



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

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VIA FACSIMILE AND U.S. MAIL

April 10, 1997

Mr. Fred Evans
Department of the Navy
Northern Division
Naval Facilities Engineering Command
Code 1823/FE
10 Industrial Highway, Mailstop 82
Lester, PA 19113-2090

Re: Naval Air Station, Brunswick, Maine
Draft Record of Decision for a Remedial Action at Sites 4, 11, and 13

Dear Fred:

Attached are the U.S. Environmental Protection Agency's (EPA) comments on the *Draft Record of Decision for Sites 4, 11, and 13* for Brunswick Naval Air Station. This decision document presents the final action for Sites 4, 11, and 13, and its associated groundwater contamination, the Eastern Plume.

One of the EPA's major points of review was ensuring that this decision document is clear in discussing the transition from the Interim Record of Decision (ROD) for the Eastern Plume to this final ROD. The EPA believes that the attached comments should help in clarifying this decision document.

With regard to the State of Maine Maximum Exposure Guideline as an applicable or relevant and appropriate requirement (ARAR), the EPA understands that this ROD was prepared and submitted prior to the complete resolution of the same issue at Loring Air Force Base. For your consideration, the EPA is providing a copy of the most recent ARAR table on this issue.

Please feel free to call me at (617) 223-5521 should you have any questions.

Sincerely,

Robert Lim, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc. Bob DiBiccaro/EPA-ORC



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Jim Caruthers/NASB
Jeffrey Brandow/ABB
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Susan Weddle/BACSE
Carolyn LePage/TAG Advisor
Rene Bernier/Topsham Community Rep.

ATTACHMENT

The following are the EPA's comments on the *Draft Record of Decision for Sites 4, 11, and 13* dated March 1997.

General Comments

1. Transition from Interim ROD to Final ROD: One of the EPA's major points of review was ensuring the ROD sufficiently explains the transition from the Interim ROD for the Eastern Plume to a Final ROD for Sites 4, 11, and 13 (Source Control) and the Eastern Plume (Management of Migration). Subject to the Navy adequately addressing the following comments, the EPA believes that this ROD sufficiently explains this transition. For added clarity, the EPA has provided suggested, additional text for Section XII. Documentation of No Significant Changes.
2. Since this ROD addresses the Eastern Plume, the Navy should ensure that in appropriate places both Sites 4, 11, and 13 and Eastern Plume are cited. For example, the title page and the table of contents should reference also the Eastern Plume.
3. The EPA suggests providing the revised version of this ROD in redline and strikeout.

Specific Comments

1. Declaration, Page 2; Delete "and the USEPA" since EPA signs the ROD.
2. Declaration, Page 3, Description of Selected Remedy: Describe the Eastern Plume remedy in more detail (i.e., bullets which include groundwater extraction and treatment; groundwater monitoring; operation & maintenance; five-year reviews, etc.)
3. Page 8, Figure 1: Figure should also have approximate extent of Eastern Plume since this ROD addresses both source control for Sites 4, 11, and 13, and management of migration for the Eastern Plume. Similarly, title of map should include "Eastern Plume."
4. Page 14, Last ¶: Suggest adding additional sentence following last sentence alluding to the fact that a decision for the source areas, Sites 4, 11, and 13, would be made at a later date. Briefly state that FS alternatives only looked at Site 11 contamination since the RI was concluded that Site 4 and 13 were not contributing to the Eastern Plume groundwater contamination.

[Section IV. Scope and Role of Response Action: This section should focus on how the response action fits into the overall strategy for addressing the principal threat(s) posed by the conditions at the site.]

5. Page 17, Section IV.: Based on the above objective, suggest revising section in the following way:

a) In the first paragraph, in addition to the no action decision for Sites 4, 11, and 13, suggest declaring in the first sentence (or in a second sentence) the decision for the Eastern Plume is to continue groundwater extraction, treatment and discharge of treated groundwater.

b) Move 2nd, 3rd, and 4th sentence of 1st paragraph in to a new second paragraph where decision for no source control action is briefly stated.

c) Second paragraph becomes the third paragraph.

6. Page 17, ¶ 1, 3rd Sentence: Reference Site 11 Removal Action Closeout Report, and Sites 1 and 3 Remedial Action Report.

7. Page 17, ¶ 2, 1st Sentence: Add "contaminated" before "groundwater."

[Section V. Summary of Site Characteristics: This section should provide an overview of site contamination and the actual and potential routes of exposure posed by the conditions at the site.]

