EPA anticipates receiving the RFI Report in June 2007. The Duck and Otter Creeks Partnership may request the information through Ohio's Open Records Law from Linda Tilse, Ohio EPA Northwest District Office, at 419-373-4113. After reviewing the data, should the Partnership like to schedule a meeting, please contact Lynn Ackerson, Ohio EPA Northwest District Office, at (419) 373-4113.

In addition, Envirosafe's approved RFI Work Plan includes a Community Relations Plan (CRP). The CRP is intended to identify the mechanisms for the dissemination of information by Envirosafe to the public regarding investigation activities and results. The designated Envirosafe contact is Douglas Roberts. He can be reached at (800) 537-0426.

End of Responsiveness Summary

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