



Brown & Root Environmental

C-NAVY-4-97-0105W

April 24, 1997

Project Number 7368

Mr. James Shafer
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Northern Division, Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, Pennsylvania 19113

Reference: CLEAN Contract No. N62472-90-D-1298
Contract Task Order No. 0268

Subject: Responses to RIDEM Comments on the Draft SASE Report

Dear Mr. Shafer:

Enclosed are four copies of the responses to the comments from Paul Kulpa (RIDEM) on the Draft SASE report for the Former Robert E. Derecktor Shipyard at NETC in Newport Rhode Island. These comments were received on March 19, 1997.

We are currently working on the revised SASE report based on our responses to these comments and our responses to the comments from the U.S. EPA dated April 21. We anticipate delivery of the revised report on June 12, 1997 which is 45 days from the delivery of these responses.

If you have any questions regarding this material, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "Stephen S. Parker".

Stephen S. Parker
Project Manager

SSP/

enclosure

c: B. Wheeler, NETC Newport (w/encl-4)
P. Kulpa, RIDEM (w/encl-4)
J. Trepanowski/M. Turco, B&RE (w/encl-1)
File 7368-3.2 (w/o encl)

**Responses to Comments From the
Rhode Island Department of Environmental Management on the
Draft Site Assessment Screening Evaluation Report (SASE)
Former Robert E. Derecktor Shipyard,
NETC Newport, Rhode Island**

1. General Comment

The report is organized such that each section deals with a particular aspect of the investigation for all of the areas of the site. That is, one section deals with sumps for the entire site, the next deals with drainage, etc. This layout does provide the reviewer with an overall picture of conditions at the site. However, this format is not as well suited for examining individual portions of the site, ie individual buildings or areas. Therefore, an additional section should be added to the report which compiles all of the information for an individual area or building from the different investigations conducted at the site. The following information should be included in this section of the report; historic information, all of the findings and specific recommendations of the PA, the results of any removal actions conducted prior to the SASE, the findings from the sump, drywells, drainage system, test pitting, soil borings, monitoring wells, etc. The State recommends that this section follow the format used in the Preliminary Assessment.

Response:

The SASE investigation was designed in 1994 and 1995 through the development of the SASE Work Plan. The work plan describes the investigation to evaluate all areas of potential concern as broken down into the four sub-areas described (North Waterfront, Central Shipyard, Building 234 Area, and South Waterfront). Each of the areas of potential concern identified in the Preliminary Assessment (PA) were evaluated as described in the work plan and Section 3 of the report. The report was not designed to address each area of concern separately, rather it is an evaluation of the site as a whole, as the comment above mentions.

The above comment, and some other comments that follow request clarifications on the findings at specific suspect release areas identified in the PA. In order to clarify the report, and satisfy the departments comment, numerous clarifications, additions, and other changes will be made to the report, particularly in Section 2 (regarding AST and UST records) and Section 4 text and figures. These changes describe in more detail the findings relative to the suspected release areas identified in the PA. However, the report will not undergo a complete reformat to be "release-specific".

Finally, many of the comments request information be included in the SASE report which has already been published or addressed in other deliverable reports, such as the PA report, the Marine Ecological Risk Assessment, and other not yet completed reports. Completed reports and available information have been used for the design of the SASE investigation. The Navy believes that in the context of the investigation following the CERCLA process, the re-publication of all this material in the SASE report is not necessary. However, some additions will be made for clarification as noted in the responses to the specific comments that follow.

The responses to the specific comments below will describe how each concern will be addressed.

2. General Comment

The report should include individual maps for each area of concern or building which delineated all test pits, monitoring wells, surface soil samples, borings, structures of concern (UST, sumps, ASTs drains) areas of concern, (surface staining, location of sand blast grit, former location of hazardous waste, etc). Additional maps should be provided which incorporate the pertinent analytical results, (total VOCs, SVOCs, PCBs, TPH, appropriate metals for the various media, (surface subsurface soils groundwater, sludges, etc). These maps should also incorporate pertinent field observations, such as staining and highlight exceedance of appropriate regulations, MCLs, soil standards, risk assessment values, etc.

Response:

The report figures, showing the boring locations (Figure 4-6), test pit locations (Figure 4-5), and other sample collection locations (Figure 4-1) will be revised to show detected concentrations of each contaminant group as requested in the comment. These contaminant maps will be specific to each sub-area of the shipyard (North Waterfront, Central Shipyard, Building 234 Area, and South Waterfront) as is appropriate in the context of the rest of the report. In this manner, the maps will show the areas of concern in an appropriate detail.

The "areas of concern" as described in the comment are depicted on Figure 4-1 in the PA report. The areas of concern within the study area boundaries will be added to these new Figures in the SASE Report.

Existing Tables 4-3 through 4-5 will be modified to include exceedances of regulatory standards using RIDEM "Remediation Regulations" Tables 1 (soil direct exposure), 2 (leachability), and 4 (GB groundwater), as well as promulgated MCLs.

The risk information requested by the comment is more clearly presented on the tables in Section 6, and no report clarity would be gained by adding new oversize figures depicting the increased risk results. The incorporation of these results into the figures is generally considered to be out of scope of a screening assessment report.

3. General Comment

The report should include a detailed discussion of the history of the site. This discussion should include information from aerial photographs, historic plans, interviews, etc. for each area of concern or building. The State recommends that the format for the individual structures in the PA be expanded upon in this report.

Response:

The background information presented in Section 2 is updated information previously presented in the PA report. The events at the site since the preparation of the PA report will be expanded upon to describe the sandblast grit removal and cleanup operations performed by the NETC PWD. However, a rewrite of the section to be specific to each area of concern will not be performed.

4. General Comment

This Office is aware that the remedial investigation was photo-documented. Pertinent photographs should be included in this report. These should include, photographs of sumps and catch basins before and after the removal of sludges or other debris, photographs of any staining or other visible signs of contamination, such as the paint discharge drains beneath Building 42, photographs showing the location of pertinent objects, such as the underground vaults adjacent to Building 42, etc, representative photographs of equipment boxes or other structures, appropriate photographs of test pits and so forth. A map should be provided which delineates the location of these photographs. In addition, pertinent photographs showing areas of concern from the Preliminary Assessment should also be included in the report.

Response:

As agreed at the kick-off meeting for the SASE project, videotapes and photographs taken during the investigation were duplicated and delivered in separate binder to RIDEM on March 29, 1997.

5. General Comment

The report includes a quantitative Human Health and Ecological Risk Assessment which do not reflect the proposals in the original Work Plan. In the future, in order to minimize changes to the document, the Office recommends that the Navy submit a modified Work Plan prior to submitting the draft report.

Response:

The semi-quantitative human health risk assessment was provided as a part of the SASE report in an effort to help justify the overall conclusion of the report which was that no CERCLA - based Remedial Investigation would be necessary. It appeared to the authors that there were few areas of actual contamination within the study area. These areas of concern appeared to be limited in size and could be corrected with simple short term actions, and it did not appear that further remedial investigations and actions would be necessary at the site. It was determined that this situation was most strongly evidenced using the semi-quantitative risk analysis instead of the qualitative assessment presented in the work plan.

The Navy feels the ecological assessment in the SASE report follows the general outline for the assessment as described in the SASE work plan. Section 5.3 of the work plan identified the following elements for the ecological assessment: ecological characterization of the site; consideration of analytical data for exposed surface soils; identification of ecological receptors and terrestrial habitats potentially impacted by the site; literature review on detected site-related contaminants and potential ecological receptors; identification of viable complete exposure scenarios; and identification of those exposure scenarios more likely to represent a significant ecological risk. The ecological assessment addressed each of these components and discussed the ecological conceptual model in the context of the limited natural habitat value of the site.

Revisions to the risk assessments will be limited to those described in responses to specific comments that follow.

6. General Comment

Please be advised that all UIC structures must either be permitted or properly closed. Permits are obtained through the UIC Section of the DEM. The requirements of the permit depend upon the use of the structure. Closure is through the UIC Section and Waste Management Section of DEM. Closure requirements are delineated below.

