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July 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: Submittal of Responses to RIDEM Comments dated May 29, 1997

Dear Mr. Shafer:

Attached are responses to the second set of comments received from the Rhode Island Department of Environmental Management on the Draft Site Assessment Screening Evaluation (SASE) report. These comments were actually an evaluation of our responses to the first set of comments, and were received by the Navy on May 30, 1997.

For the sake of completeness, the attachment provides the original comment from RIDEM, our response to that comment, the RIDEM Evaluation of the response and our response to the evaluation. Each issue is numbered as was done for the original responses.

Many or all of these issues may have been addressed by the revisions to the Draft SASE report, which was delivered to the RIDEM as a Draft Final in June 1997. We should request that the RIDEM review that Draft Final report and if any issues are not addressed to their satisfaction, they should evaluate the Navy's position in the enclosed attachment.

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

Very truly yours,

Stephen S. Parker  
Project Manager

SSP/

attachment

- c: T. Bober, Northdiv - (w/encl - 2)
- 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 The Second Group 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  
Received on May 30, 1997**

**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, i.e. 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, dry wells, 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.*

**RIDEM Evaluation of response:**

The Navy has indicated that the report will not undergo a complete revision to be release specific. The Navy appears to have misinterpreted the Offices comment. The Office did not request a major rewrite or a change in the format of the report. The Office requested that all the information for an individual area or building from the different investigations conducted at the site be included in one section of the report. As an illustration, for Building 6 the report would include a section which summarizes the historic findings for this building, potential areas of concern identified in the preliminary assessment, and during the SASE and measures taken to remediate or investigate these areas and the results thereof. This section would simply compile all pertinent information for that area. Site conditions warrant that this section address individual buildings and sections of the site separately. Please revise the report accordingly.

***Navy Response:***

*The report currently describes the four sub areas that were described in the work plan. The report is not designed to address each building separately. To do so would be a reformat of the report to be specific to each potential release area. Although such a change may improve the readability of the report, it would not change the findings or conclusions of the 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.*

**RIDEM Evaluation of Response:**

The Navy indicated that additional work concerning this issue will not be performed. In addition, appropriate information from the PA will not be incorporated into the SASE. Preliminary Assessments are limited undertakings and are not designed to examine a problem in the detail that an SASE would. Therefore, it would be inappropriate to rely solely on the work of the PA and not perform the additional work normally associated with a SASE. Accordingly, the Office reiterates its concern. The Navy should perform the additional work and incorporate the new findings with that of the PA into the SASE report.

***Navy Response:***

*It appears that the DEM is suggesting that the background described in the PA report is limited. The Navy concurs that the PA is limited, but only in that no actual sample analyses are performed. One of the objectives of the PA is to perform a complete records search. This was done and the information described in the PA is complete. The SASE is a second step in a process. The first step is a PA that identifies the potential for releases at the site, The SASE is the second step that is a confirmation of releases and first look at possible extent of contamination to determine if there is a need to proceed to the RI.*

*It also appears that the DEM is requesting Section 2 be reformatted to describe each area or building called out in the PA report. The reviewer should refer to the response to Comment No. 1.*

#### 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.*

**RIDEM Evaluation of Response:**

The Office has received the photographs and videotapes. The States package included twenty four photographs. Please indicate whether this represents the total number of photographs taken at the site or whether additional photographs are available. The Navy has not addressed the second issue. Specifically pertinent photographs from the PA should be included in the SASE.

**Navy Response:**

*The pertinent photographs available from the SASE are included in the submittal package. This includes photographs of all the cleaned sumps, some of the test pits during excavation, and the vegetation present on the site. The video tapes show condition of culverts, smoke tests of storm drains and other underground structures, test pits after excavation and before back fill, and sump cleaning activities.*

*Since other reviewing parties have not requested photographs be included in the text of the SASE report, the separate package of photographs has been submitted to the RIDEM only, avoiding unnecessary reproduction costs.*

**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, dry wells, 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 back filling);

**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.*

**RIDEM Evaluation of Response:**

The response notes that other discharge points will be blocked or dismantled as part of this program. It is assumed that this refers to structures which have soft bottoms or other avenues for a release to the environment. Please advise that this action requires regulatory involvement. Accordingly, said actions cannot occur until approval is obtained from the DEM.

