



DEPARTMENT OF THE NAVY

NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

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NAS BRUNSWICK
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IN REPLY REFER TO

5090
Code 1821/EK

01 JUN 1999

Environmental Protection Agency, Region I
Attn: Mr. Michael S. Barry
1 Congress Street
Suite 1100 (HBT)
Boston MA 02114-2023

State of Maine
Department of Environmental Protection
Attn: Ms. Claudia Sait
17 State House Station
Augusta ME 04333-0017

Subj: IR SITE 9 – DRAFT FINAL PROPOSED PLAN, NAVAL AIR STATION
BRUNSWICK, ME

Dear Mr. Barry/Ms. Sait:

Thank you for your recent comments on the Draft Proposed Plan, responses to your comments are included as Enclosure (1). You should receive the Draft Final Proposed Plan very shortly from EA Engineering. The revised schedule, which has been included as Enclosure (2), shows the Record of Decision (ROD) being signed mid-October 1999, which is beyond our goal of September 1999. Please note that the public comment period has been changed in the Draft Final Proposed plan to reflect the current schedule.

To accelerate the schedule and achieve the September 1999 signature date of the ROD, we intend to proceed with the scheduled public comment period unless the Draft Final is disputed in accordance with the Federal Facilities Agreement (FFA). Also, to achieve the ROD signature date, in lieu of formal comment and responses we would like to suggest taking a working approach to developing the ROD. This may consist of EPA and MEDEP marking up an electronic copy of the ROD or attending meetings where specific wording is discussed. This approach would expedite finalization of the ROD, and may be more efficient compared to receipt of written comments.

We would like to discuss with you in the very near future how we may streamline development of the ROD and any suggestions you may have to improve the schedule.

If you have any questions, please contact me at (610) 595-0567, x161

Sincerely,

A handwritten signature in black ink, appearing to read "Emil E. Klawitter". The signature is fluid and cursive, with a large, stylized initial "E" and "K".

EMIL E. KLAWITTER, P.E.

Remedial Project Manager

By Direction of the Commanding Officer

Copy to:

Mr. T. Williams, NAS Brunswick

Mr. P. Nimmer, EA Engineering, Science, and Technology

Mr. T. Fusco, BACSE

Ms. C. Lepage, Lepage Environmental Associates, Inc.

**RESPONSE TO COMMENTS FROM
US DEPARTMENT OF ENVIRONMENTAL PROTECTION
ON DRAFT PROPOSED REMEDIAL ACTION PLAN, 23 APRIL 1999
SITE 9: NEPTUNE DRIVE DISPOSAL SITE
BRUNSWICK NAVAL AIR STATION**

COMMENTOR: Mike Barry

DATE: May 10, 1999

General Comments

1 Breaking out the inactive incinerator ash landfill and groundwater contamination issues was successful in several sections. It could be more clear in the Proposed Remedial Action and Risk Evaluation sections. Please see the detailed comments.

Response: No response required.

1 Although this version of the PRAP looks and reads better overall than the previous version, the Navy has not made a number of the changes to which it agreed at our meeting on February 1, 1999 (and some of these changes were left over from our last round of comments). These missed changes are highlighted below. Please make them.

Response: The requested changes have been incorporated in the Draft Final PRAP.

2 Many of EPA's remaining specific comments are editorial, but correct grammar or enhance readability of the PRAP.

Response: No response required.

3 Pick one of the following and use it consistently: "groundwater" "ground water", or "ground-water" (the first is the most preferred).

Response: Groundwater (1 word) will be used in the PRAP.

Specific Comments

1 Page 1, Introduction, ¶ 1: In the 2nd sentence, delete the comma after "Comprehensive" (in the Glossary too).

Response: The requested changes have been incorporated in the Draft Final PRAP.

2 Page 1, Introduction, ¶ 2: In the 1st sentence, make “cleanup” into two words.

Response: The requested change has been incorporated in the Draft Final PRAP.

3 Page 1, Introduction, 2nd Bullet: Add “remedial” in front of “alternative” for consistency.

Response: The requested change has been incorporated in the Draft Final PRAP.

4 Page 1, Introduction, ¶ 3: Revise to read “natural attenuation with long-term monitoring in combination with implementation of institutional controls”, to emphasize the remedy component that will actually eliminate the environmental threat, natural attenuation. Also, we agreed at our February 1 meeting that the end of this sentence would be revised to read “to address any threats posed by groundwater, soil, surface water and sediment at Site 9” rather than “to safeguard against unexpected contaminant migration ...the environment”. Please make this change.

Response: We are unsure that the specific wording was agreed, but if it was in retrospect “surface water and sediment should not be included.” We are not considering natural attenuation or institutional controls for either of these media. The wording with exception to the surface water and sediment shall be included in the Draft Final PRAP.

5 Page 1, The Cleanup Proposal Box, 4th Arrow: Delete “...with long term monitoring” because it’s redundant to the sixth arrow and will save a line.

Response: The requested changes have been incorporated in the Draft Final PRAP.

6 Page 1, Table of Contents: Add a “s” after “The Navy” and before “Proposed Remedy”.

Response: The requested changes have been incorporated in the Draft Final PRAP.

7 Page 2, Map: The extent of site 9 has been a concern to all parties, we propose the following:

A Switch to a dashed line for the Site 9 boundary and label it “Approximate Site 9 Extent” in the legend. A solid line can later be used for the institutional controls area in the ROD.

B Include the old incinerator location in the dashed line.

C Continue the boundary through the middle of the impoundment dams. See attached figure.

D “Boundry” and “unamed” are misspelled.