All UIC structures must be properly closed to eliminate the potential for the structure to act as a conduit for groundwater contamination in the future. The following steps must be followed during the closure of UICs, attached please find "UIC Facility Closure Guidelines":

- a. all liquid and/or sludge remaining in piping, drains, tanks, drywells, etc. must be removed;
- b. all drains, piping and appurtenances associated with the UIC disposal system must be sealed;
- c. after confirmatory samples have demonstrated the absence of contaminants within the disposal system, the system must be cleaned fill and capped to grade (confirmatory analytical results must be submitted to the Department prior to backfilling);

Response:

Using the definition described in the RIDEM UIC regulations, only one location, the Dry Well at Huts 1 and 2, was determined to be a UIC. As described in the SASE report, this dry well was found to be empty, and appeared to have been used for sewage disposal from the bathrooms at the current locations of Huts 1 and 2. The Navy has no current use for this pit, and intends to have it dismantled.

Other sumps and pits were termed potential discharge points as described in Tables 4-1 and 4-2, based on their construction and piping outlets. These potential discharge points will be blocked or dismantled as a part of site redevelopment.

The reviewers should note that section 4.1 will be expanded to include a discussion of each sump individually. Section 4.1 of the draft report was developed in order to only discuss the sumps from which releases to the environment were suspected, and the tables 4-1 and 4-2 summarize the pertinent information for all of them individually. However, there are numerous comments that follow which indicate that this approach was not clear enough. Therefore, all sumps will be described individually in the text (Section 4.1), and summarized in the existing tables.

7. General Comment

The human health and ecological risk assessment assumes that current conditions are maintained at the site, surface coverage, etc. This is not necessarily the case and the report should note this or be modified accordingly.

Response:

A statement will be added at the end of the first paragraph of Section 7.0 (page 7-1) as follows:

"The ecological assessment was conducted based on current conditions at the site, particularly regarding the location and extent of exposed surface soil areas, and was not intended to address possible future ecological exposure scenarios resulting from changes to the existing conditions."

Similarly, a statement will be added at the end of the first paragraph of Section 6.0 as follows:

"The human health risk assessment was conducted based on current conditions at the site, particularly regarding the location and extent of exposed surface soil areas, and was not intended to address possible future site development and exposure scenarios resulting from changes to the existing conditions."

The approaches used are appropriate in that the site is expected to remain industrial, and paved areas are expected to remain paved, and maintained in a better condition than they currently are.

**8. Section 1-1, Projection Objectives;
Page 1-2, Paragraph 2.**

The discussion in this section is limited to the four areas of concern. The report should note that Derecktor Shipyard occupies space currently used by NUWC. This section of the report should also briefly state why these areas were not included in the current investigation and state any remediations carried out at these sites. A more detailed discussion of these areas should also be included in the appropriate section of the report.

Response:

The Navy concurs that part of the former leased area (Buildings 62, and 1-5, as well as the parking areas) were not within the study area defined for the SASE. The investigation boundaries were set as a part of the work plan, based on the findings of the PA, and reviewed by the regulatory agencies. For clarification, the report will be revised with the following statement in Section 1:

"The study area boundaries were set based on the findings of the Preliminary Assessment and the locations of the areas of concern defined within that assessment. The PA identified two areas of potential concern not within the study area boundaries, however, which are UST locations at Building 62 and Building 5. It is the Navy's intention to address these areas in accordance with the RIDEM UST Regulations, and not address them as a part of the CERCLA process which the SASE is a part of."

Remedial actions and investigations that were conducted at these off-site areas are addressed in other reports specific to those sites.

**9. Section 2.1, Activity History;
Page 2-2, Paragraph 3.**

This section of the report includes a brief history of activities in the Coddington Cove area. The report should note whether any of the activities conducted in the area had

the potential to generate waste (that is Derecktor Shipyard was known to generate a large volume of waste material, and certain materials such as sandblast grit was disposed of directly on-site).

Response:

The known history appropriate for this investigation is presented in Section 2 of the SASE report. This section will be slightly revised to describe the uses of the buildings prior to the lease by Derecktor, however, records of chemical releases and related information are not generally available, since records of such instances were not maintained at the time.

**10. Section 2.4, Findings of the Preliminary Assessment;
Page 2-5, Whole Section.**

As indicated in the report, the Preliminary Assessment (PA) was used to identify potential areas of concern. These areas would then be addressed in the SASE Report. The PA noted that a number of storm drains existed in the vicinity of Buildings 1,2,3 & 4. The report also notes that the drains in the vicinity of building four may have been impacted by releases from the site. The report should include a discussion of these buildings and any work performed in these areas during the SASE. Please be advised that the storm drains are potential UIC and should have been investigated as part of this SASE. This should be noted in the report.

Response:

Referring to the areas south of buildings 1, 2, 3, and 4, section 3.1, paragraph 3 of the PA report states "Any discharges to catch basins in these areas, based on the observations made during the site investigation, would have been released to the bay". Section 2 of the PA report states that the potential for environmental impacts from Buildings 1, 2, 3, and 4, (and 5) were low. For these reasons, the SASE investigation, as designed in the work plan, does not address these buildings. The impact to the near-shore environment from storm drain discharges is addressed in the Marine Ecological Risk Assessment (currently under development as a final document). Therefore, the storm drains near Buildings 1, 2, 3, 4, and 5 do not need to be investigated as a part of the SASE.

**11. Section 2.5, Recent Activity;
Page 2-6, Paragraph 5.**

This section of the report deals with the sand blast grit removal conducted at the site. The report should provide more detail concerning this removal action. That is analytical results from material, initial estimates concerning amount of grit at the site, actual volume of grit at the site, actual volume of grit removed and whether any grit still exists at the site. As of this writing, the Navy has not submitted the required report for the removal action which includes all of this requested information. This office recommends that this report be submitted so that its findings could be included in this report.

Response:

A summary of the removal action was prepared by OHM corporation in February 1996. This information will be summarized in Section 2.5 of the Draft Final SASE report. A full copy of the OHM report will be provided in a new appendix (Appendix F) to the Draft Final SASE report.

**12. Section 2.5, Recent Activity;
Page 2-6, Whole Section.**

Building 42 was used as a hazardous waste storage area and as a paint facility. During the shipyards operational period hundreds of fifty five gallon drums containing waste solvents, oils, acids and other materials were located in this building. The floors of the buildings were heavily stained and or flooded. The report should include a description of this building in the individual site history section.

Response:

Regarding the description of the building, the reviewer is requested to refer to the response to comment no. 1. This area is properly identified as a target area for the investigation. Repetition of previously published background information for each historic release area is not useful for the purposes of the SASE.

The reviewer is requested to refer to Section 4.2.1.2, and Figure 4-3 of the SASE report that shows the floor drain system that routes to sump S42-5, which is suspected to be designed and installed to be a sewage holding tank. Section 4.2.1.2 will be clarified to state that any discharges or leaks within the storage areas of Building 42 would have most likely drained into this holding tank via the floor drains and subsequently mixed with water from the roof drains, and sanitary waste from the bathrooms. It is not known how this material was disposed of.

**13. Section 2.5, Recent Activity;
Page 2-6, Whole Section.**

On the southeast corner of Building 234 was a hazardous waste storage area. The EPA required that soil and groundwater samples be collected in this area. The report should note that this area was used to store hazardous materials and that it was investigated under the USEPA RCRA program. Since the EPA investigation was limited to EP Tox analysis the report should note whether any remedial investigation activities, (test pits, boring etc) under the current SASE program addressed this area. Finally the location of this area should be depicted on a map.

Response:

The reviewer is requested to refer to the response to comment no. 1. This area is properly identified in section 2 of the SASE report as a target area for the investigation. Repetition of previously published background information for each historic release area is not useful for the purposes of the SASE.

As shown in Table 3-3 and 3-4, the area southeast of Building 234 was addressed through the installation of test pits 07 and 08, and the installation of a boring completed as a groundwater

monitoring well (MW09). The results described in the report indicate that there is little residual contamination at these locations with the exception of a high concentration of bis(2-ethylhexyl)phthalate in deeper soils.

**14. Section 2.5, Recent Activity;
Page 2-6, Whole Section.**

On the northern corner of Building 234 there was a spill of fuel oil. The oil from the spill entered a storm drain in the area. This information should be included in the report. The report should also note whether any contamination was observed in the storm drain in which the fuel entered and whether this drain had a soft or hard bottom.

Response:

Page 2-39 of the PA report contains the following paragraph:

"According to spill incident reports reviewed at the RIDEM, a spill occurred on October 31, 1987 on the north side of Building 234. According to the report (which is provided as Appendix J to the PA report), the 10,000 gallon UST was overfilled by a Derecktor Employee and fuel oil entered an adjacent storm drain and then discharged to Coddington Cove. Spill response measures were taken by Derecktor, and the spill was cleaned up. It was estimated that approximately 100 gallons or less of fuel oil was released."