**Navy Response:**

*The Navy concurs that DEM involvement is required on remedial actions that will take place at the site.*

**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.*

**RIDEM Evaluation of Response:**

The following should be added to the above. As an illustration, residential use of the property may increase the area of exposed surface soils. This additional exposure was not evaluated in the risk assessment. Therefore the risk reported in this document with regards to this scenario may not represent the risk that would have been reported if an increase in exposed surface soils was assumed.

**Navy Response:**

*The Navy has addressed this concern by including the surface soils (under asphalt and pavement) in the future exposure scenarios. The reviewer is asked to refer to Section 6.3.2 of the Draft Final report.*

**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.*

**RIDEM Evaluation of Response**

The Navy has indicated that the areas of concern outside those currently defined in the SASE are limited to underground storage tanks. The Preliminary Assessment identified other areas of concern in addition to underground storage tanks. It is the States understanding that all areas of potential concern were addressed during the Rehab of these Buildings. Therefore, there was no need to investigate these areas under the current study. The State is requesting the that the Navy document this effort. Accordingly, the report should discuss all actions conducted at these locations, investigation of drainage system, potential areas of surface discharge, actions under the UST program, etc.). This information is needed in order to determine whether additional work is required in these areas. Please be advised that upon receipt of said documentation, the Sate will conduct an inspection of the areas in question.

***Navy Response:***

*The Navy was not aware that building rehabilitation efforts should be documented and reported to the DEM. Such documentation was not recorded and is not available for transfer to the DEM. The Navy went ahead with the restorations because the PA indicated that there was a low potential for environmental impact in these areas, with the exception of the UST issues which are being addressed under another regulatory avenue.*

**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.*

**RIDEM Evaluation of Response:**

The Navy has noted that the potential impacts from the above areas are limited to discharges to the bay or were defined to be of low priority in the preliminary assessment. The Office has never approved the Preliminary Assessment or the findings or recommendations there in. Therefore, the statement that these areas were not included in the SASE was based upon the recommendations of the Preliminary Assessment is incorrect. As stated above, these areas were not included in this study due to the fact that the navy indicated that the areas of concern had been addressed.

The Navy also indicated that as stated in the Preliminary Assessment, any discharge from the drains in this area would have entered into the bay. Throughout the Preliminary Assessment probable discharge points from the drains was thought to be the bay. Therefore if the findings of the Preliminary Assessment were sufficient to determine that additional work was not required for the drains located outside of the SASE study area, the report should state why the Navy invest time and money to determine discharge points for the drains within the study area. The State reiterates its comment and request that the Navy address these issues.

***Navy Response:***

*The Navy's understanding of the issue is that the storm drains in the area of Buildings 2-5 were not investigated as a part of the SASE. The approach to exclude the areas around Buildings 2-5 is consistent with the work plan and project scoping meetings.*

**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.*

**RIDEM Evaluation of Response:**

As previously indicated a detailed discussion of historic conditions at this location must be included in the report.

***Navy Response:***

*The Navy's response is the same as stated in the response to the original comment, above.*

**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-ethyl-hexyl)phthalate in deeper soils.*

**RIDEM Evaluation of Response:**

As previously indicated a detailed discussion of historic conditions at this location must be included in the report. In addition, this Office requested that the Navy supply a copy of the original map of the EPA action and note on a figure the location of this action. This information is necessary to determine whether the sample locations in question were properly placed.

***Navy Response:***

*The requested information is presented in Appendix H and I of the Preliminary Assessment Report. The area in question is to the south of the southeast corner of the former Building 234. This area is described on Figure 4-1 of the SASE report as "Area L - Rotoblast and debris area". The results of the sample collections performed in this area in 1984 showed an elevated concentration of Methyl Isobutyl Ketone (MIBK) in the surface soils at one location near the location of Test Pit 06 excavated as a part of the SASE. The Office is reminded that MW09 was installed as a part of the SASE down gradient of this area particularly in order to assess groundwater quality in this area.*

*Regarding the inclusion of the information from the PA into the SASE report, the reviewer is asked to refer to the response to Comment No. 1.*

**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 Derektor Employee and fuel oil entered an adjacent storm drain and then discharged to Coddington Cove. Spill response measures were taken by Derektor, 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 out fall 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.*

**RIDEM Evaluation of Response:**

As previously indicated a detailed discussion of historic conditions at this location must be included in the report. In addition, it is assumed that the report will note whether any residue contamination was found in this area.