Response: The requested changes have been made to the Figure in the Draft Final PRAP. Note that the boundary of Site 9 will be referred to as “Approximate extent of Site 9 based on site investigations” as per ME DEP comments.

8 Page 3, The Proposed Remedial Action:

A 1st full paragraph: We suggest reversing the order to “natural attenuation with long-term monitoring and institutional controls” to emphasize the remedy component that will actually eliminate the environmental threat, natural attenuation, first.

Response: The requested changes have been incorporated in the Draft Final PRAP.

B 2nd bullet: Change “will” to “would” as it’s a proposed action.

Response: The requested change has been incorporated in the Draft Final PRAP.

C 4th bullet: To clearly delineate factors relating to groundwater, we suggest that this bullet be indented slightly to show it refers to the groundwater vinyl chloride issue.

Response: The requested change has been incorporated in the Draft Final PRAP.

D 5th bullet: In recent events, the overall decreasing trend hasn’t continued in all wells; in fact, some may be increasing. However, we can confidently concur that overall levels are stable. Recommend the end of the first sentence be switched to “...generally stable or decreasing.” Also, on event 13, the highest vinyl chloride concentration was 20 ppb, and 4 wells were above federal or state limits. Since events will yield different results, recommend changing the second sentence to “...at generally 3-4 monitoring locations.” Just change the number in the last sentence. In addition, the Navy agreed in February to change “Federal or State drinking water standards” to “Federal Maximum Contaminant Levels and State Maximum Exposure Guidelines”. Please make this change.

Response: The requested changes have been incorporated in the Draft Final PRAP.

E 2nd full paragraph: The Navy agreed at our February 1 meeting to reword this paragraph in accordance with EPA's Comment No. 4.d in its December 30, 1998 comments. This has not been done. To do so, please add this sentence at the end of this paragraph: "The interim remedy in place at Site 9 and the preferred final remedial alternative presented in this Proposed Plan for groundwater are essentially the same. This is because the Site 9 interim Record of Decision focused on groundwater after field investigations failed to identify any distinct source areas at the site, and additional investigations required by the interim Record of Decision also failed to identify any distinct source areas at the site."

Response: The requested changes have been incorporated in the Draft Final PRAP.

9 Pages 3-4, Site History:

A In the 1st sentence of the 1st paragraph, "based" should be "base".

Response: The requested change has been incorporated in the Draft Final PRAP.

B In the Former Incinerator paragraph, add "of" after "disposed" in both places.

Response: The requested change has been incorporated in the Draft Final PRAP.

C As the Navy agreed at our February 1 meeting, the Building 201 paragraph should mention the septic system that was suspected to be a source of contamination as it was discussed in more detail in the Summary of Investigations Section.

Response: An additional sentence will be added to the end of this paragraph:

"A septic system associated with Building 201 was suspected to be a potential source of contamination."

D In the Unnamed Streams paragraph, 3rd sentence, "have been" should be "were".

Response: The requested change has been incorporated in the Draft Final PRAP.

E Revise the last paragraph to indicate that the previous RODs were signed by the Navy and EPA with MEDEP concurrence.

Response: The requested change has been incorporated in the Draft Final PRAP.

10 Page 4, Summary of Investigations, Remedial Investigation (E.C.Jordan 1990):

A In the 3rd paragraph, move the whole discussion of the Human Health and Ecological Risk Assessment (4th sentence to end of paragraph) to the Risk Evaluation section of the Proposed Plan. Though a risk evaluation was performed as part of the RI it is most appropriately placed in the Risk Assessment section in the PRAP for readability. Also, simplify “exposure to the soil on the surface” to read “exposure to surface soil”.

Response: The paragraph will be moved as requested, and the requested change has been incorporated in the Draft Final PRAP.

11 Page 5, Summary of Investigations, Supplemental Remedial Investigation (E.C.Jordan 1991):
In the 2nd paragraph, last sentence, change “leachfield” to “septic system” for consistency.

Response: The requested change has been incorporated in the Draft Final PRAP.

12 Page 5, Summary of Investigations, Technical Memorandum:

A Add (ABB_ES 1994) to the title of this section.

Response: The requested change has been incorporated in the Draft Final PRAP as ABB-ES 1994b.

B In the 1st full paragraph, last sentence, change “a septic system” to “the septic system”.

Response: The requested change has been incorporated in the Draft Final PRAP.

C 1st bullet: The Navy agreed at our February 1 meeting to change “Federal and State drinking water standards” to “Federal Maximum Contaminant Levels and State Maximum Exposure Guidelines”. Please make this change.

Response: The requested change has been incorporated in the Draft Final PRAP.

D 2nd bullet: Revise this bullet to read “It was determined that the septic system behind Building 201 was no longer an active source of vinyl chloride in the groundwater at Site 9 but could have been a historical source”. EPA had requested this change in Comment No. 6.a of its December 30, 1998 comments, and the Navy agreed at our February 1 meeting to make this change.

Response: The requested change has been incorporated in the Draft Final PRAP.

E 4th bullet: In the last sentence, change “from” to “in”.

Response: The requested change has been incorporated in the Draft Final PRAP.

F 5th bullet: In the 2nd sentence, replace “attributed” with “attributable”.

Response: The requested change has been incorporated in the Draft Final PRAP.

13 Page 5, Interim Record of Decision: The revisions to this section are not what EPA and the Navy agreed to, based on EPA’s Comment No. 7 in its December 30, 1998 comments, at our February 1 meeting. Please delete these paragraphs and replace them with the following:

The Interim Record of Decision was developed by the Navy and approved by EPA and MEDEP in September 1994 to require the Navy to monitor the groundwater contamination at Site 9 while conducting additional source investigations. The selected interim remedial action included the following: groundwater remediation through natural attenuation to contaminant concentrations below federal Maximum Contaminant Levels and state Maximum Exposure Guidelines, institutional controls to prevent human contact with the groundwater, development of a Long-Term Monitoring Plan, and five-year site reviews.