The reviewer is requested to refer to the response to comment no. 1. This area is properly identified in section 2 of the SASE report as a target area for the investigation. Repetition of previously published background information for each historic release area is not useful for the purposes of the SASE.

The SASE investigation confirms that the catch basins in this area discharge at outfall 10, at the west side of Building 234. The records state that the oil release was cleaned up. The nature of the bottoms of the catch basins and storm drains will be clarified in Section 4.2.1.3.

**15. Section 2.5, Recent Activity;
Page 2-6, Whole Section.**

The northern water front area was used to store hazardous waste. The waste were stored in fifty five gallon drums and in tanks without secondary contaminant or protection from the elements. As a result there were reports of releases of hazardous material from the corroded drums. Accordingly, EPA required an investigation of this area. The report should include a detailed discussion of the north water front area and the investigation required by the EPA. In addition, since the EPA investigation was limited to EP Tox, the reports should note what samples from the SASE were taken from the areas investigated by the EPA. A map should be provided which depicts the sampling locations of the EPA and those of the SASE.

Response:

The previous investigation of the north waterfront hazardous waste storage area is documented on Page 2-43 and Appendix I of the PA report. This area was addressed as a part of the SASE as described in the Work Plan and Section 3 of the SASE report. This area was investigated

through the performance of test pits and borings completed as monitoring wells. The reviewer is specifically requested to refer to Tables 3-3 and 3-4 of the SASE report.

The exact locations of samples collected during the EPA's investigation of this area in 1984 are not known, except that they are proximal to the north waterfront hazardous waste storage area, designated on Figure 4-1 of the PA report. For these reasons, the SASE sample stations identified in Table 3-3 and 3-4 of the SASE were positioned in this area. Because the exact locations of the samples collected in 1984 are not known, they cannot be added to the SASE figures.

In addition, one of the findings of the SASE report is that due to the nature of the pavement and the storm drains at the entire site, releases at the site were most likely transported to the near-shore areas of Narragansett Bay (SASE report, page 8-3).

16. Section 2.6, Recommendations of the Preliminary Assessment Report; Page 2-8, Paragraph 2.

This section of the report deals with the sand blast grit found at the site. As previously discussed, the report should include all of the appropriate estimates, removal volumes and analytical results for this action. The report should note whether any grit still exist at the site. Please note that after the completion of the removal action, grit was discovered in the vicinity of the piers.

Response:

Facility representatives noted during the preparation of these responses that a large quantity of virgin sandblast grit was present near pier 1. This material was removed with the material excavated from the area around Building 42, and placed under the cap at McAllister Point Landfill (refer to the response to comment 11).

In addition, the reviewer is reminded that all off-shore investigations are conducted as a part of the Marine Ecological Risk Assessment for Dorektor Shipyard. This will be clarified in Section 2.6 of the SASE report.

17. Section 2.6, Recommendations of the Preliminary Assessment Report; Page 2-9, Paragraph 4.

This section of the report deals with the USTs found at the site. The reports discussion is brief and makes references to UST files which were not included in this document. This section of the report needs to be expanded to include the following: discussion noting the source of information used to located the USTs, i.e. engineering plans, site walk over, Preliminary Assessment report , interviews, etc., whether any suspected USTs were not located, investigation methods which were used in an attempt to locate these "missing" USTs , i.e. test pitting, magnetometer survey, borings, etc. (the areas covered by these techniques should be included in a map, ie location of test pits, etc), a quantitative discussion of the USTs investigations, that is results of analytical testing and whether sampling was limited to petroleum related compounds or whether a full sweep of VOCs, SVOCs, PCBs etc were analyzed for, plumes associated with the USTs, and any other information concerning their investigation and remediation.

Response:

The Navy concurs that the available records for the removal of USTs north of Building 234 should be included in the SASE report, and the findings of the investigations performed as a part of this UST location pertinent to this report shall be summarized.

**18. Section 2.6, Recommendations of the Preliminary Assessment Report;
Page 2-10, Paragraph 1.**

This section of the report discusses the contamination associated with Building 62. The report should note the results of the investigation of the sumps and reservoir within the building. Specifically, whether the contamination found in these areas had been remediated and whether a release had occurred.

Response:

The UST location at Building 62 is currently under investigation as a part of a separate project. The work plan for that investigation is currently under review by the RIDEM as of the date of this writing, and any discussions of the findings of the investigation for that location would be understandably preliminary. In addition, this location is outside of the study area as described in the SASE work plan and the SASE report. Therefore, the Navy proposes that the requested changes not be made.

**19. Section 2.6, Recommendations of the Preliminary Assessment Report;
Page 2-10, Paragraph 4.**

This section of the report alludes to the ASTs found at the site. The discussion of the AST should be elaborated to include the following; a map depicting the location of each AST, the type and size of AST, the contents of the AST when it was dismantled, the presence of any staining associated with the AST, SASE sampling associated with the ASTs, and any other pertinent information.

Response:

The PA report notes the presence of three ASTs, all located at the North Waterfront. The requested information will be searched for at RIDEM, NETC Fire Department, Middletown Fire Department, and Middletown Health Department. This information will be added to the SASE report if it is found. However, AST records are generally not maintained as UST records are, and it is expected that the ASTs were removed by Derecktor before or during the bankruptcy proceedings.

The reviewer is asked to refer to Tables 3-3 and 3-4 regarding the sample collection stations pertinent to these AST Locations. Results are presented in Section 4 of the SASE report.

**20. Section 2.6, Recommendations of the Preliminary Assessment Report;
Page 2-11, Paragraph 2.**

The report notes that the Preliminary Assessment recommended remedial activities with regards to the interiors of a number of the buildings. The report states that these buildings have undergone industrial cleaning and therefore additional investigation is

no longer warranted. The Preliminary Assessment also recommended that the floors of the buildings be inspected for leaks. This recommendation was based upon observations of heavy staining, spillage or flooding being observed in these areas. The SASE report should note whether the floors were inspected for cracks in order to ascertain whether a release had occurred.

Response:

This section of the report will be revised to describe the current condition of the floors inside the buildings where industrial cleaning was performed. These floors do not have major cracks present, and the likely path followed by releases inside the building is the floor drain system as described in Section 4.2 of the SASE report.

**21. Section 3.1.1, Sump Inspection;
Page 3-2, Whole Section.**

The report indicates that the sludges and other debris in the sumps, drains and other structures was removed during the remedial investigation. Analytical testing results of the sludge removed from sumps and other potential UIC structures must be submitted to determine whether the system in question acted as a source of contamination.

Response:

A new appendix will be presented (Appendix G) in the revised SASE report which will present the results from the analysis of the waste removed from the sumps and pits. This material includes water, sludge, and solid debris (wood, metal, concrete, insulation (non-asbestos) and other non-regulated waste.

22. Figure 3-1, Base Map

This figure depicts a pipe being located south of Building 42 in between two catch basins. Please indicate which section of the report contains a discussion of this pipe.

Response:

The findings of the subsurface drain system and the pipes south of Building 42 are presented in Section 4.2.1.2, and Figure 4-3 of the SASE report. There was no finding of the purpose or the potential past use of the pipe in question. This pipe will be discussed in Section 4.2.1.2 of the revised report.

**23. Section 3.2, Drainage Systems and Outfalls;
Page 3-4, Whole Section.**

This section of the report discusses the measures taken to investigate the storm drains in the area. The report has not indicated whether each storm drain was tested to determine whether it was a UIC, and whether a release had occurred. The report should delineate the measures taken to determine whether a storm drain was a UIC, and note on a map which drains had undergone testing and the results of this effort.

Response:

The storm drains were inspected through the use of robotic video cameras and smoke tests. The performance of this effort will be more clearly described in Section 3.2 of the revised SASE report, as described in the response to comment number 30.

The findings of this effort are described in Section 4.2 of the SASE report. The connections and discharge routes are clearly presented on Figures 4-2 through 4-4.

It is the Navys understanding that a catch basin could only be considered a UIC if there is no outlet piping discharging to the ground subsurface, and if the basin has an unconsolidated bottom. Since all the catch basins inspected were found to have consolidated bottoms and (with the exception of CBs 42-1 through 42-4), the catch basins are connected to outfalls open at the sheet piling at the west border of the site. Therefore, most of the 45 catch basins at the site are not UICs. The Navy concurs that CBs 42-1, 2, 3, and 4 require cleaning and upgrading, as stated in Section 8.4 of the SASE report.

