



FOSTER WHEELER ENVIRONMENTAL CORPORATION

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File # 1284-0038-00-0075

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Mr. Iver McLeod
Maine Department of Environmental Protection
State House Station #17
Augusta, ME 04333

Dear Ms. Cassidy and Mr. McLeod:

On the behalf of the US Navy, Foster Wheeler Environmental Corporation is please to present the Final Work Plan for Mercury Burial Vault II And Drum Investigation at the Portsmouth Naval Shipyard in Kittery, Maine. Also enclosed are the Navy's responses to U.S. EPA comments dated December 23, 1999, Maine DEP comments dated January 5, 2000, and Seacoast Anti-Pollution League comments dated January 14, 2000 on the Draft Final Work Plan Mercury Burial Vault II and Drum Investigation. The Navy is scheduled to commence work on February 28, 2000.

Should you have any questions or request for additional information please feel free to contact Mr. Fred Evans at (610) 595-0567 x-159.

For the Community Restoration Advisory Board (RAB) members; if you have any comments or questions on these issues, they can be provided to the Navy at a RAB meeting. by calling the Public Affairs Office at (207) 438-1140 or by writing to:

Portsmouth Naval Shipyard
Code 106.3R Bldg 44
Attn: Marty Raymond
Portsmouth, NH 03804-5000

Very truly yours,

Carl Tippmann, PE

cc: Distribution
File



**RESPONSE TO U.S. EPA COMMENT DATED DECEMBER 23, 1999
DRAFT FINAL WORK PLAN
MERCURY BURIAL VAULT II AND DRUM INVESTIGATION
PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE**

General Comments

- 1. Comment:** The text states that if MBII is located, it will be removed as a Time-Critical Removal Action. However, there is no specific information provided regarding how this removal would be conducted. EPA recommends that the document indicate that a removal action at MBII would be completed in accordance with the final work plan for Mercury Burial Vault I. This work plan outlines sampling requirements, analytical procedures, etc.

Response: The work plan will be revised to indicate that a removal action at MBII would be completed in accordance with the final work plan for Mercury Burial Vault I, except the soil excavated from directly around the vaults will not be placed directly into roll-offs.

- 2. Comment:** The Work Plan for MBII and Drum Investigation work does not make any mention of any proposed analytical work (i.e., laboratory analysis of soil from test pits). EPA recalls that at the technical meeting on December 15, 1999, the Navy indicated that some of the soil from the test pits would be analyzed for certain chemical constituents. Given the clarified objective of the proposed work, EPA realizes that the chemical analysis may no longer be a proposed component of the work plan. However, this needs to be clarified. If any samples will be analyzed, the Navy should document that they will use Standard Operating Procedures (SOPs), laboratory methods, etc. that have been reviewed and approved by EPA's Quality Assurance/Quality Control staff. If the Navy intends to use difference and/or new procedures, they should be submitted to EPA for review.

Response: The Work Plan for MBII and Drum Investigation work has been revised to provide a section on Sample Matrices, Parameters, and Frequency of Collection. The TtNUS Work Plan for Geological Services has been revised to soil sampling will be in accordance with SOP SA-1.3 in the Standard Operating Procedures (SOP) for Portsmouth Naval Shipyard. Analytical procedures will be provided for review and comment.

- 3. Comment:** Page 4-4 of the Work Plan states that if MBII and/or drums containing materials are removed, the removal would be considered a Time-Critical Removal Action. The text further states that the action would be documented in a Removal Action Close-Out Report. EPA reminds the Navy that depending on the type of removal action pursued, there may be requirements in addition to a Close-Out Report.

Response: In the event that a Time-Critical Removal Action under CERCLA is performed, all required documentation will be provided.

**RESPONSE TO MEDEP COMMENTS DATED JANUARY 5, 2000
DRAFT FINAL WORK PLAN
MERCURY BURIAL VAULT II AND DRUM INVESTIGATION
PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE**

General Comments

1. **Comment:** The Draft Final Work plan is very confusing regarding what, when, and if any materials (soil, product, ash, water) will be sampled and what they will be sampled for. The main body of the work plan does not indicate any sampling of material will occur.

Yet several responses to MEDEP comments indicate sampling will occur. For instance, response to MEDEP Comment 19 states, "...should drums be removed from an excavation, the excavation will be inspected for evidence of current releases. If leaks or spills are detected the soil within the excavation will be sampled for volatile organic compounds, semivolatile organic compounds, PCBs/pesticides, and metals. If ash is visible within the landfill, regardless of whether there are signs of a current release, the soil within the excavation will be analyzed for volatile organic compounds, [etc.]." Response to MEDEP Comment 23 states, "...waste characterization samples will be analyzed for TCL/TAL VOCs, SVOCs, Pesticides/PCBs, metals, and cyanide. If ash is present in the waste, the characterization will include dioxin analysis." Likewise, Response to Comment 25 states, "...DRO and GRO analysis will be analyzed using..."