**Navy Response:**

*The draft final report clarifies the condition of the catch basins. Regarding the historic conditions of the site, the reviewer is asked to refer to the response to Comment No. 1. No residual contamination was apparent during the inspection of the culverts and catch basins in this area, as evidenced by the videotapes provided to the DEM.*

**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 containment 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).*

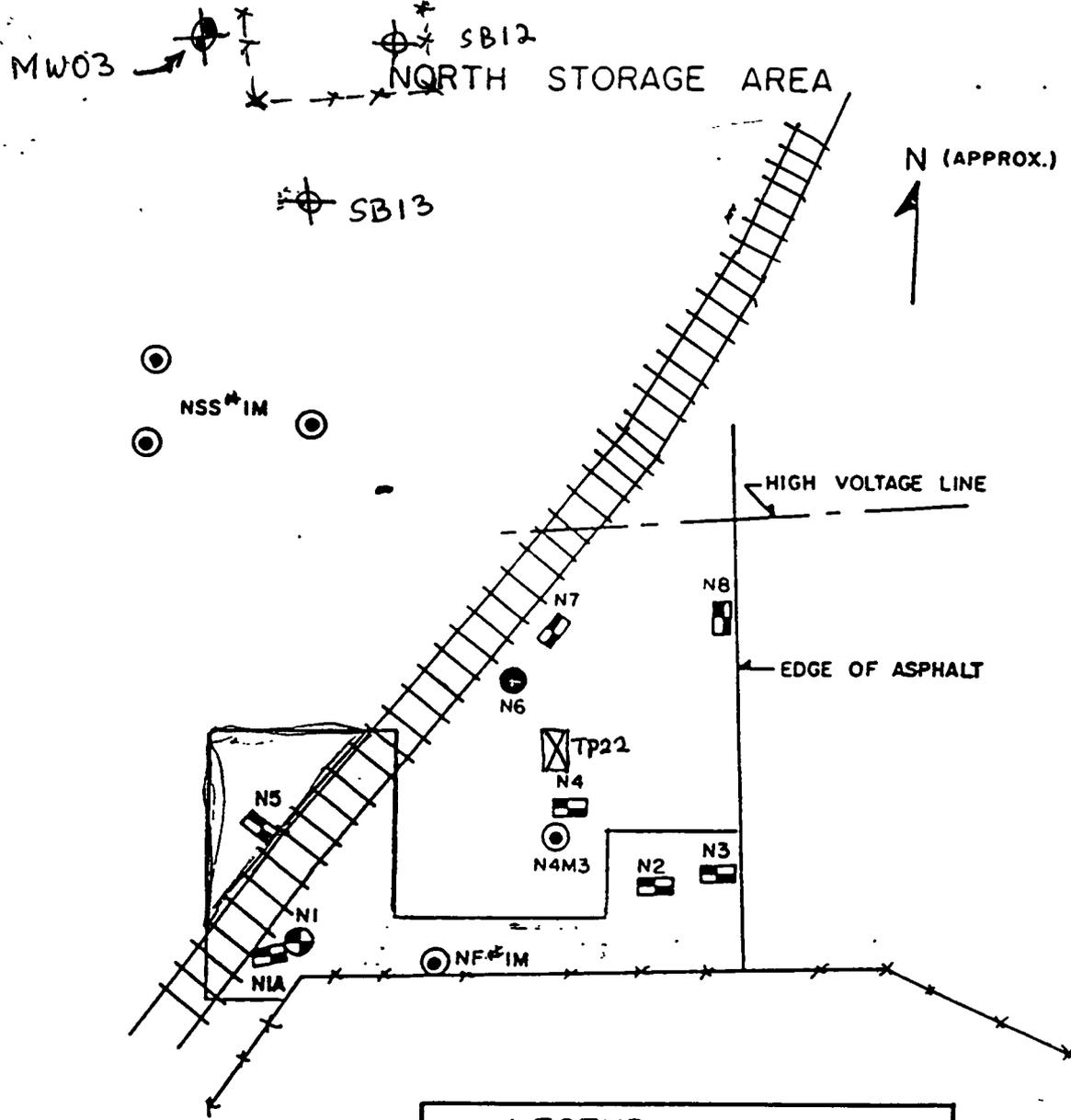
**RIDEM Evaluation of Response:**

The Navy has indicated that the exact location of the samples in question is not available, therefore the Navy is unable to comply with the Office request to depict the historic sampling locations in question on a map with the current sample locations. The 1984 study includes two figures drawn to scale depicting the sampling locations, therefore it is possible to address this Office's request. The Office reiterates its request that the Navy provide a copy of the original drawing and transpose the requested information onto a map.

**Navy Response:**

*Regarding the historic conditions of the site, the reviewer is asked to refer to the response to Comment No. 1. The map in question has been attached to this response letter. It shows the location of test pits, borings and monitoring wells as located to the best of our ability considering the lack of existing benchmark features on the site.*

*This figure shows that the sample stations that were selected during the development of the work plan and used during the field work are appropriate for the determination of conditions of the subsurface based on the previous records of the site.*



LEGEND	
	BACKHOE EXCAVATION
	SPLIT SPOON SAMPLING
	OBSERVATION WELL
	SURFACE SAMPLE
	SASE TEST PIT
	SASE BORING
	SASE MONITORING WELL

FIGURE 3:

AREA TO BE EXCAVATED (shaded) IN NORTH STORAGE AREA

SCALE: 1" = 20'

ORIGINAL DRAWING BY DOLCE, SPIRITO & ASSOC. NOV. 1 1984 FOR R.E. DELECTOR  
 SASE Sample points located by measurement to available features described on this figure DSA