**24. Section 3.3.1, Test Pitting Activities;
Page 3-6, Paragraph 3.**

The report indicates that a test pit was installed north of Building 234 to investigate a potential UST. Information from the Preliminary Assessment indicates that interviews with Derecktor Shipyard personnel and engineering plans indicate that there was two, 10,000 gallon USTs installed by the Donatelli Construction company. The area also contained a third, 25,000 gallon UST. This information should be included in the report along with the location of the USTs and the location of the test pit.

Response:

Another records search for evidence of the USTs in this area will be performed at the RIDEM, The NETC Fire Department, the Middletown Fire Department, and the Middletown Health Department. Any information found will be included in the SASE Report. However, as stated in the PA report, it is believed that the UST or USTs in at the North of Building 234 were not registered.

**25. Section 3.4.3, Groundwater Monitoring Well Installation;
Page 3-11, Whole Section.**

At a number of sites, the location of the monitoring wells will not provide the necessary to determine the subsurface disposal systems impact to groundwater. Many of the wells appear to be side gradient to the buildings where the systems are located and borings were not advanced at these locations. Please refer to analytical testing results from S-234-4, S-42-1 and S-42-2. The report should comment on the location of the monitoring wells and note at which locations additional wells are needed.

Response:

Installing wells hydraulically down-gradient of these sumps is impractical due to the presence of the buildings, the proximity to the ocean and the sheet piling wall. In addition, the concentrations of contaminants in the soils under sumps S234-4 and S42-2 are not expected

to represent potential contamination to the groundwater.

However, Section 8.4 of the report will be revised as follows: After the contaminated soils are removed at S42-1, the Navy can evaluate the need for monitoring wells in this area based on the vertical extent of contamination found during excavation.

**26. Section 3.5.3, On-Shore Ecological Setting;
Page 3-14, Whole Section.**

This section of the report deals with the ecological survey conducted at the site. Based upon the information presented it appears that the survey was limited to an on-site walkover and a literature search. During the Ecological Advisory Board Meeting it was the State's understanding that a more in depth survey was conducted at the site. For clarification, please provide a more detailed description of the ecological survey. This information should be submitted to the State prior to the issue of the draft final document as it will influence decisions concerning the ecological risk assessment methodology, specifically, whether the listed species in the report should be limited to those observed during the ecological survey.

Response:

A complete description of the ecological survey is described in Attachment 1 to these responses to comments, as requested by the comment above.

The reviewers should note that it was agreed at the Technical Meeting held on March 5, 1997 that the species listed in the report will be limited to those observed during the ecological survey.

**27. Section 3.3.1, Test Pit Excavation;
Page 3-6, Whole Section.**

Page 3-6, paragraph 4 states that the drywell was sampled as described in Section 3.2. Section 3.2 describes the investigation of the drainage systems and outfalls, this section does not contain a description of the drywell sampling.

Response:

The sampling procedure is described in Section 3.1.2 of the SASE report. This typographical error will be rectified.

28. Table 3-1, Summary of the UICs and Samples Collected.

In the summary section of the table the report should include a brief discussion of the field observations and indicate whether contaminants were detected in the samples

Response:

Table 3-1 shows where samples were collected and the rationale for positioning the stations at these locations. Findings are presented in Section 4. Tables 4-1 and 4-2 will be revised to

include a "contents" column. A new Appendix G will be added to describe the contaminants detected in the material which was removed from the sumps and trenches during the inspection process.

**29. Section 4.0, Findings of the Investigations;
Whole Section.**

29a: Building # 6 was deemed to be a area of potential concern due to the activities conducted in the building. Specifically hazardous chemicals were used in the building for pipe preparation work, hazardous chemicals were stored outside of the building, the loading dock and pavement in the area was heavily stained, a discharge pipe was found which led from the hazardous materials tanks in the building to a discharge point outside of the building, and there were allegations that leaking PCB transformers were stored in the area. This section of the report does not adequately address this area. Specifically, the report should discuss the potential sources of contamination, the measures taken to investigate these source, (ie collection of samples from storm drains, surface soil sample groundwater sample, etc) and the results of this sampling effort.

Response:

The PA report describes the information about Building 6 that the reviewer states above. This information was used to design the investigation efforts in this area, as indicated on Tables 3-2 and 3-3 of the report. The SASE report clearly states the potential source areas for the PCB contamination found in Test Pit 14. This text is presented in Section 4.3.4.2, page 4-21, Paragraph 2.

29b: Note, as previously requested, this information will be in one section, (that is, surface soil, subsurface soil, drainage basin, sample, etc). The report should also note whether the drainage basins in the area had hard or soft bottoms.

Response:

Regarding the report format, the reviewer is requested to refer to the response to comment no. 1. Regarding the catch basins, the reviewer is requested to refer to the response to comment no. 23.

**30. Section 4.0, Findings of the Investigations;
Whole Section.**

Section three of the report notes that a number of the storm drains, sumps and other structures at the site were filled, contained sand blast grit, sludges and other debris which had to be removed. The condition of the individual structures should be noted in the report as well as any other pertinent information, presence of oil or other contaminants, etc.

Response:

The following text will be added to Section 4.2.1 of the revised report:

"Forty-five catch basins were found at the site. Four of these were found to be blocked or filled with debris, including soil, gravel, concrete, wood and minor quantities of sandblast grit. All the catch basins inspected were found to be made of brick and mortar or poured concrete and were found to have consolidated bottoms.

In general, catch basins were not found to be obviously contaminated with oils or other contaminants, although the PA report states that oil and other evidence of chemical disposal was present in some of the catch basins during the inspection in 1993."

The primary storm drain lines were inspected with robotic video cameras, and were found to be made of concrete piping in good condition.

A new third paragraph will be added to Section 4.2.1.2:

"The four catch basins (designated on Figure 4-3 as CB42-1, 2, 3, and 4) which were filled with material were cleaned out using a vactor and hand tools. These were found to have small diameter piping leading away from them, but cleaning of these exit pipes did not prove to find outlets."

Regarding the sumps, the reviewer is asked to refer to the response to comments 6 and 21.

**31. Section 4.0, Findings of the Investigations;
Whole Section.**

Huts 1 & 2 were used as a maintenance facility by Derecktor Shipyard. These Huts were considered to be an area of significant concern due to there use as a maintenance facility and the presence of fifty five gallon drums, heavy oil staining, reported leaks, evidence of leaks presence of small ASTs and large 20,000 and 10,000 gallon ASTs. The Division is aware that samples were collected to address the concerns in this area. However, due to the structure of the report and the scale of the maps it is not possible to easily ascertain the specific of the investigation. Therefore, the report should be modified so as to provide the following information;

Location of 20,000 and 10,000 gallon ASTs, leakage associated with said tanks, contents of tanks, fate of tanks, analytical samples taken to determine if a release had occurred at the tanks, location of various 250 gallon waste oil/gasoline ASTs, leakage associated with tanks and analytical tests to determine if a release had occurred, location of interior and exterior manholes, staining and contamination associated with each and test to determine if a release had occurred.

Response:

The reviewer is asked to refer to the responses to comments 19 (regarding AST records) and comment 30 (regarding catch basins).

The reviewer is also asked to refer to the response to comment 1 regarding the design of the investigation and results for areas of potential concern.

In addition, the vehicle maintenance area was investigated through the performance of test pits and borings completed as monitoring wells. The reviewer is specifically requested to refer to Tables 3-3 and 3-4 of the SASE report for sample stations pertinent to this location.

For clarity, the following text will be included in Section 4.2.1.2 of the report:

"As described in the Work Plan and Section 3 of the this report, Huts 1 and 2 are the former location of a vehicle maintenance area, and there is a catch basin in the floor of one of these huts (CB-N-42-2), where significant staining was noted during the PA. This catch basin was found to be connected to one of the primary outfalls (3B) as shown on Figure 4-3".

**32. Section 4.0, Findings of the Investigations;
Whole Section.**

During the Derecktor Shipyard operational period, two quonset huts were located north of Huts 1 & 2. Heavy staining was observed on the floor of these huts. The report should note the location of these huts, discuss potential historic contamination and its potential impacts, i.e. whether said contamination may have entered any storm drains, etc). The report should also note whether any remedial investigation activities were conducted as part of the SASE for these structures.

Response:

The reviewer is asked to refer to the response to comments no. 1 and 2 regarding the design of the investigation and the target areas that were identified in the PA.