Curiously, all these Responses are prefaced by, "This section has been removed." But then they go on to describe what sampling will occur. If any sampling is to be done then these sections should not be removed.

Furthermore, the inclusion of the TtNUS Work Plan for Geological Services indicates that sampling will occur.

In addition, responses to SAPL comments 25 ("...when in doubt, a sample will be collected for analysis), and 30 ("A soil sample from the bottom of the excavation will be analyzed for...Dioxin analysis will be included if ash...") indicate sampling will occur.

Please state specifically in the Foster Wheeler section of the work plan what sampling will occur. If any sampling is to occur then a Sampling and Analysis Plan should be submitted. Also, any analytical methods that will be used must be approved by USEPA and MEDEP.

Response: Sections were removed because the scope of the work plan is to perform test pits to investigate the possible presence of drums and Mercury Burial Vault II. If drums containing material and/or Mercury Burial Vault II are discovered, a Time-Critical Removal Action under CERCLA will be performed. However, the Navy tried to provide some additional information in response to the MEDEP's comments rather than leaving the response as "this section has been removed".

The Final Work Plan has been revised to include a section on Sample Matrices, Parameters, and Frequency of Collection to indicate the types of analyses to be performed by Foster Wheeler for the Navy. The TtNUS Work Plan for Geological Services indicates how the sampling locations will be determined. Analytical Methods will be provided to USEPA and MEDEP for review and comment.

2. **Comment:** There are too many problems with the responses to MEDEP comments dated April 30, 1999. As indicated in the previous comment, several of them are contradictory to the work plan. And, in many instances, a substantial number of responses ignores our line-of-inquiry (concerns) by simply stating "this section has been removed". The MEDEP objects to this as the concern is taken out of the Work Plan and often vaguely addressed by brief statements that follow in their responses

("however, ..."). It is difficult to know what will be done under a variety of possible field situations that could be encountered. The scope of the Work Plan seems to be readily changeable.

Response: Please see our response to MEDEP Comment No. 1.

Specific Comments

3. Comment: 4.3 Investigation Activities, p. 4-2

"If water is encountered during any given excavation, it will be returned to the excavation at the completion of the investigation activities."

Where will the water be kept in the meantime?

Response: Water removed from excavations will be stored, if necessary, in drums on site in a contained area.

4. Comment: 4.4 Backfill, p. 4-4

- a. **Comment:** "... each of the excavations will be backfilled with the material that was excavated from the location."

The Navy's response to SAPL Comment 26 states, "...the soil from the [mercury burial vault] site will not be tested for use as backfill. New fill will be purchased as "certified clean" soil. This contradicts the statement from Section 4.4. If the soil from the excavation will not be used as fill then what will the Navy do with it? Please clarify.

Response: Each excavation will be backfilled with the material from the excavation. Should additional soil be required to complete backfilling the excavation, "clean fill" will be used to complete backfilling the excavation.

- b. Please indicate that the MEDEP Residential Soil Criteria are currently in Draft form.

Response: The Work Plan has been revised to indicate that the MEDEP Residential Soil Criteria are currently in Draft form as requested.

5. Comment: Appendix A, TtNUS Work Plan for Geological Services

Please be sure that this Appendix is updated as discussed at the December 15, 1999 Technical Meeting and as recorded in the December 28, 1999 minutes of that meeting.

The following comments refer to the Navy Response to Comments included with the Draft Work Plan.

Response: A revised Appendix A, TtNUS Work Plan for Geological Services, has been included in the final Work Plan.

6. Comment: Response to USEPA Comment 5

The USEPA commented that, "In order to implement major changes, a process must be established for regulator notification and concurrence prior to implementation of the change."

The Navy responded, "... should major field changes be required, they will be communicated to the EPA and MEDEP Remedial Project Managers..."

Please note that as EPA stated, regulator concurrence must be reached prior to implementation of the change.

Response: When required, concurrence with MEDEP and EPA will be obtained by the Navy prior to proceeding.

7. **Comment:** Response to MEDEP Comment 3b

Original Navy statement: "The landfill...is currently being used for recreational activities..."

MEDEP Comment: "This statement should be clarified. The Navy halted the use of the landfill for soccer and baseball several years ago..."