**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 Derecktor Shipyard. This will be clarified in Section 2.6 of the SASE report.*

**RIDEM Evaluation of response:**

The Office indicated that after the removal action sandblast grit was found at the site. To illustrate this point, this Office noted one location where grit was present; grit is present at other locations scattered across the site. Therefore this Office reiterates its comment concerning sandblast grit at the site.

***Navy Response:***

*A report of the removal action was included in the Draft Final SASE report, Appendix F. There is residual sandblast grit remaining on the roadside North of Building 234 and in the grassy area west of Building 234. However, the volume can only be estimated since it is scattered and has no measurable depth. The material may make up a total of 5-10 cubic feet, and is spread over an area greater than 4000 square feet of ground surface.*

**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.*

**RIDEM Evaluation of Response:**

The Navy has indicated that additional information will be provided concerning these ASTs. This information should include appropriate maps depicting the location of the ASTs and current sampling locations. Be advised that photocopies of any original maps should also be submitted to this office.

***Navy Response:***

*The Navy has submitted the findings of the record searches in the draft final SASE report. Unfortunately, the search did not reveal any further information than was previously described in the PA, described above. The reader is asked to refer to Page 2-11 of the Draft Final report regarding this issue.*

**23. Section 3.2, Drainag 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 under gone 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 Navy's 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.*

**RIDEM Evaluation of Response:**

The report notes that the majority of the catch basins at the site had consolidated bottoms and therefore were not UICs. Please be advised that in order for a catch basin not to be a UIC, the bottoms and sides must prohibit migration into the surrounding soils. The report should therefore note what procedures were employed to determine if the catch basins or other structures met this criteria.