8. Page 19, ¶ 2: At end of last sentence, suggest adding "postponing a source control decision for Sites 4, 11 and 13 until a later time."

9. Page 27, ¶ 2: After second sentence, add statement that groundwater within or downgradient of the plume is not currently used for any purposes (i.e., drinking). Suggest the following:

"Although the aquifer is not currently being used, the groundwater is a potential drinking water source."

[VI. Summary of Site Risks: The summary of the baseline risk assessment should provide an indication of the risks to human health and the environment that are or may be posed by the conditions at the site.]

10. Page 31, ¶ 1, Last Sentence: This statement partially correct. VOCs are the only analytes being analyzed in the Eastern Plume monitoring program. The metals, cadmium and lead, are not.

11. Page 34, ¶ 2: Second through fourth sentences require some clarification. Suggest the following:

"Since sampling from both the remedial investigation and the current long-term monitoring program has determined that the Eastern Plume has not migrated beyond the most downgradient wells (i.e., MW-230A, MW-231A&B, MW-318), exposure to aquatic receptors in Harpswell Cove has not been evaluated. If the Eastern Plume does migrate and discharge to Harpswell Cove, potential exposure may result. However, this exposure is not considered significant because PCE, TCE, and DCE would volatilize from the surface water and/or be diluted below levels of ecological concern."

12. Page 34, ¶ 2, Last Sentence: Suggest qualifying monitoring of surface water in Harpswell Cove only if Plume migrates beyond current, most downgradient monitoring points. For example, "If it appears that the plume has migrated beyond the downgradient most points, the Navy will institute additional downgradient monitoring wells and/or conduct monitoring in Harpswell Cove."

[Section VII. Development and Screening of Alternatives: This section provides a concise description of how each alternative would address the contamination at the site or operable unit from the beginning of the remedy to completion of site activities.]

13. Page 36, ¶ 1: For a better transition, suggest revising to the following:

"Since Sites 4, 11, and 13 require no further action under CERCLA, this section applies only to the Eastern Plume. Additional groundwater remediation alternatives were not developed because alternatives for the Eastern Plume were developed in the Feasibility Study prior to the issuance of the Interim ROD. Since the issuance of the Interim ROD, it has been determined that Sites 4, 11, and 13 are no longer source areas for the contamination in the plume. Therefore it was unnecessary to reopen the FS or to develop additional alternatives."

14. Page 37, Response Objectives: The objectives set forth on page 37 are the same as those found in the Interim ROD and do not reflect the intent of the final remedy which is to restore the aquifer. Therefore, objective number 4 should be revised to: "To restore the aquifer."

15. Page 37, Section VII.B.: In short, the objective of this section is to restate that:
- the FS analyzed alternatives for both source, Site 11 only, and groundwater contamination;
 - since groundwater extraction and treatment were part of each FS alternative, the Interim action for the Eastern Plume was taken

Therefore, suggest substituting the following for the current paragraph:

"In making the transition from an Interim action to a final action, additional remedial action alternatives were not developed because the Feasibility Study identified and analyzed alternatives for both source and groundwater contamination. The Navy's selection of the Interim remedial action as the final action is the result of a comprehensive evaluation of different groundwater treatment options. The FS report described and evaluated five alternatives: no action; groundwater extraction and treatment; and three different source control options for Site 11 in conjunction with groundwater extraction and treatment.

Since groundwater extraction and treatment was common to each treatment alternative and because it was desirable to stop the migration, an interim remedial action for

groundwater was chosen. It was acknowledged that groundwater extraction and treatment could be part of a final site remedy even if additional time were taken to evaluate a source control alternative for Site 11. The decision to take an interim action provided a timely response to the migration of the Eastern Plume groundwater contamination.

In the time since the Interim ROD, the Navy conducted two removal actions at Site 11 under their removal authority and it was determined that Site 11, as well as Sites 4 and 13, are no longer source areas. Therefore, no source control alternatives are evaluated and groundwater extraction and treatment will only be discussed further in this final ROD."

