ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

(217) 557-8155
(FAX) 782-3258

May 11, 2005

Department of the Navy
EFA Midwest
c/o Bill Busko
Environmental Department
201 Decatur Avenue
Great Lakes, Illinois 60088-5600

2005 MAY 20 PM 12:26

PWC GL

Re: LPC # 0971255004 -- Lake County
Naval Station Great Lakes – Building 68H
LUST Incident No. 991563
LUST Technical File and Superfund Technical File

Dear Mr. Busko:

The Illinois Environmental Protection Agency (Illinois EPA or Agency) is in receipt of the Navy's Corrective Action Completion Report, Closure of Former Leaking Underground Storage Tank Building 68H, Naval Station Great Lakes, Great Lakes, Illinois requesting closure at Building 68H. It was generated by Toltest, Inc. and was dated February 2005 and received on March 25, 2005. In the submittal the Navy is requesting an NFR determination be made based on the proposed institutional controls, land use restrictions (Industrial/ Commercial current and future land use), base-wide groundwater use restriction, and the existence of an engineered barrier. Illinois EPA previously provided a comment letter in response to the Navy's 45-Day Report for this incident number and the associated LUST Relative Risk Ranking Sampling Report. That letter was dated August 21, 2003. In it, Illinois EPA provided two possible options for the Navy to close this site out. One was to perform an additional removal followed by confirmation sampling to verify attainment of unrestricted reuse levels. The other was to submit a CACR and provide additional information/calculations/data in order to exclude the appropriate exposure routes. The Navy's submitted CACR follows the latter course, to provide the requested information to exclude those exposure routes. The Agency has reviewed this most recent document and provides the following comments:

1) **Executive Summary** - There is mention of seven soil samples collected to assess the

extent of the release. On page 2 within the Introduction, it states the 45-Day Report indicated nine soil samples (UST-1 through UST-9) were collected. On page 7 within Section 2.1 it lists eighteen soil samples (68H-001 through 68H-018) were collected. Figure 3 shows the location of the nine soil samples labeled UST-1 through UST-9, as does the following table. The 45-Day Report in the Agency's possession also reports those same nine samples. The tables in Appendix 3 report data for 10 samples, only seven of which are from the initial excavation. There is no data provided in either report, save the text in this section, which supports or confirms the collection of 18 soil samples. Please review the available data and determine how many samples were actually collected. If the number is 18, then the analytical data for those samples will need to be included in this report and re-submitted for Agency review. If nine is accurate, all reference to the eighteen soil samples labeled 68H-001 through 68H-018 must be removed.

2) **Section 1.4, Hydrology** - The next to last sentence states, "Determination of groundwater flow using the groundwater elevations from each piezometers was not obtained because the piezometers were not placed in a triangular pattern." In Section 2.1, it states, "During the LUST Relative Risk Ranking Sampling, three soil borings (NTC-68H-SB1 through NTC-68H-SB3) were placed in a triangular pattern ..." Figure 2.0C shows the locations of the soil borings as being the same as the piezometers, which agrees with the statement in Section 1.4 that reads, "...three temporary piezometers (NTC-68H-TP1, NTC-68H-TP2, and NTC-68H-TP3) were installed in the soil probes." The sample locations shown in the figure are in agreement with the original statement from Section 1.4 and are <u>not</u> in a triangular pattern. Again, Illinois EPA suggests the Navy review the available data and determine which statements are accurate and remove the inaccurate ones. (It appears to the Agency that Section 2.1 is either discussing data that has not been submitted to the Agency or is in error.)