The Interim Record of Decision stated that the interim remedy did not address the source of the groundwater contamination, and that the results of the Navy’s additional source investigations were to be used in developing a final Record of Decision for Site 9.

Response: The text listed above has been incorporated in the Draft Final PRAP.

14 Page 5, Summary of Investigations, Additional Source Investigation (ABB ES, 1997): Simplify the 1st paragraph to “In accordance with the interim Record of Decision, the Navy conducted an additional source investigation to find an ongoing source of the volatile organic compound contamination in the Site 9 groundwater. This additional source investigation was conducted at Site 9 in 1995-1996. As a result of this investigation, the Navy reached the following conclusions: ...”.

Response: The requested change has been incorporated in the Draft Final PRAP.

15 Page 6, Summary of Investigations, Long Term Monitoring Plan:

A 2nd full paragraph; EPA has the same comment as Comment No. 8.d above regarding the 3 wells above standards. In addition, the Navy agreed in February to change “Federal or State drinking water standards” to “Federal Maximum Contaminant Levels and State Maximum Exposure Guidelines”. Please make this change. In the last sentence, change “altered” to “revised”.

B In the last paragraph, which discussed the revised Long Term Monitoring Plan, add a new last sentence that reads “The revised Long-Term Monitoring Program will be reviewed and approved by EPA and MEDEP in consultation with the Restoration Advisory Board and the public”. Since this paragraph deals with the future LTMP it should also include bullets that address the goals of (or incorporate them into the second bullet):

- 1 Track VOC plume boundaries/plume evolution
- 2 Monitor impacts to groundwater, surface water and sediment due to site 9.

Response: A. The requested change has been incorporated in the Draft Final PRAP.

B. We do not believe the words “and the public” should be included. This would insinuate a public comment period which we do not believe is required.

We are currently discussing the requirement for sediment sampling for the plume and the landfill and the surface water sampling for the landfill, therefore we cannot agree with comment 15B2. The wording to the third bullet has been changed to state that the goal will be to “Monitor impact to the environment due to Site 9.”

16 Page 6, Risk Evaluations:

A Make the title of this section “Risk Evaluation”.

Response: The requested change has been incorporated in the Draft Final PRAP.

B Break the discussion of the risks posed by the ash landfill out into a separate paragraph. Revise to read as follows: “The baseline risk assessment did not address the current or potential risks from exposure to the contents of the inactive ash landfill on the grounds that human exposure to the landfill contents was unlikely. Since the Navy stopped using the landfill, the landfill area has been graded and covered with soil, and barracks used for military residences have been constructed that cover the area. The risk assessment also did not address potential

ecological risks from the inactive ash landfill.”

Response: The requested text change has been incorporated in the Draft Final PRAP.

C In the 3rd paragraph, change “Federal or State drinking water standards” to “Federal Maximum Contaminant Levels and State Maximum Exposure Guidelines”.

Response: The requested change has been incorporated in the Draft Final PRAP.

D As noted in Comment 10.b above, the discussion of risks from the soil, sediment and surface water should be here rather than in the Summary of Investigations section even though a risk assessment was part of the RI.

Response: The requested change has been incorporated in the Draft Final PRAP.

17 Page 7, Table 1:

A For the No Action and Active Remediation alternatives, the expected duration of the remedy should be in the comment column as for Alternative 2.

Response: A note has been added to Table 1 in the comments section for Alternative 1 and Alternative 3 indicating the expected duration is based on 20-year projection.

B The alternative cost should be updated to include the cost of landfill excavation and removal (it’s the same cost as previous PRAP versions). A qualified, rough estimate would be acceptable. We agree that there are too many variables to estimate a cost of removing and rebuilding the buildings.

Response: The cost of Alternative 3 noted on Table 1 was increased by 20%, from \$1,584,200 to \$1,901,040.

18 Page 7, Alternative 2:

A The landfill paragraph, while it presents important information, is very confusingly written. The following is suggested: “Since the Navy stopped using the inactive ash landfill, the landfill area has been graded and covered with soil, and barracks used for military residences have been constructed that cover the area. This alternative would establish institutional controls to prevent the disturbance of and contact with impacted soil in the landfill without EPA and MEDEP approval. Implementation of these controls would involve the addition of a notice to the

Air Station's Master Plan, and, if the Navy transfers the property, the inclusion of use restrictions in the deed or other transfer document. In addition, this alternative would require the development of a Long-Term Monitoring Program to ensure that the ash remaining in the landfill is not impacting the environment. Groundwater downgradient of the landfill would be monitored for inorganics to assess whether the landfill is impacting groundwater and/or has the potential to impact surface water."

Response: We believe the language the institutional control language should be similar to our agreed wording in the Site 2 Record of Decision. Therefore the wording will be changes as follows:

"Since the Navy stopped using the inactive ash landfill, the landfill area has been graded and covered with soil, and barracks (Buildings 218-220) used for military residences have been constructed that cover the area. This alternative would establish institutional controls to prevent the disturbance of and contact with impacted soil in the landfill. Land use restrictions shall be documented in the current NAS Brunswick Operations Instructions. The Operations Instructions are used by NAS Brunswick to identify and screen environmental areas from inappropriate construction or development activities. Should NAS Brunswick ever close and/or transfer this property, EPA and MEDEP shall be notified and appropriate wording shall be included in the necessary real estate documents to prevent disturbance of buried ash without regulatory review and approval. In addition, this alternative would require the development of a Long-Term Monitoring Program to ensure that the ash remaining in the landfill is not impacting the environment. Groundwater downgradient of the landfill would be monitored for inorganics to assess whether the landfill is impacting groundwater and/or has the potential to impact surface water."

