



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

November 25, 2019

Patrick S. Steerman  
Steerman Environmental Management & Consulting, LLC  
422 Creek View Lane  
Roswell, Georgia, 30075

Re: Sauer Dump Superfund Site  
Administrative Settlement Agreement and Order on Consent for Remedial  
Investigation/Feasibility Study (ASAOC) dated March 11, 2013  
Docket No. CERC-03-2012-0177DC

Via email, confirmation of receipt is requested.

Dear Mr. Steerman:

In accordance with section X. EPA Approval of Plans and other Submissions of the March 11, 2013 Administrative Settlement and Agreement on Consent (ASAOC), this letter conditionally approves the November 2018 Remedial Investigation Report (RI), the September 2019 Human Health Risk Assessment (HHRA), and the Revised September 2019 Ecological Risk Assessment (ERA) September 19, 2019 that were re-submitted with your RI/HHRA/ERA Response to Agency Comments on September 19, 2019.

**The specified conditions of the approval are as follows:**

- 1. Update the RI, HHRA and ERA reports with the Settling Parties Responses to Agency Comments that were submitted on September 19, 2019 and further discussed on the August 6, 2019 conference call.**
- 2. The Settling Parties must acknowledge that the cleanup number for lead may be lowered (become more stringent) drop substantially if EPA formally adopts a lead level that is below the current 10 ug/dL or if MDE applies a more stringent cleanup number for lead. If this occurs, EPA may require the Group to re-evaluate and potentially initiate a risk-based soil cleanup based on the new PbB value or MDE ARAR.**
- 3. Address the attached comments from EPA, MDE and HGL with the updated RI, HHRA and ERA.**

The RI, HHRA and ERA sufficiently characterize the Site to move forward with the Development and Screening of Alternatives as outlined under Section 9.1.c.5 of the ASAOC. With respect to the ERA, your proposed revisions to the ERA address most of EPA Region 3 Biological Technical Assistance Group's (BTAG) comments. However, the narrative and approaches in the ERA are not completely consistent with the approaches advocated by the BTAG, nor with all the statements that were made and conclusions that were made by the settling defendants.. However, the ERA provides sufficient data to move forward with the remedial process and develop alternatives and cleanup values protective of ecological receptors.

Please submit draft final versions of the RI, HHRA ERA by January 3, 2019 along with an updated Site schedule. If you have questions, please contact me at 215-814-2022 or tymchenko.nick@epa.gov.

Sincerely,

Nick Tymchenko  
Remedial Project Manager  
Western Pennsylvania and Maryland Remedial Section  
(3SD22)

Enclosures:

1. Sauer RI ERA HHRA comments.docx
2. Sauer RI\_MDE RI RTCs.pdf
3. Sauer RI\_MDE sauer hhra era RTCs.pdf
4. Sauer RI\_HGL Comments on Revised RI and HHRA\_10\_24.pdf

Cc:

M. Cron, EPA  
B. Cohan, EPA ORC  
P. Williams, MDE



## RI REPORT

The exact boundary of the FOA (and its impact on the residential properties) will need to be identified in the FS or RD. When this delineation is performed it will need to be done for all site related COCs (not just PCBs and lead) as other contaminant classes including, for example, PAHs, as it is not entirely clear that all site-related COCs are collocated. This delineation will allow for determining where risk-based cleanup will need to be performed for those COCs not collocated with lead and PCBs.

