

N00210.AR.000894
NSTC GREAT LAKES
5090.3a

LETTER AND THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON
THE DRAFT SITE 12 FEASIBILITY STUDY NSTC GREAT LAKES IL
11/10/2015
TETRA TECH INC

**Responses to Illinois EPA's June 2, 2014 Comments and
June 16, 2014 Rebuttals
Draft Site 12 Feasibility Study Report
Naval Station Great Lakes, Great Lakes, Illinois**

Original Date Issued: June 10, 2014

Revision 1 Issued: July 7, 2014

Comment No. 1 - General Comment — As this document was submitted for review before Agency comments on the Draft Final Remedial Investigation/Risk Assessment (RI/RA) were addressed, please ensure that all subsequent revisions to the RI/RA are carried forward to the FS, as appropriate.

Response: Agree. Comment acknowledged.

Illinois EPA Rebuttal: The response is acceptable.

Comment No. 2 - Section 1.2.7.3 — The calculated non-carcinogenic risk for the child resident should be stated here.

Response: Agree. The following text derived from the RI Report (Section 6.8.2) will be added: "RME HIs for the hypothetical future child resident for surface soil and subsurface soil are greater than 1. However, HIs for target organs were less than 1 indicating that non-cancer hazards are acceptable. The CTE HIs for the child resident for surface soil and subsurface soil were less than 1."

Illinois EPA Rebuttal: The response is acceptable.

Comment No. 3 - Section 2.2.1 — Suggest a third Remedial Action Objective to address exposure of maintenance/occupational workers exposure to surface and subsurface soil.

Response: It is assumed that "maintenance/occupational workers" in the subject comment is equivalent to the term "industrial/commercial workers" commonly used in the TACO regulations. As noted in the RI, there was no unacceptable risk identified for maintenance/occupational workers. Therefore, an RAO for this receptor is not needed.

Illinois EPA Rebuttal: The response to comment 3 is not acceptable. The “maintenance/occupational worker” receptor was included and evaluated in the Remedial Investigation/Risk Assessment Report upon which this Feasibility Study (FS) was based. This receptor was in addition to the industrial/commercial worker. Table 6-13 of the Remedial Investigation Report not only provides calculated risk values for this receptor different from the industrial/commercial worker, but those values are reported as being within the United States Environmental Protection Agency’s risk range (2×10^{-5} for surface soil and 4×10^{-5} for subsurface soil). Illinois EPA does not consider those values representative of “no unacceptable risk.” Illinois EPA’s point of departure for acceptable risk is 1×10^{-6} . Risks within the risk range are not deemed acceptable, but require risk management decisions to be made, which may require that remedial action be taken. As such, Illinois EPA’s original request for a Remedial Action Objective to address the risks to those receptors is reasonable.

Response to Illinois EPA Rebuttal: Per discussions with the Navy and Illinois EPA, the following RAO will be added to Section 2.2.1 of the FS:

“RAO 2: Prevent I/C and construction worker exposure through ingestion, dust inhalation, and dermal contact to contaminated subsurface soil with COC concentrations exceeding TACO criteria.”

Note that this new RAO is for subsurface soil only. The RAO does not need to be applied to the surface soil. In the case of I/C exposure, arsenic is the only COC with a concentration greater than its I/C criterion, and there is only one sample where the concentration is greater than the criterion. The maximum concentration in surface soil is 16.9 mg/kg, and the I/C TACO criterion is 13 mg/kg. The arithmetic mean and the 95% UCL of the ten surface soil sample results are 9.07 mg/kg and 11.4 mg/kg, respectively, both of which are less than the I/C TACO criterion. Therefore, per 35 IAC 742.225 (d) and (e), no action is required for the surface soil.

In the case of Construction Worker exposure, there are no concentrations in the surface soil greater than the Construction Worker criteria.

This RAO will be met in Alternatives 2 and 2A through LUCs to require maintenance of the surface soil which acts as a barrier to exposure to subsurface soil. In Alternatives 3 and 3A, the RAO is met by the excavation.