B With regard to the 1st sentence of the groundwater paragraph, the Navy agreed at our February 1 meeting to change "use of" to "reliance upon" and "mechanical systems" to "physical systems". Please make these changes. Simplify the two sentences about institutional controls by replacing them with the following: "This alternative would establish institutional controls to prevent human contact with or use of site groundwater without EPA and MEDEP approval. Implementation of these controls would involve the addition of a notice to the Air Station's Master Plan, and, if the Navy transfers the property, the inclusion of use restrictions in the deed or other transfer document."

Response: The text regarding natural attenuation has been re-worded as per ME DEP comment No. 19. We believe the language the institutional control language should be similar to our agreed wording in the Site 2 Record of Decision. Therefore the wording will be changes as follows:

This alternative would establish institutional controls to prevent human contact with or use of impacted groundwater. Land use restrictions shall be documented in the current NAS Brunswick Operations Instructions. The Operations Instructions are used by NAS Brunswick to identify and screen environmental areas from inappropriate construction or development activities. Should NAS Brunswick ever close and/or transfer this property, EPA and MEDEP shall be notified and appropriate wording shall be included in the necessary real estate documents to prevent use of groundwater without regulatory review and approval. Other aspects of this alternative include continuance of the current Long-Term Monitoring Plan and 5-year reviews by the Navy, EPA, and MEDEP. The land use restrictions address the existing risks by preventing human use and exposure to the affected soil and groundwater.

C The Navy agreed at our February 1 meeting to include a reference to “Federal Maximum Contaminant Levels and State Maximum Exposure Guidelines” as “key ARARs” for Alternative 2. Please make this change, and do the same for Alternative 3.

Response: A bullet has been added in Table 1 for Alternative 2 and Alternative 3 to indicate State MEG and Federal MCL are key ARARs. If this does not respond to the comment, please include specific language to address this issue.

19 Page 8, Alternative 2: In the 2nd paragraph, add a “s” to “compound” (in the Glossary too).

Response: This text has been revised as per ME DEP comment No. 20, and therefore this comment no longer applies.

20 Page 8, The Navy’s Proposed Remedy: Revise the 1st sentence of the 1st paragraph to read “The Navy recommends that Alternative 2, Institutional Controls and Natural Attenuation with Long-Term Monitoring, be implemented at Site 9.” In the 1st sentence of the 2nd paragraph, replace “lead agency” with “Navy”. In the 2nd sentence of the 2nd paragraph, add a “s” to “requirement”.

Response: The changes noted above have been made in the Draft Final PRAP.

21 Page 9, Table 2: Replace “Effectiveness” with “Effectiveness” in both places.

Response: The text changed as noted above have been made in the Draft Final PRAP.

**RESPONSE TO COMMENTS FROM
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
ON DRAFT PROPOSED REMEDIAL ACTION PLAN, 23 APRIL 1999
SITE 9: NEPTUNE DRIVE DISPOSAL SITE
BRUNSWICK NAVAL AIR STATION**

COMMENTOR: Claudia Sait

DATE: May 14, 1999

General comments:

1. In the technical meeting (February 01, 1999) the Navy agreed to all DEP previous changes to the Site 9 PRAP. It is disappointing to find that a number of the changes were not made.

Response: The meeting's purpose was to resolve a very different set of comments between two regulatory agencies and the TAG advisor. We must respond to all these comments which sometimes answer one person's comments to the chagrin of another's comment. This inefficiency will exist until the program changes such that we receive a unified set of comments from regulatory authorities. We have made every effort to incorporate MEDEP comments in this Draft Final PRAP.

2. The term groundwater throughout the document is written ground-water and ground water depending on whether the word is a noun or adjective. A hyphenated word is used when two words still in the process of becoming one word. The Department suggests making it one word (groundwater) since the inconsistency (although grammatically correct) may be confusing to the public.

Response: Groundwater (1 word) will be used in the PRAP.

3. The proliferation of boldface type, which designate technical language defined in the Glossary, is distracting and may be misinterpreted as emphasis. Please consider boldfacing a word only the first time that it appears in this PRAP.

Response: Bold will be used only during the first occurrence of a defined word.

4. Somewhere in the PRAP the connection between the drinking water standards and Maximum Contaminant Level (MCL) and Maximum Exposure Guideline (MEG) needs to be made. These terms are used interchangeable in the document and may be confusing to the public. It may be simpler to use the terms MCL and MEG then define them in the glossary.

Response: These terms will be defined in the glossary, and will note drinking water standards.

Specific comments:

5. Page 2, Figure 1, site map:

- Sample Locations would be better called "*Groundwater Long-Term Monitoring Locations*."

Response: This change has been made to the legend of the figure in the Draft Final PRAP.

- A symbol for the LT-901 seep location is needed. The symbol must be added to the legend.

Response: A separate symbol for LT-901 has been added to the figure.

- Expand the site boundary to include the Old Incinerator since it was included as part of the investigation or be sure that it is clear in the PRAP why it is not included.

Response: This extent of the Site 9 boundary has been increased to include the Old Incinerator.

- Since the unnamed stream is mentioned in the PRAP it needs to be shown on the map. Please extend the unnamed stream from the downstream dam to the border of the page, and label with an arrow as "*Unnamed Stream*".