16. Section VIII. Description of Alternative: Suggest including a figure showing locations on extraction wells and treatment plant.
17. Page 39, ¶ 1, 1st Sentence: Suggest deleting "Interim" and "implemented."
18. Page 39, ¶ 1, 2nd Sentence: Suggest deleting "Interim" and change "consisted" to "consists."
19. Page 39, ¶ 1, 3rd Sentence: Suggest changing sentence to the following:

"The extraction system consists of five groundwater extraction wells that are designed to hydraulically contain the plume and reduce contamination throughout the plume."
20. Page 39, ¶ 2: Suggest the following changes:
 - a) Line 1 - Change "was" to "is"
 - b) Line 2 - Change "were" to "are"
 - c) Line 3 - Change "was" to "is"
 - d) Line 4 - Change "was" to "is" and "met" to "meets"
21. Page 39, ¶ 3: Suggest the following changes:
 - a) Line 1 - Change "was" to "is"
 - b) Line 2 - Change "was required from" to "with" and "that outlined" to "outlines"
22. Page 41, ¶ 1: Since transition was made in Section VII., delete second half of 1st sentence beginning with "and."
23. Page 41, ¶ 3: Delete "Interim."
24. Page 41, ¶ 3, 2nd Sentence: Following "uncontaminated areas," suggest adding "and by restoration of the aquifer to potentially allow the future use of the aquifer." instead of "and by permanent...."

25. Section IX.B.: This section should have a brief statement referencing the ARARs tables in Appendix E.
26. Page 42, 1st Full ¶, 2nd Sentence: Delete "Interim" and "proposed." Change "was" to "is."
27. Page 42, Section IX.B., Delete last sentence.
28. Page 43, ¶ 2: Suggest revising paragraph to the following:

"The purpose of groundwater extraction and treatment for the Eastern Plume is to prevent further migration of contaminants and to restore the aquifer. Five extraction wells, placed within the plume, control plume migration and reduce groundwater contaminant concentrations. The extraction wells are designed to address the majority of the Eastern Plume contamination which is located in deeper portions of the aquifer.... Groundwater from the extraction wells are treated using UV/oxidation for the volatile organic compounds. Treatment of the extracted water permanently reduces the toxicity and mobility of contaminants."
29. Page 44, 1st Full ¶: After 1st sentence, suggest adding the following:

"In continuing the operation of the groundwater extraction and treatment system, no short-term impacts are expected since no significant construction is anticipated."
30. Page 44: Based on the above comment, suggest deleting 2nd paragraph.
31. Page 44, 3rd Full ¶: Suggest revising 2nd sentence to the following:

"There is no implementability issues with continuing the operation of the groundwater extraction and treatment system."
32. Page 45, 1st Full Sentence: Suggest revising sentence to the following:

"As part of discharge requirements, the base provides the Brunswick Sewer district with monthly reports detailing sampling and analysis results and total volumes of treated water."
33. Page 45, Section IX.G. Cost: Please provide costs associated with yearly O&M of plant and groundwater monitoring.
34. Page 45, Section IX.H. State Acceptance: Delete "Interim" in 1st and 2nd paragraphs.

[Section X. Selected Remedy: This section should summarize major treatment components of the remedy. It should discuss remediation goals and points of compliance. Estimated costs should be described in

detail. Contingencies should be listed. O&M costs should also be listed.]

35. Section X.: Since this section relates only to the groundwater remedy, suggest beginning the section with the following sentence:

"Since Sites 4, 11, and 13 require no action under CERCLA, this section applies only to the Eastern Plume."

In addition to the brief paragraph on the Eastern Plume Groundwater Extraction and Treatment, the following topics that are found on Page 50 should be separated into separate paragraphs or subsections:

- Cleanup Levels (Page 50, Lines 12-21)
- Long-term Monitoring and Operation and Maintenance (Suggest moving Lines 9-12 to Section X.C.)
- Costs (Page 50, Lines 3-4)
- Five Year Reviews (Page 50, Lines 4-8)

The contingency for Building 584 should be mentioned.

36. Page 47, Section X.A.: Rename subsection title to "Groundwater Extraction and Treatment. In addition, briefly mention treatment process including pretreatment for metals, UV/oxidation for VOCs, discharge to POTW, and periodic disposal to filter press sludges.
37. Page 48, Section X.B.: This section should only deal with the groundwater extraction and treatment portion of the overall remedy. The no action remedy for Sites 4, 11, and 13, should be discussed in Section IV., Page 17. Therefore, suggest moving paragraph on Site and combining with new second paragraph in Section IV., Page 17. See above comments 5 & 6 on Section IV., Page 17. Edit as needed.
38. Section X.D.: Conclusion should not discuss no action for Sites 4, 11, and 13.
39. Page 52, 1st P, 1st Sentence: Add "Sites 4, 11, and 13 before "Eastern Plume."
40. Page 52, 1st P, 2nd Sentence: Delete "selection of the Interim action as."
41. Page 53, 1st P: Change "will treat" to "treats." Change "implementation of the Interim action" to "continuation of groundwater extraction and treatment does not pose any unacceptable..." Change "will be" to "is."
42. Page 53, Section XI.B.: Insert "E" after "Appendix."
43. Page 53, Section XI.C.: Delete "Interim" in 1st and 3rd lines.
44. Page 56, Section XII.: The EPA suggests the following be added for purposes of

describing how the transition from the Interim ROD to the Final ROD was accomplished:

