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Code 18211

CERTIFIED MAIL- RETURN RECEIPT REQUESTED

Ms. Allison Drew
Environmental Protection Agency (EPA)
Region IV
Waste Management Division
RCRA and Federal Facilities Branch
345 Courtland Street
Atlanta, Georgia 30365

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NAS PENSACOLA
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Dear Ms. Drew:

Enclosed for your review are our responses to your comments on the Draft Interim Data Reports and the Proposed Recommendations for Phase II Workplans at the Naval Air Station Pensacola Sites 1, 2, 11, 12, 13, 14, 15, 24, 26, and 30.

We have incorporated your appropriate comments into the Final Interim Data Report submittals and the Draft Phase II Wprkplans for the above mentioned sites. The Interim Data Reports were finalized in the context of the corresponding primary document (Federal Facilities Agreement (FFA), Section VIII.B.2).

We will proceed with the RI/FS process on these screening sites since contamination was detected and the recommendations for additional field work had been provided. The appropriate Operable Unit will be expanded to include these screening sites, and in the future, we will prepare submittals pertaining to these sites, up to and including the generation of a Baseline Risk Assessment (BRA), as Operable Unit-specific documents.

We appreciate your effort and corporation. Please contact Ms. Suzanne O. Sanborn at (803) 743-0574, if you should have any questions pertaining to our responses or any other matter concerning the Naval Air Station Pensacola, Pensacola, Florida Installation Restoration Program.

Sincerely,
JAMES B. MALONE, JR., P.E.
MANAGER, INSTALLATION
RESTORATION, EAST SECTION

Encl:

(1) NAVY Responses to EPA/FDER/NOAA/FDNR comments
copy to:
NAS Pensacola (Mr. Ron Joyner, Code 18250)
FDER (Mr. Eric Nuzie)

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NAVY RESPONSES TO COMMENTS

ATTACHMENT A: EPA COMMENTS AND NAVY RESPONSES
ATTACHMENT B: FDER COMMENTS AND NAVY RESPONSES
ATTACHMENT C: FDNR COMMENTS AND NAVY RESPONSES
ATTACHMENT D: NOAA COMMENTS AND NAVY RESPONSES

Attachment A

**RESPONSES TO COMMENTS FROM THE
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION IV**

GENERAL COMMENTS PERTAINING TO SITES 1, 2, 11, 15, 26 AND 30

Comment 1:

The Work Plans for these 10 sites were submitted as Group-specific or Operable unit-specific documents. This was in accordance with Section VIII.C. and D. of the FFA which states that all Primary and Secondary Documents "shall be for a specific operable unit(s)". Why weren't the Interim Data Reports also submitted according to this format?

Response:

The Navy could have combined the reports for sites in the same operable units. However, given the large amount of data presented in each report, the combination of sites would probably be unwieldy for review purposes and would serve no real purpose other than complying with the specific reference in the FFA.

Comment 2:

These Interim Data Reports are Secondary Documents, and most nearly fall under the category of Preliminary Characterization Summary Reports (see Listing in Section VIII.D.1. of the FFA). As stated in Section VIII.B.2. of the FFA, Secondary Documents are regarded as "input or feeder documents" which comprise "discrete portions of the primary document [in this case, the RI/FS Work Plan]". Greater emphasis should therefore be placed on preparation of the primary document than on the "feeder" secondary document. Since the Phase II Work Plan will, in effect, be the RI/FS Work Plan, it is EPA's opinion that reporting efforts should have focused on using the information gained in Phase I to justify and support recommendations for the phase II investigation rather than a straight presentation and discussion of the data. In other words, the Phase II recommendations should have been much more substantive.

Response:

The objective of the Phase II recommendations was to provide EPA, FDER and the Technical Review Committee (TRC) with a conceptual plan for additional investigations at each site. The phase II work plans will be significantly more substantive than the Attachment A recommendations in the Phase I report.

Comment 3:

All currently available, relevant information should be included in the screening report so that the most complete conceptual model possible can be developed. The reports generally include only passing references to previous investigations performed at these sites (e.g. Site 1, page 3-31: "...these results are generally consistent with those previously reported by Geraghty & Hiller (1986)..."). All historical information on waste management practices at the site and data from previous investigations should be used to map out the present extent of contamination, and potential migration/exposure pathways, to the maximum extent practicable. Given the amount of information which currently exists for these sites, every effort should be made to make the next phase of field work the final phase. This makes development of as clear and complete a model as possible particularly critical at this point. The more complete the model, the greater the certainty with which the existing data gaps can be identified and targeted for investigation in the most efficient manner possible.

Some specific examples where the inclusion of other existing information in the present reports would have been useful include:

- a) Site 1, Section 3.9.4.3: What were the VOC concentrations observed during G & M's earlier sampling events? Comparison of these values with values from the present round of sampling may provide useful information on contaminant migration or degradation. For example, vinyl chloride is a degradation product of TCE. What, if any, changes were observed in the relative distribution and concentration of these two VOCs between 1984 and 1991?
- b) Site 2: Identification of hazardous waste and product storage facilities, maintenance facilities, tank farms, vessel dockage areas, etc., and correlation of their locations with waste migration patterns and "outfall" connections should have been included in the present report. This information may have facilitated the interpretation of sampling results and helped to focus further sampling events.
- c) Site 30: Shallow groundwater results for this site suggest the presence of two separate sources of groundwater contamination which appear unrelated to Site 30. Inclusion of available information on the past and present uses of surrounding land and buildings (e.g. in the vicinity of B001) may have facilitated interpretation of sampling results and helped to focus further sampling events.

Response:

It would be completely impractical to include all the currently available and relevant information for each site in the screening reports. This information was noted in the screening reports for comparative purposes. All currently available and relevant information was, however, included and/or referenced in the work plan for each site. All historical information and previous investigation data was used in conjunction with the phase I data to determine the extent of the affected media and make recommendations for additional work. To the extent that is cost effective and efficient, every effort will be made to make the next phase of work the final phase. It is expected that for many sites the next phase of work will be the final phase. However, some sites, depending on the results of phase II, may require additional data to fill gaps or further delineate the extent of an affected medium.

The following responses are divided among the three points raised:

- a) The Site 1 work plan presents a complete summary of groundwater VOC concentrations from G & M's earlier sampling events. Furthermore, many references to data from these previous events were included in the report text for comparison with current data. The text clearly indicates that overall, vinyl chloride concentrations are lower and there are few occurrences of elevated concentrations in the current round, as compared to previous sampling events. The EPA should keep in mind that the objective of the Phase I investigation was not to perform overly detailed analyses of the data such as a comparison of potential chemical breakdown products from the past, but rather to clarify and make a determination of the locations for additional samples in order to fill data gaps and fully characterize the site. A fully detailed comparative analysis of all past and present data will be performed as part of the Phase II investigation, as required to support a baseline risk assessment and select remedial alternatives.
- b) The majority of the requested additional information is described in the work plan for Site 2. Additional information will be gathered during Phase II regarding the historical use of adjacent property/facilities and other potential sources of the detected contamination.
- c) One of the recommended tasks for Phase II at Site 30 is to gather information in order to determine the source or sources of the compounds detected which appear to be unrelated to the site itself. At the present time, only general information is available; however, this information was mentioned in the report and was used in consideration of the suggested additional sampling locations.

Comment 4:

For risk assessment purposes, a background or control sample location should be chosen and the collected sample analyzed for the same parameters.

Response:

Background or control samples will be collected at approximately 3 locations at NAS Pensacola for comparative purposes during the risk assessments.

Comment 5:

significant problems with lab QA/QC were evident in some of these reports. It is recommended that either stricter analytical protocols be instituted for future samples or another lab be used that can produce usable data.

Response:

There were a few problems for laboratory QA/QC for the TCL analytical data. These problem areas have been identified and E & E's laboratory has implemented corrective measures. However, overall the data are valid and usable. Regarding the analytical screening data, there seems to be a general misunderstanding of the intended use of the data, that being to identify the principal areas and chemicals of concern at each site. Given the data quality objectives for Phase I, the screening analyses produced highly useful data. See also the responses to comments 49 and 50 for Site 1.

Comment 6:

EPA concurs with FDER's general comments 1-7.

Response:

See the responses to FDER's general comments 1 through 7.

SITE-SPECIFIC COMMENTS

Site 1 - Sanitary Landfill

Interim Data Report

Comment 1, Page 1-19 Section 1., Paragraph 1:

The date given for the GOAPP in Section 5 - "References" is 1989. A revised edition of the 1989 version was submitted in July 1990. Was the work performed at this site **done** according to the 1989 or 1990 version of the GOAPP?

Response:

The date of the GOAPP was incorrectly referenced as 1989. All work performed under the Phase I project was completed under the guidelines established in the EPA-approved 1990 GOAPP. All references have been corrected to reflect this.

Comment 2, Page 2-1, Section 2.2, Paragraph 1:

Briefly describe what is meant by "most suitable conditions." Easily accessible? Visibly affected/stressed areas?

Response:

Site 1 is **densely** wooded and **very** large in area. E & E decided that the **most** efficient way to establish an accurate grid system over a site of this size would be to set up **several** adjoining grids and to take advantage of the existing roads and cleared areas to establish base lines for the individual grids, and overall grid system. Hence, the search for the most "suitable conditions" in this woodland for set up of the grid.

Comment 3, Page 2-3, Section 2.4, Paragraph 1:

Exactly how was the asbestos survey conducted?

Response:

The asbestos survey was conducted in conjunction with site **reconnaissance** and habitat/biota surveys. One of the biologists participating in the above activities is an asbestos specialist and **made** visual inspections of areas where exposed debris was discovered, for evidence of asbestos building materials disposal. The text has **been** revised to provide **sane** additional description of the task.

Comment 4, Page 2-3, Section 2.5, Paragraph 1:

Considering that the **purpose** of the Phase I investigation **was** to determine all possible contamination at the site, it is not clear why the **preliminary** survey did not also include *using* the methodologies described in Section 6.1.2 of the 1990 GOAPP - i.e., VOC air sampling, whole air collection and solid absorbents, or Section 6.1.4 - Semi-Volatile **sampling**. The Mini-Ram particulate monitor **should** be used for health and **safety** determinations. It does not **measure** gases emanating from the site. Some of the constituents of **concern** are commonly **measured** in the nanograms per cubic meter range (ex. pesticides, PCBs). The Mini-Ram used at this site **measured** in milligrams per cubic meter. The tests were only **M** for 15 minutes per location which is a very minimum amount of time for any type of air monitoring. The Mini-Ram has a high degree of uncertainty inherent in this instrument as evidenced by the **high** detection limits. VOCs are more commonly **measured** by the TO-14 method and PCBs/pesticides by the TO-4 method instead of the Mini-Ram.

Response:

As discussed in the approved Phase I work plan and in the draft report, the air emissions survey and particulate **sampling** task involved more than Mini-Ram particulate **monitoring**. An OVA instrument was used in the **screening survey** of emissions by obtaining ground level measurements at each grid point on the site. In addition, to this **formal** grid survey, the OVA and an HNu were used during earlier reconnaissance walkovers. The purpose of the air monitoring work completed in the Phase I screening exercise was not to produce a definitive conclusion regarding the overall question of emissions regarding this site. Rather, the investigation was intended to screen for the general parameter groups of concern in order to gain indications of the existence and magnitude of the problem. The air monitoring work that was completed in Phase I has provided at least preliminary indication that Site 1 is not a significant source of air emissions in its present condition, and any further subsequent steps to confirm this indication should be tailored as practical, justifiable and defensible in supporting a risk assessment, as well as the ultimate decision regarding this site.

Comment 5, Page 2-3, Section 2.5, Paragraph 1:

Section 6.1.3 referenced here pertains to Hi-Vol samplers; how does this relate to the Mini-Ram sampling since they are two separate sampling methodologies?

Response:

The referenced Section 6.1.3 in the COAPP was incorrect. The report was corrected to specify Section 6.1.1 in the COAPP, which pertains to particulate sampling.

Comment 6, Page 2-4, Section 2.6, Paragraph 1:

Why was the Bicon Micro-R-Meter chosen over the sodium iodide probe gamma scintillation detector?

Response:

Both instruments have sodium iodide probes and are effective at detecting gamma radiation at low to very high levels. As a result both instruments are useful in performing preliminary radiation surveys and either could have been used.

Comment 7, Page 2-5, Section 2.7, Paragraph 4:

Why were the 'yy' and 'zz' designations included, since they are apparently not used? Also, Grid Survey Origins and the believed landfill boundaries should be clearly labeled in the figures in Appendix C.

Response:

The 'yy' and 'zz' designations were not used in this grid system and the reference to them in the draft report was in error. The designations have been deleted from the final interim data report.

Comment 8, Page 2-7, Section 2.10, Paragraph 1:

Where is Beaver Pond and the "adjacent marshy area"? These features are not labeled in Figure 2-1. Also, all roads in this figure should be labeled, particularly those which are referenced later in the text.

Response:

The names of several site features were removed from Figure 2-1 for the sake of clarifying the intended purpose of the figure, which was to illustrate the lay-out and orientation of the survey grid system. However, these features will be identified on Figure 2-1 in the final interim data report.

Comment 9, Page 2-7, Section 2.10, Paragraph 1:

Why were surface water samples not collected directly into their sample containers? Also, it would seem impractical and very difficult to obtain a representative sample of water from one foot above the bottom of a water body using a stainless steel bowl.

Response:

The *surface* water samples were collected according to the methods specified in Section 6.9.1 of the 1990 GOAPP. However, the three surface water samples collected in Bayou Grande were collected directly into the sample containers. The only sample collected from below the surface according to the method specified in the report was one of the two from Golf Course pond. This method was non-standard and will not be used again.

Comment 10, Page 2-7, Section 2.10, Paragraph 2:

The decontamination procedure given in Section 6.10 of the 1989 GOAPP was not acceptable (See 7-7-89 ESD memo to McCurry-WES). If this was the procedure used instead of the decontamination procedure given in Section 6.10 of the 1990 version, then the equipment cannot be considered adequately decontaminated as per the Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (ECBSOPQAM), April, 1986 (revised February 1, 1991).

Response:

See response to comment 1.

Comment 11, Page 2-8, Figure 2-2

The pond names would be useful in this figure. Also, what is the pond at the far right edge of this map, below the Golf Course Pond? Why was it not sampled?

Response:

The pond names are identified on Figure 1-2. The names of these features have been removed in Figure 2-2 for the purpose of clarity in identifying sample locations. The pond to the south of Golf Course Pond has not been named. This pond does not appear to be connected to the landfill area by either surface run-off or surface water or groundwater flow. Thus, no landfill-related contamination was suspected and the pond was not sampled, per the approved Phase I work plan.

Comment 12, Page 2-8, Figure 2-2

As a general rule, both a sediment and a surface filter sample should be collected from the selected sampling location whenever practicable. Why was a surface water sample not collected at locations SD002 and SD004?

Response:

Phase I work plan called for five sediment samples and three surface water samples because more variation in sediments would be expected than in surface water. Both sediment and surface water samples are proposed for the general areas of SD002 and SD004 during Phase II.

Comment 13, Page 2-9, section z-12, Paragraph 1:

VOC samples should never be composited. They must be transferred into sample containers immediately after collection to prevent undue volatilization.

Response:

All samples were collected according to the procedures set forth in the July 1990 GOAPP. "Samples for volatile organics will not be homogenized or composited; rather, selected segments of soil, equal in volume, will be taken from each aliquot and placed in a 40 ml glass vial" (July 1990 GOAPP sect. 6.10 p. 6-30). Although the text may have indicated that soil samples were composited, the VOC samples were collected in the manner described in the July 1990 GOAPP.

Comment 14, Page 2-10, Table 2-2:

TCL is an acronym for the target compound list, and includes everything except metals. The Target Analyte List (TAL) includes the metals.

Response:

Comment noted.

Comment 15, Page 2-10, Table 2-2:

Why weren't samples for the temporary and permanent monitoring wells analyzed for the same constituents?

Response:

The Phase I effort did not originally include the sampling of existing permanent wells. However, the sampling of existing wells was subsequently added to Phase I in an attempt to gain more groundwater data during the analytical screening phase. The installation and screening of temporary wells was intended to provide supporting information for expanding the present well network. The permanent wells that comprise the network were sampled and analyzed for TCL organics and TAL metals in order to; 1) assess the current groundwater conditions; 2) to compare with earlier G & M results; 3) to aid in the development of the Phase II work plan; and 4) to compare with later Phase II groundwater data.

Comment 16, Page 2-10, Table 2-2:

Why was gross alpha the only radiological parameter analyzed for (and only for) the permanent monitoring wells?

Response:

Gross alpha was included as a groundwater analytical parameter to Minimize alpha-emitting radionuclides (e.g., radium 222, uranium 234, uranium 238, thorium 230, radon 222, polonium 210), and as a screen for groundwater exceeding the 15 pCi/L Florida drinking water standard for gross alpha. Per the Phase I work plan, this analysis was not intended for the temporary wells.

Comment 17, Page 2-11, Section 2.14.1, Paragraph 1:

The preceding section states that temporary well screens were installed to bracket the water table. These wells would thus be useful for the detection of floating, but not sinking, immiscible liquids.

