



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

N00102.AR.000618
NSY PORTSMOUTH
5090.3a

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October 29, 1998

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

re: Response to MEDEP March 9, 1998 Comments, Revised Executive Summary, and Glossary of Terms, Draft Final Estuarine Ecological Risk Assessment (EERA), Portsmouth Naval Shipyard, Kittery, Maine

Dear Fred:

The Maine Department of Environmental Protection has reviewed the documents referenced above. The Department's comments follow.

RESPONSE TO MEDEP 3/9/98 COMMENTS

1) 3/9/98 Comment 7 (9/3/97 Comment 61)

The Navy's response to this series of comments and responses states, in part, "...ecological impacts to marshes in the form of stress from exposure to contaminants are poorly known...the effects described [in Burdick 1995] are referred to as potential impacts, and further study is needed to confirm or refute their significance."

The MEDEP acknowledges that there is a general lack of information regarding impact of contaminants on salt marshes and that any conclusions should be made with caution due to this uncertainty. However, this uncertainty only affects the confidence in conclusions rather than the conclusion itself.

Nevertheless, the MEDEP accepts the conclusions for the salt marsh community at Clark Cove as presented in the Draft Final EERA (the location/community referred to in the original comment). But the MEDEP also notes that the Navy states in Section 8.3.1.5 of the Draft Final EERA, "Large scale disturbance within the marshes studied was not observed, however, ecological stress was detected in some of the marsh areas which could be linked to contaminant exposure" (emphasis added).

The Navy recommends in the Draft Final EERA that, "Monitoring activities should be focused on monitoring changes in the size and extent of saltmarsh areas and habitat quality of the marshes adjacent to Seavey Island." The MEDEP concurs with this

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recommendation. This monitoring is especially important because of the contaminated sediments trapped within the saltmarsh peats. Monitoring will help to ascertain whether or not the saltmarshes are acting as sources or sinks of contaminants in the future. Monitoring of sediments around the saltmarshes should be included in the monitoring plan for OU4.

2) 3/9/98 Comment 9 (9/3/97 Comment 70)

Navy Response: "Based on currently available data, concentrations of DDT, DDE, and DDD measured in the soils at the SWMUs did not exceed the soil background concentrations determined for Seavey Island...therefore those compounds were not linked to a SWMU."

Regardless of this fact, quarterly monitoring of seeps indicates that levels of 4,4'-DDT that exceed both Maine's freshwater and saltwater chronic water quality criteria, are present in seeps at the Shipyard (see attached table). DDT levels are especially high at Clark Cove seep CC-1004.5. Levels have also been high at Sullivan Point seep SP-1001. These results indicate that excessive levels of DDT are migrating to the offshore environment from the Shipyard. Therefore, DDT must be addressed as part of OU4 remedial activities.

EXECUTIVE SUMMARY

1.1 Introduction, p. 1-1

3) para 1: Please indicate that CERCLA is also known as the "Superfund" Act (nowhere in the summary does it refer to PNSY as a Superfund Site).

4a) para 2: Provide the date of the RCRA Facility Assessment.

b) para 2: Change, "...several Solid Waste Management Units (SWMUs) where releases were known or suspected." to "...where releases of contaminants were known or suspected."

c) para 2: Change, "Thirteen of the SWMUs evaluated..." to "Thirteen of the SWMUs were evaluated..."

5a) Para 3: Change "...was conducted to evaluate risks to the estuary" to "...was conducted to evaluate risks to the Piscataqua River estuary."

b) Last bullet: Change "...to support communications of Shipyard-associated ecological risks..." to "...to support communications of Shipyard-associated offshore ecological risks..."

6a) Para 4: Change "...to evaluate ecological risks..." to "...to evaluate offshore ecological risks..."

b) Please indicate that under CERCLA areas of concern on the Shipyard are now referred to as Operable Units (OUs), not SWMUs.

c) "This report also does not address..."

Please add that the report also does not address onshore ecological risk. You should indicate that the Navy addressed onshore ecological risk in the document, "Onshore Ecological Risk Assessment of the Portsmouth Naval Shipyard Facility, Kittery, Maine, ChemRisk, August 10, 1992."