Navy response: "No revisions to the text will be made. Based on the Risk Evaluation of Surface Soils from the...JILF...using the field for youth soccer did not pose a health problem."

This was not the point of my original comment. The MEDEP is not disputing the results of the Risk Evaluation of Surface Soils. However, it would be helpful to state that the only current recreational use of the landfill is the running track. Otherwise, the Navy's statement gives the impression that the landfill is currently being used for other recreational activities, which is not the case.

Response: The text has been revised to indicate a running track and fitness area are located on the landfill.

8. **Comment:** Response to MEDEP Comment 4

Original MEDEP Comment: "Please place this work plan in context, i.e., indicate that this project is being undertaken as part of the CERCLA clean up of the PNSY."

Navy response: "The objective of the project has been revised..."

Nevertheless, the objective should still indicate that the project is being undertaken as part of the CERCLA clean up of the Portsmouth Naval Shipyard. Please add this language.

Response: The first sentence of Section 1.2, Objective, has been revised to "in further characterization in support of determining a final remedy of the site under CERCLA."

9. **Comment:** Response to MEDEP Comment 10

"The Navy reserves the right to discontinue testpitting prior to the number of testpits or drums specified if it believes it has collected adequate information."

As previously stated, any major field changes (such as reducing the number of test pits) require concurrence by the regulators.

Response: The decision to reduce the number of test pits may be unilaterally made by the Navy. The Navy is voluntarily performing this investigation to determine a proposed course of action for the JILF.

10. **Comment:** Response to MEDEP Comment 14

"...no permits are required for the testpitting if the work is being overseen by the MEDEP's Bureau of Remediation and Waste Management."

It is important to note that this waiver of permits is primarily due to PNSY being a CERCLA site and the Bureau of Remediation and Waste Management (BRWM) is acting within its authority under CERCLA. It should not be construed to indicate that any project that is overseen by the BRWM is free from permitting requirements.

Response: Comment noted.

11. Comment: Response to MEDEP Comment 17

"...the Navy will ensure...that contingencies are in place should a release occur."

Please discuss these contingencies.

Response: The following has been added to the fourth paragraph of Section 4.3, Investigation Activities, of the work plan: Spill kits and over packs will be available during the investigation.

12. Comment: Response to MEDEP Comment 19

This response does not indicate that ash will be analyzed for dioxins. Please clarify that this is the case.

Response: The Work Plan has been revised to indicate a sample will be analyzed for dioxin if ash is present in the test pit.

13. Comment: Response to MEDEP Comment 27

MEDEP Comment: "FCRs need to be acted on in a timely manner."

Navy response: "This section has been removed."

Why has this section been removed? Does the Navy no longer have a process for dealing with Field Change Requests?

Response: The Navy will be responsible for notifying the EPA and MEDEP of field changes, if required.

14. Comment: Response to MEDEP Comment 29

"The Construction Schedule has been removed from the Work Plan."

Attachment 2 of the Draft Final Work Plan contains the Construction Schedule as is appropriate. Please do not remove it from the Work Plan.

Response: The construction schedule will remain in the Work Plan and has been updated to reflect the new start date.

15. Comment: Response to SAPL Comment 40

"This section has been revised to indicate the final investigation report will contain the results of laboratory and field testing, interpretation of the data, and document any deviations from the Work Plan."

In fact, this section of the Draft Final Work Plan does not indicate that the closeout report will contain interpretation of the data or document any deviations from the Work Plan. Please revise this section.

Response: This section (Section 8) has been revised to reflect what will be included in Foster Wheeler's close out report and what will be included in TtNUS' investigation report.

**RESPONSE TO SAPL COMMENTS DATED JANUARY 14, 2000
DRAFT FINAL WORK PLAN
MERCURY BURIAL VAULT II AND DRUM INVESTIGATION
PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE**

Comments on Navy Responses to SAPL's May 27, 1999, Comments

1. **Comment:** SAPL Comment 2. Page 1-1, Section 1-1. The second paragraph indicates that the Jamaica Island Landfill (JILF) is shown on Figure 2-1. The JILF is not identified on Figure 1-2, but is shown on Figure 1-3. The text here should refer to Figure 1-3.

Navy Response: The reference will be revised to refer to Figure 1-3.

Additional Comment: The text was not revised.

RESPONSE: This text has now been revised to refer to Figure 1-3.

2. **Comment:** SAPL Comment 5. Page 1-2, Section 1.2. What is the basis for estimating 25 test pits will be excavated? This information should be included in the Work Plan.