Response:

Detect— sinking immiscibles would be unlikely in a well with only five feet of screen installed to bracket the water table. Nonetheless, all the wells were checked for both floating and sinking immiscibles. However, concern for the potential presence of sinking immiscible liquids is among the reasons that intermediate-depth monitoring wells will be installed at Site 1 during Phase II. The intermediate-depth wells are to be constructed above the top of the confining/semi-confining unit separating the Surficial Zone from the upper portion of Main Producing Zone.

Comment 18, Page 2-13, Section 2.15, Paragraph 3:

Why were the water levels for the 28 temporary wells collected over a period of 5 days? This is absolutely unacceptable. Water levels must be collected over as short a time period as possible if they are to provide comparable values. This procedure is of particular importance at NAS Pensacola, where tidal phase could have a considerable effect on water level.

Response:

The water levels were collected from the 28 temporary monitoring wells over a 5-day period for practical reasons. Due to the high cost of stainless steel casings and screens, it was not cost effective to use a new casing and screen at each location. As a result, a limited number of wells were installed and then extracted and decontaminated after the collection of the groundwater sample from each well. Consequently, the installation, sampling and extraction process required five days at Site 1. However, as shown in Figures 3-7 and 3-8 of the report, the water levels, groundwater flow directions and hydraulic gradients derived from the temporary well data are very comparable to those derived from the permanent shallow wells where measurements were collected in one day. In addition, tidal phases have been observed to significantly affect groundwater levels only in wells in very close proximity to tidally influenced water bodies at NAS Pensacola. Therefore, tidal fluctuations are not considered to have any significant impact on the water levels and flow directions observed in the temporary wells at Site 1.

Comment 19, Page 2-13 Section 2.15, Paragraph 3:

What USGS Benchmark was the previously established elevation at permanent monitoring well G39 referenced to?

Response:

The reference elevation utilized at G39 was established by G & M during the 1984 study. G & M does not indicate in the report the benchmark from which the well elevations were established, only that it was referenced to mean sea level by a registered surveyor.

Comment 20, Page 2-14, Section 2.16.2, Paragraph 1:

As before, the decontamination procedure given in Section 6.10 of the 1989 QAPP was not acceptable (See 7-7-89 ESD memo to McCurry-WES). If this was the procedure used instead of the decontamination procedure given in Section 6.10 of the 1990 version, then the equipment cannot be considered adequately decontaminated as per the ECBSOQAM.

Response:

See response to comment 1.

Comment 21, Page 2-14, Section 2.17, Paragraph 3:

What was the rationale for pouring the development/purge water for the temporary wells back into the well after samples were collected? This practice is not according to the ECBSOQAM.

Response:

Development and purge water was poured back into the temporary wells to minimize the disposal costs of investigation-derived wastes for the project. Given that the wells were temporary and that only water specific to that location was reintroduced, this practice should have no adverse affect on the aquifer or the collection of future groundwater samples.

Comment 22, Page 2-14, Section 2.17, Paragraph 4:

How will the drummed investigation-derived materials be disposed of by NAS Pensacola?

Response:

The Navy is in the process of establishing procedures for the ultimate disposal of the drummed investigation-derived materials.

Comment 23, Page 3-1, Section 31:

Existing data analysis should have included a discussion of historical waste management practices at the landfill and the materials disposed.

Response:

All available and pertinent historical data for Site 1 is included, referenced, and/or summarized in the site work plan.

Comment 24, Pages 3-1 to 3-9, Sections 31 and 32

A figure (or figures) illustrating the locations of all significant features described in these sections (e.g., tar pit, linear features south of the tar pit, marshy-appearing depression, the dark circular feature near the picnic area road, medical waste disposal area, etc.) and the time periods over which these were visible should be included. A map showing the location of current significant land uses (e.g., picnic and camping areas) should also be included.

Response:

A figure has been added to the report depicting the locations of the principal features identified by the aerial photograph analysis task.

Comment 25, Page 3-13, Section 3.4, Paragraph 1:
As before, how was the asbestos survey performed?

Response:
See response to comment 3.

Comment 26, page 3-15, Section 3.5, Paragraph 3:
See comment 4 above on the inadequacies of using a Mini-Ram.

Response:
See response to comment 4.

Comment 27, page 3-15, Section 3.5, Paragraph 3:
These measurement locations should be clearly labeled in some figure (e.g., Figure 3-2).

Response:
The coordinates for particulate air monitoring stations are provided in Appendix B. For reference, the station locations were added to Figure 3-2.

Comment 28, Page 3-15, Section 3.6, Paragraph 1:
Was the background radiation data collected for alpha, beta or gamma radionuclides? Also, can past disposal records or other information provide insight into the elevated radiation readings?

Response:
The background radiation data collected was for gamma radiation. There is no information available from previous reports that address the issue of potentially radioactive materials being placed in the landfills. It is suspected, however, that the known disposal of granite rock in the landfill may at least partially contribute to the elevated background gamma radiation observed.

Comment 29, Page 3-18, Section 3.7.1, Paragraph 2:
Why is the single isolated response near Bayou Grande northeast of the landfill considered insignificant?

Response:
Litter and debris that included metal cans and other metallic objects were observed to be washed onto the shoreline area of Bayou Grande in this area. The small and isolated response located directly on the shoreline is believed to be related to this debris and not to material associated with the landfill.

Comment 30, Page 3-18, Section 3.7.2, Paragraph 1:
Background electromagnetic conductivity values in the area should be provided in the text for comparison. Also, quantitative definitions of "moderate" and "strong" should be provided.

Response:
The referenced section does not discuss EM results, rather it discusses the magnetometer survey, where background is reported to have been approximately 50,000 gammas. Moderate magnetic anomalies are considered to be 500 to 1000 gammas above or below background. Strong magnetic anomalies are considered to be 1000 gammas or greater relative to background.

Comment 31, Page 3-18, Section 3.7.3, Paragraph 1:
Again, what is background for these surveys? The 10 mmhos/m is not exceptionally anomalous and may represent ambient conductivity for the area.

Response:

Background electromagnetic terrain conductivity was found to range between 4 and 7 mhos/m. A statement to that effect was added to the text.

Comment 32, Page 3-22, Section 3.7.3, Paragraph 2:

Given the findings summarized in sentence 4, sentence 5 should probably indicate that the depth of burial lies closer to the 10' exploration depth.

Response:

The fifth sentence in the referenced paragraph is in agreement with the comment in that it is concluded that given an exploration depth range of 10 to 20 feet, the depth of burial is probably in the 10 to 15 foot range.

Comment 33, Page 322, Section 3.7.3, Paragraph 3:

The anomaly referred to here appears to be present in the deeper vertical coplanar mode rather than the shallow horizontal coplanar mode.

Response:

The anomaly referred to was found to be present in both the horizontal coplanar mode and vertical coplanar modes.

Comment 34, 3-24, Section 3.8.1, 1:

Have there been no other studies of the shallow subsurface lithology for this site conducted in the past? If any such information exists, it should be included in this section to support and supplement the findings of the current investigation. All available information should be used to assess site conditions and evaluate their potential effect on contaminant release and migration. This comment applies equally to all types of field investigations conducted at the site.

Response:

All previous known and/or available subsurface lithologic data is included, referred and/or summarized in the Site 1 work plan.

Comment 35, Page 324, Section 3.8.2, Paragraph 2:

Because the water levels measured for the 28 temporary wells were collected over a five day period, their validity is questionable.

Response:

See response to comment 18.

Comment 36, Pages 3-29 to 3-30, Figures 3-7 and 3-8:

The legends in these figures should indicate that water level elevation isopleths are for the surficial zone only.

Response:

"Surficial zone" was added to the isopleth legend in the report.

Comment 37, Page 3-32, Section 3.9.1, Paragraph 1:

What parameters were analyzed for? This section should reference Table 2-2.

Response:

Reference to Table 2-2 was added to this section.

Comment 38, Page 3-36, Section 3.9.1.1, Paragraph 3:

Could the high concentrations of iron and manganese mask other potential metal contaminations?

Response:

High concentrations of iron and manganese can cause erroneously elevated readings for selected metals using ICP analysis. However, the surface water samples were not analyzed for iron and manganese. Thus, the presence of these metals has not been confirmed; however, all Phase II surface water samples will be analyzed for TAL metals, which include iron and manganese.

Comment 39, Page 3-37, Section 3.9.2, Paragraph 2

If the VOC samples were composited, this improper collection method could explain why only one VOC was detected in the sample.

Response:

VOC samples were collected in accordance with Section 6.10 of the approved 1990 GOAPP. See response to comment 13.

Comment 40, Page 3-37, Section 3.9.2, Paragraph 2:

The methylene chloride is being written off as a laboratory-derived contaminant. What future lab QA/QC will be proposed to prevent this problem?

Response:

E & Es laboratory had made improvements to reduce the occurrence of laboratory-derived contaminants in sample results. As a result, laboratory QA/QC results, especially regarding methylene chloride, have improved.

Comment 41, Page 3-43, Sections 3.9.2.3 & 3.9.2.4:

If there are other PAHs besides benzo-a-pyrene in the sample, how will they be differentiated in future samples? Also, if phenols are reported as trichlorophenol, how will they be differentiated in future samples?

Response:

Phase I analytical screening used benzo-a-pyrene as an analytical target to give an indication of total PAHs. In Phase II, analyses for TCL organics will involve the reporting of individual PAH compounds. Future TCL organics analyses will include individual phenolic compounds as well.

Comment 42, Page 3-43, Section 3.9.3, Paragraph 2:

See comment 39 above - VOC samples should not be composited.

Response:

See response to comment 13.

Comment 43, Page 3-46, Figure 3-12:

A separate figure should be prepared to illustrate the analytical results for each metal. The "Total Metals" plot combines too much information in one figure. Also, effort should be made to contour the data whenever useful or practicable.

Response:

Figures will be added to the report to show concentrations for selected individual metals. However, contouring these data would not be representative, useful or practicable.

Comment 44, Page 3-47, Figure 3-13:

The numeric results of analyses should be included in all such figures to facilitate visualization of the extent and magnitude of contamination. Also, effort should be made to contour the data whenever useful or practicable.

Response:

The locations where VOCs, PAHs and phenols were detected were few, and the data summary tables are easily referenced. Contouring the results of these analyses is not practicable due to the fact that VOCs, PAHs and phenols were each only detected at two or three locations on the site.

Comment 45, Page 3-48, Section 3.9.3.3, Paragraph 2

Having a laboratory-derived contaminant of 19,000 ug/kg methylene chloride indicates that the lab is using improper or inadequate QA/QC methods - or that methylene chloride is present at the site.

Response:

The highest level of method blank contamination associated with soil sample analysis resulted in a methylene chloride concentration of 8,900 ug/kg, not 19,000 ug/kg as stated by EPA. Methylene chloride was detected in sample P01-S012 at a concentration of 19,000 ug/kg and the report clearly indicates the potential for the presence of this compound on the site. See response to comment 40.

Comment 46, Page 3-49, Section 3.9.4.1, Paragraph 1:

What is the reason for the pH of 1.86 in temporary well TW014 and the pH of 3.9 in well TW026?

Response:

The reason for these lower values of pH is unknown. The pH meters used to obtain these readings were properly calibrated immediately prior to collecting the measurements. Thus, the pH values of 1.86 and 3.9 are believed to be correct, although no confirmation of these unexpected low values was performed. In addition, all the measurements collected from wells immediately before and after these wells showed more normal readings.

Comment 47, Page 3-52, Section 3.9.4.2, Paragraph 2:

Specifically, which of these metals listed in Table 9-4 of the OAPP might be observed at elevated concentrations due to dissolution of aquifer matrix sediments?

Response:

All the listed metals could, to varying degrees, be expected to be elevated due to dissolution of aquifer matrix sediments.

Comment 48, Page 3-60, Section 3.9.4.2, Paragraph 3:

"...these results... suggest that the detected elevated total metals concentrations in the temporary well groundwater samples probably reflect acid preservative leaching or dissolution of aquifer matrix sediments entrained in these unfiltered samples rather than actual groundwater contamination." Will this be the reasoning used whenever metals are detected in a total metals groundwater sample? If the constituent is in the aquifer (matrix or otherwise), the purpose of collecting a sample is to determine the concentrations (MCLs are based on unfiltered samples). Also, why are matrix dissolution effects believed to be greater in temporary than in permanent wells?

Response:

The reasoning which is offered to explain elevated metals concentrations in unfiltered, turbid, acid-preserved samples is no less valid than any concerns which would be raised regarding the representation of filtered samples as characteristic of dissolved groundwater constituents. Actual representative concentrations of metals contamination in groundwater are probably between filtered and unfiltered results. The answer to the first question raised in the comment is yes. To interpret this data without consideration of procedures that skew results would be irresponsible.

Matrix dissolution effects are believed to be greater in the temporary wells than in permanent wells partially due to the fact that these were newly constructed wells without filter packs around the screens, and because the permanent wells have been in place for more than five years, previously purged and sampled on more than one occasion, and have filter packs around the well screens.

Comment 49, Page 3-62, Table 3-9:

Please note the **number** of qualifiers used in this table **and** how **many** results have a qualifier after then:

- *= duplicate analysis not **within** control limits.
- + = correlation coefficient for the **MSA** is less **than** 0.995.
- E= reported value is **estimated** **because** of the presence of interference.
- M= duplicate injection precision not met.
- W= post digestion spike for furnace AA analysis is out of control limits (**85-115%**), while **absorbance** is less than **50%** of spike absorbance.

The large **number** of **results with** a qualifier indicates that **improper** or **inadequate QA/QC procedures** are being used in the lab.

Response:

The presence of qualifiers on data **does** not necessarily **Micate** improper or inadequate QA/QC procedures are being used.

Comment 50, Page 3-67, Table 3-10:

According to the analytical results for samples W 3, **G44** **and** **G45**, fifteen instances of compound detection in the method blank were reported for these samples. **As before**, this indicates **improper** or **inadequate** lab QA/QC procedures.

Response:

The levels of TCL compounds present in the method blanks associated **with** these **samples** met CLP criteria. A potential airborne source for the **freon** **and** **hexane** contamination was identified in the laboratory **and** corrective measures have **been** implemented.

Comment 51, Page 3-77, Section 3.9.4.3, Paragraph 2:

The results of G & M's 1986 study **should** be **tabulated** or presented in a figure in the present report for **caparison** purposes.

Response:

Results of the G & M 1986 study **are** referenced, tabulated **and** discussed in the Site 1 work plan.

Comment 52, Page 3-77, Section 3.9.4.3, Paragraph 2:

The final sentence of **this** paragraph requires further explanation. **How** do the analytical results suggest potential groundwater contamination below the surficial zone of the **sand** **and** **gravel** aquifer?

Response:

The potential for groundwater contamination below the surficial zone of the sand-and-gravel aquifer is elaborated upon in the the groundwater contamination distribution/source discussion that follows in Section 3.10. **The** concluding statement in Section 3.9.4.3 **has** **been** modified in the final interim data report **with** a reference to the discussion in Section 3.10.

Comment 53, Page 3-79, Section 3.9.4.3, Paragraph 8:

See comment 51.

Response:

See response to comment 51.

Comment 54, Page 3-79, Section 3.9.4.3, Paragraph 8:

According to Table 3-10, Trichloroethene was detected in samples W004, W033 and W038. Care should be taken to make sure that all text and tables accurately present the raw data. Also, figures illustrating the detected concentrations of the more frequently detected compounds would greatly facilitate visualization of the extent and magnitude of contamination.

Response:

Comment noted. The typographic error on page 3-79 has been corrected. See response to comment 44.

Comment 55, Page 3-81, Section 3.9.4.3, Paragraph 14:

As before, why were only the permanent monitoring well samples analyzed for gross alpha?

Response:

See response to comment 16.

Comment 56, Page 3-81, Section 3.9.4.3, Paragraph 15:

A discussion of regional groundwater alkalinity, hardness, and total organic carbon, should be included for comparison with the present results.

Response:

A discussion of regional groundwater alkalinity, hardness and total organic carbon was added to the text in Section 3.9.4.3.

Comment 57, Page 3-85, Section 3.10.4, Paragraph 2:

The fact that the temporary wells are more turbid than the permanent wells could be explained by inadequate well development or that the wells do not have a filter pack around the screen as do the permanent wells.

Response:

Comment noted.

Comment 58, Page 3-86, Section 3.10.4, Paragraph 6:

All available information on the existing deep G & M wells, including construction details, sampling results, etc. should be included in the present report.

Response:

Well construction information regarding the deep wells installed by G & M is provided in Table 3-2 of the report. Discussions of groundwater sample results in Section 3.8 (Hydrologic Assessment), Section 3.9 (Chemical Analyses), and 3.10 (Contamination Distribution/Source Discussion) refer to G & M deep well water levels and previous samples' analytical data for comparison purposes to this Phase I investigation. A complete summary of the previous G & M investigation is included in the Site I work plan.

Comment 59, Page 3-95, Section 3.11.2:

The results of matrix spikes and duplicates should have been discussed in this section.

Response:

Any problems concerning laboratory QA/QC are discussed either in this section or in the case narrative at the beginning of the data in the appendix.

Attachment A

Comment 60, Page 1, Paragraph 1:

Please clarify what is meant by: "to the greatest extent practicable". The purpose of the RI is to adequately characterize the nature and extent of contamination so that a Baseline Risk Assessment can be performed (i.e., exposure potential identified) and a sufficient means for remediating the site determined.

Response:

The intended meaning of the sentence in question is that a major goal of Phase II is to put forth every practical effort in order to delineate the extent of contamination as identified during Phase I.

