EPA Comments on the
Group 1 Sites Record of Decision, March 2010
Picatinny Arsenal, NJ
June 24, 2010

General Comments

1. Add a figure showing the boundaries of the LUCs.

2. The Group 1 Sites ROD addresses contaminated soil and groundwater. However, Table 5, Human Health Risk Assessment Results, and Section 2.8.1.3, Risk Characterization do not list or discuss risk resulting from exposure to contaminated groundwater. It is requested that risk associated with this exposure pathway be fully discussed and added to the relevant table.

3. The selected remedy for contamination in soil at Site 40 includes the removal and off-site disposal of explosives and the implementation of land use controls for arsenic, PCBs, PAHs and residual explosives. However, it is not indicated in the ROD that risk levels will be acceptable after explosive-contaminated soils are removed from the site. Therefore, it is requested that language be added to the ROD indicating that risk levels due to exposure to soils will be acceptable at Site 40 following the implementation of the remedy.

Specific Comments

1. Section 1.5, Statutory Determinations, third paragraph, page 1-2 – Insert "the" between "and" and "NCP".

2. Section 1.6, Data Certification Checklist, page 1-2 – The page number for Baseline risk represented by the contaminants of concern (COCs) should be page number 2-5.

3. Section 1.7, Authorizing Signature, page 1-3 – Change "Emergency and Response Division" to "Emergency and Remedial Response Division".

4. Section 2.1, Site Name, Location, and Description, third paragraph, page 2-1 – In the second sentence, it is apparent that "Area I" should be replaced with "Group 1".

5. Section 2.4, Scope and Role of Response Action, second paragraph, page 2-3 – In the second sentence place "explosives in" before "groundwater".

6. Section 2.4, Scope and Role of Response Action, fifth paragraph, page 2-3 – Revise the first sentence as follows: "The RA selected for explosives in groundwater at Group 1 Sites…."

7. Section 2.4, Scope and Role of Response Action, sixth paragraph, page 2-3 –Revise the paragraph as follows: "Land use controls (LUCs) for soil and groundwater will be

implemented to control current and future activities at Group 1 Sites that could result in unacceptable risk to human health." It should be noted that land use controls include institutional controls and engineering controls.

8. Section 2.4, Scope and Role of Response Action, seventh paragraph, page 2-3 – In the last sentence in the paragraph replace "beneficial use" with "unrestricted use".

9. Section 2.6.1, Physical Characteristics, Size, Topography, and Surface Water Hydrology, first paragraph, page 2-3 – In the second sentence, it is apparent that "Area I" should be replaced with "Group 1". It should be noted that according to the Lakes FS, Picatinny Lake is 108 acres in area.

10. Section 2.6.2, Summary and Findings of Site Investigations, Extent of Ground Water Contamination, page 2-5 – To be consistent with the text, "Ground Water" in the section title should be "Groundwater".

11. Section 2.6.2, Summary and Findings of Site Investigations, Extent of Ground Water Contamination, first paragraph, page 2-5 – In the last sentence of the paragraph replace "effected" with "affected".

12. Section 2.7, Current and Potential Future Land Use, second paragraph, page 2-5 – Revise the second to last sentence of the paragraph as follows: "The WRA functions as an institutional control…."

13. Section 2.8.1, page 2-6 – The second sentence states: "Potential risk associated with exposure to chemicals in soil, sediment, groundwater and surface water were quantified for current and future outdoor maintenance workers, current and future industrial/research workers, and future construction/excavation workers". Site Worker along with an Onsite Youth Visitor are two additional receptors which were evaluated and should be included in the text.

14. Section 2.8.1.2, page 2-6 – 2-7 – This section should be edited to include the Site Worker and an Onsite Youth Visitor as receptor populations for whom estimated risk and hazards were calculated.

15. Section 2.8.1.3, Risk Characterization, page 2-7 – 2-9 – This section has several inconsistencies when compared to Table 5. These include:

<u>Site 40:</u> "The cumulative cancer risk for the future industrial/research worker was 4 x 10-4 which is greater than the USEPA cancer risk range." Table 5 data shows that the cancer risk was estimated at 3 x 10 -4

<u>Site 93:</u> "The non-cancer hazard for a construction worker was calculated to be greater than the hazard threshold of 1 (HI=2)." Table 5 states the HI=6. Additionally, as shown in Table 5, the HI for an onsite youth visitor is 3. This should be mentioned/discussed in the ROD text since it is above 1 and hence in the unacceptable risk range.

Site 156: "Cumulative cancer risk associated with the exposure of a current and future industrial/research worker exposure to soil at Site 156 was found to be 2 x 10-4. The receptor "Industrial research worker" is not found on Table 5, however there is a Site worker listed. The reference to the receptor should be the same in both places. This also applies later in the paragraph when the non-cancer effect is discussed and again in the following paragraph when dermal absorption of arsenic is discussed. Changing the language in the ROD to be consistent with Table 5 would serve to diminish any confusion.

16. Section 2.8.2.1, Summary of Findings for Soil and Terrestrial Food Chain Exposures, first paragraph, page 2-9 – It is stated that "…surface soils at Sites 40 and 157 were toxic and likely to pose a risk to terrestrial plants and soil invertebrates." Additionally, it is noted that the Feasibility Study identified ecological risk drivers and derived ecological cleanup goals for surface soil through a weight of evidence approach. However, the Remedial Action Objectives (RAOs) provided in the Record of Decision do not address the protection of ecological receptors. Therefore, it may be appropriate to include an RAO which prevents ecological exposure to contaminated soil that would cause unacceptable risk.