Navy Response: See response to MEDEP Comment No. 5a.

Additional Comment: The information in the response to MEDEP's comment should be included in the text of the Work Plan (see page 1-2 of the December Work Plan) to clarify that only 17 of the 25 proposed test pits are based on the MTADS results. The remaining 8 test pits are located in areas where MTADS was not attempted, but where Navy records show drums might have been buried between 1945 and 1965.

RESPONSE: The Work Plan Report has been revised to indicate 17 of the test pits target magnetic anomalies and 8 of the test pits are located in areas where MTADS was not attempted, but where Navy records show drums might have been buried between 1945 and 1965.

3. **Comment:** SAPL Comment 7. Page 1-5, Figure 1.3. Why is grass shown on Figure 1-3; what is the significance of grass? The location of the historical shoreline is impossible to identify on this figure. Perhaps a different line weight should be used.

Navy Response: When conducting excavation activities, it is important to know if an excavation will pass through grass, concrete, asphalt, etc. Also, any excavation that occurs beyond the limit of grass will require an alternate cover (such as asphalt) to be re-installed at the completion of the excavation activities. The line for the historical shoreline was presented for information purposes only.

Additional Comment: We appreciate the explanation for the grass symbol on Figure 1-3. However, the last sentence of the Navy's response begs a follow-up comment. Information on any figure should be presented so that a reader can readily identify and understand pertinent features. If the historical shoreline is defined in the legend, then the reader should be able to identify it on the figure. As we pointed out in our original comment, we were unable to do that. If the historical shoreline is to be retained in the final version of the Work Plan, the line weight should be changed. If the Navy feels the historical shoreline is not necessary for the reader to understand the figure, the symbol and note should be deleted from the legend to avoid further confusion.

Response: The line weight for the historical shoreline has been changed as requested.

4. **Comment:** SAPL Comment 8, Page 2-1, Section 2.1. The project team should also include a Maine-Certified geologist to provide oversight for the test pitting and observation of materials encountered. The information gathered during the test pitting will surely be utilized in subsequent interpretations of contaminant fate and transport and migration pathways.

Navy Response: See response to MEDEP Comment No. 7.

Additional Comment: The Navy's response to the MEDEP's comment identifies who the Certified Geologist will be. However, the current Work Plan still does not mention the Certified Geologist in the text or in the Project Organization Chart in Attachment 1. The Certified Geologist's role on the project team should be clearly spelled out in the body of the document, not just in an Appendix.

Response: The text and organization chart (Attachment 1) has been revised to include a Maine Certified Geologist, Mr. Charles Race of Tetra Tech NUS (TtNUS). The text also has been revised to describe Mr. Race's responsibilities during the site investigation.

5. **Comment:** SAPL Comment 10, Page 2-3, Section 2.4. The text states that technical changes to the work and non-conforming items will be documented in the project files. Significant deviations from the final Work Plan must be communicated to the regulatory agencies immediately and may require agency approval. Therefore, this section should also describe the criteria for determining what constitutes a significant change from the Work Plan and a process for notifying the regulatory agencies and other interested parties.

Navy Response: Please see our response to EPA Specific Comment No. 5.

Additional Comment: The Navy's response states that significant changes will be communicated to the regulatory agencies and the Restoration Advisory Board (RAB), but does not address situations where regulatory agency approval will be required. This shortcoming should be addressed.

Response: Regulatory agencies will be contacted by the Navy when concurrence is required.

6. **Comment:** SAPL Comment 12, Page 3-1, Section 3.1. The text states that approximately 40 drums will be removed from the JILF and disposed. What is the basis for the number, 40? Earlier comments submitted by the Maine Department of Environmental Protection indicate the actual number of drums buried at the JILF could be in the thousands. Please clarify. The text should be revised to reflect that water encountered during the test pit excavations will also be tested for contamination.

Navy Response: Please see response to MEDEP Comment No. 10 regarding the number of drums. Drums containing materials and soil where an obvious current release has occurred is proposed for characterization as part of the work plan.

Additional Comment: We are confused by the use of the term "current" with regard to sampling if there is evidence of a release. If there is any sign of a release, regardless of whether it is "current" or not, appropriate materials should be sampled.

RESPONSE: The term "current" was intended to indicate a release associated from a drum, which has been discovered. The Work Plan has been revised to provided clarification.

7. **Comment:** SAPL Comment 13, Page 3-1, Section 3.2. A bullet stating that the contents of the mercury burial vault will be sampled should be added to the list in this section. The sixth bullet should include sampling any water encountered in the test pits.