Comment 61, Page 1, Paragraph 2:

The proposal to analyze for a very limited number of contaminants for this site is not acceptable for several reasons: 1) if the VOC samples or any other samples that readily volatilize were composited in the Phase I round of sampling, there is a distinct possibility that this fraction of the sample was lost due to volatilization/aeration; 2) the large number of constituents detected in the method blank caused several of the analytical results to be written off as laboratory-derived contamination. There is always the possibility that some of these constituents were actually in the sample; 3) samples were only collected once - not on a monthly or quarterly basis. Some constituents may not have yet migrated to the sampling point, have been attenuated in the finer sediments, been diluted by precipitation, etc. With time, more constituents may be moving through the soil, groundwater, etc.

Response:

The proposed Phase II work plan will now include TAL/TCL analyses for almost all samples to be collected at all sites. Additional responses to this comment are divided among the three points raised:

- 1) The VOC samples were collected as adequate in a manner consistent with the requirements set forth in Section 6.10 of the GOAPP. Homogenization of soils for VOC samples was not conducted. This method is regarded as appropriate and the results to be valid. In response to EPA's concern, the Phase II work plan will be modified to include the full TCL/TAL on all samples; however, some sample locations have been adjusted.
- 2) Method blanks and sample analyses indicate the presence of several contaminants commonly attributed to laboratory procedure sources. Careful consideration of these results has concluded that it is highly likely that a laboratory source is responsible for the presence of these, and although it is possible that their presence could in part be attributed to the site, it is unlikely.
- 3) The comment implies that many more rounds of sampling and extended periods of time may be required to evaluate the extent of contaminants at this site. This is inconsistent with EPA's assertion that the phased approach does not proceed in the most direct path toward the objectives of the RI/FS process, nor does it reflect the EPA's assertion that RI planning should strive to make the next phase of fieldwork the last.

Comment 62, Page 2, Paragraph 1:

The discussion of where to install additional monitor wells is too general. The purpose, or rationale, for installing each well must be specified. The rationale should be based on existing data. What is presently known about the nature and extent (both lateral and vertical) of the plume? What "gaps" still exist in the data? What can and cannot be predicted/anticipated about contaminant migration from available data? Will the proposed locations adequately address each of the remaining data gaps?

Response:

A detailed rationale for all sample locations and analytical requirements will be provided in the Phase II work plan.

Comment 63, Page 2, Paragraph 4:

What data gaps remain with regard to delineation of surface water contamination? How will these samples fill these data gaps?

Response:

See response to comment 62.

Comment 64, Page 2, Paragraph 5:

What data gaps remain with regard to delineation of sediment contamination? How will these samples fill these datagaps?

Response:

see response to comment 62.

Comment 65, Page 4, Table 1:

Why aren't all samples within the same media to be analyzed for the same constituents? Why will the only media to be analyzed for gross alpha be the soil samples? Why is this the only radiological parameter to be analyzed for?

Response:

See response to comment 62.

Comment 66, Page 5, Paragraph 1:

What data gaps remain with regard to delineation of soil contamination? How will these samples fill these data gaps? Also, as stated before, no VOC samples should be composited.

Response:

see responses to comments 13 and 62.

Comment 67, Page 5, Paragraph 4:

The monitoring well installation procedures must be more detailed. The Region IV Environmental Services Division guidance for well installation requires installation of stainless steel wells. A Variance may be requested for the use of alternative well materials, such as PVC. Attachment A is a listing of the minimum information to be supplied for consideration and the risks retained by the Navy if the variance is granted.

Response:

More detail regarding monitoring well installation will be provided in the Phase II work plan. In addition, the Navy will submit a separate request for the use of PVC well materials.

Comment 68, Page 7, Paragraph 3:

Justify the decision not to perform more extensive hydrologic assessment tests (e.g., step drawdown tests, pumping tests) at this phase of the investigation.

Response:

A rationale for the type of hydrologic testing proposed will be provided in the Phase II work plan.

Comment 69, Page 7, Paragraph 4:

Is the GOAPP referenced here the 1989 or 1990 version?

Response:

The referenced GOAPP is the EPA-approved 1990 version.

Comment 70, Page 7, Paragraph 5:

The goal of the RI is to gather enough information to do a full Baseline Risk Assessment (BRA) and Feasibility Study (FS). The BRA clarifies a preliminary evaluation and its purpose is not to determine the need for further investigations or characterization as stated in the Recommendation Letter. The investigation and characterization of all media should be complete before the BRA is completed.

Response:

Comment noted. This paragraph was intended to point out that an early part of the BRA will be to conduct a preliminary risk evaluation. This preliminary evaluation will provide an early indication of the potential threat at the site as well as assist in determining the need for any additional investigation. A more detailed discussion of the tasks to be conducted as part of the BRA is contained in Section 18 of the work plan.

Appendices

Comment 71, Appendix B:

Please note that the radiation readings for Site 1 ranged from NA to 11 uR/h and that WA readings ranged from NA to 20 ppm (NA = Not Accessible).

Response:

The range of radiation readings was added to the text in Section 3.5.

Comment 72, Appendix D:

Please note that the highest open-borehole OVA/HNu readings for the temporary wells ranged from 0 to 400 ppm and the pH ranged from 1.86 to 7.44 units.

Response:

The ranges in open-borehole OVA/HNu readings and groundwater pH values was added to the text in Sections 3.8.1 and 3.9.4.1, respectively.

Comment 73, Appendix I:

Please note the case narrative explaining the problems with the QA/QC for the permanent monitoring well samples.

Response:

Comment noted.

Site 2 - Waterfront Sediments

Interim Data Report

Comment 1, General Comment:

Throughout the report, the field logbook was referenced as a source for field and sampling documentation and site observations and measurements. This important information source should have been included in the report as an attachment or appendix.

Response:

Copies of the field logbooks will be provided to the EPA and FDER.

Comment 2, General Comment:

There is no discussion regarding the depth of water, water condition (i.e., turbidity), tide, or sediment description (sand, mud, etc.) or similar factors relative to this sampling investigation. Contaminant deposition at the two "subsites" of this site (i.e., to the east and south) may be influenced differently by wind, tide and other such factors. Without a description of these factors, it is difficult to assess the impact of contaminants migrating offshore and the appropriateness of Phase II recommendations.

Response:

This information was collected and is contained in the field logbooks which will be provided to EPA. This information will also be collected during the Phase II investigation and included in the Phase II report.

Comment 3, Page 1-1, Section 1., Paragraph 1:

See comment 1 for Site 1.

Response:

The work was performed according to the 1990 version of the GOAPP. The date of the GOAPP has been changed in the references.

Comment 4, Page 1-3, Figure 1-2:

The letter quality of this figure, particularly building numbers, must be improved.

Response:

The letter quality of Figure 1-2 will be improved in the final interim data report.

Comment 5, Page 1-3, Figure 1-2:

The northeastern portion of this site contains only one "outfall". What is the reason for the relatively large aerial extent of this portion of the site?

Response:

The area represented as the northeastern portion of the site on Figure 1-2 is larger than the actual area of investigation. This figure will be changed to accurately reflect the actual size of the site.

Comment 6, Page 2-1, Section 2.1, Paragraph 2:

What was the rationale for using the 1982 FDER data for sites FNB-5 and FNB-6 as being indicative of ambient bay conditions? This data should have been included in the report.

Response:

FDER Pensacola Bay sampling stations FNB-5 and FNB-6 were chosen as being indicative of ambient conditions (Site 2) because both locations are approximately 1 mile east and upstream of Site 2 and NAS Pensacola, and would not be expected to be affected significantly by activities on the installation.

Comment 7, Page 2-3, Section 2.4, Paragraph 1:
See comment 4 for Site 1.

Response:

See response to comment 4, Site 1.

Comment 8, Page 2-4, Section 2.4, Paragraph 1:
See comment 5 for Site 1.

Response:

See response to comment 5, Site 1.

Comment 9, Page 2-4, Section 2.5, Paragraph 1:
See comment 6 for Site 1.

Response:

See response to comment 6, Site 1.

Comment 10, Page 2-4, Section 2.7, Paragraph 1:
As before, VOC samples should not be composited.

Response:

See response to comment 13, Site 1.

Comment 11, Page 2-4, Section 2.7, Paragraph 1:

The vessel dockage area situated between the east and south portions of the site was not sampled. This area is highly suspect of sediment contamination due to release of metals from vessel bottoms and deck paint, oily bilge discharges and releases (accidental or otherwise) of hazardous materials over the years. Tidal influence (flushing), wind dispersion and storm surges can be a factor of contaminant migration. Sampling of this area must be performed.

Response:

Sediment samples will be collected in this area as part of the Phase II investigation. See response to comment 62, Site 1.

Comment 12, Page 2-4, Section 2.7, Paragraph 1:

Surface water samples should have been collected from randomly selected areas where sediment samples were collected. This would have helped to further assess contaminant migration and define pollution sources. Contaminants are transported through this media and surface water contamination may have revealed a need to expand this investigation.

Response:

Surface water samples will be included as part of the Phase II investigation. See response to comment 62, Site 1.

13, Page 2-5, Figure 2-1:

The designation of "outfall versus storm water outfall" discussed throughout the report and identified on numerous figures is confusing and misleading. The term "outfall" should have been used exclusively and defined in applicable portions of the text as storm water drainage from culverts, drain pipes or sewer systems, and/or point sources (i.e. elevated structures, production and maintenance areas, product or waste storage units).

Furthermore, the figures identify "outfalls" from buildings that are not adequately characterized. **based on the sampling results**, several of these "outfalls" could be from structures that **have** stored or **retained** hazardous materials. a listing of building structures and types, **by number** as they appear on the figure, would render a better and **more realistic** picture of potential pollution sources.

Response:

As part of the Phase II investigation a contaminant source survey will be conducted. This survey will include a review of available Navy documents (e.g., Public Works Center [PWC] records, and the installation's Spill Prevention, Control and Countermeasures Plan [SPCC Plan], etc.) and a physical survey of potential source areas. To the extent possible, this survey will identify and define the outfalls and sources along the waterfront, including the buildings from which they originate.

Comment 14, Page 2-6, Section 2.8.2, Paragraph 1:

See comment 10 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 15, Page 2-6, Section 2.9, Paragraph 1:

"Wastes generated during decontamination activities were allowed to evaporate to the maximum extent possible, and the residue was disposed of on site." What exactly does this mean - were solvents, contaminated wash water, etc. poured into the bay? Define "properly disposed of" as it is used in this paragraph.

Response:

Only excess sediment and wash water (no solvents) were placed into the water. The text was revised to clarify this.

Comment 16, Page 3-5, Section 3.4, Paragraph 2:

See comment 4 for Site 1.

Response:

See response to comment 4, Site 1.

Comment 17, Page 3-5, Section 3.5, Paragraph 2:

The radiation levels of 12 and 35 uR/h were not given in Appendix B.

Response:

These radiation readings were mistakenly omitted from Appendix B and have been added.

Comment 18, Page 3-5, Section 3.5, Paragraph 2:

"The high background level is assumed to be due to the natural radiation of the granite wall." Were other measurements taken along the wall to verify this assumption?

Response:

The seawall itself is primarily composed of concrete. The granite-slab wall was noted only at the southern tip of this north-south oriented vessel dockage area. The comparatively low readings along the concrete seawall and the higher readings along the granite wall suggests that the level noted at the granite wall is due to natural radiation from the minerals in the granite. The text has been changed to clarify this.

Comment 19, Page 3-11, Section 3.6.3, Paragraph 1:
See comment 40 for Site 1.

Response:
See response to comment 40, Site 1.

Comment 20, 3-13, Section 3.6.4, Paragraph 1:
See comment 41 for Site 1.

Response:
See response to comment 41, Site 1.

Comment 21, Page 3-13, Section 3.6.5, Paragraph 1:
Assuming all stormwater run-off from the base is directed to the south and east, it is somewhat surprising that pesticides were not detected in any samples. If the samples were collected at depths requiring "diver's gear", then perhaps wind and total dispersion were factors in transporting contaminants downstream and away from the assessment area.

Response:
Comment noted. The formulation of the Phase II sampling plan will take this into account.

Comment 22, Page 3-14, Section 3.8.2, Paragraph 1:
See comment 40 for Site 1.

Response:
See response to comment 40, Site 1.

Attachment A

Comment 23, Page 1, Paragraph 1:
See comment 60 for Site 1.

Response:
See response to comment 60, Site 1.

Comment 24, Page 1, Paragraph 2:
Aren't the proposed samples sediment and not soil samples?

Response:
The EPA reviewer should note that the proposed samples are designated in the text as sediment samples.

Comment 25, Page 1, Paragraph 4:
See comment 69 for Site 1.

Response:
See response to comment 69, Site 1.

Comment 26, Page 2, Paragraph 1:
The purpose for collectim of each proposed sampling location should be clearly stated. How will the information gained help assess the magnitude or extent of contamination at Site 2?

Identify on-base tank farms, hazardous waste and product storage areas, manufacturing, fabrication, machining, painting, maintenance facilities, and correlate their locations with "outfall" connections, waste migration patterns and site topographic features. This will be necessary to focus sampling locations.

Response:

A detailed rationale for the location of sampling points and the selection of analytical parameters will be presented and discussed in the revised phase II work plan for this site. A contaminant source survey (see response to comment 12, this site) will be conducted during the second phase of the investigation, and will identify all potential sources of pollution and the potential pathways for migration of such pollution.

Comment 27, Page 2, Paragraph 1:

Surface water samples should be collected at several randomly selected sediment sampling locations to assess contaminant migration and further define pollution sources.

Response:

Surface water samples will be included as part of the phase II investigation.

Comment 28, Page 2, Paragraph 1:

Several sediment (surface and subsurface) and surface water samples should be collected from the vessel dockage area to determine if this part of the facility is contaminated and impacting Pensacola Bay.

Response:

Sediment and surface water samples will be collected from the vessel dockage area during the Phase II investigation.

Comment 29, Page 2, Paragraph 3:

See comment 70 for Site 1.

Response:

See response to comment 70, Site 1.

Comment 30, Page 5, Table 1:

Why aren't all samples within the same media to be analyzed for the same constituents?

Response:

The Phase II work plan will be revised so that all phase II samples will be analyzed for the TCL/TAL list. See response to comment 62, Site 1.

Appendices

Comment 31, Appendix B:

See comment 17 for Site 2.

Response:

See response to comment 17, Site 2.

Site 11 - North Chevalier Disposal Area

Interim Data Report

Comment 1, Page 1-1, Section 1., Paragraph 1:
See comment 1 for Site 1.

Response:
See response to comment 1, Site 1.

Comment 2, Page 1-3, Figure 1-2:
The believed boundaries of the site should be indicated on this figure.

Response:
This figure has been revised to show the boundaries of the site.

Comment 3, Page 2-3, Section 2.4, Paragraph 1:
See comment 3 for Site 1.

Response:
See response to comment 3, Site 1. The text has been revised to clarify the methodology.

Comment 4, Page 2-3, Section 2.5, Paragraph 1:
See comments 4 and 5 for Site 1.

Response:
See response to comments 4 and 5, Site 1.

Comment 5, Page 2-4, Section 2.6, Paragraph 1:
See comment 6 for Site 1.

Response:
See response to comment 6, Site 1.

Comment 6, Page 2-7, Section 2.10, Paragraph 1:
Were the VOC soil samples also composited?

Response:
See response to comment 13, Site 1.

Comment 7, Page 2-9, Section 2.10, Paragraph 2:
Why were all wells installed to bracket the water table? Was there no evidence or records to indicate potential Dense Non-aqueous Phase Liquid (DNAPL) contamination?

Response:
The water table was bracketed with the well screen in an effort to detect floating immiscible product on top of the water table. In response to DNAPL contamination, see response to comment 17, Site 1.

Comment 8, Page 2-9, Section 2.10, Paragraph 2:
See comment 10 for Site 1.

Response:
See response to comment 1, Site 1.

Comment 9, Page 2-10, Table 2-2:
See comments 14, 15 and 16 for Site 1.

Response:

See responses to comments 14 and 15, Site 1. Gross alpha radiation was not analyzed for on this site during Phase I.

Comment 10, Page 2-11, Section 2.13, Paragraph 3:

Wells at Site 1 were tied into the well GM39 elevation; here, the wells are referenced to well GM47. What USGS Benchmark was the previously established elevation at permanent monitoring well GM47 referenced to?

Response:

The reference elevation utilized at GM47 was established by G & M during the 1986 study, and it was referenced to the same datum used in the 1984 study. See response to comment 19, Site 1.

Comment 11, Page 2-13, Section 2.35, Paragraph 3:

See comment 21 for Site 1.

Response:

See response to comment 21, Site 1.

Comment 12, Page 2-13, Section 2.15, Paragraph 4:

See comment 22 for Site 1.

Response:

See response to comment 22, Site 1.

Comment 13, Page 3-1, Section 31:

See comment 23 for Site 1.

Response:

See response to comment 23, Site 1.

Comment 14, Page 3-7, Section 34, Paragraph 1:

See comment 3 for Site 1.

Response:

The text has been changed to clarify the methodology. See response to comment 3, Site 1.

Comment 15, Page 3-7, Section 35, Paragraph 1:

See comment 4 for Site 1.

Response:

See response to comment 4, Site 1.

Comment 16, Page 37, Section 36, Paragraph 1:

Was the background radiatim data collected for alpha, beta or gamma radionuclides?

