



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

N00102.AR.000482
NSY PORTSMOUTH
5090.3a

October 16, 1997

Mr. Fred Evans
Northern Division
Naval Facilities Engineering Command
Department of the Navy
10 Industrial Hwy., Mail Stop. #82
Lester, PA 19113-2090

Re: Response to Comment Letter
Sites 30, 31 and 32 Site Screening Work Plan
Portsmouth Naval Shipyard
Kittery, Maine

Dear Fred:

The United States Environmental Protection Agency (EPA) has reviewed the Navy's Response to Comment Letter for the Sites 30, 31 and 32 Site Screening Work Plan. This letter was dated September 16, 1997.

EPA's comments on the responses provided are as follows.

GENERAL COMMENTS

COMMENT 4: It is agreed that the intent of the background monitoring well is to provide data on groundwater conditions upgradient of any potential contaminant sources. However, the background groundwater data is used during the screening process to identify Site-related potential contaminants of concern (PCOCs). The comparison of groundwater data in the Site monitoring wells installed in fill material to the groundwater data from the background monitoring well installed in natural material may lead to the identification of PCOCs that are fill-related, as opposed to Site-related.

Based on the Navy's response, it is not possible to install the background monitoring wells at Site 31 and Site 32 in fill material, or to collect subsurface soils in the fill material upgradient of the site as recommended by EPA. The approach and rationale for the evaluation of data should be documented prior to data evaluation. The Site Screening Report should explain this issue and describe how it was evaluated in detail.

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SPECIFIC COMMENTS

COMMENT 2: The depth of the acid proof pit is stated as 4 feet. Please specify whether this is the depth of the acid proof pit relative to the ground surface. If the depth is not relative to the ground surface, please specify the depth of the pit below ground surface.

COMMENT 5: Based on the information provided, it appears that the crystalline substance which has been observed at three discrete times between 1973 and the present is not permanently visible along the edges of the former acid proof pit. The observance of this substance strongly suggests a potential source of contamination that may appear under certain conditions (e.g., water table fluctuations) which have not been determined to date. The work plan does not propose any additional work to investigate this potential source within the building and beneath the acid proof pit and the Navy states "access problems" as the reason it will not be pursued. The Navy does not specify the nature of the access problems; however, given the knowledge of the activities which occurred in the pit, the undocumented conditions of the pit and tanks at the time of "covering", and the presence of the crystalline substance, the Navy should consider efforts to characterize the source area.

In addition, please describe how the pit was "covered" in the 1960's, what efforts would be required to uncover them, and whether there is documentation that the tanks were emptied.

In the second paragraph of the Navy's response, it is stated that the boring located on the eastern side of the building will be located against the outside wall. Please clarify where this will be located relative to the acid proof pit and whether the boring is downgradient of the acid proof pit.

COMMENT 9: As opposed to previous stated sampling intervals (e.g., 0-1 ft, 3-5 ft, etc.), the Navy now proposes to collect samples for analyses at 5-foot intervals. It is not clear if this interval is in addition to the surface soil (0-1 ft) collection such that there will be two samples (one surface and one subsurface) collected from 0-5 ft, and also, if sample collection for chemical analyses will occur to the total depth of the boring. It was previously proposed that subsurface soil sampling would cease at the vadose zone/groundwater table at Sites 30 and 32. Please clarify the sampling intervals and sample collection for each Site in detail.

COMMENT 11: Based on the location of the proposed background monitoring well in the natural material at Site 31 (Figure 3-4, Page 3-9; monitoring well shown in the upper right corner of the figure), the Potentiometric Surface Maps (Map 1 and Map 2) in the *Groundwater Data Package for Round 7, April 1997*, and the tidal effects which tend to cause a radial influence in the groundwater flow direction, it is not evident that the proposed background monitoring well is hydraulically upgradient of Site 31. This issue should be evaluated and further clarification provided.

The Navy proposes that this monitoring well serve as an upgradient well for Site 31 and as a downgradient well for Site 21. As stated by the Maine Department of Environmental Protection (MEDEP) in Comment 6.b., it is not appropriate to locate the background monitoring well for Site 31 based on the goal to intercept potential contaminated groundwater from Site 21. The background monitoring well for Site 31 should be placed in the most appropriate upgradient location without consideration to Site 21. While it may be possible that the ideal location upgradient of Site 31 will be in an appropriate downgradient location from Site 21, it is not clear that the proposed well is ideally located upgradient of Site 31. Please present the evidence (i.e., potentiometric data) for the area including Site 31 and Site 21 to support the location of the proposed dual-purpose monitoring well.

COMMENT 29: With respect to the grouting of the annular space above the bentonite seal during monitoring well construction, the Navy responds that the MEDEP has suggested that an inert substance such as clean fill or filter sand be used to fill the annular space. The Navy plans to use fine grained filter sand.

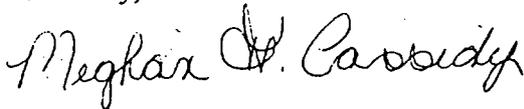
EPA has some concerns with the use of fine grained filter sand to fill the annular space above the bentonite seal since it seems to defeat the purpose of the surface seal which is to: 1) prevent surface runoff from entering and infiltrating down the annulus of the well, and 2) prevent damage to the well by providing stability to the well alignment (which aids in maintaining the integrity of the annular fill material including the bentonite seal) during frost heaving. While the bentonite seal is the primary annular sealer, the surface seal provides a secondary line of defense and is particularly important when wells are installed on solid surfaces (i.e., asphalt, concrete, etc.) where surface water runoff may pass beneath the concrete pad or through the flush mount cover.

Please explain the rationale behind the use of filter sand for filling the annular space above the bentonite seal so that the advantages and disadvantages can be weighed and other options may possibly be considered in general or on a site-specific basis.

COMMENT 30: The Navy states that a tidally influenced well will be one that exhibits a head difference of greater than 1 foot between low tide and high tide. Technically, a tidally influenced well should be defined as one in which the water level fluctuates with the tide, regardless of a specific vertical distance. This statement should be clarified to say that this "definition" is for the purposes of sampling the tidally influenced wells at low tide in order to avoid significant dilution of contaminants which may occur as the tide rises and impacts the water level in the well.

If you have any questions regarding these comments, please contact me at (617)573-5785.

Sincerely,



Meghan F. Cassidy
Remedial Project Manager

cc: Marty Raymond/PNS
Iver McLeod/ME DEP
Carolyn Lepage/Lepage Environmental
Eileen Curry/Dynamac
RAB Members