Navy Response: The objective of the project has been revised to clarify that the project is being performed as an additional site investigation of the landfill to attempt to locate Mercury Burial Vault II and to more accurately determine the quantity of drums buried within the landfill. Therefore, no sampling will be performed.

Additional Comment: The last statement of the Navy's response is in conflict with information provided in responses to other comments (see response to SAPL Comments 12, above, and 23, below, for example) and the TtNUS Work Plan for Geological Services that is included as Appendix A in the current Work Plan. These responses and Appendix A indicate that sampling will occur. We concur with the Maine Department of Environmental Protection's (MEDEP) General Comment 1 in the agency's January 5, 2000, letter that if sampling is to occur, a Sampling and Analysis Plan should be submitted (preferably as part of the final Work Plan) and that analytical methods must be approved by the regulatory agencies.

Response: A section has been added to the Work Plan to address sampling associated with the site investigation. Any sampling associated with an emergency removal action would be included in a Removal Action Close Out Report.

8. **Comment:** SAPL Comment 14. Page 3-1, Section 3.3. It would be appropriate to list all personnel required to perform the work, not just union craft labor. A Maine-Certified Geologist must be included.

Navy Response: Union craft labor along with personnel identified in Section 2.1 will be used to perform the work. Also, see response to your Comment No. 8.

Additional Comment: We perceive the Maine Certified Geologist to be an important member of the project team. Therefore, as we pointed out in our Additional Comment on SAPL Comment No. 8, the Work Plan should clearly identify the Certified Geologist's role and how it fits with the rest of the project team's responsibilities and decision-making processes.

Response: The text and organization chart (Attachment 1) has been revised to include a Maine Certified Geologist, Mr. Charles Race of Tetra Tech NUS (TtNUS). The text also has been revised to describe Mr. Race's responsibilities during the site investigation.

9. **Comment:** SAPL Comment 16. Page 3-2, Section 3.6. How will monitoring for radioactive hazards be conducted? Where will the results be reported?

Navy Response: During intrusive work on CERCLA sites, a representative from the Shipyard's Radiological health Division will conduct on-site radiological overcheck monitoring. A report will be issued after the field work which will contain results of the radiological monitoring.

Additional Comment: The details of the radiological hazard monitoring (including instruments, frequency, background determination, action levels, etc.) should be included in the Health and Safety Plan (HASP).

Response: Consistent with past agreed-upon practice, the Shipyard will continue to conduct on-site radiological overcheck monitoring with a high sensitivity gamma field survey instrument during any "intrusive" work at CERCLA sites (e.g., when sampling substantially below grade, when drilling wells, during test pitting, etc.). A summary of the results from on-site radiological overcheck monitoring during any intrusive work is included in final reports. If any significant result above normal background levels is identified, work will be stopped and the levels will be evaluated.

The details of this monitoring will not be included in the Health and Safety Plan because the Shipyard, not the contractors, will be performing the work. Shipyard workers are trained to follow standardized protocols for this type of monitoring.

10. **Comment:** SAPL Comment 22. Page 4-3, Section 4.3.1 "The Jerome™ Mercury Vapor Analyzer has a detection range up to 1.999 mg/m³. The permissible exposure limit (PEL) for mercury is 0.010 mg/m³." This passage is confusing. It appears that the vapor analyzer may not be able to detect concentrations well in excess of the PEL, and, therefore, would not be appropriate to monitor potential site worker exposures. Please clarify.

Navy Response: This section has been removed.

Additional Comment: The July 1999 Health and Safety Plan states that monitoring for mercury will occur during the excavation of MBII. Therefore, our original comment still requires a response, unless the Jerome™ Mercury Vapor Analyzer will not be used for monitoring. If a different instrument will be used, what is the detection range?

Response: The Jerome™ Mercury Vapor Analyzer will be utilized to monitor potential site worker exposure. The detection range maximum of 1.999 mg/m³ was included in the Work Plan in error. The proper detection range maximum for the Jerome™ Mercury Vapor Analyzer is 0.999 mg/m³. Mercury vapor levels in excess of the maximum range would still be detected using this instrument. In the unlikely event that a work area has mercury vapor levels that exceed the maximum detection limit, the Jerome™ Mercury Vapor Analyzer will give the maximum detection limit as the reading. Foster Wheeler has also chosen to use the TLV (Threshold Limit Value) of 0.025 mg/m³ instead of the PEL of 0.025 mg/m³. We have chosen to do so because the TLV is more conservative than the PEL.

