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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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COMMISSIONER

April 10, 2001

EA ENGINEERING,
SCIENCE & TECHNOLOGY

APR 12 2001

RECEIVED

Mr. Orlando J. Monaco
Code 1821 LM
Department of the Navy, Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, PA 19113-2090

Re: Building 95
Naval Air Station, Brunswick, Maine

Dear Mr. Monaco:

This letter is to follow up our discussion regarding Building 95 at the Technical Meeting on March 20, 2000. Alpha-Chlordane and Heptachlor epoxide were detected in groundwater samples in both the April and September 2000 monitoring events. Heptachlor epoxide was above the Maine Exposure Guidelines during the September 2000 sampling event. Based on the terms agreed to by Maine Department of Environmental Protection, the Environmental Protection Agency, and the Navy in the Long Term Monitoring Plan for Building 95 (May 2000) the detection of this compound triggers the following:

- continued long term monitoring;
- review of the data to determine the need to include analysis of the second round analytes;
- and adding MW-NASB-067 to the monitoring network.

It is the Department's understanding that the analyses for the second round analytes (rotenone, avitrol, and maleic hydrazide) are not a routine analyses. Therefore, it was decided to cancel the April 2001 monitoring event and include a discussion of Building 95 as part of the July technical meeting. Attached is a copy of memo from our toxicologist which outlines the technical argument for adding the three second round analytes, which we can discuss in July.

Whether or not the Navy decides to establish long term institutional controls for this site it will be necessary to analyze for the second round analytes before closing out this site.

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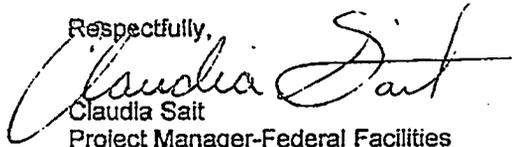
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As part of the Navy's and the agencies earlier discussions it was agreed to develop a consensus statement to formally establish the guidelines for closing out this site to help our successors from having to revisit these issues in the future. MEDEP still supports this idea and hopes that the Navy will initiate this activity as soon as possible.

Please call me if you like to discuss this matter in more detail (207) 287-7713.

Respectfully,



Claudia Sait
Project Manager-Federal Facilities
Bureau of Remediation & Waste Management

Cf. File
Larry Dearborn-DEP
Anthony Williams-BNAS
Michael Barry-EPA
Carolyn LePage-LePage Environmental
Al Easterday-EA
Ed Benedikt



Memo

To: Claudia Sait
 From: Catherine Zeeman *ckz*
 Date: April 9, 2001
 Re: September 2000 Groundwater Monitoring Results - Building 95, Brunswick Naval Air Station, Brunswick, Maine

As requested, I have reviewed the results of chemical analyses performed on groundwater samples collected near Building 95 of the Brunswick Naval Air Station (BNAS), Brunswick, Maine. Monitoring is being conducted in part to if substances that were stored and/or handled in Bldg. 95 are present in underlying groundwater. Water samples were analyzed for selected organochlorine(OC), organophosphate (OP), carbamate, and triazine pesticides. At least three contaminants of potential concern (COPCs) were exempted because (1) analyses for the compounds in question would be difficult, and (2) the compounds have physical/chemical characteristics that do not favor migration into groundwater (low mobility). As Indicated in your February 7, 2000 letter to Mr. Arthur Coccoil, Department of the Navy, Northern Division, the arguments for exempting the three compounds were found to be conditionally agreeable. It was agreed that concerns about the exempted compounds would be low as long as monitoring data indicate that compounds with similar or less potential for mobility, if any, are not found in the groundwater.

The compounds that were exempted are Avitrol, Maleic hydrazide and Rotenone. Compounds that have similar or less potential for migration to groundwater would have a lower solubility in water and/or a higher sorption partition coefficient (K_{oc}) than those for the exempted compounds. Alpha-Chlordane and Heptachlor epoxide were detected in groundwater samples from September 2000. This does not appear to be an artifact because the same two substances were detected in samples from an earlier monitoring round. The solubilities and K_{oc} s for the detected compounds are compared with those for the exempted compounds below (from Mackay et al., 1997¹):

		Solubility @ 25°C mg/L (approximate)	Koc (approximate)
Detected Compounds	Chlordane	0.1	32,000
	Heptachlor epoxide	0.2	3,200
Conditionally Exempted Compounds	Avitrol	8,000	33
	Maleic hydrazide	<0.1 - 6,000	40 - 342
	Rotenone	0.2	4,000

¹ Mackay, D., W-Y Shiu and K-C Ma. 1997. Illustrated handbook of physical-chemical properties and environmental fate for organic chemicals. Vol V. Pesticide Chemicals. Lewis Publishers, Boca Raton, FL.

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The solubilities and partition coefficients summarized above suggest that Avitrol, Maleic hydrazide and Rotenone are as- or more mobile than the compounds that were detected in the groundwater samples. Consequently, the monitoring results invalidate the low mobility argument, and the presumed absence of the three compounds should be confirmed with chemical analysis.