"Although the Feasibility Study evaluated both source control and groundwater alternatives, the decision to select groundwater extraction and treatment was taken because there was a concern with controlling the migration of the Eastern Plume. Since it was a common component of all the remedial alternatives, it was acknowledged that groundwater extraction and treatment could be consistent with the final remedy and the only difference would be the source control alternative for Site 11. In the time since the Interim ROD, the Navy conducted two removal actions at Site 11 under their removal authority obviating the need for further action under their remedial program. It was, therefore, not unnecessary to reopen the Feasibility Study and develop remedial alternatives for the Eastern Plume."

Appendix E

45. Table E-1, Page 1 of 3: Since they are not a requirement, delete RCRA ACLs and Federal AWQC.
46. Table E-1, Page 2 of 3: Since they are not a requirement to the remedy for the Eastern Plume, delete, lines for "USEPA RfDs" and "USEPA CSFs"
47. Table E-1, Page 3 of 3: The table should be revised to indicate that the MEGs are relevant and appropriate and the discussion in "Action to be Taken to Attain aRAR" should be revised accordingly. To assist the Navy in this regard is the current version of the Loring AFB ARAR Table relating to MEGs.
48. Table E-3, Page 1 of 3: Since they are not a requirement to the remedy for the Eastern Plume, delete line for "CWA-NPDES Regulations."

References

EPA, 1989. *Interim Final Guidance on Preparing Superfund Decision Documents*. OSWER Directive 9355.3-02. Washington, DC, June.

**CHEMICAL-SPECIFIC ARARS CRITERIA, ADVISORIES, AND GUIDANCE
GROUNDWATER MITIGATION ZONE ALTERNATIVE**

**OPERABLE UNIT 12 FEASIBILITY STUDY
LORING AIR FORCE BASE**

MEDIA	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS	ACTION TO BE TAKEN TO ATTAIN ARAR
<u>GROUNDWATER</u>				
<u>Federal</u>	Safe Drinking Water Act (SDWA) - Maximum Contaminant Levels (MCLs) (40 CFR 141.11 - 141.16)	Relevant and Appropriate	MCLs have been promulgated for several common organic and inorganic contaminants. These levels regulate the concentration of contaminants in public drinking water supplies, but may also be considered relevant and appropriate for groundwater aquifers used for drinking water.	MCLs in the groundwater will be attained at the compliance boundary. A restriction on the use of groundwater within the compliance boundary will be established, and an appropriate monitoring program will be conducted until the groundwater concentrations are less than the MCLs. An alternate supply of potable water will be assured to future tenants within the groundwater restriction area.
	SDWA - Maximum Contaminant Level Goals (MCLGs) (40 CFR 141.50 - 141.51)	Relevant and Appropriate	MCLGs are health-based criteria to be considered for drinking water sources. MCLGs are available for several organic and inorganic contaminants. Non-zero MCLGs are to be used as goals when MCLs have not been established.	When MCLs have not been established, non-zero MCLGs in the groundwater will be attained at the compliance boundary. A restriction on the use of groundwater within the compliance boundary will be established, and an appropriate monitoring program will be conducted until the groundwater concentrations are less than the MCLGs. An alternate supply of potable water will be assured to future tenants within the groundwater restriction area.
<u>State</u>	Department of Human Services (DHS), Rules Relating to Drinking Water (10-144E Chapters 231-233)	Relevant and Appropriate	Maine's primary drinking water standards are similar to federal MCLs. Maine has adopted federal MCLs as drinking water standards under the Maine Safe Drinking Water rules. When state standards are more stringent than federal standards and have been legally and consistently applied, the state levels shall be used.	State drinking water standards which are more stringent than federal standards will be attained at the compliance boundary. A restriction on the use of groundwater within the compliance boundary will be established, and an appropriate monitoring program will be conducted until the groundwater concentrations are less than the State drinking water standards. An alternate supply of potable water will be assured to future tenants within the groundwater restriction area.