Comment No. 4 - Section 2.2.2.1 — The last statement in the next to last paragraph states, “The I/C and construction worker exposure TACO criteria will not be considered in the evaluation of the

alternatives." This is inconsistent with the FS for Sites 5, 9, and 21, which stated just the opposite. It is understood that the calculated risks for the construction worker at this site were less than the USEPA target risk range of 1×10^{-4} to 1×10^{-6} . However, the risks for the maintenance/occupational worker were within the risk range, not below.

Response: As noted in the response to Comment No. 3, there was no unacceptable risk identified for maintenance/occupational workers. Therefore, no RAOs or PRGs were developed for this type of receptor.

The current and likely future use of Site 12 must also be considered. Site 12 is currently used for recreational purposes, and this use is expected to continue. Sites 5, 9, and 21 are located in areas that are considered industrial, and which will continue to be used for industrial purposes with industrial exposure scenarios. Sites 5, 9, and 21 are also located on the edge of the base that could be sold or transferred through the BRAC process and either converted to residential uses similar to those which abut Sites 5, 9, and 21 to the west or continued to be used industrial similar to the properties to the north. Therefore, the consideration of I/C TACO values was appropriate for Sites 5, 9, and 21. Because an industrial exposure scenario is unlikely at Site 12 and because there was no unacceptable I/C risk, I/C TACO values do not need to be considered further. The statement in Section 2.2.2.1 in the subject comment will be retained for clarity about what was evaluated in the FS.

Illinois EPA Rebuttal: Regarding the first part of the response to comment number 4, see the previous comment. For the second part, there are calculated risks to current maintenance/occupational workers, and these risks would be applicable to potential future receptors as well. Exposure routes and criteria for the maintenance/occupational workers should be considered in the evaluation of alternatives.

Response to Illinois EPA Rebuttal: Per the follow-up comment and response to Comment No. 3 above, an RAO for I/C and construction worker exposure will be included. The subject sentence in Section 2.2.2.1 per the original comment will be revised by deleting the word "not":

"The I/C and construction worker exposure TACO criteria will be considered in the evaluation of the alternatives."

The follow-up response to Comment No. 3 describes how the I/C and construction worker exposure scenarios will be addressed.

Comment No. 5 - Table 2-1 — Another TBC to be included on the chemical-specific ARAR Table would be the most recent Preliminary Remediation Goals, U.S. EPA Region 9. They may be only TBCs, but they are, in many instances, more stringent than the TACO screening values.

Response: Please note that USEPA Region 9 PRGs have been replaced by the Oak Ridge National Lab/USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites (RSLs). These RSLs (and other potential TBCs) are excluded from Table 2-1 because the ARARs and TBCs listed on Table 2-1 are only those that will be retained for use in one or more of the alternatives, and ultimately used in a ROD. The table is not intended to include all regulations or TBCs that were evaluated, but subsequently rejected, because they were either not applicable, relevant, appropriate, or necessary.

TBCs are used in the absence of protective ARARs. The selection of a TBC is subjective, and there are often several choices available for a given situation. The primary criterion for the selection of a TBC is that it be protective. There is no requirement to select the most stringent value available. As has been the case for other sites at NSGL, the Illinois EPA TACO values have been used because they are considered protective. Therefore, the inclusion of other TBCs or the discussion of other TBCs in the FS is not needed. No change will be made based on this comment.

Illinois EPA Rebuttal: For response to comment number 5, it is noted that the Region 9 PRGs have been replaced by the Oak Ridge National Laboratory/USEPA Regional Screening Levels for Chemicals at Superfund Sites. In addition, while Illinois EPA understands that they would be merely To Be Considered (TBC) guidelines, the listed State of Illinois Tiered Approach to Corrective Action Objectives (TACO) regulations are TBCs as well. The Site 19 FS listed both the Region 9 PRGs and the TACO regulations on the ARAR Table. Illinois EPA believes this FS should list both the Oak Ridge National Laboratory/USEPA Regional Screening Levels for Chemicals at Superfund Sites and the TACO regulations on its ARAR Tables.