Response: This change has been made to the figure.

- Inactive monitoring wells from the past groundwater monitoring should be added to the map, and be shown as a different symbol. (DEP suggests a solid circle for active wells and an open circle for inactive wells.) By showing all wells within the extent of this figure, the public will realize that upgradient and downgradient areas have been characterized, and these data have been used to delineate the boundary of Site 9 (as shown).

Response: All site monitoring wells will be added to the figure, using the symbols requested above.

- The boundary of Site 9 is not a box, and needs to be represented in the legend as it appears on the map. The line weight needs to be increased.

Response: This change will be made to the figure.

- It is unclear exactly what the boundary of Site 9 encompasses. Is it the boundary of the site investigation; or the boundary of the area to be placed under institutional control? This needs to be stated clearly on the map. DEP recommends the extent of the site investigation.

Response: The figure will be changed to read "Approximate extent of Site 9 based on site investigations."

- The southeast boundary of Site 9 needs to be added to the map.

Response: The boundary of Site 9 has been extended through the middle of the impoundment ponds.

6. Page 3, Proposed Remedial Action, bullet 4:

"Extensive investigations have not identified a source of vinyl chloride in ground water."

To more accurately reflect this situation, please modify this as follows: "*Extensive investigations have not identified the source responsible for vinyl chloride in Site 9 groundwater.*"

Response: The requested changes have been incorporated in the Draft Final PRAP.

7. Page 3, Proposed Remedial Action, bullet 5:

In light of Figure 3-9 of the 1998 Annual Report, is the true trend of vinyl chloride concentration site-wide being presented? This figure shows that total Site 9 vinyl chloride concentration line (least-mean square regression?) is gradually rising over time. The same rising trend appears for 1,2 – dichloroethene, another degradation compound of TCE. The Annual Report is still in draft form, and may undergo changes. However, the Navy should consider if this report and the PRAP are presenting the same trend information, and that the PRAP should be based on the data evaluation within the 1998 Annual Report and updated as necessary.

Response: Please see response to EPA comment 8d. The text will be revised as follows:

→ *Long-term monitoring of Site 9 groundwater, stream sediment, surface water, and groundwater seep indicates volatile organic compound concentrations, including vinyl chloride, are generally stable or decreasing. However, vinyl chloride is above the Federal Maximum Contaminant Levels and State Maximum Exposure Guidelines in groundwater at 3 to 4 monitoring locations. The concentrations are detected up to 20 parts per billion.*

8. Page 3, 2nd column, 3rd para:

“Based upon the new information or Public comments, the preferred alternative presented in this Proposed Plan can be modified or a different alternative can be selected.”

The public is encouraged to provide comments, but the mechanism by which these comments are considered is undefined. It is our concern that the public will not receive full answers in time to react until they read the ROD. DEP recommends that the first sentence in the last paragraph of this section should be amended to read: “*Upon review and consideration of public comments, the Navy and EPA will issue a final remedy choice in a signed Record of Decision document with expected concurrence by MEDEP.*”

Response: The requested changes have been incorporated in the Draft Final PRAP.

9. Page 4, Unnamed Streams, para 2:

The correct title for the interim rod is Interim Record of Decision for Groundwater Operable Unit at Site 9. This needs to be corrected in the reference section also.

Response: The requested changes have been incorporated in the Draft Final PRAP.

10. Page 4, Unnamed Streams, para 3:

The word *the* is repeated in the next to last sentence.

Response: The second “the” will be deleted.

11. Page 4, Unnamed Streams, para 2 and 3:

The second and third paragraphs under Unnamed Streams do not relate to that heading. New headings, such as *Long Term Monitoring Plan* and *Future Events*, need to be inserted.

Response: The requested additional section headings have been incorporated in the Draft Final PRAP.

12. Page 4, Remedial Investigation (E.C. Jordan 1990), para 3:

“Potential impacts to ecological receptors was estimated due to polycyclic aromatic hydrocarbons in the sediment directly behind Building 201, however, ...”

The following language is suggested: "Because polycyclic aromatic hydrocarbons were present in sediment near Building 201, the potential impact to ecological receptors was estimated. However, ..."

Response: The requested changes have been incorporated in the Draft Final PRAP in the Risk Evaluations section per EPA Comment 10.

13. Page 5, Technical Memorandum, para 1:

Please modify as follows: "Field investigations were performed in 1993 to further characterize the inactive landfill and provide information to support *possible* remedial action and *continued* ground-water monitoring."

Response: The requested words have been added in the Draft Final PRAP.

14. Page 6, Long-Term Monitoring Plan, para 2:

See comment 7 above.

Response: The text of the Draft Final PRAP has been changed as follows:

These results indicate a general reduction or stabilization of the vinyl chloride concentrations at several monitoring locations. However, 3 to 4 monitoring locations continue to detect vinyl chloride above the Federal Maximum Contaminant Levels and State Maximum Exposure Guidelines.

15. Page 6, Long Term Monitoring Plan, para 4, bullet 1 &2:

"The Long-Term Monitoring Plan will be revised based on the results of the analytical samples and following goals: ..."

DEP recommends the following language: *The revised Long Term Monitoring Plan will be reviewed and approved by EPA and DEP in consultation with the Restoration Advisory Board and the public.*

Also the goals should include the following:

- *Monitor changes in groundwater, surface water, and sediment related to Site 9;*
- *Monitor changes in the plume boundaries and potential migration pathways;*
- *Monitor effectiveness of the remedial action for the protection of human health and the environment.*

Response: We do not believe the words “and the public” should be included. This would insinuate a public comment period which we do not believe is required.