***Navy Response:***

*The catch basins and other structures referred to were tested with smoke driven by forced air and through visual inspections. The rationale behind this methodology is that material disposed of into these catch basins will follow the path of least resistance, that being through the storm drain systems then into the bay. The visual inspections were performed only to ascertain the basic structure of the basin (consolidated or unconsolidated). The smoke test determined the paths of least resistance.*

**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.*

**RIDEM Evaluation of Response:**

The Navy has indicated that it is not possible to locate monitoring wells due to the presence of buildings, proximity to the ocean, and the sheet piling. Building 234 is an open slab and therefore should not present logistical problems for installing a well. In addition, the Navy has installed monitoring wells in close proximity to the ocean at other sites at this base. Therefore, the navy should discuss the limitations of this practice and indicate whether the other similarly located wells on the base should be replaced. Finally please indicate the limitations that sheet piling poses to the installation of monitoring wells.

***Navy Response:***

*The previous response states that it is not practical, not that it is not possible. The intention of installing wells down gradient of a source area is to attempt to find contaminants in groundwater migrating away from that source location. In this instance, the sumps are as close as 50 feet from the sheet piling wall that holds the ground at the waterfront. As shown in section 4 of the report, there is a significant amount of groundwater fluctuation with tide. This fluctuation and the influence of the sheet piling wall on the groundwater flow makes it impractical to determine the hydraulically down gradient direction from each of the source areas. As stated previously, the concentrations of contaminants in the soils under sumps S234-4 and S42-2 are not expected to represent potential contamination to the groundwater.*

**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.*

**RIDEM Evaluation of Response**

The Navy has indicated that a complete description of the Ecological survey is included in an Attachment to these comments. The States package did not include the referenced attachment. Please provide a copy of said attachment for review. Be advised that the Office will withhold response to this comment until said package is received.

***Navy Response:***

*Please refer to the revised Section 4.5 of the Draft Final SASE report which makes up the attachment in it's entirety.*

**29. Section 4.0, Findings of the Investigations;  
Whol 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, (i.e. 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 {Draft} 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.*

**RIDEM Evaluation of Response:**

The Navy responded to the Offices concerns with respect to the PCB release at this location. The Navy did not adequately respond to the other issues broached in this comment. The Office therefore reiterates its concern.

***Navy Response:***

*The information stated in the Offices comment was used to design the investigation efforts in this area, as indicated on Tables 3-2 and 3-3 of the report. The report describes the lack of available overburden groundwater in this area, and the findings of surface and subsurface soil samples collected in this area. Regarding the catch basins, the reviewer is requested to refer to the response to comment no. 23. This comment appears to also allude to the format of the report, as addressed in the response to comment no. 1.*

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

**RIDEM Evaluation of Response:**

The Navy's response involves a series of paragraphs which includes a general description of the findings. The Office requested that the report note the condition of each catch basin and specifically whether contamination observed at the time of the preliminary assessment was still present.

**Navy Response:**

*Adding a paragraph describing each of the 45 catch basins is a lengthy and tedious methodology to describe the findings which have already been presented as described in the previous text.*

**31. Section 4.0, Findings of the Investigations; Wh le S ction.**

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 out falls (3B) as shown on Figure 4-3".*

**RIDEM Evaluation of Response**

Based on the Navy's response it is assumed that the Offices issues will be addressed, in that a detailed description of the findings of this area including all appropriate maps, figures, and photographs will be included in the report.

**Navy Response:**

*The Navy withholds response to this comment pending the RIDEM review of the Draft Final report.*

**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.*

**RIDEM Evaluation of Response:**

Based on the Offices aforementioned concerns with the format of the report and the target areas it is assumed that the Navy will address this comment.

***Navy response:***

*The navy withholds response to this comment pending the RIDEM review of the Draft Final report.*

**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."*

**RIDEM Evaluation of Response**

The Navy noted that stained soils or walls were not observed in the area and the opportunistic vegetation were present. The report should elaborate on these findings. Specifically, the report should note what procedures were employed to determine if stained soils were present and whether a release had occurred. At a minimum, the Office assumes that the Navy removed any vegetation which prohibited an adequate inspection of the area and collected subsurface soil samples for jar headspace analysis, field VOC, TPH and metal analysis (laboratory analysis would have to be performed for those analyzed not subject to field analysis. The Office also requests a copy of the field notes taken during this investigation.