3) **Section 1.5, Pathway Exclusion** – On page 5 and in the 45-Day Report, the excavation was reported as being 15 feet by 15 feet by 11 feet deep. According to the 45-Day Report, "The excavation, 15' by 15' by 11', was backfilled to within two feet of the surface with clean 3/4" crushed stone fill material. A final 1.5 foot lift was filled with CA-6 road-base compactible gravel and a 6-inch concrete replacement cap was placed over the excavated area as final site restoration." The excavation occurred in 1999. The LUST Relative Risk Ranking Sampling occurred in 2002. According to Section 1.2, the 2002 samples labeled NTC-68H-SB1 and NTC-68H-SB2 were both located within the previous excavation cavity. All of the exceedances reported for this site, in the LUST Relative Risk Ranking Samples, were attributed to these two borings or the piezometers installed within them. The depth of those exceedances and the reported staining and odors was reported as 6-8 feet, 8 feet, or throughout the entire boring. As noted above, from the surface to approximately 11 feet below ground surface, the excavation was

backfilled with clean fill material. If that is the case, how is it that samples collected from within that clean fill material reveal contamination above the remediation objectives? Further removal may be required. Also, how do samples within the backfill confirm or refute the presence of contamination in the area surrounding the excavation?

4) **Section 1.6, Remediation Objectives** – The second sentence states, "The appropriate screening values for this site as determined by site usage and as stated in the IEPA letter dated August 21, 2003 are the IEPA TACO Tier I SROs for Industrial property and the IEPA TACO Class II GROs." This is incorrect. Illinois EPA's letter did not state what the appropriate screening values were. The Agency's letter stated that the Navy needed to either remediate the site to unrestricted reuse levels or provide justification (information/calculations/data) to exclude the appropriate exposure routes. The appropriate screening values were never discussed.

5) **Section 2.1, Soil Contaminant Plume** – In the second paragraph, it states, "...and NTC-68H-SB3 was advanced within the northern end of the former tank cavity. This appears to contradict the statement in Section 1.5, referenced above, that states NTC-68H-SB1 and NTC-68H-SB2 were both located within the previous excavation cavity. That statement did not say that NTC-68H-SB3 was located within the excavation cavity. Please clarify which borings were within the excavation cavity and which were not.

6) **Section 2.1, Soil Contaminant Plume** – In the third paragraph, there is discussion of the residual impact migrating to the more permeable and porous sand and gravel lenses. However, in the following paragraph, the statement is made that there is no evidence of contaminant migration or widespread petroleum impact. Has the horizontal and vertical extent of those sand and gravel lenses been investigated and delineated? Without complete delineation of those lenses, it is impossible to determine that there is no evidence of contaminant migration outside of the excavation cavity. Please explain the basis for such a statement.

   Additionally, the last sentence in that paragraph states NTC-68H-SB3 is down gradient from sample 68H-004. According to Section 1.4, the groundwater flow direction was not determined. Please explain how it was determined that sample NTC-68H-SB3 was down gradient.

7) **Section 2.2, Groundwater Contaminant Plume** – How can it be stated that "the impacted groundwater remains localized within the former tank cavity" when there was only one groundwater sample collected outside the tank cavity and the groundwater flow direction has not been determined? Please explain.

8) **General Comment** – None of the figures in the CACR have horizontal scales on them.

Please revise the figures to include a scale for reference.

9) **General Comment** – The Agency's comment letter dated August 21, 2003 listed 5 items of information that were required to exclude the appropriate exposure routes. The Navy's CACR adequately addresses 4 of those 5. It does not properly address number 2. The nature and extent of both the soil and the groundwater contamination has not been completely delineated. The nature and extent of contamination must be delineated before any determination regarding exclusion of an exposure pathway can be made.

This letter does not complete the statutory and regulatory requirements pursuant to Section 57 of the Act (415 ILCS 5/57) for this LUST Incident. The outstanding LUST Program requirements must be addressed prior to the Illinois EPA issuing any No Further Remediation letter for this LUST Incident.

If you have any questions regarding this correspondence, you may contact me at (217) 557-8155 or via electronic mail at Brian.Conrath@epa.state.il.us.

Sincerely,

Brian A. Conrath

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

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cc: Tom Henninger, LUST