### Specific Comments

1. Section 2.1 – Site and FOA Definition – The author acknowledges that the FOA boundary is approximate. The exact boundary of the FOA (and its impact on the residential properties) will need to be identified.
2. Section 6 – 2016 Interim Measure – Current scientific literature on lead toxicity indicates that adverse health effects are associated with blood-lead (PbB) levels below the long-held target of 10 µg/dL. Specifically, evidence exists of clear cognitive declines in young children with PbB levels between 2 and 8 µg/dL. For this reason, U.S. EPA recommends consideration of current scientific conclusions when evaluating lead exposure (actual or potential) at CERCLA sites. Although an official policy is not currently in place, U.S. EPA may draft a directive formally lowering the target PbB level in the future, resulting in a lower risk-based clean-up level for this metal. This, in turn, could trigger the need for re-evaluation of lead at Sauer Dump for those areas that have not achieved the more protective standard.
3. Section 7 – 2016 Supplemental Vertical Soil Delineation – It is not clear what PCB screening number (1 ppm) reference is being referenced. If it is the TSCA Residential Cleanup number this technically is not a screening number. The RSLs are screening numbers.
4. Section 9 – Evaluation of Results – The most current version of the Regional Screening Levels (RSLs) should be the primary screening values used at the time that screening is performed. Using MCLs to screen out COCs may lead to unacceptable risks if multiple contaminants are present due to how MCLs are derived. MCLs for some individual COCs may be at the upper end of the risk range and when combined with other COCs may result in an unacceptable risk being screened out in the screening phase which is unlikely to happen with RSLs. For these reasons the use of MCLs as primary screening numbers is inappropriate. It is not clear whether MCLs were used to screen out COCs in the HHRA.
5. Section 9.1.2 – Evaluation of Soil Results by Residential Parcel – Parcel 209 – The author states that the FOA does not extend onto Parcel 209. In Section 2.1 the PRP Group acknowledges that FOA boundary is approximate. It is not clear at this time whether this statement can be made.
6. Section 10 – CSM – Regarding groundwater contamination see Specific Comment 4 regarding the use of MCLs. Also, lead has an action level of 15 ug/L. It is listed as an

MCL.

### Human Health Risk Assessment

#### General Comments

The Group needs to evaluate/remediate Parcels down to the appropriate depths, not just 0-2 feet.

Based on a quick review of the risk results there are COCs other than PCBs and lead (e.g., Hg, Co, Sb) that may not be collocated with PCBs and lead and may (on their own) drive a remedial action. These COCs and their locations will need to be considered during the FS and RD/RA phases of the cleanup.

#### Specific Comments

7. Section 1.1 – Site and FOA Definition – See Specific Comment 5 (above).
8. Section 4.2 – Identification of Potentially Exposed Populations – For waterbodies the size of the Back River, EPA generally would evaluate a subsistence fisher as a potentially impacted receptor. Based on the location of the Site it is acceptable to evaluate only a recreational fisher scenario. If, however, information becomes available indicating that subsistence fishing is occurring this scenario may have to be evaluated.
9. Section 7.2 – Detected Chemicals with No Screening Values or Surrogates – Additional discussion regarding carbazole is warranted as it was found in numerous samples. Additional information on the concentrations found in soils, sediment and groundwater are needed to determine whether additional effort is required to develop a provisional value for this COPC.

### Ecological Risk Assessment

#### **Section 9 Scientific / Management Decision Point (SMDP)**

**Delete “EPA directed that”**

**5.1.3 ESVs for Soil**, page 23, paragraph 2 – EPA’s comment “Delete the discussions regarding background as a means of undermining the ESVs.” was not addressed contrary to the response(s). The statement “ESVs below background imply that toxicity occurs to wide-ranging species from naturally occurring, wide-ranging soil concentrations...” is not accurate and seems to be the basis of the text that the comment refers to. Understanding the basis of the TRVs and the natural variability in background values lends itself to understanding the associated uncertainty and the limitations and use of the EcoSSLs without labelling them as ineffective in “screening out non-problematic chemicals that are present at background concentrations.”

**5.2 Consideration of Bioaccumulative Chemicals in Sediment** – EPA’s comment was

ineffectively referring to consideration of food chain exposure to higher trophic levels other than that discussed in the text, such as piscivorous birds, mammals, and fish.

**5.2.2 Estimation of Bioaccumulative Chemicals in Aquatic Benthos** – EPA guidance clearly states that for the screening assessment “...the most conservative (i.e., highest) bioaccumulation factor (BAF) reported in the literature should be used in the absence of site-specific information.” It is not appropriate to use median values and then further adjust them based on assumptions of site-specific bioavailability and bioaccumulation. The comment “For the screen, BSAFs for bioaccumulative compounds should be no less than 1; site-specific bioavailability can be considered as necessary in SLERA refinement / BERA scoping phase of the project.” was referring to the median BSAF values that were still greater than 1, and then further reduced without site-specific BSAF data. Furthermore, other sources cite higher lipid levels for aquatic invertebrates, and the same value (2%) is later noted, without substantiation, as the fish lipid level.

In general, the methods used to assess the risk potentially posed by select bioaccumulative compounds (most notably PCBs) are not conservative / protective of sensitive species and are not consistent with a screening level assessment.