**33. Section 4.0, Findings of the Investigations;
Whole Section.**

The Preliminary Assessment noted that the south exterior wall of Building 42 was heavily stained. The report should note whether this condition still exists. Furthermore, the report should note what efforts were taken if any to determine if the soils adjacent to the southern wall were impacted and whether any sampling was performed in this area.

Response:

The revised SASE report will provide the following text as the second paragraph of Section 4.3.4.2:

"The Preliminary Assessment noted that the south exterior wall of Building 42 was heavily stained. This condition no longer exists. Furthermore, the soils adjacent to the southern wall showed no obvious evidence of impact, and opportunistic vegetation which is taking over this area does not appear to be stressed in any way."

**34. Section 4.0, Findings of the Investigations;
Whole Section.**

The Preliminary Assessment notes that a six inch plastic discharge pipe was located on the southern wall of Building 42. The function of the pipe is unknown, and it did not appear to discharge to any drain. The SASE report has not commented on the pipe. The report should indicate what remedial investigation activities, if any, were performed to determine the function of the pipe, whether a discharge had occurred from the pipe and the sampling performed to determine the nature of the discharge.

Response:

The revised SASE report will provide the following text in Section 4.2.1.2:

"A six inch ID PVC discharge pipe is located at the ground surface at the southern wall of Building 42. Visual inspections revealed that the pipe is connected to the lavatory on the other side of the wall. This pipe is broken off at the exterior side of the wall, and the destination it had when functioning is not known. It should be noted that this lavatory is in the poorest of conditions, and it appears that the mechanical systems within it have not been functional for several years."

**35. Section 4.0, Findings of the Investigations;
Whole Section.**

There are two separate reports of waste lagoons located at the northeast corner of Building 42. These lagoons apparently accepted oil waste from the shipyard. The potential existence of these lagoons was not noted in the report. The report should therefore be modified accordingly, and the potential location of the lagoons noted on a figure. The report should also note what remedial investigation activities were designed to ascertain the location of these lagoons (the location of the test pit or monitoring wells in this area may not have intercepted these lagoons). In addition, the report should clearly note that the absence of surface staining cannot be used as a criteria for the remedial investigation. This is due to the fact, that the Navy, despite agreements with the regulators not to, had placed clean fill in the area north of Building 42.

Response:

The reviewer is also asked to refer to the response to comment 1 regarding the design of the investigation and results for areas of potential concern.

The PA report states that this area was used for disposal of bilgewater from the dry dock, found during the RIDEM investigation of the site performed in May 1983 (Appendix F of the PA report).

This area north of Building 42 was investigated through the performance of test pits and borings completed as monitoring wells. The reviewer is specifically requested to refer to Tables 3-3 and 3-4 of the SASE report for sample stations pertinent to this location.

In addition, TRC installed a cluster of three wells in the area also to determine the presence of contaminants resulting from the former location of the bilgewater disposal pit. This information is presented in the Site Assessment Report, Building 42, prepared by TRC Environmental Corporation, 1994.

Finally, the reviewer should be aware that the investigation was designed around the information available to the Navy and the regulatory officials. The absence of stained soils at the time of investigation was not used as a criteria for determining if samples should not be collected. Sample stations are clearly identified in the work plan, and surficial soil samples in this area were not collected in accordance with a prior agreement with all the parties due to the presence of clean fill placed after the removal of the sandblast grit.

**36. Section 4.0, Findings of the Investigations;
Whole Section.**

The Preliminary Assessment notes that a pile of slag like material was found in the south east corner of Building 234. This material was stored near three storm drains. The report should include a discussion of this material. In addition the report should note what remedial investigation activities, storm drain samples, soil sample, etc, which were taken to investigate any releases from this material.

Response:

The reviewer is also asked to refer to the response to comment 1 regarding the design of the investigation and results for areas of potential concern.

This area was investigated through the performance of test pits and borings completed as monitoring wells. The reviewer is specifically requested to refer to Tables 3-3 and 3-4 of the SASE report for sample stations pertinent to this location.

No revisions to the report are planned for addressing this comment.

**37. Section 4.0, Findings of the Investigations;
Whole Section.**

The Preliminary Assessment noted that the shoreline near the southeastern corner of Building 234 was stained reddish brown, probably from rotoblast material. The report should note this and indicate whether the staining is still present. The report should also indicate what remedial investigation activities were conducted in this area.

Response:

The reviewer is also asked to refer to the response to comment 1 regarding the design of the investigation and results for areas of potential concern.

This area was investigated through the performance of test pits and borings completed as monitoring wells. The reviewer is specifically requested to refer to Tables 3-3 and 3-4 of the SASE report for sample stations pertinent to this location.

**38. Section 4.0, Findings of the Investigations;
Whole Section.**

The Preliminary Assessment notes that rotoblast grit and sandblast grit was found in several locations in the vicinity of Building 234. The SASE has not noted whether this material is still present at the site. The report should address this issue and note whether any samples were collected in areas of suspected concern.

Response:

The following text will be included in Section 4.3 of the revised SASE report:

"The Preliminary Assessment report noted the presence of large quantities of two types of sandblast grit used as general fill at various locations around the site. However, a series of removal actions resulted in the removal of most of this material. Remnant quantities of this material (less than several cubic feet scattered at various locations) remain at the site in the Building 234 area, and no sandblast grit was found in large quantities in the subsurface investigations performed. Samples of soil were collected in the former fill areas as identified in Tables 3-3 and 3-4, and results from the analysis of these samples are presented in the following sections."

**39. Section 4.0, Findings of the Investigations;
Whole Section.**

The report notes that Building 18 was not considered an area of potential concern due to the historic use of the site. The Division is aware the building is in an area subject of erosion. The Preliminary Assessment noted that there were two 250 gallon storage tanks and several fifty five gallon drums on the site. The report should note whether these items had been removed from the buildings.

Response:

Building A18 was not within the study area for the SASE. The investigation boundaries were set as a part of the work plan, based on the findings of the PA, and reviewed by the regulatory agencies.

**40. Section 4.0, Findings of the Investigations;
Whole Section.**

The report noted that samples were collected from the north waterfront area due to the potential concern from releases of hazardous materials stored in that area. The report should include a discussion of the sampling location and the areas of potential concern, such as the location of the hazardous waste AST, location of sampling required by EPA to address historic releases., etc.

Response:

The reviewer is asked to refer to the responses to comment 15 regarding the North Waterfront Hazardous Waste Storage area, and comment 19 regarding the ASTs.

**41. Section 4.0, Findings of the Investigations;
Whole Section.**

The following locations (potential UICs) showed elevated concentrations of TPH and SVOCs: S234-4, S-42-1 and S-42-2. Please note that groundwater was not analyzed for TPH.

Response:

The reviewer is asked to refer to the response to comment no. 25 regarding groundwater sample collection at the west side of Building 42.

**42. Section 4.1.1, S42-1;
Page 4-2, Paragraph 5.**

This section of the report includes the concentrations of the different analytes observed at this sampling location. The report should also note the concentration of oil detected.

Response:

The concentration of TPH detected by the analyses will be noted in the text as requested.

**43. Section 4.1.1, S42-1;
Page 4-2, Paragraph 5.**

This section of the report indicates that the presence of gravel prohibited the collection of soil samples below a depth of six inches. It is assumed that the presence of surface contamination would have prompted the removal of the gravel in order to ascertain the depth of the gravel and whether the soil beneath the gravel was contaminated. Therefore, the report should note whether the gravel was in such a condition that it could not be penetrated with a hand spade.

Response:

The paragraph will be revised as follows:

"Building 42 is supported on pilings and there is a crawl space under the floor where these pilings are visible. This crawl space is approximately 3 to 4 feet high at the highest point, two feet in height under S42-2, and one foot in height under S42-1. The bottom of the crawl space is made up of compacted soil and gravel. This crawl space was entered to collect soil samples under Sump S42-1. The subsurface material under sump S42-1 prevented the penetration of sampling tools (hand augers and a steel trowel) beyond the first (0-6 inch) sample interval. Therefore, deeper sample intervals were not obtained."

**44. Section 4.1.1, S42-1;
Page 4-2, Whole Section.**

This section of the report notes that there was a potential release from the floor drains which discharged on to the soil beneath Building 42. The report should note whether monitoring wells will be placed down-gradient of the suspected release.

Response:

The reviewer is asked to refer to the response to comment no. 25.

In addition, the reviewer is incorrect in the determination that there is a discharge to the soils from a floor drain. The subject section states clearly that a discharge piping hole was found to be sealed at the bottom of sump 42-1. It is important to segregate this former discharge point from the "floor drains" which are present throughout the building, primarily because the floor drains are connected to a disposal flow path of their own, and this former discharge point appears to have allowed waste material to be discharged onto the ground under the building.