Response to Illinois EPA Rebuttal: Agree. The RSLs will be included in the subject ARAR table (Table 2-1). The entry from Site 19 FS Table 2-1 will be used. However, the following sentence will be added to the end of the "Evaluation/Action to be Taken" column:

"No RSLs were selected as PRGs."

Comment No. 6 - Table 2-3 — Please include the Illinois Solid Waste and Special Waste Hauling regulations (35 Illinois Administrative Code (IAC) 809) in the ARAR table.

Response: Table 2-3 already includes portions of Illinois Solid Waste and Special Waste Hauling regulations (35 IAC 809) along with portions of 35 IAC 808 to the extent necessary. The scope of 35 IAC 809 applies to transporters of Special Waste which is an off-site requirement. These off-site requirements must be followed in any case and are not listed in the ARAR tables. A similar example is the regulations for hazardous waste transporters, which are not included on the ARAR tables. No change will be made based on this comment.

Illinois EPA Rebuttal: The State does not agree with the response to comment number 6. Please include the specified regulations in the table as was done for the FS for Site 19.

Response to Illinois EPA Rebuttal: Agree. The entry for 35 IAC 809 in the Site 19 FS will be added to Table 2-3. The current "Special Waste Classifications" entry will be edited to delete the 35 IAC 809.103 reference.

Comment No. 7 - Section 4.2.2 — Alternatives 2 and 3 list Natural Attenuation as part of the remedy. However, there are no monitoring activities (groundwater sampling) included along with the natural attenuation. Please explain how the addition of Natural Attenuation, without some type of monitoring, is considered an enhancement of the remedy. Simply mentioning natural attenuation without providing some way of determining that it is actually occurring is not acceptable.

Response: Agree. However, because the groundwater cannot be used, there is no benefit in the collection of groundwater samples as part of a monitoring program. Therefore, the alternatives will be revised to eliminate "Natural Attenuation" as a component because no monitoring will be performed. General discussions of "natural attenuation" in the text will be revised to "natural processes". Sections 3, 4, and 5 and Table 5-1 will be revised to eliminate Natural Attenuation as a component to the alternatives. Minor revisions will be made in Table of Contents, Figure 4-1, Figure 4-3, Appendix C, and the cost estimate text in Appendix D.

Illinois EPA Rebuttal: The response is acceptable.

Comment No. 8 - Section 4.2.3.1 — The description for Alternative 2A assumes approximately 5 years will be required for treatment. From where did this estimate come? Please explain its origin.

Response: A duration for treatment was needed for cost estimating purposes. The groundwater was not modelled, so the duration was estimated using the groundwater velocity (approximately 40 feet per year) and the length of plume (approximately 200 feet). The 5-year period is assumed to be sufficient for the contaminants to pass through. No change will be made based on this comment.

Illinois EPA Rebuttal: The response to comment number 8 answers the question posed by the comment. However, if no explanation is included in the FS, the reader will not have that information. Please include the explanation provided within the FS Report.

Response to Illinois EPA Rebuttal: Agree. The second paragraph on page 4-12 will be revised as follows (new text is underlined):

“The AS system would be operated until the PRG is met; for cost estimating purposes, approximately 5 years are assumed to be required for treatment. The estimated duration considered groundwater velocity (approximately 40 feet per year), length of the plume (approximately 200 feet), and time to pass through the AS area (approximately 5 years). The amount of organic carbon is unknown; therefore, the duration of AS operation is uncertain...”

Comment No. 9 - Appendix C On page 2, the site is mistakenly identified as the Naval Weapons Industrial Reserve Plant at the end of the first paragraph.

Response: Agree. The correction will be made.

Illinois EPA Rebuttal: The response is acceptable.

Comment No. 10 - Appendix C — On page 3, the FS/Corrective Measures Study for Site 4 (Area of Concern 22) —Former Underground Storage Tanks is mentioned, rather than the FS for Site 12.

Response: Agree. The correction will be made.

Illinois EPA Rebuttal: The response is acceptable.