



## State of New Jersey

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Mr. Ted Gabel  
Project Manager for Environmental Restoration  
Environmental Directorate, B319  
U.S. Army IMA-NERO Garisson  
Picatinny Arsenal. New Jersey 07806-5000

August 25, 2014

Re: Draft Lakes Feasibility Study PICAs 015, 057 and 164, June, 2014 - Picatinny Arsenal, Dover, New Jersey

Dear Mr. Gabel:

The New Jersey Department of Environmental Protection (Department) has completed the review of Picatinny Arsenal's Draft Lakes Feasibility Study and has the following comments.

### Case Management Comments

1. P. 10 and P. 31 The site history section for Lake Denmark and Picatinny Lake should be updated with the results of the MMRP RI. Particularly, on page 31, there is a discussion of what types of MMRP related items are suspected to be in the Picatinny Lake. A paragraph should be added as to what was found.
2. P. 49, p. 63, p. 75, p. 77, p. 79 and Appendix D2, p. 13- Throughout the report the Army states that there is not unacceptable ecological risk for Picatinny Lake. In the 2013 benthic tissue study, the Army was not able to collect enough tissue data to say conclusively that there is no risk to benthic organisms in Picatinny Lake. Benthic tissue data would be an additional line of evidence, and given that various lines of evidence indicate impact (chemical data, toxicity tests), this lack of chemical information from the

tissue data leaves the issue whether there is ecological risk in Picatinny Lake inconclusive.

3. P. 52 - At the February 6, 2014 meeting with the Army, EPA and the NJDEP, the Army proposed hotspot removal of five areas in Picatinny Lake with elevated metal and explosive data. The proposal was based on the inconclusive lines of evidence, including the outcome of the 2013 benthic tissue study, which did not provide conclusive evidence that there was not unacceptable risk to benthic community in Picatinny Lake.
4. P. 53 – Section 4.2.1 states that potential chemical specific ARARs and TBC guidance is presented In Table 4-1. Table 4-1 does not include the NJ Surface Water Quality Standards, or the sediment criteria. Also, the sediment criteria listed on page 53 does not include the NJ Ecological Screening Criteria. Also the NJ Ecological Evaluation Technical Guidance should be a TBC.
5. P. 54- 55 - The RAO's discuss the clean-up goals for the metals and the explosives. There is a disconnect between the potential ARARs and TBCs listed on page 53-54 and the clean-up goals. The Army needs to provide continuity between these two sections. Perhaps the Army can include a table with the numeric clean-up goals listed.
6. P. 65 – The NJDEP substantive requirements should be elaborated on or provided elsewhere in the report.
7. Appendix B – The title of the tables should be “Promulgated Standards and Guidance....” since some of the criteria in the table are promulgated standards.

### Ecological Risk Assessor Comments

1. **Executive Summary:** The FS refers to mercury in fish tissue, then states that “it remains unclear if the issue is site related;” however, mercury is observed in sediments at levels up to 254 ppm and remains undelineated. These levels of mercury in sediment are clearly contributing to the mercury levels in the fish tissue within Picatinny Lake. Picatinny Lake contains hot spots with unacceptable levels of contaminants and toxicity. The hot spots consist of persistent, bioaccumulative, toxic contaminants (PBTs), which will remain in the environment for decades, continuing to contaminant ecological receptors and migrate to downstream areas, and even spread to the terrestrial environment. These PBTs must be removed from the environment in accordance with NJDEP policy and the Ecological Evaluation

Technical Guidance (EETG) (NJDEP 2012) found at  
([http://www.nj.gov/dep/srp/guidance/srra/ecological\\_evaluation.pdf](http://www.nj.gov/dep/srp/guidance/srra/ecological_evaluation.pdf)).

2. **1 Introduction:** The FS references NJDEP guidance documents from 1992 and 1997 without providing document titles; however, these documents are not included in the reference section. The full reference for these documents should be provided. In addition, the EETG (2012) should be referenced and used in the FS.
3. **3.3.4.3 Ecological:** The FS states that “the results of the Phase II ERA indicate that ecological risks are not significant for Picatinny Lake as a whole.” Significant contaminant levels remain in hot spots within the lake. These PBTs must be removed from the environment in accordance with the EETG and NJDEP policy.
4. **3.3.4.4 Aquatic Biota:** The FS references a fish survey and the summary statistics regarding populations; however, sublethal effects were not measured. Therefore, the fish survey does not provide a complete picture of the environmental impact that the contaminants are having on the biota.
5. **4.2 Identification of ARARs:** The FS does not list the EETG as a TBC. The EETG should be added, particularly Section 6.0 which lists a preference for treatment and removal for sites where ecological risk is determined to be negligible if persistent, biomagnifying, toxic contaminants are present.
6. **4.2.1 Chemical-Specific ARARs and TBC Guidances:** See comments under **4.2 Identification of ARARs**, above.
7. **4.2.2 Action-Specific ARARs and TBC Guidances:** See comments under **4.2 Identification of ARARs**, above.
8. **5.4.2 Land Use Controls:** The FS states that LUCs are “not effective in managing potential exposure to benthic communities.” Whereas this is accurate, other ecological receptors should be listed in addition to the benthic communities.
9. **7.2 Individual Analysis of Alternatives:** See comments under **4.2 Identification of ARARs** and **5.4.2 Land Use Controls**, above.
10. **7.2.2 Alternative-2 - LUCs:** See comments under **7.2 Individual Analysis of Alternatives**, above.
11. **7.2.3 Alternative-3 - Sediment Removal and Off-Site Disposal (Sediments):** See comments under **5.4.2 Land Use Controls**, above.
12. **7.3.1 Overall Protection of Human Health and the Environment:** See comments under **5.4.2 Land Use Controls**, above.
13. **7.3.2 Compliance with ARARs:** See comments under **4.2 Identification of ARARs**, above.

14. **7.3.3 Long-Term Reliability and Effectiveness:** See comments under **5.4.2 Land Use Controls**, above.
15. **7.3.5 Short-Term Effectiveness:** See comments under **5.4.2 Land Use Controls**, above.
16. **Figures 6-1 through 6-5:** These figures indicate that the contaminant hot spots are not delineated.
17. **Table B-2:** The table does not list the NJDEP ecological screening criteria (ESC) posted on the website at <http://www.state.nj.us/dep/srp/guidance/ecoscreening/>. The ESC have been posted since 2008, with the most recent version updated in 2009. In accordance with the introductory paragraph, the most conservative ESC (LELs for freshwater sediments) should be used as an initial screening value.

If you have any questions, please contact me at (609) 292-3007.

Sincerely,



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Case Manager  
Bureau of Case Management

cc: William Roach, USEPA  
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Jim Kealy, BEERA