**45. Section 4.1.3, S42-5;
Page 4-3, Paragraph 4.**

This section of the report discusses an underground vault. The approximate size of the vault and the location of the inlet pipes should be included in the report. The report also speculates that the vault was a domestic waste water holding tank. In this section of the document the report should note whether the domestic sanitary facilities from Building 42 drain into the vault.

Response:

The dimensions of the vault are presented on Table 4-1. The location of the inlet pipes are described in the second paragraph of the section in question. Results from the smoke testing operations described in Section 4.2.1.2 and Figure 4-3 indicate that the vault is connected to the floor drain system and the lavatories in Building 42. The text correctly references Section 4.2 for this information.

**46. Section 4.1.3, S42-5;
Page 4-3, Paragraph 4.**

The report states that the "vault was pumped out" however the bottom of the vaults could not be closely examined due to the "presence of water and soil". The report should note whether water reentered the vault after it was pumped thereby prohibiting visual inspection of the floor, or whether it was logistically impossible to remove all of the water from the chamber.

Response:

The following text will be added to the second paragraph of the section described in the comment:

"The floor also appeared to be poured concrete, as indicated by probing with hand augers and steel rods. However, the integrity of the floor could not be thoroughly visually inspected because all the water in the vault could not be removed without a much larger effort than was deemed necessary. Instead of a complete confined-space cleaning and investigation of the floor of the vault, it was determined that it would be assumed to be a potential discharge point, and borings would be installed adjacent to, and down-gradient of the vault in order to identify contaminants that would have entered the soil from the vault if it had served as a discharge point. Some soil was present on the floor of the vault under the hatch opening, but the type of soil at that location indicated that it most likely fell into the vault when the cover was removed."

The reviewer should note that the borings installed at this location and results from samples collected from them are described in the fifth paragraph of the section in question and Table 4-3B.

**47. Section 4.1.3, S42-5;
Page 4-3, Paragraph 4.**

It must be determined whether any subsurface structure, including all catch basins within the storm water drain system, were designed for infiltration. The results of the investigation on the storm drain system servicing portions of building 42 showed that the system discharged into a vault with concrete side walls, however, the report does not state whether the bottom of the vault was designed to allow for infiltration.

Response:

Refer to the response to comment no. 46.

**48. Section 4.1.3, S42-5;
Page 4-4, Paragraph 1.**

The report indicates that soil samples were collected from the vault. The report should indicate whether these samples were from the discussed top soil which fell in or whether they were collected from a different section of the tank.

Response:

The first sentence of the third paragraph of Section 4.1.3 will be revised as follows:

"Three soil samples from the soil on the floor of the vault (assumed to be soils introduced from above as discussed previously) were collected using a hand auger..."

**49. Section 4.1.3, S42-5;
Page 4-4, Paragraph 1.**

The concentration of TPH was elevated in the samples taken from this location. This should be noted, along with the actual concentrations, in this section of the report.

Response:

The text will be revised as requested.

- 50. Section 4.1.4, Dry Well Huts 1 & 2;
Page 4-4, Paragraph 6.**

This section of the report states that the compacted gravel bottom of the dry well did not allow for collection of soil samples. This necessitated the installation of boring down gradient from the dry well in order to determine whether a release had occurred. In order to avoid confusion, the report should note the logistic problem which prohibited boring inside of the dry well.

Response:

A fourth sentence will be added to the second paragraph of Section 4.1.4:

"In addition, a boring could not be advanced through the top of the dry well using a drilling rig because the weight of the rig on the ground this close to the dry well would cause the well to collapse. Therefore..."

- 51. Section 4.1.5, S234-1;
Page 4-5, Paragraph 4.**

The report indicates that soil samples were collected to a depth of 1.5 feet. The report should note any observations made during the collection of the sample.

Response:

The text will be revised as requested.

- 52. Section 4.1.6, S234-4;
Page 4-6, Paragraph 1.**

This section of the report discusses the concentrations of contaminants observed in the sump. Elevated levels of TPH were observed in this sample location and should be noted in this section of the report.

Response:

The text will be revised as requested.

- 53. Section 4.1.8, Equipment Boxes, Building 234;
Page 4-7, Whole Section.**

The information provided in the report indicates that all of the equipment boxes were not tested. Please be advised that this Office does not concur with the methodology

of sampling only a number of the subfloor equipment boxes. All subfloor equipment boxes must be characterized.

Response:

Due to the concerns voiced by the RIDEM during the preparation of the work plan, all sub-floor sumps were investigated to determine if the bottoms were consolidated or if these sumps could have allowed contaminants to enter the soils under the building foundation. It was determined that the fifteen equipment boxes were suspect of such occurrence, and this approach was followed for the investigation of a representative group of these boxes.

After dismantling one of these boxes, it was determined that the bottoms were not made of poured concrete, but were open to the soil. Therefore, samples were collected from four of the equipment boxes to determine if releases which may have occurred in the southern portion of Building 234 had impacted the soils under the foundation. Results from the analysis of these samples indicates there was no chemical impact to the soils from whatever activities occurred in this area.

Collection of soil samples from the remaining eleven equipment boxes will not provide useful information regarding the overall condition of the site. The findings of this and other portions of the investigation indicate that while it is possible, it is highly unlikely that these equipment boxes would have allowed chemical fluids to enter the soil under the foundation. The bulk of any fluid releases inside the building would have been captured by drains and cleanouts leading to Sump 234-8. The results of the samples collected from the four boxes selected randomly is a strong indicator of the condition of the remaining eleven.

In addition, there is no evidence (either historical or based on observations made during the PA or the SASE investigations) that would indicate that releases occurred in these areas. The reviewer should be aware that the equipment boxes were utility hookup points (electrical, compressed air, and water), and inadvertent or purposeful introduction of chemicals to these boxes could have had dangerous results to the personnel nearby.

This will be clarified in Section 4.1.8 of the draft final report.

**54. Section 4.2, Drainage Systems and Outfalls;
Page 4-7, Whole Section.**

This section of the report discusses the drainage system at Derecktor Shipyard. Due to concerns of storm related releases from the system into the bay there was a discussion of sampling pertinent outfalls during a storm event. The report should note whether this sampling effort was conducted and whether releases to the bay still occurred.

Response:

Collection of samples from the outfalls during a storm event was not described in the approved work plan, and therefore it was not performed. In addition, the Navy does not recall such a discussion and could not find record of it in minutes to the kick-off meeting held on July 17, 1997 or the work plan scoping meetings held January 18, 1996 and April 18, 1995.

**55. Section 4.2, Drainage Systems and Outfalls;
Page 4-7, Whole Section.**

It has not been determined whether some of the piping from sumps discharged at the ground surface underneath Building 42 or whether the discharging pipes extended to a subsurface disposal system. If such investigation is not feasible, borings and/or monitoring wells downgradient (directly between the location of the system and the shoreline) of the potential systems must be used to determine any contaminant migration.

Response:

To the contrary of the comment above, it has been determined that the floor drain system is a single piping loop which apparently discharges all collected fluids to sump S42-5, as shown on Figure 4-3. A former discharge pipe in the bottom of sump S42-1 allowed fluids to drain directly onto the ground under the building as described in Section 4.1.1 of the report. In addition, drilled holes in the bottoms of sumps S42-2 and S42-4 indicate that any discharges into these sumps would have been discharged to the soils under the building, as described in Table 4-1.

Section 4.1.1 describes contaminants in soils under Sump S42-1. Section 4.1.2 describes contaminants in soils under sump S42-2. Section 4.1.3 describes contaminants in soils in and adjacent to sump S42-5. These results indicate that the only location where the quantity of materials released were great enough to impact ground water is at Sump S42-1.

TRC Environmental corporation installed wells on the west side of Building 42 (downgradient of building sumps), and results from analysis of samples from these wells did not indicate high contaminant concentrations.

**56. Section 4.2.1.2, Huts 1 & 2;
Page 4-10, Whole Section.**

The PA identified a manhole in the middle of the heavily stained floor of Hut 1. This manhole and any investigations associated with it was not found in this section. The report should note the existence of this manhole and all the investigation samples, smoke testing, etc) associated with it.