1.2 Approach

7a) p. 1-2 para 2: Change "...but persistent chemicals will become attached to sediment particles..." to "...but persistent hydrophobic chemicals will become attached to sediment particles..."

b) para 2: "Because depositional areas adjacent to the Shipyard would be more likely to accumulate contaminants from the Shipyard than depositional areas further upstream or downstream, depositional areas around the Shipyard were defined as Areas of Concern (AOCs) and were evaluated for effects to the assessment endpoints."

The actual criteria used to delineate the AOCs should be stated. Most notably, can it be said that the AOCs were delineated using data on measured contaminant levels, or was the presence of sediments the primary criterion?

8) p. 1-2 para 3: Change, "...the its sensitivity..." to "...its sensitivity..."

9) p. 1-2 para 4: "An assessment endpoint is..."

Please provide some examples of assessment endpoints, e.g., blue mussel, lobster, benthic community, eelgrass.

10) p. 1-3 para 1: Change "...levels of contamination in mussel..." to "...levels of contamination in blue mussel..."

11) p. 1-3 para 3: Please note the distinction between a contaminant of potential concern (COPC), introduced on page 1-2, and contaminant of concern (COC), introduced here.

12) p. 1-4: Levels of ecological risk identified in the Estuarine ERA are defined on this page. It should be noted in this section that these definitions pertain to ecological risk only, and not human health risks. This becomes an issue for areas where ecological risk is determined to be negligible, therefore no further action is recommended. It should be clear that further action may nevertheless be indicated due to human health risks.

13) p. 1-4 para 3: Change "correspondance" to "correspondence".

14) 1.3 Results, p. 1-5

a) "The DDT compounds were not linked to any of the SWMUs."

Please see Comment 2 above.

b) "The levels of contamination measured were a mixture from a variety of sources..."

Are the contaminants referenced in this sentence all the COCs or just lead and DDTs?

Does this sentence refer to sources other than the Shipyard or a variety of sources within the Shipyard? Please clarify.

15) 1.3 Results, p. 1-5, Footnotes 1 and 2

"Chemicals that exceeded water quality criteria in seep samples..."

DDT exceeded water quality criteria in seep samples at both Clark Cove and Sullivan Point (see Attachment). Please add DDT to these lists.

GLOSSARY OF TERMS

16) anthropogenic – change "effects" to "affects"

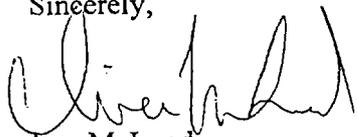
AOC – add Portsmouth Harbor

Coliform – change "inhibit" to "inhabit"

Also, please include "OU", Operable Unit.

Please feel free to contact me at (207) 287-8010 if you have any questions.

Sincerely,



Iver McLeod
Project Manager
Bureau of Remediation and Waste Management

Attachment

pc:

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Mark Hyland, MEDEP
Larry Dearborn, MEDEP
Katie Zeeman, MEDEP
Harrison Bispham, MEDEP
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Marty Raymond, PNS
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Jack McKenna, RAB
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Peter Van der Mark, TAG Representative
Carolyn Lepage, TAG Advisor
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SEEP DATA, PORTSMOUTH NAVAL SHIPYARD
 EXCEEDANCES OF SURFACE WATER QUALITY CRITERIA FOR 4,4'-DDT

Units in ng/L

LOCATION	Rd. 7	Qual	Rd. 8	Qual	Rd. 9	Qual	Rd. 10	QUAL	CRITERIA	
									FW CHRONIC	SW CHRONIC
CC-1004.3	3	U	3.7	U	1.1	J	3.7	U	1	1
CC-1004.5	17		36		4.1		81.9		1	1
CC-1011	3	U	5		1.15	J	3.7	U	1	1
SP-1001	19		55		1.2	J	0.7	J	1	1
SP-1002	3	U	3.7	U	1.6	J	3.6	J	1	1
SP-1003	3.15		3.7	U	1.5	J	1.1	J	1	1
BC-1006	1.7	J	3.7	U	0.3	J	0.6	J	1	1
BC-1012	3	U	3.7	U	3.3	J	0.7	J	1	1
BC-1018	3	U	0.7	U	1.3	J	0.4	J	1	1

Bold indicates exceedance of water quality criteria

J - Value is an estimated positive result due to various technical noncompliances, or value was reported at a concentration below the detection limit.

U - Not Detected; or value reported is a raised detected limit as a result of blank contamination

Data from: Seep and Sediment Data Package for Round 10, Portsmouth Naval Shipyard Kittery, Maine, Brown and Root Environmental, March 1998