We are currently discussing the requirement for sediment sampling for the plume and the landfill and the surface water sampling for the landfill, therefore we cannot agree with comment 15B2. The wording to the third bullet has been changed to state that the goal will be to “Monitor impact to the environment due to Site 9.”

16. Page 6, Risk Evaluations, para 2:

“Laboratory results of the Long-Term Monitoring Plan have not detected vinyl chloride in the surface water of the north and south branches of the unnamed stream.”

Vinyl chloride was detected in the north branch water at SW-010 in the Event 11 sample at 1.0 µg/L and in the Event 12 sample at 0.6 µg/L. Please correct this statement.

Response: The sentence has been edited as follows:

Laboratory results of the Long-Term Monitoring Plan have detected vinyl chloride in the surface water of the north branch of the unnamed stream at 1.0 ug/L or less and vinyl chloride has not been detected in the south Branch of the Unnamed Stream.

17. Page 6, Risk Evaluations, 2nd column, para 1:

“Additionally, the vinyl chloride concentrations in ground water have been decreasing at some location, however, 3 monitoring locations have exceeded the Federal drinking water standard of 2.0 parts per billion.”

Both the Federal and State drinking water standards have been linked in numerous places in this document and it seems out of place to remove it here. Please put the reference to the State drinking water standard back into this sentence.

Response: The requested changes have been incorporated in the Draft Final PRAP.

18. Page 7, Alternative 2, Inactive Ash Landfill, entire paragraph:

a.) According to earlier information, (page 4) there is no precise information concerning the types of wastes handled or disposed in this land fill and may have included solvents, paint sludges and possible Metal Shop wastes. Based on this information, the Navy should not limit the content of the landfill to just ash but must acknowledge the possibility of other unknown wastes. At this time the DEP is not willing to agree to monitoring for just inorganics from the ash landfill.

Response: This issue should be discussed as part of the long-term monitoring plan revision. No changes to the PRAP have been made based on this comment.

b.) "Ground water downgradient of the inactive landfill will be monitored for inorganics to assess whether impacted ground water has the potential to impact ground water or surface water."

With respect to ground water, this statement does not make sense. It would appear that it should be rewritten similar to: "*Ground water downgradient of the inactive landfill will be monitored to assess whether impacted ground water from the landfill is migrating downgradient and may cause a detrimental impact to surface water.*"

Response: The requested changes have been incorporated in the Draft Final PRAP.

19. Page 7, Ground-Water Contamination, 1st sentence:

"The natural attenuation with long-term monitoring alternative includes the use of natural biological and mechanical systems to degrade chemical contaminants."

To the lay person "mechanical systems" will likely imply an engineered solution. Please consider: "*The natural attenuation with long-term monitoring alternative involves reliance on natural flushing and dispersion processes to dilute, and in situ biological systems to degrade, chemical contaminants.*"

Response: The requested changes have been incorporated in the Draft Final PRAP.

20. Page 8, Ground-Water Contamination, 1st sentence:

"Surface water and sediment will continue to be monitored for volatile organic compound, to assess whether these media may be impacted by vinyl chloride in site ground water."

Vinyl chloride has reached the north unnamed stream (Events 11 and 12 detections), although not at concentrations of concern. (See comment 16 above.) Also DEP is not willing at this time to commit to what sampling just for vinyl chloride. Therefore, the PRAP statement should be rewritten similar to:

"Surface water and sediment will continue to be monitored to assess whether these media may be adversely impacted by groundwater from Site 9."

Response: We do not concur with the sediment monitoring as has been previously discussed. The other changes have been incorporated in the Draft Final PRAP.

21. Page 8, Alternative 3:

Is the Navy still contemplating the concept of injecting treated ground water into the aquifer at BNAS?

Response: ReInjection is not the preferred alternative, and reference to reInjection has been removed.

22. Table 2, Comparative ranking of alternatives to nine CERCLA criteria:

Under Alternative 3, the Department can not think of reasons why the "Protection of Human health and Environment" and "Implementability" rankings would not be good (instead of moderate) relative to the Natural Attenuation Alternative. The only real downside to Alternative 3 is increased cost. Please explain.

Response: This issue was found to be acceptable in previous versions of the PRAP and we consider it to be an accurate description of remedial alternatives. No changes to the PRAP have been made.

23. Page 11, References:

The source investigation by ABB ES (1997) needs to be added to the list of references.

Response: The requested reference has been added, as follows.

ABB-ES. 1997. Final Source Investigation Report. Portland Maine. April.

**RESPONSE TO COMMENTS FROM
LEPAGE ENVIRONMENTAL SERVICES COMMENTS
ON DRAFT PROPOSED REMEDIAL ACTION PLAN, 23 APRIL 1999
SITE 9: NEPTUNE DRIVE DISPOSAL SITE
BRUNSWICK NAVAL AIR STATION**

COMMENTOR: Carolyn Lepage

DATE: May 9, 1999

- 1. Page 1, Introduction.** The word "interim" should be capitalized in the first bullet (and elsewhere in the text) as it is part of a document title.

Response: The word has been capitalized as requested.

- 2. Page 1, Introduction.** The USEPA had commented previously that the phrase "...to safeguard against unexpected contaminant migration..." in the paragraph following the bullets was vague, and suggested alternative wording. Yet no change was made in the text. Please clarify.

Response: This text has been revised. Please see response to EPA Comment 4. The text was revised as follows:

The Proposed Plan recommends natural attenuation with long term monitoring and implementation of institutional controls to address any threats posed by groundwater and soil at Site 9 that could impact Public health and the environment.

