

Response to Comments
Draft Proposed Remedial Action Plan
Operable Unit 10, Site 35
Former Camp Geiger Fuel Farm
MCB Camp Lejeune, North Carolina

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DATE: April 3, 2009

Introduction

The purpose of this document is to address comments on the Draft Proposed Remedial Action Plan (PRAP) for Site 35, Operable Unit No. 10. The United States Environmental Protection Agency (USEPA) and the North Carolina Department of Environment and Natural Resources (NCDENR) provided the comments listed below. The responses to comments are provided in **bold** text.

EPA Region 4 Comments on the Draft Proposed Remedial Action Plan for Site 35/OU 10 (Dated March 23, 2009)

General Comments

1. Overall most of the content in these Proposed Remedial Action Plans [hereinafter Proposed Plan or PRAP] is useful and provides information required by the NCP or EPA guidance. However, there are some areas that are not entirely consistent with the EPA *Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Documents* [OSWER 9200.1-23P, July 1999](hereinafter referred to as the *Decision Document Guide*) format for a Proposed Plan. For example, some of the standard language related to basis for taking an action provided in the *Remedial Action Objectives* Section belongs in the *Summary of Site Risks* Section. Also, the standard language for ‘hazardous substances’ as opposed to ‘pollutants or contaminants’ should be used [Reference Decision Document Guide p. 3-4 and Highlight 3-2] (see below). RAOs for groundwater should be consistent with the EPA expectation in the NCP and guidance to restore groundwater that is an actual or potential drinking water source to meet cleanup levels throughout the plume.

***[Excerpt: A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents]
Highlight 3-2: Standard Language Explaining Basis for Taking Action***

It is the lead agency's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

If the site is contaminated with pollutants or contaminants (in accordance with the definitions contained in NCP §300.5), then the following standard language should be used: It is the lead agency's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened releases of pollutants or contaminants from this site which may present an imminent and substantial endangerment to public health or welfare."

If the response action will address both hazardous substances and pollutants or contaminants, a combination of the two examples of standard language may be necessary.

The text mentioned above was removed from the Remedial Action Objectives section and the following text was added to the end of the Summary of Site Risks section: "It is the current judgment of the Navy, MCB Camp Lejeune, and EPA, in concurrence with NCDENR, that the Preferred Alternative identified in this PRAP, or one of the other active measures considered in the PRAP, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment."

2. In several places in these documents, it is not clear that land use controls (LUCs) are indeed part of all of the remedial alternatives. Suggest that LUCs be included in the actual title of the alternatives such as with Alternative 2, MNA and LUCs. Also, to emphasize the Preferred Alternative in the documents consider capitalizing and bolding the title. For example: **Alternative 4, Air Sparging with Downgradient ERD Injections and LUCs.**

The Alternative title was capitalized and bolded and was revised to the following: "The Preferred Alternative is Air Sparging (In-Situ Aeration) using a Horizontal Well, Monitoring of the Natural Degradation of Chemicals of Concern (COCs), and Land Use Controls (LUCs)."

In addition, in Table 5: Remedial Alternatives for Site 35, each alternative that includes LUCs as a part of the remedy has "/LUCs" added to the name of the alternative. In the 1st paragraph of Section 9, the text describing the preferred alternative was modified as follows: "Alternative 5, air sparging with LUCs, is the Preferred Alternative to address groundwater contamination at Site 35."

Specific Comments

1. **Introduction, 1st paragraph, Page 1** – Consistent with General Comment #2 above, the sentence on the LUCs is not entirely consistent with the preceding sentence on the Preferred Alternative. Please add the following phrase after the word ‘implemented,’ “as part of the remedy”.

The phrase “as part of the remedy” has been added to the Introduction 1st paragraph, Page 1.

2. **Scope and Role of the Action, Page 6** – Please indicate whether this remedial action is considered the final action for this OU or whether additional responses actions are anticipated. Also, indicate if there have been earlier removal and/or response actions at the OU.

[Add: “This is the final remedial action for Site X and it does not include or affect any other sites at the facility.”]

The sentence provided above has been added to the end of the Scope and Role of Response Action Section.

