



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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March 19, 2010

Engineering Field Activity, Midwest  
Attn: Mr. Howard Hickey  
Building 1A, Code 931  
201 Decatur Avenue  
Great Lakes, Illinois 60088-5600

Re: Navy Responses to Comments on the  
Remedial Investigation and Risk Assessment  
Report for Site 19 – Small Arms Range 910  
Naval Station Great Lakes, Great Lakes, Illinois

0971255048 – Lake  
Great Lakes Naval Station  
Superfund/Technical

Dear Mr. Hickey:

The Illinois Environmental Protection Agency (Illinois EPA or Agency) is in receipt of the Navy's responses to Agency comments on the Remedial Investigation and Risk Assessment Report for Site 19 – Small Arms Range 910, Naval Station Great Lakes, Great Lakes, Illinois. They were dated February 22, 2010 and were received via electronic mail that same day. The Agency has reviewed the Navy's responses and has the following additional comments. In addition, we have now completed our review of the Appendix F risk calculations and are providing the comments generated during that review as well.

- 1) **Response to Comment Number 1** – This comment is concerned with the differences between the Table 4-4 and Table 6-1 and 6-2 comparison criteria. The response clarifies the dissimilar objectives of these tables, i.e., to define extent of contamination versus screening against acceptable soil criteria. The response is acceptable.

The Agency must caution, however, that the selection of screening criteria must be done carefully. When comparing the Table 4-4 criteria to the Table 6-1 and 6-2 criteria, we note the removal of several categories of screening values. These include the ORNL Industrial criteria and the TACO and non-TACO Industrial/Commercial and Construction Worker ingestion criteria. It appears this was done because criteria for these categories are typically greater than the Residential and non-Residential inhalation routes of exposure. However, a small group of the non-TACO compounds have limited toxicology data (subchronic only) which results in criteria for the

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Construction Worker only, ingestion or inhalation. None of these compounds were detected at this site and no revision is required.

- 2) **Response to Comment Numbers 2 and 3** – Responses acceptable.
- 3) **Response to Comment Number 4** – The responses and expanded correction are acceptable.
- 4) **Response to Comment Number 5** – Our original comment concerned the ProUCL statistical program utilized for calculating the soil exposure point concentrations. The user's guide for this computer software cautions against use of ½ the detection limit for non-detect results. The response states that ½ the detection limit was agreed to earlier and no change is required. The State will accept this response due to the prior agreement and in light of the very low incidence of non-detect results in the data set for this site. However, in the future, the software user's guide should be followed.
- 5) **Response to Comment Number 6** – The responses are acceptable.
- 6) **Response to Comment Number 7** – The Agency's comment #7 asks for the specific input parameters employed when calculating the soil-to-air screening criteria. The response directs us to the location of the exposure frequency and duration information and the receptor intake parameters. This is helpful but not conclusive. The calculated screening values presented in revised Table 6-1 could not be reproduced. Additional comments regarding Tables 6-1 and 6-2 are presented in the replies for Comment #15.

Furthermore, it appears that the Residential and Industrial receptor values were calculated using the internet calculator as stated in Section 6.3.1. However, the Construction Worker values appear to be derived from the Supplemental SSL procedures (December 2002) Exhibit A-1 and A-2 equations. Section 6.3.1 should be corrected.

- 7) **Response to Comment Number 8** – The Agency's comment asked for a description of how "BaP Equivalents" were derived. The initial response provided a reference that was later retracted. The subsequent reference provided an internet reference for the assignment of order-of-magnitude relative potency factors which is helpful. What is lacking is a detailed description of their application. For example, we need to know whether the highest or average environmental concentration for each carcinogenic PAH was used and how non-detects were treated.

The second part of our comment asked why some "BaP Equivalents" entries are qualified by "halfnd". We assume this indicates that ½ the detection limit was substituted for non-detection results. As stated for Comment #5, we will accept this

practice for this report. We do question, though, why the “halfnd” appears only for BaP equivalent results and intermittently. Please confirm the practice was used uniformly for all parameters.

- 8) **Response to Comment Numbers 9 through 12** – The subject responses are acceptable.
- 9) **Response to Comment Number 13** – The response provides the sub-chronic PEF calculation for the Construction Worker receptor. Recently, the response to a similar comment for NSGL Site 5 included site-specific inputs for all variables. The response for this site, other than the time variable (T), contains defaults from the Supplemental SSL reference. The use of defaults for site-specific inputs should be discussed and properly justified.
- 10) **Response to Comment Number 14** – Response acceptable.
- 11) **Response to Comment Number 15** – The response states that Table 6-1 was reviewed and amended. Additional work is needed, however. For example, values are incorrect such as the ORNL-RSL-residential criterion for chromium: 280 vs. 0.29, values are missing such as no ORNL-Industrial and Construction Worker-inhalation for nickel, 1/10 not applied to non-carcinogens such as the TACO-Residential-inhalation value for naphthalene, and 1/10 applied to carcinogens such as the TACO-Residential-ingestion for benzo(k)fluoranthene. These are only examples; numerous other errors appear in this table and in Table 6-2. Additionally, the URL in footnote 6 is incorrect. Corrections in Tables 6-1 and 6-2 will impact Table 6-4.
- 12) **Response to Comment Numbers 16 through 18** – The subject responses are acceptable.
- 13) **Response to Comment Number 19** – The first part of our original comment was unclear, so we must apologize. The comment was meant to request the inclusion of inhalation unit risk values for non-BaP carcinogenic PAHs. The unit risk values are available from the California EPA internet site and should be used. The response to the second part of the comment regarding removal of extrapolated values is acceptable.
- 14) **Response to Comment Number 20** – The response states that the Recommendations in the Executive Summary and Section 7.2 will be changed based upon what the team develops. That is acceptable. However, given that there are still revisions to the document to be made and reviewed, specifically regarding the risk quantification calculations; such discussion cannot yet be conducted.

The second part of the response proposes changes to the 5<sup>th</sup> bullet of the conclusions, which make use of the background values found in the Agency's Tiered Approach to Corrective Action Objectives (TACO) regulations. Those values are useful when discussing the uncertainties regarding the calculated risk numbers. However, the Navy is reminded that TACO is not an Applicable nor Relevant and Appropriate Regulation (ARAR) at this site. It is merely a To Be Considered (TBC) regulation. This should be pointed out here as well if the proposed table is to be provided. The final determination for whether remedial action is required at this CERCLA site will be based upon the calculated risk.

Additionally, several of our original comments potentially impacted the outcome of the Appendix F risk quantification calculations. This situation persists. Therefore, our review of the Appendix F risk calculations is again postponed until our comments have been satisfactorily addressed.

If you have any questions regarding anything in this letter or require any additional information, please contact me at (217) 557-8155 or by electronic mail at [brian.conrath@illinois.gov](mailto:brian.conrath@illinois.gov).

In accordance with Public Act 96-0603, which went into effect on August 24, 2009, any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Sincerely,



Brian A. Conrath  
Remedial Project Manager  
Federal Facilities Unit  
Federal Site Remediation Section  
Bureau of Land

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cc: Bob Davis, Tetra Tech NUS, Inc.

Owen Thompson, USEPA (SR-6J)