- 3. Page 1, The Cleanup Proposal.** The current version of this section is more detailed than in previous versions, which we think is an improvement. However, the bulleted items do not refer to soil or address measures taken regarding soil contamination. Yet the text in the right column on page 7 refers to the "impacted soil in the inactive ash landfill" and "preventing human use and exposure to the affected soil". Furthermore, the ground-water components of the second and third alternatives listed in Table 1 include institutional controls to "restrict excavation in the vinyl chloride ground-water contaminated area". Therefore, soils should be specifically mentioned in this section.

Response: This comment was unclear. We believe the PRAP is adequate as written. If further clarification is necessary, please provide specific text to be added.

- 4. Page 2, Figure 1, Site map.** As we noted in our January 15th comments, while the current version of Figure 1 is a marked improvement over previous drafts, several items require revision or clarification. The site boundary should include the approximate location of the old incinerator and should clearly define the southern extent of Site 9. The stream should be extended east of the lower dam. The line weight for the Site 9 boundary shown in the Legend should be the same as shown on

the map. It appears that the sample locations shown on the map are monitoring well locations. The Legend should be revised to reflect this. It would be helpful to add a separate symbol for seep locations. In addition, the locations of the two monitoring wells located just to the south of the upper impoundment should be added to the map. We suggest that the southern boundary of the site in the vicinity of the upper impoundment be depicted by a dashed line, and that it include well MW-NASB-077 (formerly MW-909).

Response: The map has been revised as indicated in response to EPA comment No. 7 and MEDEP comment No. 5.

5. **Page 3, The Proposed Remedial Action.** The fifth bullet describes concentrations of vinyl chloride relative to the Federal or State drinking water standards. Our notes from our February 1st meeting indicate the text was to be revised so that Maximum Contaminant Levels (MCLs) and Maximum Exposure Guidelines (MEGs) were included. We believe MCLs and MEGs were to be included in the sixth bullet as well. Please clarify.

Response: This text has been revised. Please see responses to EPA comment No. 8d.

6. **Page 3, The Proposed Remedial Action.** According to our notes from the February 1st meeting, the last paragraph in the left column was to be revised as suggested in USEPA's specific comment 4d in their December 30, 1998, letter. Why weren't the revisions made?

Response: This text has been revised. Per EPA comment No. 8e the text was revised as follows:

"The interim remedy in place at Site 9 and the preferred final remedial alternative presented in this Proposed Plan for groundwater are essentially the same. This is because the Site 9 interim Record of Decision focused on groundwater after field investigations failed to identify any distinct source areas at the site, and additional investigations required by the interim Record of Decision also failed to identify any distinct source areas at the site."

7. **Page 3, How to Obtain More Information.** The date should be revised to June 15, 1999.

Response: The meeting date has been changed to July 7th to reflect the schedule slippage.

8. **Page 3, The Proposed Remedial Action.** As stated in our previous comment letters, we think the text at the top of the second column does not clearly inform the reader where documents in the Administrative Record are located. It currently states that

Curtis Memorial Library has an index to the Administrative Record - it does not state that the Administrative Record itself is located at the library. As agreed to at the February 1st meeting, the text should be revised.

Response: The sentence has been revised as follows:

These documents have been compiled into an Administrative Record. The Administrative Record including relevant documents is available for your review at the Curtis Memorial Library located in Brunswick.

9. **Page 3, The Proposed Remedial Action.** The date in the fourth paragraph should be revised to June 15, 1999.

Response: Please see response to comment 7.

10. **Page 4, Site History, Building 201.** According to our notes from the February 1st meeting, this section was to be revised to include information about the septic system suspected to be a source of vinyl chloride. This information should be added.

Response: This text has been revised. Per EPA comment No. 9c the text has been revised as follows:

"A septic system associated with Building 201 was suspected to be a potential source of contamination."

11. **Page 4, Site History, Unnamed Streams.** The last two paragraphs in this section should be placed under a separate heading. In addition, it is not clear what maintenance in the first sentence of the first of the two paragraphs refers to. Please clarify.

Response: This text has been revised. Also, please see the response to MEDEP comment No. 11.

12. **Page 4, Site History, Unnamed Streams.** There is an extra "the" in the third-to-last line in this section.

Response: Comment noted. The text has been revised.

13. **Pages 5 & 6, Summary of Investigations.** To be consistent, the reference citations for the *Technical Memorandum*, the *Interim Record of Decision*, and the *Long-Term Monitoring Plan* should be included in each of the appropriate headings.

Response: Comment noted. The text has been revised.

14. **Page 5, Summary of Investigations, Technical Memorandum.** The bulleted items in this section should be listed under a separate heading as it currently appears that they relate solely to the investigations reported in the *Technical Memorandum*. In addition, MCLs and MEGs should be mentioned in the first bullet, and information regarding the elevated metals concentrations (did they exceed MCLs or MEGs?) should be included in the fourth bullet. The word "attributable" was to be substituted for "attributed" in the fifth bullet.

Response: This comment was unclear. We believe the PRAP is adequate as written. If further clarification is necessary, please provide specific text to be added.

15. **Page 5, Summary of Investigations, Interim Record of Decision.** The first paragraph in this section is awkwardly written. In a nutshell, the *Interim Record of Decision* (pages 11 and 12) recommended groundwater remediation through natural attenuation and proposed long-term monitoring of groundwater, surface water, sediment and leachate be initiated while additional source investigations continued. The USEPA also had some suggestions in their December 1998 letter (specific comment 7). Please revise.