Response:

The background radiatim data collected was for gamma radiation. The text has been changed to reflect this.

Comment 17, Page 39, Section 3.6, Paragraph 1:

Appendix B has a radiation reading of 45 uR/h for grid coordinate N2+00E1+50-grid B. This was not noted in the text. What are the road materials at this site that are contributing 6 to 8 uR/h radiation?

Response:

The text has been changed to include this radiation reading. The road material at Site 11 is asphalt which included pebble-size rock fragments.

Comment 18, Page 3-15, Section 381:

See comment 34 for Site 1.

Response:

All available data is included, referenced, #or summarized in the Site 11 work plan.

Comment 19, Page 3-16? Table 31:

According to this table, water levels for the 11 temporary wells were collected over the period 1/17/91 to 1/22/91 - 6 days. Why did it take 6 days to collect 11 water level measurements? Water level measurements for the eleven permanent wells were all collected within a 2 hour period on 2/26/91. As stated for the temporary wells at Site 1, water levels should be measured as closely as possible to each other and during the same tidal phase.

Response:

Comment noted. See response to comment 18, Site 1.

Comment 20, Page 3-18, Figure 3-7:

See comment 36 for Site 1.

Response:

"Surficial Zone" was added to the figure.

Comment 21, Page 3-19, Section 391, Paragraph 2:

The meaning of "A" and "B" intervals should be defined in the text.

Response:

The EPA reviewer should note that the meaning of the "A" and "B" intervals was fully described in Section 2.10 of the report.

Comment 22, Page 3-27, Figure 3-9:

See comment 43 for Site 1.

Response:

See response to comment 43, Site 1.

Comment 23, Page 3-30? Section 391, Paragraph 10:

See comment 40 for Site 1.

Response:

See response to comment 40, Site 1.

Comment 24, Page 3-30, Section 391, Paragraph 11 & 12:

See comment 41 for Site 1.

Response:

See response to comment 41, Site 1.

Comment 25, Page 3-31, Section 3.9.2, Paragraph 2:
EPA concurs with FDER's comment 1 for this site.

Response:

See response to FDER comment 1, Site 11.

Comment 26, Page 3-35, Section 3.9.2, Paragraph 4:
See comment 48 for Site 1.

Response:

See response to comment 48, Site 1.

Comment W, Page 3-39, Section 3.9.2, Paragraph 12:
See comments 51 and 58 for Site 1.

Response:

A complete summary of the previous G 6 M investigation is included in the Site 11 work plan. See responses to comments 51 and 58, Site 1.

Comment 28, Page 3-40, Table 3-6:

Please note the qualifiers in *this* table and the number of samples they apply to; this indicates inadequate or improper lab QA/QC procedures.

Response:

See response to comment 49, site 1.

Comment 29, Page 3-43, Table 3-7:

Please note the number of constituents that were present in the method blank. This again indicates inadequate or improper lab QA/QC.

Response:

See response to comment 40, Site 1.

Comment 30, Page 3-50 to 51, Section 3.10.1 and 3.10.2:

The results presented in these sections suggest that Site 30 *should* be included as a part of Operable Unit 2 (Group B). Also, submittal of a single report for **this Operable Unit** (rather than site-specific reports) would facilitate preparation of a more complete, **meaningful** discussion of these **surface water and sediment results**.

Response:

Although still part of Site 30, the lower portion of the creek does appear to be impacted by contaminants from Site 11. However this was not known until the results of Phase I were assimilated. Future reports may include this area as part of Operable Unit 2. See also response to general comment 1, Site 1.

Comment 31, Page 3-56, Section 3.10.4, Paragraph 8:

The upward gradient at G-51 appears relatively small. Inclusion of the results of any earlier sampling events in this discussion may be useful.

Response:

The results of all earlier investigations at this site are summarized and presented in the site work plan.

Comment 32, Page 3-61, Table 3-9:
See comment 29 for this site.

Response:

See response to comment 40, Site 1.

Attachment A

Comment 33, Page 1, Paragraph 1:
See comment 60 for Site 1.

Response:

See response to comment 60, Site 1.

Comment 34, Page 1, Paragraph 2:
See comment 61 for Site 1.

Response:

See response to comment 61, Site 1.

Comment 35, Page 1, Paragraph 3:
See comment 62 for Site 1.

See responses to comment **a**, Site 1.

Comment 36, Page 2, Paragraph 4:
Samples for VOCs should not be composited.

Response:

See response to comment 13, Site 1.

Comment 37, Page 2, Paragraph 4:

The rationale behind the proposed sampling scheme for each individual boring should be more clearly stated. For example, composited soil samples will be collected at the specified intervals from surface to 10' below the water table for five borings where high levels of contamination were detected in Phase I. Why is boring 812 included in this group when more extensive contamination was observed in the adjacent boring 813?

Response:

See response to comment 62, Site 1.

Comment 38, Page 2, Paragraph 4:

The stated goal for collection of two samples below the water table is to assess the vertical extent of soil contamination. What assurance exists that this approach will define the vertical extent of contamination?

Response:

The stated goal of collecting soil samples below the water table and analyzing for metals only was to differentiate between groundwater and aquifer matrix contamination, not to define the vertical extent of contamination.

Comment 39, Page 3, Figure 1:

It is useful to have all existing and proposed samples for each locality on the same figure. However, the crowded nature of this figure makes it difficult to locate the specific locations being proposed for a given sample type. A series of clear plastic overlays would help to clarify the proposed sampling plan.

Response:

Comment noted.

Comment 40, Page 4, Table 1:

Why aren't all samples within the same media to be analyzed for the same constituents? Why will the only media to be analyzed for radionuclides be the soil samples? Why are no samples to be analyzed for gross alpha?

Response:

In response to these concerns, all Phase II samples will be analyzed for the full TAL/TCL list and for gross alpha, beta and gamma radiation to screen for radionuclides.

Comment 41, Page 6, Paragraph 1:

See comment 67 for Site 1.

Response:

See response to comment 67, Site 1.

Comment 42, Page 7, Paragraph 1:

See comment 68 for Site 1.

Response:

See response to comment 68, Site 1.

Comment 43, Page 7, Paragraph 2:

See comment 69 for Site 1.

Response:

See response to comment 69, Site 1.

Comment 44, Page 7, Paragraph 3:

What sampling or other types of field investigation will be performed to locate and further delineate these potential sources of contamination?

Response:

The revised Phase II work plan will provide detail regarding the types of sampling and field investigation methodologies that will be performed for site characterization and contaminant source determination. See response to comment 62, Site 1.

Comment 45, Page 7, Paragraph 4:

See comment 70 for Site 1.

Response:

See response to comment 70, Site 1.

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Appendices

Comment 46, Appendix B:

Please note that the radiation readings ranged from 4 to 45 uR/h.

Response:

The range in radiation readings has been added to the text in Section 3.5.

Comment 47, Appendix E:

Please note that the highest open-borehole OVA/HNu readings ranged from 0 to 1000 ppm. The fact that 12 of the borings had high readings of 1000 ppm should have been noted in the fact.

Response:

This information has been added to the text in Section 3.8.1.

Site 15 - Pesticide Rinse Disposal Area

Interim Data Report

Comment 1, Page 2, Executive Summary, Paragraph 3:

Was a survey of all past uses of the surrounding property performed for this site as part of the screening phase? This would have provided potentially useful information on these "additional sources of contamination".

Response:

As part of Phase I, historical aerial photos and present site activities were evaluated. As part of phase II, a contamination source survey will be performed which will include an extensive review of the past uses of this site and the surrounding property in order to identify other potential sources of contamination.

Comment 2, Page 1-1, Section 1, Paragraph 1:

See comment 1 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 3, Page 2-3, Section 2.4, Paragraph 1:

See comments 4 and 5 for Site 1. Also, why was no radiation monitoring performed for this site?

Response:

See responses to comments 4 and 5, Site 1. Historical information provided by the Navy and the previous investigation by G & M did not indicate the potential for radiation on the site. Thus, no formal radiation survey was conducted. The use of a personnel radiation monitor is required on every site according to the procedures set forth in the 1990 General Health and Safety Plan. These were used by all field teams on this site during phase I, and any elevated readings would have been noted in the text.

Comment 4, Page 2-6, Section 2.8, Paragraph 1:

See comment 13 for Site 1.

Response:

See response to comment 13, Site 1.

Comment 5, Page 2-6, Section 2.8, Paragraph 3:

See comment 10 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 6, Page 2-8, Section 2.10.1, Paragraph 1:

See comment 17 for Site 1.

Response:

See response to comment 17, Site 1.

Comment 7, Page 2-9, Table 2-2:

See comments 14 and 15 for Site 1.

Response:

See response to comments 14 and 15, Site 1. The text was been changed to include TAL.

Comment 8, Page 2-10, Section 2.11, Paragraph 3:

As before, water levels should be measured as closely as possible to each other and within the same tidal phase. Why were the temporary wells surveyed in to well elevations GM59 and GM60? Wells at Site 1 were surveyed in relative to well GM39, at Site 11 to well GM47, at Site 12 to well GM15 and at Sites 13 and 14 to USGS Benchmark No. A161.

Response:

See responses to comment 9, Site 12, comment 9, Site 14 and comment 18, Site 1. GM59 and GM60 were the closest datums with a surveyed elevation.

Comment 9, Page 2-11, Section 2.13, Paragraph 2:

See comment 21 for Site 1.

Response:

See response to comment 21, Site 1.

Comment 10, Page 2-11, Section 2.13, Paragraph 3:

See comment 22 for Site 1.

Response:

See response to ament 22, Site 1.

Comment 11, Page 3-19 Section 3.2, Paragraph 1:

Regarding the description of Building 2692, what is meant by the term "unpaved"?

Response:

Based on information gathered from personnel during the site reconnaissance, the floor of this building was formerly dirt and was recently paved with concrete. The text has been changed to clarify this.

Comment 12, Page 3-2, Section 3.4, Paragraph 1:

Only the OVA readings are included in the appendix; where are the HNu readings?

Response:

As stated in the text in Sections 2.4 and 3.4, an OVA was used to perform the surface emissions survey at this site. The HNu was used only during site reconnaissance for health and safety purposes, and any elevated readings would have been noted in the text. All HNu readings were recorded in the field logbook, which will be provided to the EPA.

Comment 13, Page 3-2, Section 3.4, Paragraph 2:

See comment 4 for Site 1.

Response:

See response to comment 4, Site 1.

Comment 14, Page 3-3, Section 3.6.1, Paragraph 1:

See comment 34 for Site 1.

Response:

See response to ament 34, Site 1.

15, Page 3-8, Figure 3-2:

See comment 36 for Site 1.

Response:

See response to comment 36, Site 1.

Comment 16, Page 3-9, Table s3:

See comment 40.

Response:

This comment is assumed to be referring to comment 40 for Site 1. See response to comment 40, Site 1.

Comment 17, Page 3-19, Section 3.7.1.1, Paragraph 1:

What exactly were G & M's results for Arsenic (as well as other parameters)? Did these results indicate the presence of contamination in any other areas? See comment 51 for Site 1.

Response:

The results of the G & M study are referenced and discussed in the Site 15 work plan. See response to comment 51, Site 1.

Comment 18, Page 3-19, Section 3.7.1.3, Paragraph 2:

Please note the reference to a false analytical positive and more evidence of laboratory-derived contamination for methylene chloride. These problems indicate improper or inadequate lab QA/QC.

Response:

See responses to general comment 5 and to comment 40, Site 1.

Comment 19, Page 3-22, Section 3.7.1.3, Paragraph 3:

Were either of these TCL VOCs detected in earlier (i.e. G & M) sampling rounds?

Response:

Previous groundwater samples collected from these wells were only analyzed for chlorinated pesticides, PCBs and arsenic.

Comment 20, Page 3-22, Section 3.7.1.4, Paragraph 1:

See comment 41 for Site 1.

Response:

See response to comment 41, Site 1.

Comment 21, Page 3-24, Section 3.7.1.4, Paragraph 3:

"The absence of chlordane in E & E soil samples may be due to E 6 Es compositing soil over a 0- to 4-foot interval BLS. This larger interval may have diluted any chlordane present at the surface." These samples should be re-collected to verify if sampling techniques caused questionable data.

Response:

The site area will be sampled further during the Phase II investigation. The sampling methodology will include sampling soils over smaller depth intervals in order to refine the vertical extent of contamination; see response to comment 62, Site 1.

Comment 22, Page 3-24, Section 3.7.2.2, Paragraph 2
See comment 48 of Site 1.

Response:

See response to comment 48, Site 1.

Comment 23, Page 3-32, Table 3-6:

Please note the number of samples with qualifiers; this indicates improper or inadequate lab QA/QC.

Response:

See response to comment 49, Site 1.

Comment 24, Page 3-37, Section 3.8.1, Paragraph 2:

Historical ambient source data *should* be investigated for VOC contamination and the information used to focus further sampling efforts.

Response:

This information will be compiled and evaluated as part of the proposed Phase II contaminant source survey.

Attachment A

Comment 25, Page 1, Paragraph 1:

See comment 60 for Site 1.

Response:

See response to comment 60, Site 1.

Comment 26, Page 1, Paragraph 2:

See comment 61 for Site 1.

Response:

See response to comment 61, Site 1.

Comment 27, Page 1, Paragraph 3:

See comment 62 for Site 1.

Response:

See response to comment 62, Site 1.

Comment 28, Page 2, Paragraph 2

What sampling measures will be taken to assure that the vertical extent of soil contamination is determined? See comment 68 for Site 1.

Response:

the Phase II investigation, soil samples will be collected over smaller depth intervals in order to refine the vertical profile of contamination in the soils. See response to comment 21, this site.

Comment 29, Page 4, Table 1:

Why aren't all samples within the same media to be analyzed for the same parameters? Why aren't radiological parameters proposed for this site?

Response:

Almost all Phase II samples will be analyzed for the full TAL/TCL list and for gross alpha, beta and gamma radiation in order to screen for radionuclides.

Comment 30, Page 5, Paragraph 1:

See comment 67 for Site 1.

Response:

See response to comment 67, Site 1.

Comment 31, Page 5, Paragraph 3:

See comment 68 for Site 1.

Response:

See response to comment 68, Site 1.

Comment 32, Page 5, Paragraph 4:

See comment 69 for Site 1.

Response:

See response to comment 69, Site 1.

Comment 33, Page 6, Paragraph 1:

See comment 70 for Site 1.

Response:

See response to comment 70, Site 1.

Appendices

Comment 34, Appendix C:

Please note the highest open-borehole OVA/RnU read— for *the* temporary wells ranged from 0 to 780 ppm. This fact should have been noted in the text.

Response:

The range of the highest open-borehole readings has been added to the text in Section 3.7.

Site 26 - Supply Department Outside Storage

Interim Data Report

Comment 1, Page 1-1, Section 1., Paragraph 1:
See comment 1 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 2, Page 2-3, Section 2.4, Paragraph 1:
See comments 4 and 5 for Site 1.

Response:

See response to comments 4 and 5, Site 1.

Comment 3, Page 2-3, Section 2.5, Paragraph 1:
See comment 6 for Site 1.

Response:

See response to comment 6, Site 1.

Comment 4, Page 2-7, Section 2.9, Paragraph 1:
See comments 10 and 13 for Site 1.

Response:

See response to comments 1 and 13, Site 1.

Comment 5, Page 2-9, Section 2.11, Paragraph 1:
See comment 17 for Site 1.

Response:

See response to comment 17, Site 1.

Comment 6, Page 2-11, Section 2.12, Paragraph 2

These temporary wells were surveyed in relative to well GM15. The temporary wells for Site 24 were surveyed in relative to the well elevation for GM39. Wells at Site 1 were surveyed in relative to well GM39, at Site 11 to well GM47, at Site-12 to well GM15, at Sites 13 and 14 to USGS Benchmark No. A161 and Site 15 to well elevations for GM59 and GM60. Why does each site have a different reference point?

Response:

The temporary wells were surveyed in to the closest permanent monitoring well with surveyed elevation. See response to comment 9, Site 14. The EPA should bear in mind that many adjacent sites do have a common link. For example, all site 11 wells (including GM15) were surveyed relative to GM47; sites 26 and 12 were subsequently surveyed relative to GM15.

Comment 7, Page 2-12, Section 2.14, Paragraph 2:
See comment 21 for Site 1.

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See response to comment 21, Site 1.

Comment 8, Page 2-12, Section 2.14, Paragraph 3:
See comment 22 for Site 1.

Response:

See response to comment 22, Site 1.

Comment 9, Page 3-1, Section 3.1:
See comment 23 for Site 1.

Response:

See response to comment 23, Site 1.

Comment 10, Pages 3-2 to 3-3, Section 3.2, Paragraphs 2, 3:
What is contained in the storage trailers? What was the condition of the olive green containers labeled DDT? What are the contents of the refuse bins and did there appear to be releases from the bins?

Response:

In response to the three points raised: a) It is unknown what was stored in the trailers; they are no longer located on the site; b) the single five gallon container Visually appeared to be in good condition; c) the refuse bins were completely empty and abandoned, and there was no physical evidence of releases from these bins. The text has been changed to clarify these points.

Comment 11, Page 3-5, Section 3.4:
See comment 4 for Site 1. Also, were any HNu readings recorded?

Response:

See response to comment 4, Site 1. The HNu readings were recorded in the field logbooks, which will be provided to the EPA.