Response:

The drainage system in and around the current location of Huts 1&2 is presented on Figures 4-2 (Underground Drainage Systems, North Waterfront Area) and 4-3 (Underground Drainage Systems, Central Shipyard Area). These figures both show a catch basin inside Huts 1&2 which allows material to drain to outfall 3B (also shown on both figures. Additional text will be added to the end of section 4.2.1.2 as follows:

"Huts 1&2 were moved by Derecktor to their current location at the south boundary of the North Waterfront (Figure 4-2). These buildings were used for vehicle and equipment maintenance. It appears that when these huts were moved, they were positioned such that one catch basin, designed to assist parking area drainage, was inside the westernmost hut (Figure 4-2). The preliminary assessment noted heavy staining on the floor of this hut in the area of the catch basin. Smoke testing performed on the drainage systems in this area concluded that discharges to this catch basin would eventually be discharged at outfall 3B (Figure 3-2)."

**57. Section 4.2.1.2, Building 42 Exterior Drainage System;
Page 4-9, Paragraph 2.**

This section of the report discusses the various exterior drains surrounding Building 42. The Preliminary Assessment report noted that a southern elevated exterior drain (which could not function as a drain due to its elevation) was found to contain a sludge like material. The report should note which drain in the southern portion of the building matches the description in the Preliminary Assessment. In addition, the report should describe the sludge in the drain and note whether it was tested.

Response:

These catch basins are discussed in the subsection entitled Historic Huts 1&2 Drainage System in Section 4.2.1.2. The first paragraph of this subsection will be revised as follows:

"Aerial photographs indicate that Huts 1&2 were previously located in the area south of Building 42 prior to Derektor Shipyard Operations. Four catch basins are present that appear to have drained the former location of these quonset huts, but as stated in the Preliminary Assessment report, at least one of these catch basins were above the ground surface so it could not function properly. In addition, The PA report noted that there was a sludge - like material present during the PA inspection, but at the time of the SASE, these four catch basins were all full of debris, including wood, stones, soil, concrete rubble, metal and plastics fragments. These four catch basins are identified as CB-42-1, CB-42-2, CB-42-3 and CB-42-4 on Figure 4-3."

(new paragraph): "The four catch basins were cleared to the best extent possible..."

**58. Section 4.2.1.2, Building 42 Exterior Drainage System;
Page 4-9, Paragraph 2.**

Building 42 was used as the hazardous waste storage area. Accordingly, hundreds of drums of waste material was stored at and adjacent to the building., In addition there are allegations of waste being disposed of directly onto the soils in the vicinity of the building. During rain events the likely migration routes for these contaminants would have been the storm drains. Therefore, the report should include a detailed discussion of the drains. The report should discuss each individual drain with respect its location with respect to suspected areas of release, its contents, (presence of sludges, staining, etc), whether it had a soft of competent bottom, and any and all testing performed on the drain.

Response:

Section 4.2 of the report describes the drainage systems inside and around the buildings at the study area. Section 4.2.1.2 describes the drainage systems inside and around the buildings in the central shipyard area, which includes Building 42. This discussion and the information shown on Figure 4-3 clearly shows the findings of the investigations of the drain systems. The Navy does not believe that a specific paragraph for each catch basin or reach of drain piping would clarify any further the description of the site.

The reviewer should also refer to responses to comments no. 23 and 30.

**59. Section 4.2.1.2, Building 42 Interior Floor Drainage System;
Page 4-10, Paragraph 2.**

"Smoke test applied to this vault indicated that inflow pipes were connected to the floor drains, S42-3, S42-5, and the lavatories in Building 42 (floor drains and toilets. This led to the investigators to believe that S42-5 is a collection tank."

The above sentence requires modification in that S42-5 is referred to as a floor drain and as a vault. In addition, the report should discuss the areas served by the floor drains, i.e. whether hazardous chemicals were stored in these areas etc.

Response:

The above sentence will be revised as described below:

"Smoke test applied to this vault indicated that inflow pipes were connected to: the floor drains inside Building 42; sump S42-3; and the floor drains and toilets in the lavatories in Building 42. This led to the investigators to believe that S42-5 is a collection tank for those systems."

The reviewer is also asked to refer to the response to comment no. 1. Historical use of Building 42 is described in Section 2 of the report.

**60. Section 4.2.1.3, Building 234 Area;
Page 4-11, Whole Section.**

**This section of the report discusses the sum;
It is the State's understanding that during ti
6000 gallons of oil contaminated water was r
include a discussion of these findings, including the location of the sump, its
approximate size, its function and the source of the water, i.e. seawater or rain water.
In addition the report should speculate on the source of the oil.**

Response:

During the clearing of sumps and trenches described in Section 3.1 a large quantity of oily water was removed from sumps S234-6, S234-8 and S234-3. This material was containerized for off-site disposal.

The reviewer is asked to refer to the response to comment no. 6 regarding a reformat to Section 4.1 which will describe the findings of the inspection of each sump individually. The reviewer is asked to refer to the response to comment no. 21 regarding the description of material removed from the sumps.

**61. Section 4.3.2, Upgradient Off -Site Area;
Page 4-14, Whole Section.**

This section of the report discusses the upgradient area sampling results. The report should provide additional information in the discussion of the analytical results.

Specifically, the report should compare the upgradient results to those found at other upgradient locations on the site and the Rhode Island background concentrations. The requested information should also be provided in table format. Please be advised that the presence of contaminants at the upgradient locations which are not present at other upgradient locations may affect comparison performed elsewhere in the report. That is, throughout the document on-site concentrations of contaminants are compared to those observed in both upgradient sampling locations. This comparison maybe in appropriate in certain instances, for example, elimination of COPCs based upon contaminated upgradient sample results would be inappropriate.

Response:

There are not enough upgradient sample stations to perform a statistical comparison of site contaminants to those detected in upgradient locations. As discussed at the technical meeting on March 5, 1997, a review of literature and results from other samples collected upgradient of other NETC sites will be conducted and presented in the draft final report.

At the meeting on March 5, it was apparent that this comment was focused on the presence of arsenic in upgradient soil samples described in the draft SASE report. Site historical information will be performed to help determine the source of arsenic in soils in the area. At that meeting it was agreed that if the arsenic cannot be linked to the shipyard operations, it will be carried through the risk assessment and addressed as a risk management issue at a later time. Other contaminant comparisons were not called into question, and will remain unchanged.

**62. Section 4.3.3., Chemistry;
Page 4-18, Paragraph 2.**

The report includes a discussion of the PCB samples collected at the site. The report should note which sample was collected from the transformer in the northern area identified in the Preliminary Assessment.

Response:

The sampling program presented in the work plan was followed as described in Section 3 of the report. There was no intention of collection of samples from a transformer. In addition, the Navy is not aware of any transformers present on site at this time. The reviewer is also referred to the response to comments no. 1 and 2 regarding the design of the investigation and target areas.

**63. Section 4.3.5.1, Geology;
Page 4-22, Paragraph 5.**

This section of the report deals with the test pitting activities associated with a probable UST. During this investigation, contamination and piping associated with the UST was uncovered, however, the UST was not found. The report should include the engineering plans or figures which were used to determine the location of the test pits. The actual location of these pits should be overlaid on to these plans.

Response:

As described in section 3.3.1, test pit TP26 was excavated on the north side of building 234 "near the building 234 foundation in order to locate a potential discharge to the north of Building 234, and a possible UST." The location of the test pit was based on the location of the floor drain on the building slab. There were no engineering plans that described the location of the former UST, although text descriptions in the PA described it to be in the same area.

As stated in Section 4.3.5.1, former UST piping was found in this area as suspected. However, the finding was that the piping was old discards from a previous UST removal, and the pipes were no longer connected to anything. In addition, the floor drain was not found to exit this side of the building, and therefore, the test pit was terminated.

The actual location of the test pit is presented on Figure 4-5.

Section 4.3.5.1 will be revised to reflect the clarifications described above.

64. Table 4-6, Chemical Constituents Detected in Groundwater

Table 4-6, if correct, shows elevated concentrations of metals (reported in mg/kg?), including Arsenic, Barium, Copper, Lead and Zinc. This table also shows the presence of some of these

for all parameters measured. The Navy concurs that the concentrations of some of the parameters measured in MW104 exceed MCLs. This will be discussed in further detail at the end of section 4.4.1.

**65. Section 6.1.1, Occurrence and Distribution of the Data and Identification of COPCS
Page 6-2, Whole Section.**

This section of the report discusses the process for selecting chemicals of concern. The report has not indicated whether all positively detected values were included as COPC or those which met a statistical criteria. Due to the small sample size, it is assumed that all chemicals which had a positive detection were include as COPC. Please modify the report if this is not the case.

