

EPA Comments on the  
Record of Decision Groundwater and Surface Water  
at Group 3 Sites, February 2010  
Picatinny Arsenal, New Jersey  
April 22, 2010

General Comments

1. Add a figure showing the boundaries of the LUCs.
2. The bedrock aquifer is not apparently being addressed by an active response action. If this is the case it should be clearly explained why it is not being addressed by an active remedy. Alternatively, if the bedrock aquifer is being addressed by an active remedy, this should be clearly explained.
3. Given that there are VOCs in the groundwater, a statement should be included in the ROD that identifies either vapor intrusion is not an issue or that it is being addressed through a different action.
4. The ecological risk assessment summary indicates that surface water toxicity was found in some of the sampling locations. Additionally, it is stated that surface water will be monitored for the duration of the groundwater response action to ensure groundwater remediation mitigates potential surface water impacts. However, the remedial action objectives do not include protection of ecological receptors or surface water. Since there will be a monitoring program for surface water included in the Record of Decision, the prevention of ecological exposure to contaminated groundwater/surface water that would cause unacceptable risk over the duration of the response action should be included as a remedial action objective.

Specific Comments

1. Section 1.4, Description of the Selected Response Action – In-Situ Enhanced Bioremediation at Site 2, with Long-Term Groundwater Monitoring and Land Use Controls, page 1-1 – It is requested that a statement be added to this section that a response action for groundwater and surface water is not required at Sites 1 and 4.
2. Section 1.5, Statutory Requirements, second paragraph, page 1-2 – Unless the Army can justify otherwise, the first sentence should be revised to state: “The selected RA addresses Group 3 Sites (PICA 008) through the use of an active treatment technology.”
3. Section 2.1, Site Name, Location, and Description, third paragraph, page 2-1 – In the third sentence change “southeast of Site 1” to “southwest of Site 1”.
4. Section 2.4, Scope and Role of the Response Action, page 2-3 - It is requested that a statement be added to this section that a response action is not required at Sites 1 and 4.

5. Section 2.4, Scope and Role of the Response Action, first paragraph, page 2-3 – In the third sentence, change “Section 2.7.4” to “Section 2.8.4”.
6. Section 2.6.2, Summary and Findings of Site Investigations, page 2-4 – In the third sentence, insert “surface water” before “samples”.
7. Section 2.7, Current and Potential Future Land Use, second paragraph, page 2-7 –
  - a. The end of the fourth sentence refers to the “lower semi-confined, upper semi-confined and unconfined aquifers as discussed in this document.” This reference should be corrected as the document only addresses the unconfined and bedrock aquifer.
  - b. In the seventh sentence, change “affected” to “effected”.
8. Section 2.8, Summary of Site Risks, first paragraph, page 2-8 – Revise the second sentence to read: “As previously discussed, these sites are currently used for industrial purposes, and it is anticipated that this will not change in the future.”
9. Section 2.8.1, Human Health Risk Assessment, first paragraph, page 2-8 – Revise the fourth sentence to read: “However, this ROD only addresses groundwater and surface water.”
10. Section 2.8.1.1, Contaminants of Potential Concern, first paragraph, page 2-8 – It is believed that the parenthetical phrase in the second sentence should be changed to “whichever is lower”.
11. Section 2.8.1.3, Risk Characterization, Site 1, first paragraph, page 2-10 – In the fourth sentence, insert “likely” between “not” and “occur”.
12. Section 2.8.2.2, Summary of Findings for Surface Water, second paragraph, page 2-12 – It appears that the second sentence of the paragraph is out of place as it is a general statement regarding modeled food-chain risks to ecological receptors at Group 3 Sites in the section discussing site-specific risks due to ecological exposure to surface water.
13. Section 2.8.4, Contaminants of Concern and Site Cleanup Levels, first paragraph, page 2-13 – The first paragraph addresses COCs in groundwater. Therefore, “NJDEP Surface Water Quality Criteria” located in 2) should be revised to NJ MCLs.
14. Section 2.8.4, Contaminants of Concern and Site Cleanup Levels, fourth paragraph, page 2-13 – In the last sentence of the paragraph, delete “the” located before “Table 9”.
15. Section 2.10.3, Response Action GW-3: Air Sparging/Soil Vapor Extraction, LUCs and Long-Term Groundwater Monitoring, Planning Permitting, and Reporting, page 2-16 –
  - a. In the first sentence, change “removal action” to “response action”.
  - b. Delete the third sentence as it is redundant with the first two.