3. **Remedial Action Objectives, 1st paragraph, Page 7** – The information in this paragraph includes the “basis for taking action” [Reference *Decision Document Guide* Highlight 3-2 on Page 3-4 (see General Comment #1)] and should be included at the end of the *Summary of Site Risks* Section. Accordingly, please “cut and paste” from this Section into the *Summary of Site Risks* Section. See Comment below on what language should be used.

[The first sentence in the Section should begin with “The Remedial Action Objectives (RAOs) for Site X are as follows:]

The 1st paragraph, Page 7 has been moved to the end of the Summary of Site Risks Section and the first sentence of the RAOs sections has been revised to include the suggested language above.

4. **Summary of Site Risks, Page 6** – As indicated in General Comment #1, the basis for action language used in this document is related to ‘pollutant or contaminant’ as opposed to a ‘hazardous substance’. The COCs for groundwater include hazardous substances and therefore the standard language recommended in the EPA Decision Document Guide related to hazardous substance should be used.

The text mentioned above was removed from the Remedial Action Objectives section and the following text was added to the end of the Summary of Site Risks section: “It is the current judgment of the Navy, MCB Camp Lejeune, and EPA, in concurrence with NCDENR, that the Preferred Alternative identified in this PRAP, or one of the other active measures considered in the PRAP, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.”

5. **Remedial Action Objectives, Page 7** – Remedial Action Objectives provide a general description of what the cleanup will accomplish. The RAO for groundwater should be consistent with the EPA expectation in the NCP and guidance to restore groundwater that is an actual or potential drinking water source to meet cleanup levels throughout the plume. Although the current RAO states that COCs will be reduced to meet cleanup levels, it does not suggest that the purpose of the action is to restore groundwater throughout the plume to meet those levels. Revise accordingly.

The RAO was revised as follows:

“Restore groundwater quality at Site 35 to the NCGWQS and MCL standards based on the classification of the aquifer as a potential source of drinking water (Class GA or Class GSA) under 15A NCAC 02L.0201, and to prevent human ingestion of water containing COCs (benzene, TCE, cis-1,2-DCE, and VC) at concentrations above NCGWQS or MCL standards, whichever is more conservative, until the RAO has been obtained.”

6. **Remedial Action Objectives, Table 4 Page 7** – The narrative describing the remedial goals is misleading since cleanup levels are not necessarily tied to UU/UE and should be revised as follows: Table 4: Remediation Goals for Groundwater and Soil.

The title of Table 4 has been changed as recommended to “TABLE 4 REMEDIATION GOALS FOR GROUNDWATER.”

7. **Preferred Alternative, 1st paragraph, 1st sentence, Page 10** – As noted above, to emphasize the Preferred Alternative in the documents consider capitalizing and bolding the title. For example: **Alternative 4, Air Sparging with Downgradient ERD Injections and LUCs.**

The title of the Preferred Alternative in the Introduction has been changed as follows: “The Preferred Alternative is Air Sparging (In-Situ Aeration) using a Horizontal Well, Monitoring of the Natural Degradation of Chemicals of Concern (COCs), and Land Use Controls (LUCs).

8. **Preferred Alternative, 3rd paragraph, Page 10** – Overall the LUC language in this Section is good but it fails to properly address the LUC Objectives and include a reference to a LUC Boundary figure as required by EPA HQ LUC Checklist.

Delete the third paragraph and replace with the following (except the second LUC objective for soils would not apply to Site 35):

“LUCs including, but not limited to, land use restrictions in the Base Master Plan, NOTICE OF CONTAMINATED SITE, Deed and/or Lease Restrictions, and administrative procedures to prohibit unauthorized intrusive activities (e.g., excavation, well installation, or construction) will be implemented to prevent exposure to the residual contamination on the site that exceeds the remediation goals. The LUCs will be implemented and maintained by the Navy and MCB Camp Lejeune until the concentration of hazardous substances in the soil and groundwater are at such levels to allow for unrestricted use and unlimited exposure. The LUC performance objectives include:

- *To prohibit all uses of groundwater from the surficial aquifer underlying Site (73 or 35), including but not limited to, human consumption, dewatering, irrigation, heating/cooling and industrial processes;*
- *To prohibit unauthorized intrusive activities in areas with contaminated soil;*
- *To maintain the integrity of any existing or future monitoring or remediation system at the site.*

The area of (Site 73 or Site 35) that is subject to the LUCs, as well as summary of the land use restrictions is provided in Figure 4.”