***Navy Response:***

*Since the work plan did not call out the soils adjacent to the south wall of Building 42 as an area of concern, and because there was no obvious staining of soils and stressed vegetation in this area, no soil samples were collected for laboratory or screening analysis other than those associated with the test pits and borings in this area already described in the report.*

*The RIDEM is welcome to review the five bound field logbooks that were used to record field activities.*

**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 bilge water 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 bilge water 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.*

**RIDEM Evaluation of Response:**

The Navy has not adequately addressed the Offices comment. Specifically, information was requested concerning samples taken with respect to these former lagoons. To address this concern this Office expects the Navy to include in this report all historic information concerning the location of these lagoons, i.e. historic sketches aerial photographs, etc. The locations of the lagoons can then be placed on a map depicting sampling locations.

***Navy Response:***

*The Navy has attempted to comply with the request of the RIDEM with the revisions to figures 4-1, 4-5 and 4-6. The air photos do not show the lagoon, and the PA clearly describes the location, which was used to modify the figures as stated above. Again, sample locations were targeted for areas of concern as stated in the work plan. The Navy requests that the RIDEM review the draft final report regarding this issue.*

**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.*

**RIDEM Evaluation of Response:**

The Office requests a copy of any historic maps or reports and a current map depicting the location of the historic source and current sample locations. In addition, the report should include a detailed discussion concerning historic contamination and present conditions.

***Navy Response:***

*The Navy has complied with the first request with the revisions of figures 4-1, 4-5 and 4-6. The entire report is an assessment of the present condition of the site. Historic conditions of the site were documented in the PA report.*

**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.*

**RIDEM Evaluation of Response:**

The Office requests a copy of any historic maps or reports and a current map depicting the location of the historic source and current sample locations. In addition, the report should include a detailed discussion concerning historic contamination and present conditions.

***Navy Response:***

*The Navy has complied with the first request with the revisions of figures 4-1, 4-5 and 4-6. The entire report is an assessment of the present condition of the site. Historic conditions of the site were documented in the PA report.*

**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."*

**RIDEM Evaluation of Response:**

The Navy's response indicated that the volume of sandblast material was estimated during the SASE investigation. The Office assumes that the depth of the material in the areas in question were determined by hand augering. Therefore, if this is the case the above should be modified ...

**Navy response:**

*The reviewer is asked to refer to the response to comment no. 16. The residual sandblast material found on site has no measurable depth, it would be a sweepable quantity if it were located on the asphalt or another impervious surface.*

**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.*

**RIDEM Evaluation of Response**

As previously stated, these areas were excluded from the investigation portion of this SASE based upon the assurances that these areas had been remediated. This Office is requesting that the Navy document this process. Please be advised that during a recent inspection of this building, oil contaminated soil was found on the northern end of the structure. The volume of contaminated soil was not determined. This Office requests that the Navy determine the volume of said soils and ascertain whether a removal action is warranted.

***Navy Response:***

*The two ASTs will be addressed with the demolition of Building A18. Documentation of the removal and remediation of contaminated soils (if necessary) will be forwarded to the DEM.*

**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 included 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.*

**RIDEM Evaluation of Response:**

The Navy response is limited to Building 42, Building 234 was not discussed. In addition, please refer to this Offices evaluation of the Navy's response to Comment 25 regarding groundwater sampling.

***Navy Response:***

*The Navy has addressed the original comment and the spirit of the comment with the responses to comments no. 12, 13, 15, and 19.*

**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.*

**RIDEM Evaluation of Response:**

The report notes that borings were employed to determine whether a release had occurred. Please be advised that in the future, these structures should be investigated with test pits unless conditions dictate that other approaches are warranted, for example presence of chlorinated solvents warrants borings to bedrock.

***Navy Response:***

*The Navy will take this suggestion into consideration for future efforts at this and other sites in the work plan development stages..*

**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..."*

**RIDEM Evaluation of Response:**

The Navy response indicated that soil introduced into the vault when it was opened was sampled. The purpose of collection samples from structures of this nature is to determine whether the sediments or sludges present there in are contaminated. The Office questions the utility of collecting soils that may have been recently introduced into the vault. This office requests that the vault be resampled to determine the contaminants of concern.