11. **Comment:** SAPL Comment 23. Page 4-4, Section 4.3.1. The description of activities in the last paragraph indicates the Navy anticipates the containers at MBII will be the same as encountered at MBI. Is there any information to justify this assumption? What measures will be taken to prevent damage to the contents of the vault or vaults? What steps will be taken should damage occur? If water is sprayed over the concrete while it is being broken up, will samples of water be collected for testing?

Navy Response: This section has been removed. However, based on information in the IAS and the Navy's experience during the removal of MBI, the Navy anticipates the containers at MBII will be the same as encountered at MBI. Please see our response to MEDEP Comment No. 17 regarding what steps will be taken should damage occur. Water would be sprayed over the concrete while it is being broken up to reduce dust. Samples of standing water, if present, will be collected for analysis.

Additional Comment: It is not clear why this section was removed from the Work Plan. The responses to this comment and MEDEP Comment No. 17, as well as page 4-4 of the current Work Plan, indicate that MBII will be removed if it is found. Therefore, information pertaining to MBII should be retained in the Work Plan, not deleted. In addition, the final sentence in the Navy's response indicates that sampling would occur, should water be encountered in the MBII excavation. As we noted in our Additional Comment on SAPL Comment No. 13, above, the Navy's responses present conflicting information regarding sample collection. The Work Plan should be revised to address collection and analysis of samples.

Response: In the event that the Mercury Burial Vault II is found, it will be removed as a time critical removal action. Information pertaining to the removal activities and associated sampling will be included in a removal action closeout report.

12. **Comment:** SAPL Comment 25. Page 4-5, Section 4.3.2. "If leaks or spills are detected, the soil within the excavation will be sampled..." Information should be included in the text about how leaks and spill will be detected. It is likely that confirmation sampling will be required at all excavations to demonstrate there is no contamination. Sampling should include any water encountered in excavations, as well as soil.

Navy Response: Please see our response to MEDEP Comment No. 19 [That response includes the statement that the section has been removed] and SAPL Comment No. 12. The test pitting is occurring in a landfill, the Navy knows there is existing contamination. Monitoring for volatile organics will be performed using a photo ionization detector (PID) during excavation of testpits and removal of drums. The Navy believes current releases of drums containing volatile organics, oils greases, paints will be able to be determined. However, when in doubt, a sample will be collected for analysis.

Additional Comment: This response raises a number of issues. First, it is not clear why this section has been deleted. Information relating to detection of leaks or spills is important and should be included in the Work Plan. Second, the Navy's response indicates that sampling is a distinct possibility, which is in conflict with the Navy's response to SAPL Comment No. 13. The Work Plan should clearly state under what circumstances sampling would occur. Furthermore, as we pointed out in several comments above, the Work Plan should address sample collection and analytical methods. And as we stated in our Additional Comment on SAPL Comment No. 12, we find the use of the term "current" in conjunction with leaks or spills to be confusing and limiting.

Response: Leaks and spills within the excavations will be determined visually. Information concerning sampling methodology associated with the time critical removal action will be included in a removal action close out report. The term "current" has been removed from the Work Plan.

13. **Comment:** SAPL Comment 26. Page 4-5, Section 4.4.1. *"If it is evident that leakage occurred from the mercury burial vault into the surrounding soils, then the backfilling operation will not proceed until confirmation sample results indicate that the mercury level in the impacted soil is less than 5.5 mg/kg. If less than 10 cubic yards of soil requires removal resulting from mercury levels greater than 5.5 mg/kg, then the Navy Representative will further evaluate the situation and provide direction to FWENC regarding the backfilling operation. If there is no evidence of leakage, then confirmation samples will be collected and the excavation will be backfilled."* This passage raises several concerns. How was the action level for soil removal determined? The basis for using 5 mg/kg as the action level for removing contaminated soil must be included in the text, including any appropriate regulatory or reference citation. What other parameters will be included in the testing? It is also not clear what the criteria are for determining if a leak has occurred. Is it based strictly on visual observations? If less than 10 cubic yards of soil exceeds the action level, why not remove it and be done with it? This section should clearly state that the mercury burial vault will not be backfilled until "successful" confirmation sample results are received, as stated in Section 5.1.1. Will the "common fill" to be used for backfilling also be tested? There must also be a provision for testing any water that is encountered in the excavation.

Navy Response: This section has been removed. However, the soil from the site will not be tested for use as backfill. New fill will be purchased as "certified clean" soil.

Additional Comment: Removing the section does not address the issues we raised in our original comment. The responses to comments and the current Work Plan indicate that MBII will be removed if it is found. The Work Plan should also address how soil (and water) contamination encountered during the removal of MBII will be dealt with, and what will be done with the soil from the site if it is not used as backfill.