**5.2.3 Estimation of Bioaccumulative Chemicals in Fish** – EPA noted that the screening level evaluation should be based on 100% bioavailability, which can be adjusted to reflect site-specific OC values in subsequent phases of the ERA as warranted. While the PRPs acknowledged the comment, the appropriate revisions were not made. Again, the assessment underestimates screening level risk and may not result in adequately protective risk-management decisions.

**6. Results of Preliminary Screening and Initial COPEC Selection** – The proposed revision does not address the converse premise. Sampling is supposed to characterize the site which is defined by the extent of contamination. By including samples results of uncontaminated locations, you are including samples that are not representative of the site and are biasing the mean concentration, FOD, and FOE low. To present a balanced discussion, the text should merely state “It should be noted that the mean concentration, FOD, and FOE are most valid when the sampling is representative of the site, i.e., not biased to areas of high contamination or lack thereof.”

**6.3.1 Screening of Sediment Samples from Top 6 inches, Metals** – The text still does not include a discussion of the variability in AVS, including seasonality, and the resultant impacts on bioavailability. These factors must be discussed prior to dismissing these contaminants based on AVS/SEM as even moderate changes in conditions can increase bioavailability.

**7.0 Uncertainties** – The text was not revised to present a more balanced view of the conservative nature of the screening level assessment nor does it seriously discuss the potential for underestimating risk. While we acknowledge that the statement “Given the wide variety of animal and plant species and limited toxicological data, there is always some potential that risks for some unusually sensitive species were underestimated” does mention the possibility of underestimating, it includes an excessive number of caveats which essentially completely

EPA Comments to RI/HHRA/ERA  
11/25/2019

**discount the possibility of overestimation.**



**Maryland**  
Department of  
the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

November 14, 2019

Mr. Nick Tymchenko  
Remedial Project Manager Western Pennsylvania/Maryland  
Remedial Branch Hazardous Site Cleanup Division  
US EPA Region 3, Mail Code 3HS22  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

Re: Revised Remedial Investigation, Sauer Dump, dated September 2019

Dear Mr. Tymchenko:

The Maryland Department of the Environment has reviewed the above-referenced document and provides the attached comments.

If you should have any questions, please contact me at (410) 537-3493.

Sincerely,

A handwritten signature in cursive script that reads "Peggy Williams".

Peggy Williams, Project Manager  
Site Assessment/NPL Section

cc: Ms. Kaley Laleker, Director, Land and Materials Administration  
Mr. Ira May, Chief, Federal Assessment and Remediation Division

**Maryland Department of the Environment**  
**Land Restoration Program**  
**Federal Assessment and Remediation Division**

Revised Remedial Investigation Report, Sauer Dump Superfund Site, September 2019

General Comments

- 1) The remedy should be capable of withstanding expected sea level rise over the lifetime of the remedy; therefore, sea level rise and major storm events and their impacts must be taken into consideration during the Feasibility Study phase.

Specific Comments

- 2) The sample locations for the 4 composite samples are different on Figure 3.1 (field-corrected) than on Figure 9.1. Please update *all* figures with the field-corrected sample locations.
- 3) Page 43 in “Residential Parcels” section – The sentence “PCBs and lead in subsurface soils (>2 feet below grade) have also been vertically delineated on the residential parcels except in limited areas where access was not available.” This sentence should be deleted. Very few samples have been collected to verify the vertical extent of contamination in the subsurface on the residential parcels. At no time did MDE ever agree that the extent of contamination outside the FOA was achieved.





**Maryland**  
Department of  
the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

November 19, 2019

Mr. Nick Tymchenko  
Remedial Project Manager Western Pennsylvania/Maryland  
Remedial Branch Hazardous Site Cleanup Division  
US EPA Region 3, Mail Code 3HS22  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

Re: Revised Human Health Risk Assessment, Revised Ecological Risk Assessment, Sauer Dump,  
dated September 2019

Dear Mr. Tymchenko:

The Maryland Department of the Environment has reviewed the above-referenced Human Health Risk Assessment and associated responses-to-comments, and provides the attached comments. MDE has no further comments on the revised Ecological Risk Assessment, or the Group's response-to-comments.

If you should have any questions, please contact me at (410) 537-3493.

Sincerely,

A handwritten signature in cursive script that reads "Peggy Williams".