Comment 12, Page S5, Section 3.5:
Was the background radiation data collected for alpha, beta or gamma radionuclides?

Response:

The background radiation collected was for gamma radiation. The text has been changed to reflect this.

Comment 13, Page 3-7, Section 3.6, Paragraph 2:
What work will be performed to determine if the strong localized magnetic anomaly in the south-central area and other areas of Site 26 is actually buried metal?

Response:

Soil samples will be collected near these areas during Phase II. Further investigation will occur only if it becomes apparent that they are associated with some type of contamination.

Comment 14, Page 3-14, Figure 3-6:
See comment 36 for Site 1.

Response:

See response to comment 36, Site 1.

Comment 15, Page 3-21, Section 3.8.1, Paragraph 6:
See comment 40 for Site 1.

Response:
See response to comment 40, Site 1.

Comment 16, Page 3-26, Section 3.9.2, Paragraph 1:
See comment 48 for Site 1.

Response:
See response to comment 48, Site 1.

Attachment A

Comment 17, Page 1, Paragraph 1:
See comment 60 for Site 1.

Response:
See response to comment 60, Site 1.

Comment 18, Page 1, Paragraph 2:
See comment 61 for Site 1.

Response:
See response to comment 61, Site 1.

Comment 19, Page 1, Paragraph 3:
See comment 62 for Site 1.

Response:
See response to comment 62, Site 1

Comment 20, Page 2, Paragraph 2:
See comment 66 for Site 1.

Response:
See responses to comments 13 and 62, Site 1.

Comment 21, Page 4, Table 1:
Why aren't all samples within the same media to be analyzed for the same parameters? Why aren't radiological parameters proposed for this site?

Response:
In general, all Phase II samples will be analyzed for the full TAL/TCL list and for gross alpha, beta and gamma radiation in order to screen for radionuclides.

Comment 22, Page 5, Paragraph 1:
See comment 67 for Site 1.

Response:
See response to comment 67, Site 1.

Comment 23, Page 5, Paragraph 3:

See comment 68 for Site 1.

Response:

See response to comment 68, Site 1.

Comment 24, Page 5, Paragraph 4:

See comment 69 for Site 1.

Response:

See response to comment 69, Site 1.

Comment 25, Page 5, Paragraph 6:

See comment 70 for Site 1.

Response:

See response to comment 70, Site 1.

Appendices

Comment 26, Appendix B:

Please note that radiation readings ranged from ND to 16 uR/h.

Response:

The range in radiation readings has been added to the text in Section 3.5.

Site 30 - Buildings 649 and 755

Interim Data Report

Comment 1, Page 1-1, Section 1., Paragraph 1:
See comment 1 for Site 1.

Response:
See response to comment 1, Site 1.

Comment 2, Page 2-3, Section 2.4, Paragraph 1:
See comments 4 and 5 for Site 1.

Response:
See responses to comments 4 and 5, Site 1.

Comment 3, Page 2-3, Section 2.5, Paragraph 1:
See comment 6 for Site 1.

Response:
See response to comment 6, Site 1.

Comment 4, Page 2-6, Section 2.9, Paragraph 1:
See comment 10 for Site 1.

Response:
See response to comment 1, Site 1.

Comment 5, Page 2-8, Section 2.11, Paragraph 1:
See comment 13 for Site 1.

Response:
See response to comment 13, Site 1.

Comment 6, Page 2-11, Section 2.13, Paragraph 2:
Why did it take two days to measure water levels in 5 temporary wells?

Response:
See response to comment 18, Site 1.

Comment 7, Page 2-12, Section 2.13, Paragraph 1:
The Site 30 temporary wells were surveyed in relative to USGS Benchmark No. N26. At Site 26 the wells were surveyed in relative to well G45. The temporary wells for Site 24 were surveyed in relative to the well elevation for G39, wells at Site 11 to well G47, at Site 12 to well G45, at Sites 13 and 14 to USGS Benchmark No. A161 and Site 15 to well elevations for G59 and G60. Why so many different survey references?

Response:
Wells were surveyed relative to the nearest datum with a known elevation. In some cases it was a USGS benchmark, in others it was a previously surveyed well. On adjacent sites, every effort was made to use the same datum, while on sites separated by some distance this was impractical and would have resulted in excess closure error.

Comment 8, Page 2-13, section 2.15, Paragraphs 2 6 3:
See comments 21 and 22 for Site 1.

Response:

See response to comments 21 and 22, Site 1.

Comment 9, Page 33, Section 32, Paragraph 5:
Provide additional information (e.g. usage/purpose) on the "industrial waste manholes".

Response:

This refers to manholes that access the industrial wastewater sewer system. The text has been changed to clarify this.

Comment 10, Page 3-3, Section 3.2, Paragraph 9:
Only the OVA readings are given in Appendix B - not the HNu readings.

Response:

The site reconnaissance HNu readings were not included in an appendix, but were included in the field logbooks which will be provided to the EPA. The OVA readings listed in Appendix B were recorded during the formal surface emissions survey.

Comment 11, Page 3-10, Section 3.4, Paragraph 7:
See comment 4 for Site 1.

Response:

See response to comment 4, Site 1.

Comment 12, Page 310, Section 35, Paragraph 1:
No radiation readings are given in Appendix B.

Response:

The radiation survey was an informal walkover survey as described in Section 2.5. As a result, measurements were not taken at gridded coordinates and are not included in an appendix. The radiation readings are included in the field logbooks which will be provided to EPA.

Comment 13, Page 314, Table 3-1:
Again, why did it take 2 days to measure 5 water levels; water levels should be measured as closely as possible together and within the same tidal phase.

Response:

See response to comment 18, Site 1.

Comment 14, Page 3-18, Section 3.8, Paragraph 1:
What type of future work will be performed to verify the assumption that Site 11 is the potential source of contamination for Site 30? The contents of this section suggest that Sites 30 and 11 should be included in the same Operable Unit. Submittal of a single report for this Operable Unit (as opposed to PSC-specific reports) would facilitate presentation of a more complete, meaningful discussion of these sites.

Response:

The proposed Phase II investigation on Sites 11 and 30 should verify the connection between these sites. See responses to comment 30, Site 11 and general comment 1, Site 1.

Comment 15, Page 3-22, Table 3-4:
See comment 41 for Site 1.

Response:

See response to comment 41, Site 1.

Comment 16, Page 3-26, Figure 3-6:

SD013 had a somewhat higher total metals and TRPH than surrounding sediments. Could this sample point be adjacent to a point source or was the sample collected in an area of accumulation of silt or sediment? Also, see comment 43 for Site 1.

Response:

As stated in the report, the distribution of contaminants is probably not uniform. The possibility exists that this sample was collected adjacent to an as yet unidentified point source. Additional identification of possible source(s) of contamination will be conducted as part of the contamination source survey during the Phase II investigation. See response to comment 43, Site 1.

Comment 17, Page 3-27, Section 3.8.2, Paragraph 6:

See comment 40 for Site 1.

Response:

See response to comment 40, Site 1.

Comment 18, page 3-28, Figure 3-7:

Can phenol detection in SD020 be attributed to a point source near its sampling point?

Response:

Phenol contamination in SD020 may be related to current facility activities topographically upslope in Building 649. Soil samples collected in that area also exhibited elevated phenols. The text has been revised in Section 3.9 to include this possibility.

Comment 19, page 3-41, Section 3.8.4.2, Paragraph 1:

See comment 48 for Site 1.

Response:

See response to comment 48, Site 1.

Comment 20, Page 3-47, Section , Paragraph :

A discussion of activities and any associated waste disposal practices of the buildings and grounds in the vicinity of boring B001 should have been included in this report (probably in Section 31). For example, in the past chlorinated hydrocarbons have apparently been detected in the groundwater near PSC 31 (Building 648) located just north of this site. Examination of all existing data and information may have facilitated the selection of sampling localities and interpretation of sampling results in addition to helping focus further investigative efforts.

Response:

All currently available and pertinent information addressing past and present activities at and in the vicinity of Site 30 were summarized in the site work plan. This information, along with the results of this report, is being used to prepare the revised Phase II work plan. See response to comment 62, Site 1.

Attachment A

Comment 21, Page 1, Paragraph 1:
See comment 60 for Site 1.

Response:
See *response* to comment 60, Site 1.

Comment 22, Page 1, Paragraph 2:
See comment 61 for Site 1.

Response:
See response to comment 61, Site 1.

Comment 23, Page 1, Paragraph 3:
See comment 62 for Site 1.

Response:
See response to comment 62, Site 1.

Comment 24, Page 2, Paragraph 3:
See comment 63 for Site 1.

Response:
See response to comment 62, Site 1.

Comment 25, Page 2, Paragraph 4:
See comment 64 for Site 1.

Response:
See response to comment 62, Site 1.

Comment 26, Page 2, Paragraph 5:
See comment 66 for Site 1.

Response:
See *response* to comments 13 and 62, Site 1.

Comment 27, Page 5, Table 1:
See comment 65 for Site 1.

Response:
See response to comment 62, Site 1.

Comment 28, Page 6, Paragraph 3:
See comment 67 for Site 1.

Response:
See response to comment 67, Site 1.

Comment 29, Page 7, Paragraph 1:
See comment 68 for Site 1.

Response:
See response to comment 68, Site 1.

Comment 30, Page 7, Paragraph 2:
See comment 69 for Site 1.

Response:
See response to comment 69, Site 1.

Comment 31, Page 7, Paragraph 3:
See comment 70 for Site 1.

Response:
See response to comment 70, Site 1.

Appendices

Comment 32, Appendix B:
Please note that OVA readings ranged from 0 to 100 ppm; no radiation or HNu readings were given in this appendix.

Response:
A formal radiation survey was not conducted at this site. See response to comment 12 this site. The site reconnaissance HNu readings were not included in an appendix, but were recorded in the field logbooks which will be provided to the EPA.

Comment 33, Appendix E:
Please note the the highest open-borehole OVA/HNu readings ranged from 0 to 40 ppm.

Response:
This information was added to the text in Section 3.7.1.

Site 12 - Scrap Bins

Interim Data Report

Comment 1, Page 1-2, Paragraph 1:

See comment 1 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 2, Page 2-3, Section 2.3:

See comments 4 and 5 for Site 1.

Response:

See responses to comments 4 and 5, Site 1.

Comment 3, 2-3, Section 2.4:

See comment 6 for Site 1.

Response:

See response to comment 6, Site 1.

Comment 4, Page 2-4, Section 27:

If this information was given primary information in the development of placement strategies, a description of these strategies should be presented somewhere in the text.

Response:

These placement strategies were presented to the Navy by E & E in a Data Evaluation Summary during the phase I investigation. Upon request, a copy of the summaries for each site will be provided to the EPA. In all cases, the modified scope of work was equal to or greater than that specified in the approved Phase I work plan.

Comment 5, Page 2-6, Section 2.9:

See comments 10 and 13 for Site 1.

Response:

See response to comments 1 and 13, Site 1.

Comment 6, Page 2-9, Section 2.11:

See comment 17 for Site 1.

Response:

See response to comment 17, Site 1.

Comment 7, Page 2-10, Paragraph 1:

The wells at Site 1 were tied into well G439's elevation and the wells at Site 11 were tied into well G47's elevation. Here at Site 12, the wells will be tied into monitoring well G15 (Site 11). Why so many different reference points?

Response:

See responses to comment 9, Site 14, and comment 6, Site 26. Given that Site 11 wells (including G15) were surveyed relative to G47 and Site 12 wells were subsequently surveyed relative to G15, both of these sites ultimately were tied to the same datum.

Comment 8, Page 2-10, Section 2.13.2:

See comment 10 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 9, Page 2-11, Paragraph 2:

See comment 21 for Site 1.

Response:

See response to comment 21, Site 1.

Comment 10, Page 2-11, Paragraph 3:

See comment 22 for Site 1.

Response:

See response to comment 22, Site 1.

Comment 11, Page 3-1, Section 31:

Existing data analysis should have included a discussion of historical waste management practices and the materials disposed.

Response:

All available information on past and present site operations was included in the work plan for this site.

Comment 12, Page 3-2, Section 3.2, Paragraph 4:

The HNu readings referenced here were not include for review.

Response:

The HNu was carried during the site reconnaissance as a health and safety precaution. The HNu data is contained in the field logbooks which will be provided to the EPA.

Comment 13, Page 3-4, Paragraph 2:

See comment 4 for Site 1.

Response:

See response to comment 4, Site 1.

Comment 14, Page 3-4, Section 3.4, Paragraph 2

How will the high radiation potential near Building 3821 be addressed in the future, considering the 300 uR/h reading from the boring?

Response:

The proposed Phase II investigation includes the collection of soil and groundwater samples from this area. The samples will be analyzed for gross alpha, beta and gamma radiation in order to screen for radionuclides. The proposed approach and rationale will be presented in the Phase II work plan for this site.

Comment 15, Page 3-8, Figure 3-3:

See comment 36 for Site 1.

Response:

See response to comment 36, Site 1.

Comment 16, Page 39, Paragraph 4:
See comments 39 and 40 for Site 1.

Response:
See responses to comments 39 and 40, Site 1.

Comment 17, Page 3-9, Paragraph 5:
See comment 41 for Site 1.

Response:
See response to comment 41, Site 1.

Comment 18, Page 3-11? Paragraph 1:
What are the possible sources of the 120,000 ug/kg concentrations of PCBs in sample SDC001?

Response:
Additional discussion of the potential sources of PCBs was added to Section 3.8.1 of the report.

Comment 19, Page 3-11, Section 372:
Metals concentrations discussed are relative to the site, rather than to action levels. EPA's proposed action levels, as per the appendices contained in the proposed subpart S rule: Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) for Solid Waste Management Units (SWMUs), must be included in the discussion.

Response:
The Navy agrees with this comment, however, given the late arrival of these comments from EPA and the extensive changes to the report which would be required, it was not possible to incorporate the changes into the report in time for resubmittal to EPA. All future reports, where applicable, will make references to these action levels.

Comment 20, Page 3-12 thru 3-19? Table 3-3:
The state action levels and the blank data should be included in this table.

Response:
Table 3-3 was revised to include State of Florida surface water and drinking water standards. The summary analytical results for blanks are presented in Sections 3.9.1 and 3.9.2.

Comment 21, Page 319, Table 3-3:
Sample B016D is listed twice. Please correct this error.

Response:
Table 3-3 has been corrected.

Comment 22, Page 323, Paragraph 2:
See comment 40 for Site 1. Also, the reference to Section 3.10.2 should be to Section 3.9.2.

Response:
See response to Comment 40, Site 1. The reference to Section 3.10.2 has been corrected to 3.9.2.

Comment 23, Page 3-24, Paragraph 2:
See comment 41 for Site 1.

Response:

See response to comment 41, Site 1.

Comment 24, Page 3-24, Section 3.7.3, Paragraph 1:
The reference to Appendix C should be to Appendix D.

Response:

The reference to Appendix C has been changed to Appendix D.

Comment 25, Page 3-26, Table 3-5:
Include the Florida Primary Drinking Water Standards (FPDWS) on this table.

Response:

Table 3-5 has been amended to include the FPDWS.

Comment 26, Page 3-27, Paragraph 6:
See comment 48 for Site 1.

Response:

See response to comment 48, Site 1.

Comment 27, Page 3-30, Paragraph 1:
See comment 11 for this site.

Response:

See response to comment 11 this site.

Comment 28, Page 3-31, Section 3.8.3:
Further clarification is needed as to which samples and analytical results "other on-site metals" refers to.

Response:

The reference to "other on-site metals" has been deleted in the text.

Comment 29, Page 3-32, Paragraph 3:
What was the rationale for not installing temporary wells into borings B008 and B010, which, upon analysis, had the highest detected metal concentrations?

Response:

The number of soil borings and temporary monitoring wells and their locations were established in the approved Phase I work plan. The field work associated with completing soil borings, temporary monitoring well installation, and the associated sampling were conducted concurrently. As a result, the Navy and E & E did not have the opportunity to review the soil analytical results prior to installing the temporary monitoring wells.

30, Page 4-1, Section 4.0:
On several occasions, in this section and throughout the text, "off-site sources", "additional sources", or "ambient sources" are mentioned but not detailed or explained. Exactly where and what might these sources refer to?

Response:

Site 12 is surrounded by industrial facilities, warehouses, storage yards, and a solid waste transfer station. Any one of these may be an off-site, additional, or ambient source of contamination. The proposed Phase II contaminant source survey will attempt to specifically identify any other sources.

Attachment A

Comment 31, Page 1, Paragraph 1:

See comment 60 for Site 1.

Response:

See response to comment 60, Site 1.

Comment 32, Page 1, Paragraph 2:

See comment 61 for Site 1.

Response:

See response to comment 61, Site 1.

Comment 33, Page 1, Paragraph 3:

See comment 62 for Site 1.

Response:

See response to comment 62, Site 1.

Comment 36, Page 2, Paragraph 2:

See comment 64 for site 1.

Response:

See response to comment 64, Site 1.

Comment 35, Page 2, Paragraph 3 thru 5:

See comment 66 for Site 1.

Response:

See responses to comments 13 and 62, Site 1.

Comment 36, Page 5, Table 1:

Why aren't all samples of the same media to be analyzed for the same parameters? Why are only the soil samples to be analyzed for radiometric parameters? Why is gross alpha not on the list of analyses to be performed?