17. Section 2.10.1.2, Response Action S1-2: Excavation and On-Site Treatment by Composting, Implementation and Maintenance of LUCs, page 2-12 – Revise the first sentence as follows: "Response Action S1-2 would be achieved in conjunction with the implementation and maintenance of LUCs, which are administrative and engineering measures put in place to maintain the current land use."

18. Section 2.10.4.2, Response Action GW-2: Implementation of Institutional Controls and Monitored Natural Attenuation, Land Use Controls, page 2-16 – Revise the third sentence to state: "These LUC objectives will be met until such a time that contaminant levels are sufficiently reduced to allow for unrestricted use of groundwater."

19. Section 2.10.4.2, Response Action GW-2: Implementation of Institutional Controls and Monitored Natural Attenuation, Surface Water/Sediment Monitoring, page 2-17 – The second sentence refers to screening criteria for surface water and sediment. It appears that the last part of the sentence should be rewritten as follows: "…and screened against the NJSWQC for surface water and the lower of the following for sediment: ISQW, ….".

20. Section 2.10.4.7, Response Action GW-7: Nano-Scale ZVI Injection, MNA, and Implementation of ICs, second paragraph, page 2-20 – The third sentence refers to a "noble metal catalyst". It is requested that an example of a noble metal catalyst be added as in "a noble metal catalyst such as palladium….".

21. Section 2.10.4.8, Response Action GW-8: Enhanced Anaerobic Bioremediation by Injection of Microbial Growth Substrate (Hydrogen Release Compound [HRC®], Emulsified Oil Substrate [EOS®], Sodium Lactate), MNA, and Implementation of ICs,

second paragraph, page 2-21 – In the last sentence of the paragraph, insert a hyphen between “area” and “specific” and “COC” and “fate”.

22. Section 2.11.1, Protection of Human Health and the Environment, Soil, PCBs in Soil, page 2-21 – Revise the latter part of the first sentence as follows: “….but RA S3-1 does not provide adequate protection for human health.”

23. Section 2.11.2, Compliance with Applicable or Relevant and Appropriate Requirements, Soil, page 2-22 – It is stated in this section that Response Action 2S-2, Implementation of Land Use Controls, will comply with chemical-specific ARARs for arsenic, PAHs, and PCBs in soil. EPA requests that language be added to this section explaining how the implementation of land use controls for these contaminants in soil will comply with chemical-specific ARARs.

24. Section 2.12.2, Community Acceptance, page 2-25 – Revise the sentence as follows: “Community acceptance is based on comments received during the public comment period on the Group 1 Sites Proposed Plan and is addressed in the Responsiveness Summary (Section 3) of this ROD.

25. Section 2.14.1, Summary of the Rationale for the Selected Response Action, second paragraph, page 2-26 – Change “Section 2.13.2” to “Section 2.14.2”.

26. Section 2.14.2, Detailed Description of Selected Response Action, page 2-25 – It is requested that this section also include the selected response action for groundwater.

27. Section 2.14.2, Detailed Description of Selected Response Action, page 2-25 – Assuming soil contaminated with explosives is not be removed to a residential levels, revise the fourth sentence as follows: “ICs would also be implemented because some arsenic, PAH, PCB and explosive contamination above residential standards would remain at the site.”

28. Section 2.14.3, Institutional Controls, first paragraph, page 2-26 –

a. In the first sentence, replace “during” with “following”.

b. Add the following sentence to the end of the first paragraph: “Within 90 days of ROD signature, the Army shall prepare and submit to EPA for review and approval a LUC remedial design that shall contain implementation and maintenance actions, including periodic inspections.”

29. Section 2.14.3, Institutional Controls, second paragraph, page 2-26 – It is requested that the second paragraph be replaced with the following:
“The IC objectives for the Group 1 Sites are:

- Maintain the CEA and prevent access or use of the groundwater until cleanup levels are met.
- Maintain the integrity of any current or future monitoring system such as monitoring wells.
- Prohibit the development and use of property for residential housing, elementary

and secondary schools, child care facilities and playgrounds.
These IC objectives will be met until such time as contaminant levels are sufficiently reduced to allow for unrestricted use and unlimited exposure."

30. Section 2.14.3, Institutional Controls, third paragraph, page 2-26 – It is requested that the third sentence listing exhibits in the Army's plans be embellished on to explain more fully how they contribute to the Army LUCs.

31. Section 2.14.3, Institutional Controls, third paragraph, page 2-26 – The first bullet states: "Install and maintain engineering controls (typically signs) be the IC Remedial Design;" It should be noted institutional controls are administrative measures while engineering controls are physical measures such as signs, fences, covers, etcetera. As previously stated, land use controls include institutional controls and engineering controls.

32. Section 2.15, Statutory Determinations, page 2-27 – In the next to last sentence of the paragraph, change "bias" to "biased".

33. Section 3.1.2, Summary of Comments Received During the Public Meeting on the Proposed Plan and Agency Responses, page 3-30 – Revise Mr. Gabel's response to Comment 2 as follows: "There is a fish advisory, as there are for most New Jersey lakes, due to the presence of PCBs and mercury."

34. Table 5, Human Health Risk Assessment Results, Group 1 Sites – Table 5 tabulates the Human Health Risk Assessment Results which is inconsistent in the Receptor Column with the ROD language.

Receptors listed in Table 5	Receptors in ROD language
Industrial Research Worker	Industrial/research worker
Construction Worker	Construction/excavation worker

35. Table 13, Surface and Subsurface Soil Chemical-Specific TBCs –

a. Change "Proposed rule" to "Promulgated rule" for Soil cleanup criteria (SCC) NJAC 7:26D in the Requirement of Law/Regulation column.

b. Change column heading "TBC Status" to "ARAR/TBC Status".

c. Change TBC Status for Soil cleanup criteria (SCC) NJAC 7:26D to "ARAR for dermal/ingestion health based criterion only".