UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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ATLANTA. GEORGIA 30365

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NAS PENSACOLA
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Ms. Suzanne Sanborn
Remedial Activities Branch
Department of the Navy - Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
P.O. Box 10068
Charleston, South Carolina 29411-0068

Re: Draft RI/FS Work Plans for Operable Units 1-5;
NAS, Pensacola

Dear Ms. Sanborn:

The Environmental Protection Agency (EPA) has completed its review of the Draft RI/FS Work Plans for Operable Units 1 through 5 at NAS, Pensacola received in this office on October 21, 1991. The majority of our comments on these documents have already been provided to you in earlier correspondence. The present transmittal, which consists solely of comments pertaining to ecological assessment of these sites, will complete our review of these documents.

EPA is in agreement with the Navy's present plan to defer a full assessment of the extent of contamination and associated ecological impact of individual sites to the investigation of Pensacola Bay, Bayou Grande and NASP Wetlands (operable Units 15-17). Specifically, while all of the enclosed comments must eventually be addressed, EPA acknowledges that it may be appropriate to defer detailed responses to some of the attached comments to the development of these later work plans. What is needed at the present time is a clearly thought-out strategy for meshing or combining the site- or source-specific investigations with the later area-wide investigations. The ultimate goal must be to collect the information needed to complete all of the investigations in as timely a manner as possible and with a minimum duplication of effort. All work plans must be clearly designed with the intent of achieving this goal. To this end, EPA proposes that the Navy utilize the following approach in responding to the enclosed comments.

(i) If a comment requires the collection or analysis of additional samples utilizing standard Region IV SOP/QAM procedures (e.g. additional soil, sediment and surface water samples), the requested sample must be proposed for collection in the revised work plans. This approach should permit more timely utilization of this information in designing or expanding on, the work plans for Operable Units 15 through 17.

(ii) If a comment requires the collection or analysis of additional samples utilizing non-standard procedures (e.g. biota sampling) and collection of the requested information will significantly delay completion of the

site-specific investigation, then the collection of this sample may be deferred to the investigations for Operable Units 15 through 17. Your response must include clear justification for deferring the collection of any information to investigations of latter Operable Unite.

(iii) Any information or results to be collected in the present site-specific investigations which will be needed to further define the scope or extent of the investigations for Operable Unite 15 through 17, must be obtained as early on as possible in order to prevent unnecessary delays in completion of the latter investigations. The site-specific investigative schedules must be clearly designed with this goal in mind.

As per Section VIII.G.5 of the Federal Facilities Agreement, the Navy's responses to all comments on the Draft RI/FS Work Plans for Operable Units 1 through 5 are due 60 days from your receipt of the present comments.

Should you have any further questions regarding this matter, please feel free to contact me at 404/347-3016.

Sincerely yours,

Allieon W. Drew, RPM
Department of Defense Remedial Unit
RCRA & Federal Facilities Branch

Enclosure

cc: Ron Joyner, NAS, Pensacola
Eric Nuzie, FDER

TECHNICAL REVIEW *AND* COMMENTS
DRAFT RI/FS WORK PLANS FOR GROUPS A THROUGH E
NAVAL AIR STATION (NAS) PENSACOLA
PENSACOLA, FLORIDA

GENERAL COMMENTS

1. Work Plan Strategy/Approach:
Since Bayou Grande, Pensacola Bay, and NASP Wetlands are also Operable units, further explanation must be included in the current documents as to how the present site-specific sampling plan relates to, and will be integrated into, studies of these larger areas. Appropriate discussions on this topic must be included in the "Introduction", "Initial Evaluation" and "Work Plan Rationale" sections of the revised work plan (sections required as per comment 3 submitted on the RI/FS Work Plans for OUs 11-14).

The following information must be kept in mind when defining an ecological assessment strategy. Based upon the Phase I screening data and the length of time that these sites have been in existence, bioaccumulation studies and bioassays will probably be needed for at least some of the sites. However, in order to obtain useful information from these studies, the following information must be obtained prior to conducting said studies:

(i) determination of the contaminants of concern for the particular area

(ii) identification of all biological receptors in order to determine
   a. which receptors are at risk from exposure to these contaminants, and
   b. which representative species are present in sufficient quantity and biomass to conduct chemical analysis of tissues.

The proposed field work needs to be designed with these goals in mind, so that the investigation can be completed as efficiently and cost-effectively as possible.

2. Regional Biological Resources, Section 5.1:
This section must be updated with more current information. Apparently, there has been further identification of species present since the limited 1986 studies mentioned in the report. If additional work has not already been done, then some should be in order to generate more complete species lists and a more complete characterization of biological resources.