Response:

All Phase II samples will be analyzed for the full TAL/TCL list and for gross alpha, beta, and gamma radiation in order to screen for radionuclides. See response to comment 62, Site 1.

Comment 37, Page 6, Paragraph 3:

See comment 67 for Site 1.

Response:

See response to comment 67, Site 1.

Comment 38, Page 6, Paragraph 5:
See comment 68 for Site 1.

Response:
See response to comment 68, Site 1.

Comment 39, Page 7, Paragraph 1:
See comment 69 for Site 1.

Response:
See response to comment 69, Site 1.

Comment 40, Page 7, Paragraph 3:
See comment 70 for Site 1.

Response:
See response to comment 70, Site 1.

Appendices

Comment 41, Appendix B:
The 300 uR/h noted in the text was not included in this Appendix.

Response:
The 300 uR/h radiation level was detected in the subsurface during the drilling of a borehole as part of personnel health and safety monitoring. This information is included in the field logbook, which will be provided to the EPA.

Site 13 - Magazine Point Rubble Disposal Area

Interim Data Report

Comment 1, Page 1 (Executive Summary), Paragraph 3:

These findings suggest that it would be useful to group further investigation of this site with investigations for Operable Unit 10: the IWTP and associated PSCs.

Response:

The Navy agrees with this comment. Further investigation of Site 13 will be performed in conjunction with Operable Unit 10 at a later date.

Comment 2, Page 1-1, Paragraph 1:

See comment 1 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 3, Page 1-3, Figure 1-2:

Insert the text and boundary lines for the IWTP and designate the discharge point.

Response:

The figure has been revised to identify the IWTP boundary and the approximate location of the treated effluent discharge line. However, the discharge point is located approximately 1/2 mile east of the IWTP in Pensacola Bay and can not easily be shown on this figure.

Comment 4, Page 2-3, Section 2.4:

See comment 3 for Site 1.

Response:

See response to comment 3, Site 1. The text has been changed to clarify the methodology.

Comment 5, Page 2-3, Section 2.5:

See comment 4 for Site 1.

See response to comment 4, Site 1.

Comment 6, Page 2-5, Paragraph 1:

See comment 5 for Site 1.

Response:

See response to comment 5, Site 1.

Comment 7, Page 2-5, Section 2.6:

See comment 6 for Site 1.

Response:

See response to comment 6, Site 12.

Comment 8, Page 2-5, Section 2.0:

See comment 4 for Site 12.

Response:

See response to comment 4, Site 12.

Comment 9, Page 2-69 Section 2.9, Paragraph 1:

See comments 10 and 13 for Site 1.

Response:

See responses to comments 1 and 13, Site 1.

Comment 10, Page 2-69 Section 2.10:

See comment 17 for Site 1.

Response:

See response to comment 17, Site 1.

Comment 11, Page 2-7, Section 2.11:

Wells were surveyed in relative to USGS Benchmark No. A161, Sites 1, 11 and 12 all had different reference points. Will each site have its own elevation reference point?

Response:

See responses to comment 79 Site 12, comment 9, Site 14 and comment 6, Site 26.

Comment 12, Page 2-9, Section 2.12.2:

See comment 10 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 13, Page 2-9, Section 2.13, Paragraph 2:

See comment 21 for Site 1.

Response:

See response to comment 21, Site 1.

Comment 14, Page 2-9, Section 2.13, Paragraph 3:

See comment 22 for Site 1.

Response:

See response to comment 22, Site 1.

Comment 15, Page 3-1, Section 3.1:

See comment 11 for Site 12.

Response:

See response to comment 11, Site 12.

Comment 16, Page 3-2, Paragraph 1-2:

Any idea as to what had been in the 55-gallon drums?

Response:

There were no visible markings or labels on the drums to indicate what they may have contained. The text has been changed to clarify this.

Comment 17, Page 3-4, Section 3.4:

See comment 3 for Site 1.

Response:

See response to comment 4, this site and comment 3, Site 1.

Comment 18, Page 3-6, Section 3.5, Paragraph 2

See comment 4 for Site 1.

Response:

See response to comment 4, Site 1.

Comment 19, Page 3-6, Section 3.6

Was the background radiation data collected for alpha, beta or gamma radionuclides?

Response:

The background radiation data collected was for gamma radiation. The text has been changed to reflect this.

Comment 20, Page 3-8, Paragraph 1:

How will the high radiation potential near Building 771-F be addressed in the future, considering the 100 uR/h measurement?

Response:

The proposed Phase II investigation includes the collection of surface water, sediment, soil and groundwater samples from this area. The samples will be analyzed for gross alpha, beta and gamma radiation in order to screen for radionuclides. The proposed approach and rationale will be presented in the Phase II work plan for this site.

Comment 21, Page 3-11, Section 3.8.1.1:

See comment 19 for Site 12.

Response:

See response to comment 19, Site 12.

Comment 22, Page 3-12, Table 3-3.

See comment 41 for Site 1 and comment 20 for Site 12.

Response:

See the responses to comment 41, Site 1 and comment 20, Site 12.

Comment 23, Page 3-15, Section 3.8.1.3:

Having a laboratory-derived contaminant (Methylene Chloride) in so many samples indicates that the lab is using improper or inadequate QA/QC methods.

Response:

See the response to comment 40, Site 1.

Comment 24, Page 3-18, Table 3-4:

What is the explanation for the pH of 4.12 in well TW011, when the other wells had pH's of 6.1 to 7.3.

Response:

The reason for the lower pH for this sample is unknown. Although this value is lower than the values recorded for other monitoring wells on the site, it is not outside of the range of pH values commonly recorded for Sand-and-Gravel Aquifer. A review of the field logbook showed that the pH meter had been calibrated and appeared to be functioning properly.

Comment 25, Page 3-19, Table 3-5:

See comment 25 for Site 12.

Response:

This table has been amended to include the FFDWSs.

Comment 26, Page 3-20, Paragraph 2:

See comment 48 for Site 1.

Response:

See response to comment 48, Site 1.

Attachment A

Comment 27, Page 1, Paragraph 1:

See comment 60 for site 1.

Response:

See response to comment 60, Site 1.

Comment 28, Page 2, Paragraph 1:

Justify the geophysical survey proposed for this site. The site is a rubble disposal area. If the purpose is to look for radioactive metals, then a radiation detector should be used rather than a metal detector.

Response:

The purpose of the proposed geophysical survey is to check for any buried materials, such as drums, which could be a source of the soil and groundwater contamination detected in this area. A rationale for the type of geophysical survey proposed for this site will also be provided in the revised Phase II work plan.

Comment 29, Page 2, Paragraph 2:

See comment 66 for Site 1.

Response:

See responses to comments 13 and 62, Site 1.

Comment 30, Page 2, Paragraph 4:

See comment 67 for Site 1.

Response:

See response to comment 67, Site 1.

Comment 31, Page 4, Table 1:

Why aren't all samples within the same media to be analyzed for the same constituents? Also, if monitoring instruments detected up to 100 uR/h radiation, why are no radiometric analyses to be performed on any of these samples?

Response:

All Phase II samples will be analyzed for the full TAL/TCL list and for gross alpha, beta and gamma radiation in order to screen for radionuclides.

Comment 32, Page 5, Paragraph 1:
See comment 69 for Site 1.

Response:
See response to comment 69, Site 1.

Comment 33, Page 5, Paragraph 2:
Site 13 should be grouped with Operable Unit 10 for all further investigative and reporting purposes.

Response:
See response to comment 1, this site.

Comment 34, General Comment:
A baseline Risk Assessment must be performed for Site 13. See comment 70 for Site 1.

Response:
See response to comment 70, site 1.

Appendices

Comment 35, Appendix C:
How will the high radiation potential near Building 771-F be addressed in the future, considering the 100 uR/h measurement?

Response:
See response to comment 20, this site.

Site 14 - Dredge Spoil Fill Area

Interim Data Report

Comment 1, Page 1-1, Paragraph 1:
See comment 1 for Site 1.

Response:
See response to comment 1, Site 1.

Comment 2, Page 1-1, Paragraph 2:
A description is needed of the location from which the Pensacola Bay sediments were dredged. This should be shown on Figure 1-1. Also, the contaminants which may have been released into the sediments and the sources of the releases must be provided.

According to this paragraph, dredging occurred in the late 1970's, but on page 3-2, the second paragraph states that more dredge spoil disposal occurred between 1986 and 1989. Was this material stored on site from the late 1970's to the late 1980's, or was this additional material dredged between 1986 and 1989.

Response:
The text has been changed to include additional available information regarding spoil origin. It should be noted that Figure 1-1 does not encompass all of the areas dredged. The contaminants present in the sediments and their possible sources will be further investigated during Phase II.

Comment 3, Page 2-1, Section 2.1, Paragraph 2:
Why were stations PB-5 and PB-6 selected as representative of ambient bay conditions for determining background contamination? Are they located near the location where the spoil material was originally dredged? If there are any sampling stations closer to the original dredging location which are representative of ambient bay conditions, this data should be used for determining background levels.

Response:
See response to comment 6, Site 2.

Comment 4, Page 2-3, Section 2.4:
See comment 4 for Site 1.

Response:
See response to comment 4, Site 1.

Comment 5, Page 2-4, Paragraph 1:
See comment 5 for Site 1.

Response:
See response to comment 5, Site 1.

Comment 6, Page 2-4, Paragraph 2:
See comment 6 for Site 1.

Response:
See response to comment 6, Site 1.

Comment 7, Page 2-4, Section 2.7:

See comment 4 for Site 12.

Response:

See response to comment 4, Site 12.

Comment 8, Page 2-5, Section 2.9, Paragraph 2:

See comments 10 and 13 for Site 1.

Response:

See responses to comments 1 and 13, Site 1.

Comment 9, Page 2-9, Paragraph 1:

See comment 10 for Site 1. Also, wells were surveyed in relative to USGS Benchmark No. A161; Sites 1, 11 and 12 all had different reference points. Will each site have its own elevation reference point?

Response:

See response to comment 1, Site 1. The nearest datum with a known elevation is used to survey wells; it is not uncommon for adjacent sites to be surveyed relative to the same datum. In some cases this datum is a USGS Benchmark, in others it is a previously surveyed wellhead. However, sites separated by some distance will generally have their own reference point.

Comment 10, Page 2-9, Section 2.12.2:

See comment 10 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 11, Page 2-10, Paragraph 1:

See comment 21 for Site 1.

Response:

See response to comment 21, Site 1.

Comment 11, Page 2-10, Paragraph 2:

See comment 22 for Site 1.

Response:

See response to comment 22, Site 1.

Comment 12, Page 31, Section 3.1:

See comment 11 for Site 1.

Response:

The meaning of this comment to Site 14 is not entirely clear. The small ponds on the site have no names. Sediment from the larger pond was sampled during Phase I. The revised Phase II work plan will include surface water and sediment sampling in both these ponds.

Comment 13, Page 3-2, Section 3.2, Paragraph 2:

Why didn't any of the air monitoring equipment pick up the strong organic odor downwind side of the pads? Will the drum alluded to here be sampled?

Response:

The response to this comment will be divided to address the two points raised: a) The strong organic odor reported was one that is typical of decaying naturally occurring organic material. Organic compounds characteristic of this type of odor are not generally detected using an HNu or an OVA; and b) The drum was rusted completely through and no material was noted inside of it; as mentioned in the above response, samples will be collected from the pond during Phase II.

Comment 14, Page 3-5, Section 3.4, Paragraph 2
See comment 4 for Site 1.

Response:

See response to comment 4, Site 1.

Comment 15, Page 3-8, Table 3-1:

Why were the water levels for the 10 temporary wells collected over a period of 5 days? This is absolutely unacceptable. Water levels must be collected over as short a time period as possible. Considering the proximity of the site to the bay, they should also be measured during the same tidal phase.

Response:

See response to comment 18, Site 1.

Comment 16, Page 3-9, Figure 3-3:
See comment 36 for Site 1.

Response:

See response to comment 36, Site 1.

Comment 17, Page 3-12, Section 3.7.1.1, Paragraph 2
There appears to be a typographical error. "Zn" is referred to twice.

Response:

The second "Zn" was deleted from the text, and replaced with "nickel", which was the metal being referred to.

Comment 18, Page 3-12, Section 3.7.1.2

A table should be provided showing background sediment levels that are being used for comparison to on-site sediment samples (i.e., data for PNB-5 and PNB-6 sediment samples provided by FDER).

Response:

This data is summarized in the Site 14 work plan.

Comment 19, Page 3-14, Paragraph 1:
See comment 40 for Site 1.

Response:

See response to comment 40, Site 1.

Comment 20, Page 3-15, Table 3-3:

See comment 41 for Site 1 and comment 20 for Site 12.

Response:

See responses to comments 41, Site 1, and comment 20, Site 12.

Comment 21, Page 3-21, Section 3.7.3.1:
See comment 19 for Site 12.

Response:

See response to comment 19, Site 12.

Comment 22, Page 3-22, Figure 3-5:
See comment 43 for Site 1.

Response:

See response to comment 43; Site 1.

Comment 23, Page 3-23, Section 3.7.2.3, Paragraph 1:
See comment 40 for Site 1.

Response:

See response to comment 40, Site 1.

Comment 24, Page 3-24, Section 3.7.3.2, Paragraph 2:
See comment 48 for Site 1.

Response:

See response to comment 48, Site 1.

Comment 25, Page 3-26, Table 3-5:
See comment 25 for Site 12.

Response:

The FPDWSs have been added to the table.

Comment 26, Page 3-31, Section 3.8.2, Paragraph 3:
TRPH contamination is not restricted to the settling basin, and this statement should be deleted or modified accordingly.

Response:

The text has been modified to include TRPHs detected west and south of the settling basin.

Comment 27, Page 3-32, Paragraph 1:
How will the assumption that the VOC contamination source may be ambient in origin be proven?

Response:

The widespread occurrence of VOCs at a site comprised of dredged sediments and located adjacent to an active airfield suggests a possible ambient source. Upon further delineation and confirmation of these VOCs during Phase II, the ambient source possibility will be further considered. Air sampling could be used to determine if the source is airborne. In addition, the contaminant source survey proposed for Phase II will, to the greatest extent possible, also attempt to identify potential sources of the potential ambient contamination.

Comment 28, Page 3-32, Section 3.8.3, Paragraph 1:
PAHs were only detected in one of the two samples. The text should be corrected accordingly.

Response:

The text has been changed to indicate PAHs were detected in only one sample.

Comment 29, Page 4-1, Paragraph 2:

The PAH concentration in the sediment samples collected from the drainage channel was 4.7 ppm and should not be considered a "highly elevated level, but only "elevated".

Response:

The text has been changed to "elevated".

Attachment A

Comment 30, Page 1, Paragraph 1:

See comment 60 for Site 1.

Response:

See response to comment 60, Site 1.

Comment 31, Page 1, Paragraph 2:

See comment 61 for Site 1.

Response:

See response to comment 61, Site 1.

Comment 32, Page 1, Paragraph 3:

See comment 62 for Site 1.

Response:

See response to comment 62, Site 1.

Comment 33, Page 2, Paragraph 2:

Justify the geophysical survey proposed for this site.

Response:

The rationale for the type of geophysical survey proposed will be provided in the revised Phase 11 work plan for this site.

Comment 34, Page 2, Paragraph 3:

See comment 64 for Site 1.

Response:

See response to comment 62, Site 1.

Comment 35, Page 2, Paragraph 4:

See comment 66 for Site 1.

Response:

See responses to comments 13 and 62, Site 1.

Comment 36, Page 4, Table 1:

Why aren't all samples within the same media to be analyzed for the same parameters?

Response:

In general, all Phase II samples will be analyzed for the full TAL/TCL list. See to comment 62, Site 1.

Comment 37, Page 5, Paragraph 4:

See comment 67 for Site 1.

Response:

See response to comment 67, Site 1.

Comment 38, Page 6, Paragraph 2:

See comment 69 for Site 1.

Response:

See response to comment 69, Site 1.

Comment 39, Page 6, Paragraph 3:

See comment 70 for Site 1.

Response:

See response to comment 70, Site 1.

Appendices

Comment 40, Appendix C:

Please note that the OVA was not working while drilling TW009.

Response:

A review of the field logbook indicated that *the* OVA was operating properly, but that the readings obtained were 0 ppm above background. The summary page for TW009 in the appendix has been changed to reflect this.

Site 24 - DDT Mixing Area

Interim Data Report

Comment 1, Page 2, Executive Summary, Paragraph 1:
See comment 30 for Site 12.

Response:

These potential sources will be evaluated as part of the contamination source survey during the Phase II investigation.

Comment 2, Page 1-1, paragraph 1:
See comment 1 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 3, Page 2-3, Section 2.4:
See comments 4 and 5 for Site 1. Why was radiation monitoring not conducted at this site?

Response:

See responses to comment 4 and 5, Site 1. Historical information on this site did not indicate a need for a formal radiation survey. See response to comment 3, Site 15.

Comment 4, Page 24, Section 2.8, Paragraph 1:
See comment 13 for Site 1.

Response:

See response to comment 13, Site 1.

Comment 5, Page 24, Section 2.8, Paragraph 2:
See comment 10 for Site 1.

Response:

See response to comment 1, Site 1.

Comment 6, Page 2-8, Section 2.10:
See comment 17 for Site 1.

Response:

See response to comment 17, Site 1.