**CHEMICAL-SPECIFIC ARARs CRITERIA, ADVISORIES, AND GUIDANCE
GROUNDWATER MITIGATION ZONE ALTERNATIVE**

**OPERABLE UNIT 12 FEASIBILITY STUDY
LORING AIR FORCE BASE**

MEDIA	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS	ACTION TO BE TAKEN TO ATTAIN ARAR
	Maine Underground Storage Tank Rules relating to: standards for the installation, operation, and proper closure of USTs; [06-096 CMR 691]	Relevant and Appropriate	These rules require the registration of all existing, new, and replacement underground oil storage facilities with the DEP and authorizes and provides direction for the Board of Environmental Protection to develop rules for the design, installation, replacement, operation, and closure of underground oil storage facilities and tanks, except for tanks used for the storage of propane. The requirements for corrective action specify that when a leak or discharge occurs, the contamination should be mitigated. These rules define contamination as applied to groundwater, surface water, and soils when one of the following is present: 1) the presence of free product or an oil sheen; 2) primary drinking water standards (i.e., Maine MCLs); 3) MEGs (as set forth in Maine DHS memorandum, dated 10/23/92); ; or 4) a statistically significant increase in the concentration of measured parameters when compared to background values.	Contaminated private water supply wells shall be assured point-of-entry treatment to reduce the level of contamination to below Maine primary drinking water standards and MEGs within 15 days of discovery. Contaminated public water supplies may be assured treatment to reduce the level of contamination to below Maine primary drinking water standards and MEGs. Affected water supplies shall be monitored by sampling every three months as long as the treatment system is operating.

Notes:

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|-------|------------------------------------------------|------|-------------------------------|-------|----------------------------------------|
| DHS | = Department Human Services | MEG | = Maximum Exposure Guidelines | SMCL | = Secondary Maximum Contaminant Level |
| MCL | = Maximum Contaminant Level | ppb | = parts per billion | USEPA | = U.S. Environmental Protection Agency |
| MCLG | = Maximum Contaminant Level Goal | ppm | = parts per million | UST | = underground storage tank |
| MEDEP | = Maine Department of Environmental Protection | SDWA | = Safe Drinking Water Act | | |

CHEMICAL-SPECIFIC ARARs CRITERIA, ADVISORIES, AND GUIDANCE
GROUNDWATER MITIGATION ZONE ALTERNATIVE

OPERABLE UNIT 12 FEASIBILITY STUDY
LORING AIR FORCE BASE

MEMO	REQUIREMENTS	STANDARDS	REQUIREMENTS	STANDARDS	REQUIREMENTS	STANDARDS
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Maine DHS Rules
Relating to: Testing of
Private Water Systems for
Potentially Hazardous
Contaminants; [10-144E,
Chapter 233 Appendix C]

Relevant and
Appropriate

Establishes the mechanism/procedures for testing
of private residential water supplies. This program
assists applicants in the determination of the
possible existence of potentially hazardous
contaminants in the water supply. Appendix C
provides Maximum Exposure Guidelines (MEGs)
and Action Levels for inorganic chemicals,
pesticides, and organics.

Testing of private residential water
supplies will follow the mechanisms/
procedures established in this chapter.

Maine Hazardous Waste
Rules relating to:
Performance Standards
for establishing,
constructing, altering, and
operating certain types of
hazardous waste
management units; [06-
096 CMR B54]

Relevant and
Appropriate

These rules prohibit the establishment, construction
or operation of a waste facility for hazardous waste
without a license and authorizes the Board of
Environmental Protection to adopt rules establishing
Standards for the Licensing of these facilities. This
chapter outlines environmental performance
standards and general standards that would apply to
hazardous waste management units (landfills,
surface impoundments, land treatment facilities,
piles, tank and container storage facilities,
incinerators), treatment in tanks, and miscellaneous
units. The environmental performance standards
specify that hazardous waste facilities should be
located, designed, constructed, altered, operated,
maintained and closed in a manner which prevents
adverse effects on the environment. The facility-
specific performance standards outline the facility
requirements for operation. For example,
groundwater quality should not be at concentrations
greater than background levels, or above current
public health drinking water standards for Maine,
including MEGs (as set forth in Maine DHS
memorandum, dated October 10, 1992), or standards
for toxicity.

State MEGs will be attained at the
exposure point (i.e., private and public
water supply). A restriction on the use of
groundwater with concentrations above
MEGs will be maintained until a future
user of the groundwater demonstrates to
the State that the groundwater is
acceptable for use. An appropriate
monitoring program will be established as
necessary at the exposure point. An
alternate supply of potable water will be
assured to future tenants within the
groundwater restriction area.

*Complete
boundary, as
well as at the*

*Substitute
revised language
from EPA markup
(3/11/97)*