16. Section 2.10.5, Response Action GW-5: Zero-Valent Iron Injection, LUCs, and Long-Term Groundwater Monitoring, Long-Term Monitoring, second paragraph, page 2-19 – The third sentence states: “The duration of monitoring activities is subject to change based upon evaluation of the data collected and will ultimately be determined by EPA’s Regional Administrator at that time.” It is very unlikely that the duration of monitoring activities would be disputed warranting the involvement of EPA’s Regional Administrator. Therefore, the sentence should be revised to state “The duration of monitoring activities is subject to change based upon evaluation of the data collected and agreement by EPA and NJDEP.”

17. Section 2.10.6, Response Action GW-6: In-Situ Enhanced Bioremediation, LUCs, and Long-Term Groundwater Monitoring, Long-Term Monitoring, first paragraph, page 2-20 –

- a. It should be specified in this paragraph that EVO injections are only being injected into the southern surficial plume.
- b. It should also be explained why only the southern plume is being treated for by Response Action GW-6 whereas both surficial plumes are treated under Response Actions GW-3 through GW-5.

18. Section 2.10.6, Response Action GW-6: In-Situ Enhanced Bioremediation, LUCs, and Long-Term Groundwater Monitoring, Long-Term Monitoring, second paragraph, page 2-20 – Regarding the third sentence, please refer to **Specific Comment 16**.

19. Section 2.11.2, Compliance with Applicable or Relevant and Appropriate Requirements, page 2-21 –

- a. The first sentence states that all response actions (GW-1 through GW-6) will meet the NJ Groundwater Quality Standards. However, response action GW-1, No Action, does not provide a means to determine whether NJGWQSs have been met at Group 3 Sites. Therefore, response action GW-1 should be removed from the group of response actions meeting this threshold requirement.
- b. In the first sentence, replace “NJ Groundwater Quality Standards” with “NJGWQS”.

20. Section 2.11.6, Implementability, page 2-22 – Revise the first sentence to state: “All of the alternatives are implementable; however, remedy approval from other agencies would be difficult to obtain for Alternative GW-1”.

21. Section 2.15.5, Short-term Effectiveness, page 2-21 – Revise the last section of the fourth sentence to state: “.....this response action would be able to determine when SCLs would be achieved and restrict exposure to groundwater.”

22. Section 2.12.1, State/Support Agency Acceptance, second paragraph, page 2-22 – Capitalize “state” as in “State of New Jersey permit”

23. Section 2.14.1, Summary of the Rationale for the Selected Response Action, second paragraph, page 2-23 – Add the following to the end of the second sentence: “and the results of the pilot study.”

24. Section 2.14.2, Detailed Description of the Selected Response Action, first paragraph, page 2-23 –

a. The third sentence states: “Following EVO injections, MNA would be implemented to address the portions of the plume remaining in the unconsolidated and bedrock aquifers subsequent to injections.”

i. Since EVO injections are being done on only one portion of the unconfined aquifer, then MNA should be implemented concurrently with EVO injections in the bedrock aquifer and the portion of the unconfined aquifer that is not being treated.

ii. Although this will likely become a moot point if the reference sentence is revised, there is a redundancy in the beginning and end of the sentence.

b. Revise the last sentence of the paragraph to state: “LUCs and long-term groundwater monitoring would be implemented at the Group 3 Sites (PICA 008) as a result of contamination remaining in groundwater above NJGWQC.”

25. Section 2.14.3, Land Use Controls, page 2-23 – Delete the last sentence of the first paragraph and insert the following paragraph:

“A LUC Remedial Design will be prepared as the land use component of the Remedial Design. 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.”

26. Section 2.14.3, Land Use Controls, first paragraph, page 2-23 – Add the following to the end of the first paragraph: “A change in land use would include notifying the regulators.”

27. Section 2.14.3, Land Use Controls, second paragraph, page 2-23 – Replace the paragraph with the following:

The LUC objectives for Group 3 groundwater and surface water are as follows:

- Prevent access or use of the groundwater and surface water until cleanup levels are met.
- Maintain the integrity of any current or future remedial monitoring system, such as monitoring wells.
- Maintain the integrity of any components of the remedy, such as injection wells.
- Maintain the existing CEA.
- Prohibit excavation without safeguards in all areas below the water table where groundwater contaminants exceed SCLs.

28. Section 2.14.5, Expected Outcome of the Selected Response Action, page 2-24 – Regarding the second sentence, LUCs do not typically protect ecological receptors.
29. Section 3.0, Part 3: Responsiveness Summary, third paragraph, page 3-1 – In the first sentence, insert “Group 3” before “Sites” at the end of the sentence.
30. Section 3.1.2, Summary of Comments Received during the Public Meeting on the Proposed Plan and Agency Responses, Comment 1, page 3-1 – Revise the first sentence as follows: “Mr. Pat Matarazzo, a member of the PAERAB.”