¹

Unless prior written approval is obtained from the Navy, MCB Camp Lejeune, EPA and NCDENR

The 3rd paragraph of Section 10 was revised as suggested above with the exception of bullet 1, which will be revised to the following based on the human health risk assessment identifying human consumption as the only unacceptable risk for exposure to groundwater:

- **To prohibit human consumption of groundwater from the surficial and Castle Hayne aquifers underlying Site 35 (unless prior written approval is obtained from the Navy, MCB Camp Lejeune, EPA and NCDENR);**

9. **Glossary, Page 12** – Some of the terms used in this Section have poor definitions and should be revised based upon existing definitions in the NCP or EPA guidance. For example ARARs should read something like: “‘Applicable’ requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under Federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site.”

The definition was changed to the recommended text above. Additionally the definitions provided in the glossary were reviewed and compared to the NCP and revised as necessary.

NCDENR Comments on the Draft Proposed Remedial Action Plan for Site 35/OU 10 (Dated March 4, 2009)

1. Figure 2 of the Site PRAP is mislabeled as Site 73 Conceptual Site Model.

Figure 2 has been re-labeled as “Figure 2 - Conceptual Site Model.”

2. Figure 2 shows concentrations greater than 0.5ug/l as blue and concentrations of greater than 5ug/l as a light green. The proposed treatment area is shown as only blue. This would give the false impression that the red hashed area south of building G560 has greater CVOC concentrations than the groundwater in the field area proposed for Air Sparging. Please add additional colors with greater concentrations to this figure or make other appropriate changes

to clarify this misrepresentation. Do we have wells in the area south of building G560 that have been analyzed during the recent sampling events? Why does the Figure 2 show the high concentrations to the south of G560? Do we need to treat the groundwater in this area as well? We need to discuss the groundwater concentrations in the area south of building G560 at the next Partnering meeting.

The CSM was intended to show the approximate extents of groundwater impacts. VC impacts were depicted to be the most conservative. Based on Biochlor modeling, active treatment is focused on the highest TCE concentrations as shown in Figure 4. CSM will be revised to include only blue shading and will be labeled as extents of VOC-impacted groundwater.

3. The abbreviation for Highway (HWY) on Figure 4 should be corrected from HSY 17 Bypass to HWY 17 Bypass.

Figure 4 has been revised.

4. The State representatives fax number included on page 11 of the draft PRAP is noted as (919) 7332801. This used to be my phone #. The Superfund fax number is (919) 7334811. Please make appropriate changes.

The fax number for NCDENR has been changed to Fax (919) 733-4811.

5. The bottom of page 1 and Page 11 reference the Administrative Record for Camp Lejeune as being located on a the following WEB portal <http://lejeune.lantops-ir.org/>. In order to access the web portal a user name and password are required. Please provide a user name and password in the PRAP and anytime the Lejeune Lantops IR Web Portal is referenced. When you open the site it is not clear how to access the site 35 or 73 documents. Many of the more recent documents (SRI, PRAP, etc.) and sample data from the 2008 sampling events are not in the Administrative Record (AR) files.

The web page portal has been revised to <http://public.lantops-ir.org/sites/public/lejeune/AR.aspx>.

**MCB Camp Lejeune Comments on the
Draft Proposed Remedial Action Plan for Site 35/OU 10
(Dated March 6, 2009)**

1. The Subject PRAP states that the POL contamination is being addressed under the UST Program. The only 2 UST Sites that the UST Program is addressing are the UST-G480 (implementing LUCs) and the UST-TC341 pipeline Site which is well north of our Site (see attachment).

Benzene groundwater impacts commingled with the chlorinated solvent impacted groundwater will be addressed by the IR Program and has been added as a Chemical of Concern (COC) throughout the PRAP. The extents of the benzene impacts have been added to Figure 3.