3. Habitat/Biota Survey & Sampling, Sections 14.2 & 14.3:
The habitat/biota maps generated during Phase I must be included as part of the results/findings summary presented at the

beginning of this section. This will facilitate evaluation of the proposed Phase II sampling locations. Also, the habitat/biota maps must be revised to show more detail, particularly the information which was included in the text of Interim Data Reports. (Example: the Interim Data Report for Site 14 (Group C) mentions groundcover on the berms and sea oats, a state-protected species, on the back beach, but these are not shown on the habitat/biota map.)

More detail is needed on the methodologies to be used in conducting the surveys. The habitats and their related biota (both flora and fauna) must be sufficiently characterized during the survey to permit determination of the receptor organisms at risk. (Example: the Interim Data Report for Group C, Site 13 mentions that the dominant beach fauna were ghost crabs. No mention is made of organisms living in the intertidal (surf) zone, which may be food sources for the shore birds and ghost crabs.

More detail is needed on the biota sampling to be performed in the upcoming field work. For instance, the methods used for sampling of aquatic biota (including qualitative sampling) must be provided, since different sampling equipment and mesh or net sizes can yield different information about the biota. Results of the Phase I habitat/biota survey must be used to formulate appropriate sampling methodologies for each site to the maximum extent practicable. The specifics of these proposed methodologies must be included for review in the present work plans. Contingencies pertaining to some sampling specifics (e.g number, location of samples) must also be included as appropriate.

4. Soil/Surface Water/Sediment Samples, Section 14.2:
One of the concerns at NASP is the protection of endangered/ threatened species (including candidate species, species of special concern, etc.). If one of these species, or a suitable habitat for one of these species, is identified either on the site or along a contaminant migration pathway associated with the site, then the appropriate media must be sampled in the vicinity of the identified location.

Regarding the collection of background surface water and sediment samples, if no appropriate upstream locations for surface water and sediment samples exist for a site (e.g., ponds at Sites 1 and 14, sites with storm drains), then a proposed area-wide background/control location must be located.

Background/control locations must be proposed for Bayou Grande and Pensacola Bay. Since these water bodies are subject to tidal influence, two background/control locations should be designated, with respect to the direction of tidal flow.

Wherever sufficient surface water is present, a surface water sample must be collected in conjunction with the collection of a sediment sample. In response to the statement that "the relatively rapid mixing of surface waters would tend to distribute contaminants in a more homogenous fashion than that typically found in sediments..." (Group E Work Plan, p. 14-26), while mixing would be greater in surface water than in sediment, the rapidity of surface water mixing will depend upon the hydrodynamics of the water body. Furthermore, both inland and coastal water bodies are potentially affected by ground water discharge; since the extent of site-related ground-water plumes has not yet been determined, it is important to include the surface water samples.

In areas of surface water deeper than 3 feet, both surface (1' below surface) and bottom (1' above bottom) water samples should be collected, to check for surface-to-bottom gradients (such as a salt wedge).

Sediment type plays a major role in determining the composition of the benthic community. Particularly for Bayou Grande and Pensacola Bay, the type of sediment found at each station must be characterized (e.g. by performing grain size analysis). The resulting data should be used to generate a map showing the sediment type at each station. Depth contours should also be provided through use of a nautical map and/or field measurements.

When surface water and sediment data are reported, the appropriate field data (temperature, pH, dissolved oxygen, salinity or specific conductance, etc.) should be presented along with the results (e.g. in table form) to facilitate interpretation of the data.

5. Contaminant Source Survey, Section 14.2:
The results of the contaminant source survey should be used to modify the list of analytes in order to be certain that the list is complete and adequate to define site contamination.

6. Baseline Risk Assessment, Section 18:
For environmental concerns, the Baseline Risk Assessment should follow USEPA's Risk Assessment Guidance for Superfund, Volume II: Environmental Evaluation Manual (1989).

7. Contaminant Identification, Section 18.1:
Further explanation must be provided as to how the contaminants of concern will be identified or excluded from consideration, once the data are in hand. Contaminants of concern must not be identified based only on human health considerations.

8. Toxicity Assessment, Section 18.3:
While it is true that a toxicity assessment for human health concerns generally relies upon existing toxicity information, a

toxicity assessment for the biota could involve toxicity testing (e.g., bioassays or chemical analysis of tissues) if the existing toxicity information is insufficient.

SPECIFIC COMMENTS:

GROUP A (Operable Unit 1):
SITE 1: Sanitary Landfill

1. Page 14-10:
Please insert the requested habitat/biota map. Also, more detail must be added to map, including information from ESD's Wetlands Inventory of NASP, the location of the gopher tortoise burrows, and the different vegetation communities mentioned in Section 5.2, page 5-9.