Response:

All chemicals which were positively detected at on of the four subareas of the study area were subject to COPC selection screening process. To involve all positively detected chemicals as COPCs would require carrying over many semivolatile compounds that are not COPCs.

COPC selection is described in Section 6.1. The process follows general risk assessment

guidance, is conservative in nature, and adequately characterizes the COPCs selected at each site. The reviewer is asked to also refer to the response to comment no. 66.

**66. Section 6.1.1, Occurrence and Distribution of the Data and Identification of COPCS
Page 6-2, Bullet No. 1.**

This section of the report states a chemical was eliminated as a COPC if its concentrations did not exceed a threshold value which was equal to a risk level of 1E-06 or a HQ of 1. Multiple contaminants at a site would result in an exceedance of risk even if the individual chemicals do not exceed a risk value. The State regulations recognize this fact and require that this situation be addressed for site containing multiple contaminants which individually do not exceed a criteria. Therefore, it would be inappropriate to eliminate COPC based upon nonexceedance and the report should be modified accordingly.

Response:

As discussed at the technical meeting held on March 5, 1997, and in order to be more conservative in the COPC selection process and to address the concern regarding multiple contaminants, HQ values will be set at 0.1 and cancer risks will be set at 1E-07 to account for multiple noncarcinogenic effects (affecting the same organ group) and multiple carcinogenic effects for a potential receptor.

NOTE: There is no Comment No. 67.

**68. Section 6.1.2, Distributional Analysis for Data and Representation Concentrations;
Page 6-3, Whole Section.**

This section of the report discusses the use of the RME and the 95% UCL and Maximum detected value. These values have been used to calculate an overall risk for the site based upon the RME. At other sites on the base a risk based upon maximum exposure is calculated in addition to a risk based upon average exposure. This procedure should be applied at this site, that is risk is based upon maximum concentration or 95% UCL value, (which ever value is higher) and the average exposure concentration.

Response:

The procedure followed to determine reasonable maximum exposure (RME) is conservative in nature, follows EPA risk assessment guidance, and is consistent with the scope of a limited risk assessment presented in this report. The revision requested by the comment above will most likely provide a lower risk value when a 95% UCL can be calculated, and most will have no change, since as is stated in paragraph 4 of section 6.1.2, "...the maximum positive value is frequently the default choice when the number of samples in the data set is small..." Therefore, the Navy proposes to make no revisions to the report based on this comment.

**69. Section 6.3.3.1, Surface Soil;
Page 6-10, Paragraph 1.**

The report states that the fugitive dust estimates for the residential scenario are based upon the assumption that the current vegetation, paving and building would reflect

current conditions. Currently, approximately 80 % of the site is paved. Typically, the percentage of paved area does not equal 80 % in residential areas. The value should therefore be changed and the exposure scenario should be modified.

Response:

The Navy concurs with this comment. Paved area for the industrial setting will remain at 80%, but the percent paved area for the residential scenario will be reviewed and lower percent will be set as appropriate.

**70. Section 6.3.3.2, Surface Soils;
Page 6-10, Paragraph 3.**

This section of the report acknowledges the potential for contaminants to leach from subsurface soils into the groundwater. The report indicates that this loading was not considered due to the limited number of VOCs detected at the site. Certain metals and SVOCs are considered somewhat mobile. Therefore, the risk assessment should be expanded to include contaminant loading from surface and subsurface soils on to the groundwater.

Response:

It is assumed that the contaminant releases at this site occurred between the 1980s and 1993, and that the releases have occurred already and is

**71. Section 6.3.3.3, Groundwater;
Page 6-10, Last paragraph.**

This section of the report indicates that incidental ingestion of groundwater was considered in the residential scenario. Please indicate whether this incidental ingestion was associated with the use of a residential well (it is assumed that this is the case as wells are not prohibited in residential settings).

Response:

At the meeting held on March 5, 1997 at EPA's offices in Boston, it was agreed that a residential-based exposure to groundwater was unlikely at this site, due to the proximity to the ocean, and pumping of groundwater would most likely create a salt water intrusion. It was further agreed that the groundwater exposure would be revised.

**72. Section 7.2.2, Identification of Contaminants of Potential Concern;
Page 7-9, Whole Section.**

This section of the report discusses the use of benchmark and the selection of COPC. The report should indicate whether this comparison was carried out for the petroleum

contamination found at the site. In addition, the report should note the procedure for contaminants in which no bench mark exists.

Response:

As indicated on Table 7-1 of the report, an appropriate benchmark for ecological screening was not available for the general parameter of Total Petroleum Hydrocarbons. However, benchmarks were available for individual analytes that are commonly encompassed by the TPH parameter, such as PAHs, toluene and xylene. Please notice that the specific compounds included in the parameter TPH may vary as the parameter is defined by the method used in its determination. Therefore, ecotoxicological discussions for specific individual analytes are more appropriate than ecotoxicological discussions based on the general TPH parameter. The text in the report will be expanded to clarify this issue.

The text at the end of the second paragraph of Section 7.2.2 (page 7-9) currently indicates that "In the few cases where an appropriate benchmark was not available for a certain analyte, that analyte was not carried further through the screening process, although it is recognized that such analyte may still represent a COPEC." However, in response to EPA comment II-A and the views expressed by EPA at the technical meeting of March 5, 1997, analytes for which a soil benchmark supported by a primary reference cannot be identified will be retained as COPECs and discussed qualitatively. Therefore, the text at the end of the second paragraph of Section 7.2.2 (page 7-9) will be revised accordingly.

73. Section 7.3.1, Potential Ecological Exposure Pathways and Associated Receptors; Page 7-31, Whole Section.

This section of the report discuss the use of benchmarks and hazard quotients. The report should indicate a discussion of bench marks, for example whether they represent exposure to sensitive organisms etc.

Response:

In response to EPA comment II-A and the views expressed by EPA at the technical meeting of March 5, 1997, the Navy will revise the selection of ecological screening benchmarks to only use values for which supporting primary references can be identified in the appropriate literature review sources. Selected benchmarks will be listed and their supporting primary references will be identified. Also, as agreed at the technical meeting, the report will be revised to eliminate HQs and HIs, and discussions based only on qualitative comparisons of analyte concentrations to benchmarks (when available) will be included. A general discussion of the nature of the selected benchmarks will be included in response to RI DEM's comment.

74. Section 7.3.1, Potential Ecological Exposure Pathways and Associated Receptors; Page 7-31, Whole Section.

Ecological Risk Assessments may identify a sensitive or highly exposed organisms as a means of addressing risk at a site. The report should indicate why this scenario was not evaluated.

Response:

The assessment of ecological risk based on the calculation of dose-derived HQs for individual target species was beyond the scope of the screening nature of the ecological assessment. The first paragraph in Section 7.0 (page 7-1) identifies the goals of the ecological assessment, and states that the assessment "... was of a qualitative nature and was not intended to be an ecological risk assessment; it was meant to identify if ecological exposure pathways potentially associated with the site warrant conducting additional studies and preparing a formal terrestrial ecological risk assessment." Additional text will be included in Section 7.3 to further clarify this issue.

**75. Section 8.3, Risk to Receptors;
Page 8-4, Paragraph 3.**

"These assessments were performed under the assumption that highly contaminated soils under sumps as well as any other highly contaminated soils not identified as part of this study would be removed from the site under controlled conditions prior to receptor exposure."

The report indicates that highly contaminated soils not identified under this investigation would undergo remediation. Please indicate which unidentified soils are schedule for remediation and the contamination associated with these soils.

Response:

The paragraph described above will be revised as follows:

"These assessments were performed under the assumption that highly contaminated soils under sumps would be removed as described in Section 8.4 prior to receptor exposure. In addition, it is assumed that contaminated soils that may be present in subsurface soils associated with catch basins CB-42-1, 2, 3, or 4 will be removed as part of the upgrades to this area as described in Section 8.4 prior to receptor exposure."

**76. Section 8.3, Risk to Receptors;
Page 8-4, Paragraph 3.**

"These assessments were performed under the assumption that highly contamination soils under sumps as well as any other highly contaminated soils not identified as part of this study would be removed from the site under controlled conditions prior to receptor exposure."

The above statement implies that the Navy will be remedial actions are scheduled for the above mentioned soils. Please be advised that the risk assessment will have to be modified if the intended remediation is not carried out.

Response:

The Navy concurs with this comment. No revisions to the report will be made based on this comment.