***Navy Response:***

*The soil inside the vault was sampled because it was the only material inside the vault apart from the water that was removed and disposed of. No sludges were present and it appeared from probing the floor of the vault with a steel rod that the floor of the vault was constructed of poured concrete. Since the vault was found by OHM in 1995, and sampling did not occur until 1996, and since much of the soils in the bottom of the vault were most likely introduced when it was found (or even prior to that time when the access hatch was buried), the residence time of this soil in the vault is unknown. Therefore, the collection of samples from the bottom of the vault is appropriate and the contaminants found in those samples are somewhat indicative of contaminants which may have once been introduced to the vault. If there was sludge present or other material present samples of that material would have been more indicative and would have been sampled instead.*

*The Navy would like to discuss any resampling requests with the RIDEM, and will entertain suggestions of what media to sample.*

**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..."*

**RIDEM Evaluation of Response:**

The following should be added to this section of the Report: "...because the weight of the rig this close to the dry well could cause the well to collapse. Therefore a sample was collected xxxx feet down gradient of the dry well and the depth of the sample was determined by the contaminants present in the well, that is the boring was advanced approximately five feet below the lowest position of the dry well, the lack of chlorinated solvents and other sinkers indicated that a deep boring to bedrock was not warranted."

***Navy Response:***

*Since there was no contaminants found in the well, the samples were collected as close as possible (five feet horizontally) from the side of the lowest portion of the dry well, and to a depth of five feet below the lowest portion of the dry well. This information will be added to the next version of the SASE report.*

**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 sub-floor equipment boxes. All sub-floor 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.*

**RIDEM Evaluation of Response:**

The Navy indicated that sampling a subset of the equipment boxes at the site is sufficient. Please be advised that all equipment boxes must be inspected and sampled. Field analysis, with confirmatory laboratory analysis may be performed in lieu of full laboratory analysis at each box.

**Navy Response:**

*The Navy would like to discuss this with the RIDEM following the RIDEM review of the Draft Final SASE report.*

**54. Section 4.2, Drainage Systems and Out falls;  
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 out falls 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 out falls 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.*

**RIDEM Evaluation of Response:**

The Navy noted that the above sampling effort was not included in the Work Plan or discussed at a series of kick off meetings. Discussions of this nature occurred during the Ecological Advisory Boards meetings and would have reflected concerns associated with the recent findings of the offshore investigation. Since the two investigations are inter linked and discoveries from one would affect the investigations of the other, the State assumed that any additional warrant on shore work would have been performed, independent of the requirements of the original work plan. Therefore this Office reiterates its request that these areas be resampled.

***Navy Response:***

*The Navy would like to discuss this with the RIDEM following the RIDEM review of the Draft Final SASE report.*

**60. Section 4.2.1.3, Building 234 Area;  
Pag 4-11, Whol Section.**

This section of the report discusses the sumps and drainage system in this building. It is the State's understanding that during the remedial investigation approximately 6000 gallons of oil contaminated water was removed from a sump. The report should 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. sea water 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.*

**RIDEM Evaluation of Response:**

The Navy has responded to the first part of the comment, i.e. the analytical results from the material in the sump will be included in the report. The Office request that the Navy address the rest of the comment.

***Navy Response:***

*The Navy has addressed this comment through the additional text included in the Draft Final SASE Report, Section 4.1.1.4.*

**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.*

**RIDEM Evaluation of Response:**

The Navy has indicated that it does not intend to sample the transformer area. The objective of the SASE is to determine the impacts from the activities conducted in this area. Accordingly, potential impacts identified in the Preliminary Assessment would be addressed during this study. Therefore this Office reiterates its request that this area be sampled.

***Navy Response:***

*The Navy feels that the sampling program has provided the information required to make the determinations necessary for the SASE conclusions. There are no records of releases at the transformer area, and it was not called out in the preliminary assessment as a potential problem area. The Navy would like to discuss this request at the next technical meeting with the RIDEM.*

**63. Section 4.3.5.1, Geology;  
Pag 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.*

**RIDEM Evaluation of Response**

The navy has indicated that the investigations in this area indicate that the UST in question were removed at a early date. Although not stated, it is assumed that the Navy will provide the supporting documentation for this action. Please be advise that this documentation should not whether a release had occurred. This information is necessary as it will be used to determine if additional activities are warranted at this location.