Peggy Williams, Project Manager  
Site Assessment/NPL Section

cc: Mr. Ira May, Chief, Federal Assessment and Remediation Division

**Maryland Department of the Environment**  
**Land Restoration Program**  
**Federal Assessment and Remediation Division**

Revised Human Health Risk Assessment and RTCs, dated September 2019

**MDE Comment #3**

- 3) Does the Group intend to achieve residential cleanup on the entire FOA? If so, then there is no need to evaluate recreational youth or youth hunter. This should be clarified and clearly defined moving forward.

PRP Group Response: The FOA consists of all of Parcel 425 and portions of residential parcels 503, 464, 295, 209, 137 and 574. Engineering and institutional controls will be considered within the Feasibility Study for Parcel 425. The portions of the FOA on residential parcels will be remediated.

MDE is acknowledging that response from the Group and expects that the portions of the FOA on the residential parcels will be remediated to site remediation goals required for unlimited residential use.

**MDE Comment #4**

- 4) Page 3, *2.0 Conceptual Site Model* Section: The entire FOA was evaluated for residential child, which is very conservative. Furthermore, the property is zoned residential and privately owned, therefore the ability to change the zoning may be restricted.

PRP Group Response: At EPA's request, the FOA was evaluated for a potential residential child, which is very conservative. Engineering and institutional controls will be implemented on parcel 425. The portions of the FOA on residential parcels will be remediated to residential standards. No changes to zoning are anticipated at this time.

The zoning must be changed to prohibit future residential use. In the unlikely event that a party were to go to Baltimore County in the future wanting to build a house on the property (and it remains a residentially-zoned property), MDE is concerned that a deed restriction prohibiting residential use might be pre-empted by the property's residential zoning status. Additionally, regardless of the future use of the property, an Environmental Covenant will be required to ensure the integrity of any final remedy.

**MDE Comment #8**

- 7) Page 6, *3.5 Identification of Chemicals of Potential Concern (COPCs) Section, Surface and Subsurface Soil*: Subsurface soil must be evaluated for residential exposure and screened against residential RSLs.

PRP Group Response: See responses to Comments 1 and 6 [not included here]. Subsurface soils have been screened against residential RSLs.

Acknowledged. However, MDE continues to reiterate that the CDC has lowered its target blood lead level from 10  $\mu\text{g}/\text{dL}$  to 5  $\mu\text{g}/\text{dL}$  and by July 1, MDE will be lowering its residential lead cleanup level from 400 mg/kg to the 200 mg/kg range. This will be a State ARAR. Lead cleanup levels will apply to the subsurface soil as well as the surface soil on residential parcels.

October 24, 2019

Mr. Nick Tymchenko  
U.S. Environmental Protection Agency, Region 3  
1650 Arch Street  
Philadelphia, PA 19103

Subject: Sauer Dump Superfund Site  
Review of PRP's Revised Remedial Investigation Report and Human Health Risk  
Assessment, dated September 2019  
EPA Contract EP-S3-07-05, Work Assignment 055RIFS03EW

Dear Mr. Tymchenko:

In accordance with your direction, HydroGeoLogic, Inc. (HGL) reviewed the referenced reports prepared by GHD Services, Inc. (GHD) for the potentially responsible party (PRP). HGL has the following comments.

### **Comments on Revised RI Report**

#### **HGL Comment #5 on Draft RI.**

The Work Plan states (p. 20):

*"The existing soil geotechnical data and hydrologic data (e.g., water levels, tide studies) will be used to evaluate the Site hydrology in the refinement of the Site Conceptual Model (SCM). A focus in SCM refinement will be to assess the potential fate and transport of constituents in the waste. In turn, this information will determine whether and to what extent Site-related contaminants may be entering the surface waters through the groundwater pathway."*

In response to this requirement, the RI Report (p. 29) states:

*"Groundwater discharges to the adjacent wetlands and/or Back River are very small (below 3 gallons per day). As a result, with low COCs concentrations in groundwater and only small groundwater discharges to surface water/wetlands, the cumulative flux of COCs from groundwater to surface water is minimal."*

It is not clear how the 3 gallons per day were calculated. Based on the slug tests, the average hydraulic conductivity is about 54 ft/day (Section 4.7), the hydraulic gradient is 0.007 ft/ft (Section 9.4.3), and the discharge length along the Back River is about 150 ft (Plate 1). The volume of groundwater entering the Back River will equal the hydraulic conductivity multiplied by the hydraulic gradient and cross-sectional area. If the aquifer thickness is 5 ft; the discharge volume would equal 54 ft/day x 0.007 ft/ft x 150 ft x 5 ft = 283.5 ft<sup>3</sup>/day or 2,120 gallons per day. This volume does not account for discharge to the wetlands and could also be higher if the aquifer is thicker or periodically lower if the tides tend to flatten or reverse the hydraulic gradients. Please refine the conceptualization of the groundwater-to-surface water pathway.