Response: Soil samples will be collected as outlined in the TtNUS Work Plan for Geologic Services. In the event that the Mercury Burial Vault II is found, it will be removed under as a time critical removal action under CERCLA using the Navy's Lead Agency Authority. Information pertaining to the removal activities and associated sampling will be included the removal action close out report.

14. **Comment:** SAPL Comment 28. Page 4-6, Section 4.4.2. *"Test pit locations where leaking drums were encountered and removed will not be backfilled until post-excavation samples have been collected and analyzed. If the analytical results indicate that a leaking drum has not impacted the soil*

in the test pit, then the backfilling operation will begin." Comment 26, above, applies to this section. In addition, what are the criteria for determining how much soil should be removed?

Navy Response: Please see our response to SAPL comment no. 26.

Additional Comment: Please see our Additional Comment on SAPL Comment No. 26.

Response: Please see our response to SAPL Comment No. 13.

15. **Comment:** SAPL Comment 29. Page 5-1, Section 5.1. This and subsequent sections should include measures and procedures for testing water that is encountered in excavations. The second sentence states that field confirmation sampling will be performed where "severely" contaminated soil is encountered. How is "severely" defined with regard to level of contamination?

Navy Response: Please see our response to SAPL Comment No. 12.

Additional Comment: As we have pointed out in a number of Additional Comments in this letter, the Work Plan should clearly identify when samples will be collected and describe sample collection and analytical methods.

Response: Please see our response to SAPL Comment 13.

16. **Comment:** SAPL Comment 30. Page 5-1, Section 5.1.1. Why are confirmation samples being collected at two feet below the top of the vaults, rather than from a depth closer to the bottom of the vaults? The basis for the 5.5 mg/kg action level must be provided. What other parameters will be included in the confirmation analysis, particularly if the photoionization detector (PID) responds significantly? The Navy proposes to collect one composite sample for each 500 cubic yards of stockpiled excavated material. This frequency is too low for adequate characterization. We suggest sampling on the order of one sample for each 100 cubic yards of excavated soil.

Navy Response: This section has been removed. However, soil below the bottom of the vaults, if located, will remain in place. A soil sample from the bottom of the excavation will be analyzed for VOCs, SVOCs, PCBs/Pesticides, (including cyanide). Dioxin analysis will be included if ash is visible in the excavation.

Additional Comment: Instead of removing the section, the Navy should add the information in the response to the Work Plan. Soil samples should also be analyzed for mercury (it appears that metals were left out of the list of parameters in the response). Information on sample collection and analytical methods must also be included in the Work Plan.

Response: Please see our response to EPA Comment No. 2.

17. **Comment:** SAPL Comment 31. Page 5-1, Section 5.1.2. *"Post excavation confirmatory soil samples from the test pit excavations will be collected if any drums were found to have leaked their contents, or if severely contaminated soil is encountered during the excavation. If it is visually determined that confirmatory sampling is necessary, a soil sample will be collected from each of the side walls and from the base of the excavation."* While visual evidence of contamination must be taken into account, it appears that the Navy is relying solely on visual determinations as the basis for performing confirmatory sampling. The materials contained in the drums may not leave obvious signs after leaking. What other means will be used to determine if leaks have occurred? It is likely that confirmation samples will be needed to demonstrate that contamination has not occurred, regardless of evidence of leakage. As we pointed out in comment 29, above, "severely" with regard to contaminated soil must be defined. At what depths (relative to the drum or drums) will the confirmatory samples from the side walls be collected? Our previous comments about testing water encountered in the excavations also apply.

Navy Response: Please see our response to SAPL Comment No. 25.

Additional Comment: Our Additional Comment on the response to SAPL Comment No. 25 also applies to the Navy's response to SAPL Comment 31.

Response: Please see our response to SAPL Comment No. 25.

18. **Comment:** Page 5-2, Section 5.1.2. The samples must also be analyzed for diesel-range and gasoline range organic (DRO, GRO) compounds by a Maine-certified laboratory using the Maine - approved laboratory methods, and for dioxin. The frequency of soil sampling is not adequate - see comment 30, above.

Navy Response: Please see our responses to MEDEP Specific Comment No. 25 [That response states that this section has been removed, but DRO and GRO analysis will be analyzed using the Maine Methods by a Maine-certified laboratory.] and SAPL Comment 30.

Additional Comment: Why is the section being removed if the Navy intends that samples will be collected and analyzed? The information in the response should be added to the Work Plan, not deleted. Our Additional Comment on SAPL Comment No. 30 also applies.