***Navy Response:***

*Appendix F has been added to the Draft Final SASE report, which describes the USTs recorded for this property. As stated in Appendix F, closure assessments for the UST in this area were received by RIDEM UST Section on 1-11-95.*

**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.*

**RIDEM Evaluation of Response**

The Navy's response elaborates on the selection of contaminants of concern. Please be advised that elimination of chemicals of concern is performed when the list of analytes is cumbersome. This is not the case a Derektor Shipyard. Therefore all positively identified compounds must be retained in the risk assessment. Please be advised that in the future at sites where elimination of chemicals of concern is warranted, RIDEM's standards as well as Region IX should be used in this process.

***Navy Response:***

*The Navy will take this suggestion into consideration. The RIDEM is reminded that they are only one of two reviewing parties at these sites, and in cases where required methodologies conflict, the lead agency's requirements will prevail.*

**66. Section 6.1.1, Occurrence and Distribution of the Data and Identification of COPCs  
Page 6-2, Bulletin 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 non-exceedance 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.*

**RIDEM Evaluation of Response:**

As previously stated elimination of COPC is not warranted at this site and all positively detected compounds should be included in the risk assessment.

***Navy Response:***

*The agreements made at the technical meeting as described in the original response stand, and no revisions will be made regarding this comment.*

**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.*

**RIDEM Evaluation of Response:**

The Navy misinterpreted this Offices comment. This Office requested that the Navy risk assessment evaluate two exposure concentrations, one based on the average concentration the other based on the maximum or the 95 % UCL, whichever is higher. This approach has been agreed to at other risk assessments performed on this base and at NCBC.

***Navy Response:***

*The Navy used the more stringent of the exposure concentrations suggested by the RIDEM: The maximum concentration detected or the 95% UCL, which ever is higher. This is the most conservative approach for the risk evaluation.*

**70. Section 6.3.3.2, Surface Soils;  
Pag 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 most of the contaminant loading into the groundwater has occurred already and is reflected in the analysis of samples collected as a part of this SASE. The low concentrations of metals detected by TCLP analysis support this assumption. Furthermore, the performance of the removal actions proposed in Section 8 will prevent any further contaminant loading from highly contaminated soils. In addition, the reviewer is asked to refer to the response to comment no. 71.*

**RIDEM Evaluation of Response:**

The Navy has indicated that the majority of the loading to the groundwater has probably already occurred and that future removal actions will eliminate additional loadings. The Navy's justification for this position is somewhat limited in scope. This Office requests that the Navy provide additional justification for this position such as modeling results or appropriate calculations which support their position.

***Navy Response:***

*The Navy cannot prove to the RIDEM that contaminant loading will not occur, and similarly, it is unlikely that the Navy will be able to accurately quantify potential loading to the satisfaction of the RIDEM. It is unreasonable to believe that contaminant loading will affect groundwater to the extent that the groundwater will pose a risk to the receptors on the site. Nevertheless, the Navy requests that the RIDEM provide a suggestion of how contaminant loading be calculated so that no additional time is wasted proposing methodologies for such calculations.*

**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.*

**RIDEM Evaluation of Response:**

The Navy indicated that as agreed to during the March 5, 1997 meeting, groundwater ingestion at the site is unlikely due to the proximity to the ocean. This office at this and at other sites has indicated that groundwater wells throughout the state are located in close proximity to the ocean. Therefore this scenario should be examined. During the aforementioned meeting this Office agreed to consider the Navy's proposed elimination, however as stated throughout the meeting the Office's representative indicated that they would have to consult with the appropriate individuals before agreeing to any proposals. This Office has evaluated the Navy's proposals and feel that groundwater ingestion must be retained in the risk assessment.

***Navy Response:***

*The Draft Final SASE report has evaluated the groundwater under an industrial use scenario which is consistent with the current property use and future use, as well as the designation of the aquifer as GB. The Navy does not have any intention of allowing residential use of the site, and therefore still feels that evaluation of groundwater as a drinking water supply is unnecessary.*