Comment 7, Page 2-8, Section 2.11, Paragraph 2:
Water levels should be measured as close to each other as possible and within the same tidal phase. Please note that temporary wells for Site 24 were surveyed in relative to the well elevation for GM39, wells at Site 1 were surveyed in relative to Well GM39, at Site 11 to well GM47, at Site 12 to well GM15, at Sites 13 and 14 to USGS Benchmark No. A161 and Site 15 to well elevations for GM59 and GM60.

Response:

See response to comment 18, Site 1 and comment 9, Site 14. Given that Site 24 is located immediately adjacent to Site 1, the wells on two of these sites were surveyed relative to the same datum (GM39).

Comment 8, Page 2-10, Section 2.12.2:
See comment 10 for Site 1.

Response:
See response to comment 1, Site 1.

Comment 9, Page 2-10, Section 2.13, Paragraph 2:
See comment 21 for Site 1.

Response:
See response to comment 21, Site 1.

Comment 10, Page 2-11, Paragraph 1:
See comment 22 for Site 1.

Response:
See response to comment 22, Site 1.

Comment 11, Page 3-1, Section 3.1:
Existing data analysis should include a discussion of historical waste management practices and the materials disposed.

Response:
This information is summarized and provided in the site work plan.

Comment 12, Page 3-2, Section 3.2, Paragraph 2:
Only the OVA readings are included in the appendix; where are the HNu readings?

Response:
The OVA readings were recorded during the formal surface emissions survey. The HNu was only used during site reconnaissance for the purpose of health and safety and the readings recorded in the field logbook which will be provided to the EPA. Any elevated readings collected during this task are noted in the text.

Comment 13, Page 3-3, Section 3.4, Paragraph 2:
See comment 4 for Site 1.

Response:
See response to comment 4, Site 1.

Comment 14, Page 3-5, Section 3.6.2, Paragraph 2:
Please explain why it took 2 days to measure water levels for 5 wells.

Response:
See response to comment 18, Site 1.

Comment 15, Page 3-7, Figure 3-2:
See comment 36 for Site 1.

Response:
See response to comment 36, Site 1.

Comment 16, Page 3-8, Section 3.7.1, Paragraph 2:
The methylene chloride and toluene are being written off as laboratory-derived contaminants. What future lab QA/QC will be proposed to prevent this problem?

Response:

See response to comment 40, Site 1.

Comment 17, Page 3-8, Section 3.7.1, Paragraph 3:

See comment 19 for Site 12.

Response:

See response to comment 19, Site 12.

Comment 1a, Pages 3-9 thru 3-15, Table 3-2:

See comment 20 for Site 12.

Response:

The standards were added to the table. See response to comment 20, Site 12.

Comment 19, Page 3-16, Figure 3-3:

See comment 43 for Site 1.

Response:

See response to comment 43, Site 1.

Comment 20, Page 3-18, Paragraph 5:

See comment 41 for Site 1.

Response:

See response to comment 41, Site 1.

Comment 21, Page 3-20, Section 3.7.2, Paragraph 2:

Aren't there *only* 5 temporary wells, not 10?

Response:

The text has been changed to indicate that there were five temporary wells.

Comment 22, Page 3-22, Table 3-4:

See comment 25 for Site 12.

Response:

This table has been amended to include the FPDWS.

Comment 23, Page 3-23, Paragraph 1:

See comment 48 for Site 1.

Response:

See response to comment 48, Site 1.

Comment 24, Page 3-27, Section 3.8.1, Paragraph 2:

What type of air monitoring will be conducted in the future to determine if there is an ambient source of the DDT-pesticides for Site 24?

Response:

The referenced section did not suggest a potential ambient source for DDT. Given that DDT was not detected in soil or groundwater at Site 24, there is no reason to perform air monitoring for this group of pesticides.

Attachment A

Comment 25, Page 1, Paragraph 1:
See comment 60 for Site 1.

Response:
See response to comment 60. Site 1.

Comment 26, Page 1, Paragraph 2:
See comment 61 for Site 1.

Response:
See response to comment 61, Site 1.

Comment 27, Page 1, Paragraph 3:
See comment 62 for Site 1.

Response:
See response to comment 62, Site 1.

Comment 28, Page 2, Paragraph 2:
See comment 66 for Site 1.

Response:
See response to comments 13 and 62, Site 1.

Comment 29, Page 2, Paragraph 5:
See comment 67 for Site 1.

Response:
See response to comment 67, Site 1.

Comment 30, Page 4, Table 1:
Why aren't all samples within the same media to be analyzed for the same parameters? Why aren't radiological parameters proposed for this site?

Response:
In general, all Phase II samples will be analyzed for the full TAL/TCL list and for gross alpha, beta and gamma radiation in order to screen for radionuclides. See response to comment 62, Site 1.

Comment 31, Page 5, Paragraph 2:
See comment 68 for Site 1.

Response:
See response to comment 68, Site 1.

Comment 32, Page 5, Paragraph 3:
See comment 69 for Site 1.

Response:
See response to comment 69, Site 1.

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Comment 33, Page 5, Paragraph 5:
See comment 70 for Site 1.

Response:
See response to comment 70, Site 1.

Appendices

Comment 34, Appendix C:
Please note that the highest open-borehole OVA/HNu readings ranged for 0 to 175.

Response:
The range of open-borehole OVA/HNu readings has been added to the text in Section 3.7.

Attachment B

RESPONSES TO COMMENTS FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

GENERIC COMMENTS

Comment 1:

The documents do not mention that potable/irrigation water wells encountered during a NEESA survey or recently installed wells drawing from the producing Zone of the Sand and Gravel Aquifer are being used at or near the vicinity of each of the sites reviewed below.

Response:

Information obtained from Mr. Ron Joyner and the Public Works Center (PWC) of NAS Pensacola indicate that: 1) there are no irrigation wells located on NAS Pensacola. All water used for irrigation is either pumped from nearby ponds (such as those on the golf course) or is drawn from the NAS Pensacola municipal water supply system; and 2) there are three supply wells at NAS Pensacola, none of which are currently used. All potable water is obtained from a field of wells at NAS Corry Field, located approximately three miles north of NAS Pensacola.

Comment 2:

The consultant plots the total metals for soil and groundwater in the figures without providing specific figures for each metal, especially for the primary ones. As is the case of Figure 2-14, Site 1, for TW004 the figure indicates a total metal concentration of 1,669 ug/l, however, 700 ug/l corresponds to zinc, a secondary drinking water standard. Therefore, we recommend that different parameters be plotted in different figures.

Response:

Figures will be added to the reports to show concentrations for selected individual metals.

Comment 3:

Total PAHs in sediments, soils, and groundwater are reported only as Benzo-a-pyrene. Were any other constituents, i.e. naphthalene, fluorene detected in the lab analysis? It is expected that the second phase of the assessment will report individual PAHs as opposed to total PAHs as Benzo-a-pyrene only.

Response:

Phase I analytical screening used Benzo-a-pyrene and Trichlorophenol as analytical targets to give an indication of total PAHs and phenols, respectively. In Phase II, analyses for TCL organics will involve the reporting of individual PAH compounds. Future TCL organics analyses will include individual phenolic compounds as well.

Comment 4:

Phenols are reported as Trichlorophenol. Once again, were any other chlorinated or natural phenols detected in the laboratory analysis? Likewise, it is expected that the second phase of the assessment will report individual phenols as opposed to total phenols as Trichlorophenol only.

Response:

See response to generic comment 3.

Comment 5:

Are the detectim limits for the different constituents analyzed throughout these reports the lowest attainable? That is, are there assurances that even though constituents were not detected at stated detection limits (which in the case of VOCs for soils were 1000 ppb) they could be present still above DER standard for clean soil although below laboratory screening limits?

Response:

Given the analytical screening methods used, these detectim limits were the lowest attainable. Phase I analytical data was intended to be used for screening purposes only. In contrast, all Phase II samples will be analyzed with full CLP protocol using the lowest detectim limits achievable. To the greatest extent possible, sampling points will be located in a manner to fully characterize the site.

Comment 6:

The presence of methylene chloride is prevalent throughout the analytical phase at almost all sites many times at concentrations exceeding the assigned detectim limit. While said parameter is a common laboratory contaminant, no discussion is presented as to the possibility of methylene chloride existing as a constituent rather than a laboratory contaminant.

Response:

In most cases the concentrations at which methylene chloride was detected were similar for both the samples and the associated method blanks. In those cases it is unlikely that methylene chloride exists as a real constituent in the samples. On Site 1, however, the report indicated the potential for this compound to actually be in the samples due to significantly higher levels of methylene chloride detected in the samples.

Comment 7:

It is expected that the additional work proposed will be performed at full protocol and not use "screening phase" detectim limits.

Response:

During the second phase of investigations almost all the samples will be analyzed for the TAL/TCL list using full CLP protocol. A detailed rationale for sample locations and analytical requirements will be provided in the revised Phase II work plans.

SITE-SPECIFIC COMMENTS

CA/RI Sanitary Landfill (Site 1)

Comment 1:

On the proposed sediment **sampling** event and its locations, additional sediment *chemical* parameters should be analyzed for especially **NE** of the site. At a minimum, **metals and TRPHs** should be included in addition to **BNAs** given the fact that **no sampling event has** been conducted for the above mentioned constituents.

Response:

The proposed **Phase II** work plan will **now** include full **TAL/TCL** analyses by **CLP** protocol for **almost all** samples collected at **all** sites. **However**, the **sampling** locations have been adjusted from those **originally proposed**. The rationale for the selection of **sampling points and analyses** will be presented in the revised **Phase II** work plan.

Comment 2

On the proposed soil **sampling** event and its locations, **is there reason** to suspect that the soil **borings** to be located outside the landfill boundary will only contain **metals**? For instance, what is the rationale for **analyzing** the proposed soil boring below the groundwater table adjacent to **TW022, TW028 and TW012** for metals only? **Are there assurances** that of all possible leachate constituents, **only metals are** migrating **through the groundwater table** into the soil in that part of the site? We recommend that the soil be **analyzed for TCL** parameters at these locations since the soil **borings analysis for TW022, TW028 and TW012 was** not provided.

Response:

The objective of **sampling** soils below the water table for metals **only** is to distinguish metals present in the **groundwater** from metals present in the **aquifer matrix**. see response to **comment 1**, this site.

Comment 3

For the groundwater data presented, please **refer** to generic comment no 2.

Response:

see response to generic comment 2.

Comment 4:

It would be advisable to further investigate the collapse feature in the southern part of the site due to the fact that they are usually associated with solution cavities which could act as a pathway for **contaminant** migration, i.e. leachate to the **main producing zone** of the aquifer. We recommend that **subsurface** geophysics be conducted to determine the horizontal/vertical extent of this collapse feature before the proposed **intermediate and the deep monitoring wells are installed** in the **nearby** vicinity.

Response:

The "collapse feature" in the southern part of the site is likely due to the collapse of a void or hollow in materials placed in the landfill. The **Sand-and-Gravel** Aquifer is not characterized by solution cavities. Given the depth to the low permeability zone at **NAS Pensacola** (approximately 40-60 feet) and the thickness of the zone (approximately 25 feet), it is highly **unlikely** that the **main producing zone** in this area is affected. **Intermediate and deep monitoring wells** are proposed near this area during **Phase II**.

Comment 5:

It is indicated that this site contains a Boy Scout camp and a recreational area; if so, are recreational fishing/oystering activities being conducted on any of the ponds and/or the Bayou Grande area that could cause unacceptable risks to camp and/or picnic attendants given the levels of TRPHs, PAHs and phenols in the near shore/pond sediments?

Response:

According to Navy-mandated restrictions, there is no fishing, oystering, or swimming allowed in any of the ponds on Site 1 or in the Bayou Grande area immediately adjacent to Site 1.

Waterfront Sediments (site 2)

Comment 1:

It would be prudent to include in this report the often mentioned FDER's Pensacola Bay sediment sampling data and its plot on a map. Moreover, no discussion is presented regarding the possibility that the parameter concentrations found at this site exceeded the reported FDER values.

Response:

The FDER sediment sample locations and results are summarized in the Site 2 work plan. The results of metals concentrations in Phase I sediment samples were compared to the metals data collected by FDER at stations FNB-5 and FNB-6. See response to EPA comment 6, Site 2.

Comment 2:

Please refer to *generic* comments nos. 1 through 6.

Response:

See response to generic comments 1 through 6.

North Chevalier Disposal Area (11)

Comment 1:

Free product recovery should be implemented at the detected wells.

Response:

Although free product was detected in four wells, it was only slightly more than a sheen on the water surface. In all cases the product thickness was less than the 1/32-inch limit of resolution of the oil-water probe. As a result it would not be practical or cost effective to attempt to recover such a small thickness of product until the site is fully characterized with respect to the other contaminants detected.

Comment 2:

Please refer to generic comment nos. 1 through 6.

Response:

See response to generic comments 1 through 6.

Comment 3:

Due to the apparent direction of groundwater and surface water flow, plus the amount of PAHs and phenols found in the vicinity of the creek adjacent to the site, sediment and surface water should be sampled and analyzed for TRPHs, PAHs, and TCL metals in addition to the sampling proposed in the document.

Response:

Sediment and surface water samples will be collected and sampled for the full TAL/TCL list as part of the second phase of investigation at and in the vicinity of Site 30. The rationale for the selection of sampling points and analyses will be discussed in the revised Phase II work plan for Site 30. See response to comment 1, Site 1.

Comment 4:

The consultant proposes to conduct an "Off-Site Contaminant Source Survey", however, additional details of the proposed survey are not provided. For instance, are any additional drilling or geophysics necessary to conduct such assessment?

Response:

The Phase II work plan (Section 14.2.1) will provide more details regarding this. However, the contaminant source surveys will generally consist of an extensive review of available Navy records of areas adjacent to the site and the subsequent physical surveys of areas suspected to be a contributing source(s). In addition, in the area east of Bayou Grande, additional soil and groundwater sampling will be proposed for Phase II. Furthermore, data obtained from the investigation of adjacent areas (in the case of Site 11, data from Site 30, Site 26 and the IWTP sites) will also be evaluated.

Scrap Bins (Site 12)

Comment 1:

On the proposed soil sampling, why are the samples north, south, and west of B002 only going to be analyzed for TCL BNAs? Are there any assurances that VOCs are absent from the soil in that or any sector of the site at concentrations below those stated in the lab analysis?

Response:

See responses to generic comments 5 and 7 and comment 1, Site 1.

Comment 2:

The soil boring north and south of B001 should also be analyzed for Phenols due to the concentrations found at B002.

Response:

See response to comment 1, Site 1.

Comment 3:

Please refer to generic comments nos. 1 through 6.

Response:

See responses to generic comments 1 through 6.

Comment 4:

While the consultant indicates that a source of contamination may be Bldg. 455, no indication is provided as to the institutional controls being exercised that could prevent possible contamination migration to the outside.

Response:

According to information obtained from Mr. Ron Joyner of NAS Pensacola, no institutional controls are being used to prevent contaminant migration at this site.

Magazine Point Rubble Disposal Area (Site 13)

Comment 1:

Please refer to generic comments nos.1 through 6.

Response:

See responses to generic comments 1 through 6.

Comment 2:

Why does the proposed additional work plan not include monitoring any of the wells that Geraghty and Miller installed as part of a separate study?

Response:

The additional work proposed for Site 13 will be performed in conjunction with the investigation of the adjacent IWTP (Group 0) sites, which includes monitoring these wells. This work will be performed at a later date.

Comment 3:

Any investigation near the vicinity of the previously encountered asbestos material should be carried out with *care* due to the fact that while asbestos tile is not readily friable, it can become so by any type of boring or disturbing activity that encounters said material.

Response:

Comment noted.

Dredge Soil Fill Area (Site 14)

Comment 1:

Is there reason to believe that the proposed sediment sample northwest of B009 will only contain TRPHs when the sample 200 feet northwest and up the creek will be analyzed for TCL and other parameters?

Response:

See response to comment 1, Site 1.

Comment 2:

In the case of B001A and others, please refer to generic comments nos. 1 through 6.

Response:

See responses to generic comments 1 through 6.

Comment 3:

On the work proposed adjacent to B00(?) and B007, why is analysis for VOCs not being proposed?

Response:

Analysis for VOCs will be included in this area. See response to comment 1; Site 1.

Comment 4:

For comparison purposes, we recommend the results of the FDER sampling event done on Pensacola Bay be provided.

Response:

This information is included in the Site 14 work plan and will be provided in the Phase II draft work plan.

Comment 5:

Are pond, underdrain sand filters, or any institutional controls being used/practiced for filtering potential contaminants?

Response:

Information obtained from Mr. Ron Joyner of NAS Pensacola indicated that no institutional controls are being used to filter potential contaminants.

Pesticide Rinseate Disposal Area (Site 15)

Comment 1:

Analysis for VOCs in soils should also be conducted north and west of B001 north of B003, west of B004, east of B013, north of B015, east of B016, and south of B017.

Response:

Phase II soil samples collected from these areas will be analyzed for VOCs. See the response to comment 1, Site 1.

Comment 2:

Please refer to *generic comments nos. 1 through 6.*

Response:

See responses to *generic comments 1 through 6.*

DDT Mixing Area (Site 24)

Comment 1:

The soil borings northeast, southwest of B001, southwest of B002, southeast of B008, north and northeast of B015, should be analyzed for VOCs.