**GHD Response:** The citation of 3 gallons per day was taken from Malcolm Pirnie 2007 EOCS report. The Group has reviewed the calculations and has added RI Report Section 9.4.4. – Estimate of Groundwater Flux to address this comment.

**Additional HGL comment:** In addition to revising Section 9.4.4, the discussion in Section 4.7, pertaining to the estimates of hydraulic conductivities was revised. Instead of using the hydraulic conductivities derived from the slug test data, which ranged from 0.72 to 120 ft/day, laboratory results from geotechnical tests performed in 2001 and presented in ENSAT's RI (2005, Appendix Q) were used. These values range from 0.002183 ft/day to 0.15 ft/day. The mean of the five results was  $K = 0.0462$  ft/day. Therefore, the laboratory data is orders of magnitude lower than the slug test data.

There are a number of concerns associated with the laboratory data; for example:

- The permeability testing performed on the macrocore samples is in the vertical direction and results in vertical hydraulic conductivities rather than horizontal;
- The samples were collected over 2-ft intervals, which means hydraulic conductivity data is available from 5 samples for a total of only 10 feet, and;
- The sample descriptions indicate that a number of samples were clay; whereas the majority of the site material appears to be silty clay.

The ASTM method (D 5084) that was followed to perform the analyses (Section 4.6) states: "The correlation between results obtained using these test methods and the hydraulic conductivities of in-place field materials has not been fully investigated. Experience has sometimes shown that hydraulic conductivities measured on small test specimens are not necessarily the same as larger-scale values. Therefore, the results should be applied to field situations with caution and by qualified personnel."

The intent of performing the slug test was to obtain data that are more representative of the site than those obtained with geotechnical tests.

Although tidal influences may have impacted the data interpretation, during aquifer testing it is common practice to place a transducer in a well not being influenced by the test to allow other hydraulic impacts (e.g., recharge from rainfall, other pumping wells, earth tides, and tidal influences) to be filtered from the data. A transducer was not placed in a well to collect this information. Furthermore, the Work Plan does not appear to include an SOP for the slug tests.

A cursory review of the slug test data suggests that the tidal influences might not have affected the results as significantly as proposed. For example, in the slug test analysis presented for MW-1R in the figure below the downward trend for the first few minutes appears to be due to insufficient time for the water-level to equilibrate after the transducer (and cable) was installed. The slug was introduced about 1 minute after the transducer, which is not much time for equilibration. From about 1416 to the end of the test there are clearly no (or minimal) tidal effects. The text in the figure caption states: "The slug out could not be interpreted at all as the water-level was falling at a time that it should be rising." The y-axis title on the figure indicates that the y-axis values are the feet of water above the transducer and not the depth to water. Therefore, at the beginning of





**The revised RI report contains a new section, Section 9.1.2 – Evaluation of Soil Results by Residential Parcel. The following comments pertain to this section of the Revised RI Report.**

**Comment #1:** On Table 6.2, location E-Mid on Parcel 295 has a PCB concentration of 3.21 mg/kg. This location is not on Figure 9.18. Please reconcile.

**Comment #2:** On Table 6.1, location W-NW on Parcel 209 has a lead concentration of 502 mg/kg. This location is not on Figure 9.15. Please reconcile.

**Comment #3:** On Table 6.4, some of the sample IDs reference Parcel 503; however, some of these locations are on Parcel 464. Please correct so that the locations on Parcel 464 are on the table for Parcel 464 (Table 6.3).

**Comments on Revised HHRA**

**HGL's Comment #5 on Draft HHRA:** Section 3.4, top of pg. 7: Please clarify whether the lack of chromium detections in filtered samples applies to both surface water and groundwater. The text provides a reason for why chromium in an aqueous medium is assumed to be trivalent but does not explain why chromium in soil and sediment should also be in the trivalent form. Given the much greater toxicity of hexavalent chromium relative to trivalent, please explain why chromium in soil and sediment would be solely in the trivalent form.

