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STATE OF MAINE

Department of Environmental Protection

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June 27, 1991

Mr. James Shafer
Department of the Navy, Northern Division
Naval Facilities Engineering Command
Building 77-L
Philadelphia Naval Shipyard
Philadelphia, PA 19112-5094

Re: Naval Air Station Brunswick, Draft Focused
Feasibility Study Site 8, May, 1991, by
E.C. Jordan Co.

Dear Mr. Shafer:

The Maine Department of Environmental Protection (MEDEP) has completed its review of the Draft Focused Feasibility Study Site 8, which was submitted to the MEDEP by E.C. Jordan Co. on May 13, 1991 on behalf of the U.S. Department of the Navy for the Naval Air Station Brunswick (NASB) Site.

This correspondence represents partial comments developed by the MEDEP. Additional comments may follow in the near future as an addendum to this letter.

The MEDEP conditionally approves of the alternatives presented in this report provided that the following comments are addressed:

General Comments:

Any assumptions made regarding site conditions must be supported by specific informations or references in the discussion.

Contaminants of concern for Site 8 were presented in table Q-6 in the Draft Final RI Report dated August, 1990. Selection of these COC's were based on field sampling and E.C. Jordan's evaluation of conditions at the site. Although the MEDEP has provided written comments reflecting its reservations regarding some of the discarded COC's, little direct discussion regarding these contaminants, as well as target clean-up levels has occurred. Continued elimination of specific COC's in the FS stage is not appropriate. The MEDEP does not concur with the elimination of DDT as a

contaminant of concern based on statements contained in the Risk analysis of the RI report.

The target PAH clean-up level has been overestimated. The MEDEP will not concur with this clean-up level as calculated.

Specific Comments:

Page	Section	Comments
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2-5,	section 2.2.1, Human Health Risk Assessment:	Justify why only children in the 7-12 age group were evaluated for risk in the exposure scenario. It seems likely that children ages 12+ would also access the site.
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The "most probable scenario" and "realistic worst case scenario" need to be defined.

If clean-up levels are based on any risk scenario other than a residential exposure, steps must be taken to assure that future risks will be limited.

2-6,	section 2.2.1, Human Health Risk Assessment:	The presence of compounds attributed to "natural chemistry" needs to be explain. Identify what background levels are being considered (ie. Eastern US, State, local, site specific).
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The statement regarding the Jordan Avenue Wellfields should read: Present available data indicate there is no hydraulic connection....

2-7,	section 2.2.2, Summary of Environmental Risks:	Identify how the average DDT concentration was obtained. As presented, data from sampling rounds II and III do not support an average concentration of 0.003 mg/kg.
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2-8,	section 2.2.2, Summary of Environmental Risks:	The Draft Final RI (page Q-121) states that "based on the total hazard indices, both <u>Sites 8 and 9</u> are probably being severely impacted by the presence of DDT and PAH's in sediment. This conclusion is supported by the results of an analysis of the macroinvertebrate communities associated with these sites." Once the RI process has selected COC's, it seems inappropriate to continue narrowing the list of COC's to be targeted for clean-up. If DDT and other contaminants (including lead) are impacting ecological communities as indicated in the RI, then appropriate remedial alternatives need to be evaluated.
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Specifically state contaminants and corresponding target clean-up levels for surface water.

2-9, section 2.3, **Summary of Remedial Action Objectives:** If target clean-up levels are based on a "reasonable future land use", a decision will be required as to how use of this site can be restricted so that zoning changes and/or changing development patterns in Brunswick do not convert the area to residential or other high exposure use.

2-10, section 2.3.1, **Human Health Clean-up Levels:** The MEDEP believes that the proposed 18 ppm PAH target clean-up level for this site is excessive if based on a future scenario that allows repeated exposure. A residential risk scenario also needs to be discussed.

Rather than providing a broad range of PAH concentrations (1.8 to 21.9 mg/kg) a background value must be calculated for NASB and Site 8 specifically. Utilizing all values obtained from sampling at Site 8, outside the area of contamination, background carcinogenic PAH values could be as low as 0.25 ppm.

2-11, table 2-1, **Exposure Assumptions:** Following consultation with the Maine State Toxicologist, the MEDEP believes that the exposure assumptions at Site 8 have been underestimated. It is doubtful that exposure will be limited to only the 7-12 age group. The population assumption does not consider children older than 12 years who could also come in contact with the site. The exposed population should also include children in the 13-18 age group. Therefore, the exposure frequency should be increased from 48 days/year for a 6 year duration to 48 days/year for a 12 year duration. The dermal exposure should be increased from 1.0 grams/event to 3.0 grams/event. The ingestion exposure should be increased from 0.5 grams/event to 1.0 grams/event.

Recalculation of the target clean-up level using the increased exposure assumptions result in a target clean-up level of approximately 3 ppm. The MEDEP believes that 3 ppm is appropriate for this site.

2-13, section 2.3.2, **Ecological Target Clean-up Levels:** Specify if the elimination of contaminant contribution from Site 8 would lower the overall contaminant impact on the stream a level equal to or below the AWQC.

3-4, section 3.1-**Volume Calculations and Treatability Study Results:** Recalculation of Site 8 PAH target clean-up levels using the recommended exposure assumptions will result in a greater lateral distribution of carcinogenic PAH's needing remediation. The MEDEP estimates that the area to be considered could be equal to or greater than 250'x 150'. Target clean-up level contours will need to be redrawn to reflect a lowered target level.