Response: This text has been revised. Per EPA comment No. 13 the text has been revised as follows:

The Interim Record of Decision was developed by the Navy and approved by EPA and MEDEP in September 1994 to require the Navy to monitor the groundwater contamination at Site 9 while conducting additional source investigations. The selected interim remedial action included the following: groundwater remediation through natural attenuation to contaminant concentrations below federal Maximum Contaminant Levels and state Maximum Exposure Guidelines, institutional controls to prevent human contact with the groundwater, development of a Long-Term Monitoring Plan, and five-year site reviews.

The Interim Record of Decision stated that the interim remedy did not address the source of the groundwater contamination, and that the results of the Navy's additional source investigations were to be used in developing a final Record of Decision for Site 9.

16. **Page 5, Summary of Investigations, Additional Source Investigation.** The cleanup goals mentioned in the second bullet should be identified more completely. Were they State or Federal cleanup goals?

Response: We believe the PRAP is adequate as written. No changes have been made.

17. **Page 6, Summary of Investigations, Long-Term Monitoring Plan.** The correct citation is ABB-ES, 1995, not 1995b, as there was a duplicate *Interim Record of Decision* reference listed in the References section. In the paragraph following the first three bullets, we believe MCLs and MEGs were to be mentioned in place of drinking water standards.

Response: The citation of ABB-ES 1995 has been revised. The text related to MEG and MCL has been revised. Please see response to EPA comment No. 15a.

18. **Page 6, Risk Evaluations.** The specific contaminants of concern should be identified in the second paragraph. Why were the references to State drinking water standards deleted from the third paragraph?

Response: This text was found to be acceptable in previous versions of the PRAP and is considered to be an accurate description of site conditions. No changes to the PRAP have been made. Reference to MEG and MCL will be added.

19. **Page 6, Summary of Remedial Alternatives.** The two bullets at the bottom of the right column should also address soil, surface water, and sediment, as well as potential human and ecological receptors.

Response: This comment was unclear. We believe the PRAP is adequate as written. If further clarification is necessary, please provide specific text to be added.

20. **Page 7, Summary of Remedial Alternatives, Alternative 1 - No Action.** In addition to not preventing contact with contaminated ground water, this alternative also does not prevent disturbance of the inactive ash landfill.

Response: We believe the PRAP is adequate as written. If further clarification is necessary, please provide specific text to be added.

21. **Page 7, Alternative 2 - Natural Attenuation with Long-Term Monitoring and Institutional Controls.** The Inactive Ash Landfill heading should be in bold face. Metals should be used instead of inorganics, in the last sentence under the heading. The last line should read to impact surface water or sediment. Under the **Ground-Water ntamination** heading, the phrase "reliance on" should be substituted for "use of". As we stated in our January 15th comments, we do not think the term mechanical systems is used appropriately here. In addition, some of information in the second sentence regarding the ash landfill belongs in the previous paragraph. Please revise.

Response: The section heading has been made bold. The word "metals" has been used instead of "inorganics". The text of the last sentence is accurate as written.

Per MEDEP Comment No. 19 and EPA Comment No. 18b, the text referring to the Inactive Ash Landfill has been revised as follows:

The natural attenuation with long-term monitoring alternative involves reliance on natural flushing and dispersion processes to dilute, and in-situ biological systems to degrade, chemical contaminants. This alternative would establish institutional controls to prevent human contact with or use of impacted groundwater. Land use restrictions shall be documented in the current NAS Brunswick Operations Instructions. The Operations Instructions are used by NAS Brunswick to identify and screen environmental areas from inappropriate construction or development activities. Should NAS Brunswick ever close and/or transfer this property, EPA and MEDEP shall be notified and appropriate wording shall be included in the necessary real estate documents to prevent use of groundwater without regulatory review and approval. Other aspects of this alternative include continuance of the current Long-Term Monitoring Plan and 5-year reviews by the Navy, EPA, and MEDEP. The land use restrictions address the existing risks by preventing human use and exposure to the affected soil and groundwater.

22. **Page 7, Table 1.** The phrase vinyl chloride ground-water contaminated area” is awkward and should be revised in the two places it is used. These two bullets also identify institutional controls to restrict excavation and installation of drinking water wells in the contaminated area. This part of Alternatives 2 and 3 is not clearly identified in the text on pages 7 and 8. Please revise the text accordingly.

Response: We believe the PRAP is adequate as written. If further clarification is necessary, please provide specific text to be added. No changes to the PRAP were made.

23. **Page 8, Alternative 2 - Natural Attenuation with Long-Term Monitoring and Institutional Controls.** The landmarks listed in the first sentence in the left column should be clearly identified on Figure 1.

Response: The text referenced will be replaced per EPA comment 18a. As a result of the change in text, the only landmarks referred to are the barracks (Bldgs. 218-220) which already identified in Figure 1.

24. **Page 8, Nine CERCLA Evaluation Criteria.** The acronym ARAR should be added to the second criteria.

Response: We believe the PRAP is adequate as written. No changes have been made.

25. **Page 8, The Navy’s Proposed Remedy.** The first paragraphs should also address exposures of human and ecological receptors to ground-water contamination.

Response: We believe the PRAP is adequate as written.

- 26. Page 10, Glossary.** The definition of Applicable or Relevant and Appropriate Requirements should also include the acronym ARAR. Do we still need the definition of aquifer - is it still included in the body of the report? Does the baseline risk assessment also address risks to ecological receptors?

Response: We believe the PRAP is adequate as written. The definition of Aquifer is no longer necessary and will be removed.

- 27. Page 11, References.** Please delete the 1995 reference for the *Interim Record of Decision*.

Response: The reference will be deleted.