**GHD Response:** The speciation of chromium was previously discussed and resolved with EPA after submission of the HHRA Step 1 memo.

- Feb 2, 2015 – Group submitted Step 1 HHRA memo to EPA.
- Mar 18, 2015 – EPA provided comments
- Apr 6, 2015 – EPA provided MDE's comments
- Apr 24, 2015 – Group responds to EPA & MDE comments. Group proposed use of trivalent chromium (chromium III) as a surrogate for chromium.
- Apr 29, 2015 – Conference call between Group and Agencies to review Group's responses
- May 12, 2015 – EPA provided updated comments. EPA agreed to use of trivalent chromium.
- Jun 9, 2015 – Group provided revised responses to EPA comments  
EPA approved HHRA Step 1 Memo, which included use of trivalent chromium (chromium III) as a surrogate for chromium.

**Additional HGL comment:** The chronology listed does not provide the rationale in the HHRA for assuming all chromium in soil is trivalent chromium. For transparency to the reader not familiar with these meetings, please provide the requested rationale. This comment also applies to the response to HGL's original Comment #37 on the Draft HHRA.

**HGL's Comment #21 on Draft HHRA:** Table 5.1: The cadmium reference dose is based on exposure to water. Cadmium is a chemical of potential concern (COPC) only for soil and dietary

Mr. Tymchenko  
HGL Comments on Revised RI Report  
10/24/2019

items. Please use the dietary oral reference dose for cadmium and associated gastrointestinal absorption factor. Please provide target organs for all the COPCs with reference doses and update the Table 9s accordingly. Please cite the actual source of the toxicity information (e.g., provisional peer-reviewed toxicity values, health effects assessment summary tables, etc.) in place of “RSL.” The target organs for Aroclor 1254 also include skin and eyes.

**GHD Response:** The HHRA has been revised to address the above comment.

**Additional HGL comment:** The gastrointestinal absorption factor (GIABS) for cadmium (diet) is 0.025, not 0.05. The gastrointestinal tract can be used as the target organ for copper. Based on a cursory scan of the RAGS tables, HGL does not surmise that correcting the GIABS will substantially affect the numbers, and therefore, may not be worth the revisions.

**HGL Comment #25 on Draft HHRA:** Sections 4.5.1 and 4.5.2: Please see specific comments 15 -19 on the specific RAGS Part D format tables.

**GHD Response:** The HHRA has been revised to address the above comment.

**Additional HGL comment:** The second update to the 2014 OSWER Directive on default exposure assumptions revised skin surface area for the child to 6,365 square centimeters (cm<sup>2</sup>) and for the adult to 19.652 cm<sup>2</sup>. It is not necessary to revise the calculations because these changes to the skin surface area will have little effect on the overall numbers.

**HGL’s comment #26 on Draft HHRA:** Section 4.5.3.1: Please note that the adult lead model (ALM) requires a minimum exposure duration of 90 days and exposure frequency of once per week, not a minimum exposure frequency of 90 days. It is reasonable to assume that the trespasser frequents the Site between April and October. With a reasonable maximum exposure (RME) frequency of 58 days per year, the trespasser would be exposed to Site soil between 2 and 3 times per week. For the hunter, it is reasonable to assume that exposure occurs in fall during deer season. Thus, for the hunter, it would be reasonable to assume that the exposure frequency of 24 days per year occurs during a 90-day period, which would be 2 times per week. As requested in Comment #10, please add the default construction worker as a receptor and evaluate exposure of this receptor to lead using the ALM. Please revise the risk assessment to incorporate blood lead modeling for the trespasser, hunter, and construction worker.

**GHD Response:** The HHRA has been revised to add ALM modeling for the required adult receptors.

**Additional HGL Comment:** The text revisions state in one sentence that construction worker exposure to lead in groundwater will be evaluated, then states in the next sentence that this exposure route will not be evaluated. Please resolve this inconsistency.



Mr. Tymchenko  
HGL Comments on Revised RI Report  
10/24/2019

If you have any questions regarding this review or the Sauer Dump Site, please contact me at [REDACTED]  
[REDACTED] or [REDACTED]

Sincerely,

[REDACTED]

[REDACTED]

HGL Project Manager