Response:

Phase II soil samples collected from these areas will be analyzed for VOCs. See response to comment 1, Site 1.

Comment 2:

The soil boring proposed southeast of B017 should also be analyzed for metals.

Response:

See response to comment 1, Site 1.

Comment 3

Due to the groundwater flow, a monitoring well east of TW017 should be installed and the groundwater analyzed for Metals and Pesticides.

Response:

Although water level measurements from the Site 24 temporary wells indicated groundwater flow to the northeast near TW017, the prevailing flow direction for the site is probably to the northwest (see Section 3.6.2 of the report). As a result, an additional well northeast of TW017 is probably not necessary to characterize the site. A monitoring well is proposed north-northwest of TW017 during Phase II, that, in conjunction with the other proposed wells, should adequately characterize groundwater conditions at the site.

Comment 4

Please refer to generic comments nos. 1 through 6.

Response:

See response to generic comments 1 through 6.

Supply Department Outside Storage (Site 26)

Comment 1:

We recommend analyzing the soil borings around B004 for VOCs.

Response:

The revised Phase II draft work plan will *include* soil samples collected north and south of boring B004. All soil samples collected on Site 26 will be analyzed for VOCs. See response to comment 1, Site 1.

Comment 2:

Are any pesticides stored in the *chemical* storage shed and if so, the soil borings proposed behind, in front of, and southwest of it should also be analyzed for pesticides.

Response:

Information obtained from Mr. Ron Joyner of NAS Pensacola indicates that pesticides are not stored in the *chemical* storage shed.

Comment 3:

Please refer to generic comments nos. 1 through 6.

See response to generic comments 1 through 6.

Buildings 649 and 755 (Site 30)

Comment 1:

We recommend that the proposed soil borings around B001 be analyzed for VOCs.

Response:

VOCs will be included for analysis in the samples collected from these borings. See response to comment 1, Site 1.

Comment 2:

Please refer to *generic comments* nos. 1 through 6.

Response:

See response to *generic comments* 1 through 6.

Attachment C

**RESPONSES TO COMMENTS FROM THE
FLORIDA DEPARTMENT OF NATURAL RESOURCES**

Comment 1, Site 1 (Sanitary Landfill):

Contamination of the surface water and sediments were detected in Bayou Grande and the ponds adjacent to the site. Also, due to the color of the leachate in the ponds and at the base of the pond vegetation, iron and manganese may be in high quantities.

The proposed Phase II recommendations expand the number of sediment and surface water samples. However, the sampling is limited primarily to analysis of ENAs and a few TRPHs in Bayou Grande and for metals and ENAs in the ponds. Why aren't all parameters being analyzed in all the adjacent water bodies? Are iron and manganese going to be tested for in the metal samplings and why weren't they tested for in the Phase I sampling?

In the habitat and biota survey, a variety of species were found in both the upland and submerged habitats. As the soils, sediments, and surface waters are contaminated, sampling of the flora and fauna should be performed to determine if there is any bioaccumulation in any of the species. Direct and indirect link to the human food chain can be attributed to many of the species found on and adjacent to the site.

Response:

Iron and manganese were not included in the list of approved Phase I screening parameters; however, the Phase II work plan will be modified to include the full TAL/TCL on almost all samples at all sites. Sampling of the flora and fauna at this site will be conducted as part of the ecological risk assessment for Site 40 (Bayou Grande area) and Site 41 (NASP Wetlands).

Comment 2, Site 2 (Waterfront Sediments):

Detectable levels of contamination were found in the sediments. The additional sampling and analysis recommended for Phase II is commendable.

Benthic samples also need to be studied, considering the types of fauna observed reside in the sediments and serve as a food source for larger animals. Some of these species are filter feeders, which would indicate a high potential for bioaccumulation of contaminants.

Response:

Benthic faunal sampling at this site will be conducted as part of the ecological risk assessment for Site 42 (Pensacola Bay area).

Comment 3, Site 11 (North Chevalier Disposal Area) and Site 30 (Buildings 649 and 755):

The contamination results of the surface water and sediment sampling for Site 30 shows direct correlation to Site 11 in the area of Bayou Grande. The surface water quality was below class II standards. Phase II recommendations show more sampling of surface water and sediments in Bayou Grande, however, they do not extend further out in the Bayou than what was initially done in Phase I.

We would like to see more sampling performed further north in the southern arm of Bayou Grande. We would also like benthic sampling and analysis in Bayou Grande as the habitat has been contaminated. The Habitat and Biota survey results for Site 11 states "no indication of stressed biota was observed." However, the previous paragraph mentions a benthic coring was performed in the marsh

revealing no biota. If the habitat was not stressed, than one would expect some living organisms within the marsh sediments. Sampling and analysis of the flora and fauna in the marsh and bayou should be performed to assess natural resource damage and possible bioaccumulation of contaminants within species. This also applies to the wetland adjacent to Buildings 649 and 755.

Contamination of Bayou Grande may also be related to other areas of the base mill of where the creek leading from Buildings 649 and 755 joins the north/south drainage ditch. We recommend further sampling of the ditch south of this confluence as most surface water drains from the southwest end of Chevalier Field.

Response:

Sediment, surface water, and benthic faunal and floral sampling will be conducted further out in this area of Bayou Grande as part of the ecological risk assessment for Site 40 (Bayou Grande area). Extensive sampling of both sediment and surface water in the wetlands, creek, drainage ditch, the marsh area and Bayou Grande will be proposed in the revised Phase II work plan for Site 30.

Comment 4, Site 12 (scrap Bins):

Sediment contamination was found in the sediments of the storm water drain.' As contaminants may have progressed off-site through this drainage system, further sampling of the complete drain system should be performed, as well as location of the outfall of that drainage system. We realize contamination within other areas of the storm drain may be from locations other than Site 12.

Response:

The Navy agrees with this comment and has added additional sampling of the drainage system and the outfall area to the phase II investigation for Site 12.

Comment 5, Site 13 (Magazine Point Rubble Disposal Area):

Sediment and surface water sampling needs to be analyzed for Pensacola Bay. Also a habitat/biota survey should be performed in the sediments and water adjacent to this site.

There does not appear to be significant contamination emanating from this site, but is traced back to the IWTP (Group 0). Yet review of the plan for Group 0 is dependent on the study at this site. No surface water or sediment samples are addressed for this area of Pensacola Bay, yet shallow groundwater has been effected which may leach into the bay.

Response:

Sediment and surface water samples as well as a habitat/biota survey have been added to the phase II investigation for Site 13.

Comment 6, Site 14 (Dredge Spoil Fill Area)

Elevated levels of contamination was detected in all sediment samples, but were highest in samples 3 and 4 which are located in Pensacola Bay. Phase II increases the number of sediment samples at the southwest area of the site, but no additional samples are designated for the bay. We would like more samples taken in the bay between the outfalls from the site.

Also, the habitat biota survey at the site appears to have excluded the marine environment of the bay and should be performed. If further sampling shows contamination above safe limits, benthic sampling should be analyzed.

Response:

Sediment and surface water samples as well as a habitat/biota survey have been added to the phase II investigation for Site 14.

Comment 7, Site 15 (Pesticide Rinse Disposal Area):

We perceive a limited concern at this site based on Phase I results. However, groundwater and surface water flow is toward the golf course and the pond located at the NE corner of the golf course. Due to possible surface water run-off from the soils and possible surficial aquifer leachate occurring in the pond, surface water and sediment sampling should be performed in the ponds. This pond has a tidal connection to Bayou Grande through a culvert at the north edge of the pond.

Response:

Sediment and surface water samples will be collected in this pond and in Bayou Grande as part of the Phase II investigation of Site 1.

Comment 8, Site 24 (DDT Mixing Area)

Refer to General Comments.

Response:

See responses to general comments.

Comment 9, Site 25 (Supply Department Outside Storage):

Refer to General Comments.

Response:

See responses to general comments.

Comment 10, General Comments:

As a natural resource trustee, the Florida Department of Natural Resources perceives the entire naval base as a site of potential contamination of our trust resources. Our trust resources include all of Bayou Grande, Pensacola Bay, and the tidal estuaries and sloughs in and around the base. We have jurisdiction over these submerged lands and the marine environment.

The Pensacola Naval Air Station is identified by U.S.E.P.A. as a site on the National Priorities List. We commend the Navy, and E & E for identifying all potential sources of contamination (PSC) and proceeding to identify the extent of contamination for those specific PSC. However, all of these sites are located on a peninsula surrounded by our trust resources. All surface water run-off, drainage, and groundwater leachate flow from the base into our trust resource. Most of the above sites do not address the surface water flow from the PSC. The only ones addressing surface water are Site 1, 11 and 30.

We believe sediment sampling and analysis needs to be performed in all areas of the water body surrounding the base. Also surface water flow needs to be addressed thoroughly at those sites not directly adjacent to a creek, bayou, or bay. All of the Phase I studies of the sites state contamination may be from ambient sources.

Response:

In response to FDR's concerns, the Navy is fully committed to the evaluation of all surface waters and associated environments on and surrounding the NAS Pensacola. storm water runoff, surface water flow and groundwater discharge were considered during the Phase I investigation, as well as the proposed Phase II investigation. For example, during Phase I routes of storm water runoff into surface water bodies were looked for and were to be sampled, if found. None were observed for this group of sites; however, extensive surface water and sediment sampling in adjacent water bodies was performed. In addition, in response to your comments, more extensive sampling of surface waters and sediments is now proposed for Phase II. For areas that are not directly associated with these (Batch 1) sites, these concerns will be addressed during the Phase II work on Batch 2 sites or the ecological risk assessments for Site 40, (Bayou Grande area), Site 41 (NAS Pensacola Wetlands) and Site 42 (Pensacola Bay).

Attachment D

**RESPONSES TO COMMENTS FROM THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

Comment 1, Site 1 Sanitary Landfill:

Elevated contaminant concentrations were found in soil and shallow groundwater at the site. Elevated concentrations of metals, **TRPHs**, **PAHs** and **phenols** were found in sediment from the ponds adjacent to Bayou Grande, some of which discharge to Bayou Grande and support NOAA resources. Sediment **samples** are needed to determine the extent of contamination of **wetland areas** to the west and southwest of the site and are not currently planned for Phase II.

Response:

Sediment and surface waters will be added in these areas for the Phase II investigation. A detailed rationale for the location of samples and analytical requirements will be provided in the Phase II work plan for this site.

Comment 2, Site 2, Waterfront Sediments:

Metals, **TRPHs**, **VOCs** and **PAHs** were found in near shore sediments. Elevated metals and PAH concentrations were located along the eastern portion of the southern waterfront area where untreated industrial waste had formerly discharged. Elevated TRPH concentrations were widespread.

Planned Phase II samples should be analyzed for PCBs and pesticides at detection limits that will show effects on aquatic life.

Response:

Pesticides and PCBs will be added to the analyses. The detection limits will be the lowest achievable using standard EPA methods and full CLP protocol.

Comment 3, Site 11, North Chevalier Disposal Area:

Contamination from burning, landfilling and disposal of industrial wastes was found in soil and groundwater throughout the site. The site is adjacent to Bayou Grande and sediment sampling there found high contaminate concentrations from the site.

Phase II soil, groundwater, and sediment samples should be analyzed for radionuclides. Detection limits for pesticides and PCBs should be below AWQC and ER-L values.

Sediment samples in addition to the planned Phase II samples (to be included in Site 30 sampling) should be collected to delineate the extent of the high contaminant concentrations found in Bayou Grande and to determine the extent of contamination in the wetland areas adjacent to Bayou Grande.

Response:

All phase II samples will be analyzed for gross alpha, beta and gamma radiation to screen for radionuclides. Detection limits for pesticides and PCBs will be the lowest achievable using standard EPA methods and full CLP protocol. Additional investigation of Bayou Grande and adjacent wetlands will be performed during the ecological risk assessment of Site 40 (Bayou Grande area) and Site 41 (NASP Wetlands).

Comment 4, site 30, Buildings 649 and 755:

Former plating operations at these buildings is considered to be the **source** of most contamination found at the site, **although** some contamination **may** result from off-site **sources**. Elevated contaminant concentrations were found in soil and groundwater at the site. Sediment and surface water **near** the site **are** contaminated with metals, **TRPHs**, **PAHs** and **phenols**. Undetermined concentrations of pesticides and **PCBs** were also found in sediment **near** the site.

Additional Phase II sediment samples should be collected to determine the extent of the **high** metals concentrations found at two **sampling** locations in Bayou Grande **near** Site 11. For all Phase II **samples**, **PCBs** and pesticides **should** be analyzed for using detection **limits** less than the **AWQC** and **ER-L** values.

Response:

Extensive **sampling** in this area of Bayou Grande is proposed in the revised Phase II work plan for Site 30. **See response** to comment 3.

Comment 5, Site 12, Scrap Bins:

The facilities at the site **which** include a salvage yard with a compactor, a chemical storage **shed** and storage bins **are** likely **sources** of contamination found at the site. Elevated surface radiation **readings** were found and a boring was abandoned because of radiation levels to 300 **uR/h**. **High** concentrations of metals, **PAHs** and **PCBs** were found in sediment **samples** from a storm drain at the site. Elevated contaminant concentrations were **also** found in soil and groundwater.

Phase II groundwater and sediment samples should be **analyzed** for radionuclides. Lower detection **limits** **should** be used for **PCB** and pesticide **sampling** analysis in Phase II.

Response:

Phase II **samples** on all sites will be analyzed for gross alpha, beta and gamma to screen for radionuclides. Phase II detection limits for pesticides and **PCBs** will be considerably lower than those for Phase I.

Comment 6, Site 15, Pesticide Rinse Disposal Area:

Arsenic was found in **high** concentrations in both soil and **groundwater** at the site, **which** is located near Bayou Grande. A **high** concentration of mercury was found in an existing **permanent** well at the site.

Lower detection limits should be used for pesticides in Phase II **sampling** analysis. **Because** **mercury** was not analyzed for in soils previously, all **samples** **should** be analyzed for metals to determine **the source** of the **high mercury** concentration found in the permanent monitoring well.

Possible **surface** water pathways should be investigated.

Response:

Phase II **samples** will include analysis for all Target Analyte List (TAL) Metals including **mercury**. Detection **limits** for pesticides and **PCBs** will be **lower** and possible surface water **pathways** will be investigated on all sites.

Comment 7, Site 24, DDT Mixing Area:

The site is located in the center of the **peninsula** and therefore is of less **concern** than the sites adjacent to **surface** water. **Lead** found in soil and groundwater **throughout** the site is the **contaminant** of **concern**. The **source** of the lead **contamination** is uncertain, but was suspected to be from the occasional use of aviation fuel for **mixing** with **DDT** instead of diesel fuel.

All Phase II soil samples should be analyzed for TCL metals. Lower detection limits for pesticides should be used. Possible surface drainage pathways from the site should be investigated during phase II.

Response:

See responses to comments 5 and 6.

Comment 8, Site 13, Magazine Point Rubble Disposal Area:

The site is a narrow strip of land along Pensacola Bay where building rubble and construction materials were disposed. Several surface radiation readings were recorded above background, including a mass of metal ship parts which had a reading of 100 uR/h. Floor tiles from the rubble were found to contain 5% to 20% asbestos materials.

Elevated concentrations of metals, TRPHs, PAHs and phenols were found at the site in the vicinity of the IWTP and adjacent to Pensacola Bay. It is suspected that the IWTP and Chevalier Field runways may contribute more to contamination at the site than the rubble disposed there. Contamination of the area is of concern because of the proximity to Pensacola Bay.

Radionuclides should be analyzed for in Phase II soil and groundwater samples. Sediment samples should be collected from Pensacola Bay in the vicinity of the elevated contaminant concentrations found in soil and groundwater.

Response:

See responses to comment 5 and 6. Sediment and surface water samples will be collected in this area and analyzed for the full TAL/TCL.

Comment 9, Site 14, Dredge Spoil Fill Area:

Contaminated sediments from Pensacola Bay were placed at the site in the late 1970's when the Bay was dredged to create an aircraft carrier turning basin and port. Chevalier Field, west of the site, is suspected to be the source of some of the contamination found. Wetland areas which receive drainage from Chevalier Field are located north and south of the dredge spoil fill area.

Sediment, soil, and groundwater contamination are present, but probably not at high concentrations. The site is of concern because of its location on Pensacola Bay. Structures to control fuel spills from Chevalier Field and oil/water separators should be constructed here.

Response:

Surface drainage to the wetlands at Site 14 and Pensacola Bay primarily occurs from the southeastern portion of Chevalier Field. A storm water inflow grating inlet is located at the southeastern corner of the field; from there discharge flows to a culvert outfall and drainage ditch that is located on the southern boundary of the Dredge Spoil Fill Area. The storm water inlet and culvert do contain an oil-water separating unit, and the discharge to the drainage ditch is monitored for flow, pH, oils and greases, suspended solids, and temperature under NPDES permit FLO002500, outfall serial no. 006. In addition, surface water and sediment samples are proposed in this area during Phase II.

Comment 10, Site 26, Supply Department Outside Storage:

The site is an open shed on a concrete pad used for chemical storage, located in the center of the Peninsula. Slightly elevated contaminant concentrations were found in soil and groundwater. The source of 1,1,1-Trichloroethane found in groundwater has not been determined. TRPHs were found in most soil samples.

Response:

Comment noted. Further investigation of Site 26 for these concerns will occur during Phase II.