3-6, section 3.1-Volume Calculation and Treatability Study
Results: Extending the target level contours to cover a clean-up to 3 ppm could result in a volume estimate equal to or greater than 1400 cubic yards. New volume estimates must be calculated to reflect lowered target clean-up levels.

The MEDEP disagrees that DDT is no longer a "chemical of interest". If DDT levels are sufficient to impact the ecological system as reported in the Ecological Risk Assessment then appropriate remedial options need to be presented for evaluation.

3-10, section 3.3, Alternative 8B-Minimal Action: The final design for restricting site access will be submitted to both the USEPA and the MEDEP for review and approval.

3-12, section 3.3, Alternative 8B-Five Year Review: The five year technical memorandum regarding sampling results must be reviewed by the MEDEP and USEPA.

3-13, section 3.3.1, Alternative 8B-Criteria Assessment/Implementability: Installation of fencing will depend on the area to be remediated. Additional area beyond that identified in this report will be necessary. Additional costs will need to be calculated for the cost summary.

3-14, section 3.4, Alternative 8C-Soil Cover: An animal barrier should be incorporated into the cover system to discourage burrowing animals. Specify whether the geotextile fabric will be suitable for this purpose or if an additional mesh layer will be necessary.

3-18, section 3.4, Alternative 8C-Soil Cover/Covering Contaminated Area: Make specific reference to the MEDEP suggestion regarding the cover system for this site.

3-20, section 3.4.1, Alternative 8C-Criteria Assessment: Closure requirements of 38 M.R.S.A., section 1304, Chapter 404.5 (H) also state that additional, more specific requirements will depend on waste, site, and operational conditions. If deemed necessary, the Department can require additional measures for closure under this regulation. To state that Site 8 is already in compliance is not accurate.

3-21, section 3.4.1, Alternative 8C-Criteria Assessment/Compliance with ARAR's: Explain why confirmatory air monitoring will not be performed. Identify how it will be determined that both Federal and State Ambient Air Quality Standards will not be exceeded.

3-22, section 3.4.1, Criteria Assessment-Implementability: The amount of soil necessary to construct the soil cover must be recalculated to reflect a lower PAH target clean-up level.

3-24, table 3-4, Alternative 8C-Cost Summary: Include future maintenance costs in this summary.

3-26, section 3.5, Alternative 8D-Excavation/Solidification-Site Preparation: Contamination in the vicinity of TP-805 extends deeper than 1 foot. Explain why a greater excavation depth was not considered in this general area.

3-28, section 3.5, Alternative 8D-Excavation/Solidification-Site Preparation: The statement that the area of PAH risk is not believed to include the hill leading down to the stream can lead one to conclude that an assumption is being made with out adequate evaluation of the area.

Since the trees and brush act to stabilize the steep hill, their removal could likely result in a greater impact on the stream environment due to erosion than any potential impact due to PAH's associated with the site.

3-28, section 3.5, Alternative 8D-Excavation/Solidification-Stockpile: The reasons why wastes are not hazardous under RCRA regulations and why land disposal restrictions do not apply are not clearly stated.

3-30, section 3.5.1, Alternative 8D-Criteria Assessment: Since the excavation/solidification alternative appears to require less future maintenance than a soil cover, maintenance should be considered as an additional criteria assessment for all alternatives. The reduced need for continual maintenance for this alternative (as compared to alternative 8C) is a positive aspect that merits strong consideration

3-32, section 3.5.1, Alternative 8D-Criteria Assessment/Reduction in Mobility: On page A-12 of the Treatability Study Summary, Willams Environmental stated that "significant improvements in the final disposal properties of the NAS waste were demonstrated in this benchscale stabilization program". Discussions on page 3-32 did not include reference to the Willams Environmental evaluation but instead appeared to imply that alternative 8D has no additional benefits over that of a soil cover alternative. An expanded discussion to include more information and interpretation of the treatability test is needed.

3-33, section 3.5.1, Alternative 8D-Criteria Assessment/Implementability: With a lowered target clean-up level for PAH's, the amount of soil needed to be treated will increase to a volume >500 cubic yards. Finding a vendor to perform the excavation/solidification will be less difficult. The lack of vendor availability is not a reason for not considering this alternative to the fullest possible extent.

Cost should not be the primary factor in determining the selected alternative.

4-5, table 4-1, Comparative Summary of Remedial Alternatives: The need for continued maintenance should be considered as an additional comparative criteria.

A-11, Solidification/Stabilization Treatability Study-Summary: Willams Environmental stated that additional PAH compounds not listed in Jordan's RFP were estimated at significant concentrations. Explain how these findings may impact not only Jordan's interpretation of the treatability test but also the possible extent of additional contaminants not previously identified at the site

If you have any concerns or questions regarding these comments, please contact me at (207) 289-2651.

Sincerely,



Ted Wolfe
Division of Site Investigation and Remediation
Bureau of Hazardous Materials and Solid Waste Control

cc: Michael Barden, MEDEP
Sam Butcher, Harpswell Representative
Meghan Cassidy, EPA
✓Eileen Curry, NASB
Mel Dickenson, E.C. Jordan/ABB Environmental
Donald Gerrish, Town of Brunswick
Fred Lavalley, MEDEP
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