Response: Please see our response to EPA Comment No. 2.

19. **Comment:** SAPL Comment 33. Page 5-2, Section 5.2. Waste characterization samples should also be analyzed for pesticides and dioxin.

Navy Response: Please see our response to MEDEP Specific Comment No. 23. [That response states that this section has been removed, but that waste characterization samples will be analyzed for VOCs, SVOCs, Pesticides/PCBs, metals, and cyanide.]

Additional Comment: Again, this section should not be removed from the Work Plan. Rather, the information in the response, along with details of sampling and analytical methods should be included in the document.

Response: Please see our Response to EPA Comment Number 1.

20. **Comment:** SAPL Comment 34. Page 5-3, Section 5.3.2. To minimize loss of volatile constituents, sample containers for volatile organic compounds and DRO/GRO should be filled immediately from the excavator bucket, not after soil has been transferred to the stainless steel pan.

Navy Response: This section has been removed. Please see our response to MEDEP Specific Comment no. 24 [That response states that samples for VOCs and TPH will be paced directly into the vials/bottles to prevent loss of volatiles during sampling.]

Additional Comment: As we have noted in a number of Additional Comments above, information relating to sample collection methods should be added to (not deleted from) the Work Plan.

Response: Please see our Response to EPA Comment Number 2.

21. **Comment:** SAPL Comment 38. Page 6-2, Section 6.2.3. The daily CQC Report should also note any deviations from the final Work Plan.

Navy Response: The daily CQC Report will note any deviations from the final Work Plan.

Additional Comment: The text of the Work Plan should specifically identify deviations from the final Work Plan as one of the items to be documented in the daily CQC Report (see page 5-2 of the current Work Plan).

Response: The text has been revised to reflect this comment as requested.

22. **Comment:** SAPL Comment 40. Page 8-1, Section 8. The final engineering closeout report should also contain the results of laboratory and field testing, interpretation of the data, and document any deviations from the Work Plan.

Navy Response: This section has been revised to indicate the final investigation report will contain the results of laboratory and field testing, interpretation of the data, and document any deviations from the Work Plan.

Additional Comment: The text in Section 7 of the current Work Plan does not contain the revisions specified in the Navy's response

Response: The text has been revised to indicate what will be included in FWENC's report and what will be included in TtNUS' report.

23. **Comment:** Page 9-1, Section 9. The reference list should include the HASP.

Navy Response: The HASP will be included in the reference list.

Additional Comment: The HASP is not included in the reference list in the current Work Plan.

Response: The HASP has now been included in the reference list.

24. **Comment:** Attachments 1 & 2. The Project Organization Chart should include the Maine-Certified Geologist. The Construction Schedule should be updated.

Navy Response: Please see our response to MEDEP Specific Comment Nos. 7 and 29 [The latter response states that the Construction Schedule has been removed from the Work Plan].

Additional Comment: As we have noted in Additional Comments above, the role of the Certified Geologist, and their relationship with the rest of the Project Team should be spelled out. We note that, contrary to the Navy's response, the current Work Plan contains the Construction Schedule in Attachment 2.

Response: The text and organization chart (Attachment 1) has been revised to include a Maine Certified Geologist, Mr. Charles Race of Tetra Tech NUS (TtNUS). The text also has been revised to describe Mr. Race's responsibilities during the site investigation.

Comments on the December 1999 Draft Final Work Plan

We have presented the majority of our comments on the December 1999 *Draft Final Work Plan* in the Additional Comments above. To these we add the following:

1. **Comment:** Page 4-4, Section 4.2.2. A number of the Navy's responses to comments, as well as revisions to the title and text, indicate that the Work Plan applies only to investigation activities, and no longer covers removal actions. However, the text on page 4-4 states that, should the mercury burial vaults and/or drums containing materials be encountered, they will be removed as a Time Critical Removal Action. The Work Plan should provide specific information on how such a removal would be carried out. Revisions to the HASP are also needed.

Response: Please see our response to EPA Comment Number1 regarding MB II, should it be encountered. Information on removal of drums containing materials, should they be encountered, will be included in a removal action close out report. Appendix H, Buried Drum Excavation Procedures, of the HASP addresses the Health and Safety Aspects of what to do, should MBII and/or drums be encountered.

2. **Appendix A.** The TtNUS Work Plan for Geological Services should be updated to reflect the discussions and agreements reached at the December 15, 1999, Technical Meeting.

Response: The TtNUS Work Plan for Geological Services has been updated to reflect the discussions and agreements reached at the December 15, 1999 Technical Meeting.