2. Page 14-13, Section 14.2:
Biota sampling must be conducted as part of the upcoming field investigation. Although the full TCL/TAL scan was not conducted during Phase I, the screening data indicate elevated levels of metals, PAHs, TRPHs, and/or phenols in the sediments of several inland water bodies. Quantitative biota sampling must be conducted in these water bodies, along with the sampling of surface water and sediment, to determine the community structure in relation to contaminants present in the water bodies. Additionally, this information can be used to focus on food chain relationships at the site, leading to subsequent chemical analysis of tissues of representative species.

3. Page 14-16, Section 14.2.2:
Specify the methods to be used in qualitatively sampling the benthic and neritic habitats in the nearshore aquatic environment of Bayou Grande and which taxonomic level will be used in determining floral and faunal composition.

4. Page 14-18, Figure 14-4:
A surface water and sediment sample must be collected from the intermittent creek located west of the southernmost portion of the landfill (below the bottom of the figure), since a high TRPH concentration was found in soil in the southwest part of the landfill (S012, Phase I).

Surface water and sediment samples must also be collected in the wetland areas, either as a part of this investigation or in conjunction with sampling for Site 42 (NASP Wetlands).

The Wetland Inventory map generated by ESD indicates an emergent wetland between the Golf Course Pond and another golf course pond to the south. The Phase I data shows that high concentrations of total metals were found in temporary wells west of this southern pond. If it is determined that the ground-water plume extends to this area, two surface water and sediment samples should be collected from this pond.

What is the significance of the hatched area at the southwest end of Beaver Pond?

5. Page 14-19, Figure 14-5:
A soil boring sample must be collected from the forested wetland near S012 (Phase I), south of proposed Phase II intermediate monitoring well 38.

6. Page 14-21, Table 14-3:
Surface water/sediment sample location 11 is not a good background location, given that (i) the net flow in Bayou Grande is to the east, and (ii) the sample location is also proximate to Site 15 (Pesticide Rinsate Disposal).

A better background location would be west of Site 1 (possibly west of the Bayou Grande arm located west of Site 1). However, since water flow is tidally influenced in this area, the flow direction at the time of sampling must be considered in choosing a background location. Inclusion of two backgrounds, one west and one east of the site, would address both flow directions.

7. Interim Data Report:
Based on the results presented in this report, the following additional samples are recommended:

a) soil boring south of North Pond, in the vicinity of the "marshy-appearing depression" that was filled in with rubble and soil (Sec. 3.1, p. 3-2)

b) surficial soil samples in the vicinity of the stressed vegetation in the central portion of the 1970s landfill (Sec. 3.2, p. 3-6)

c) surficial soil sample in the dry stream bed located parallel to the northeastern landfill boundary and emptying into the southern end of Bayou Grande Pond (Sec. 3.2, pp. 3-6 to 3-7)

d) surface water and sediment from the circular pool near the bed of the intermittent stream that empties into the southwestern end of Beaver Pond (Sec. 3.2, p. 3-8)

e) surface water and sediment from the vicinity of the flowing spring (leachate seep) that discharges into the intermittent stream bed that empties into the southwestern end of Beaver Pond (Sec. 3.23, p. 3-8).

GROUP B (Operable Unit 2):

SITE 11: North Chevalier Disposal Area

1. Page 5-9, Section 5.2:
This section indicates a lack of information concerning the presence of freshwater or estuarine marshes along the onsite creek and/or nearby Bayou Grande. The proposed upcoming work should clarify the habitat/biota information contained in the Interim Data Report for Group B, Site 11. Section 3.3, page 3-4 of that report mentions a Juncus marsh at the boundary of Site 11, along the western side of the ann of Bayou Grande, yet the habitat/biota map (Figure 3-1, page 3-5) shows forested wetland on the western side and an emergent marsh only on the eastern aide. Sediment samples (and surface water, if present) should be collected in the western marsh, if it exists.

2. Page 14-21, Figure 14-5:
A soil boring must be installed and sampled at a more central location in the "filled potential wetland area" (as shown in the Interim Data Report for Group B, Site 11) between soil sample locations 15 and 21.

3. Page 14-40, Section 14.2.2.1:
Although the concern is expressed that contaminants found east of the creek might be related to a source other than Site 11, the contribution of the two outfalls from Building 3644 must be considered when sampling the creek and the arm of Bayou Grande, in conjunction with Site 30.

SITE 12: Scrap Bins
No specific comments.

SITE 26: Supply Department Outside Storaae
No specific comments.

GROUP C (Operable Unit 3):

SITE 2: Waterfront Sediments

1. Page 3-6, Section 3.3:
This section mentions possible bioaccumulation of sediment contaminants by shellfish in the nearshore area adjacent to the NAS facility, and the possible consumption of these shellfish by people. The Phase I habitat/biota survey of Site 2 (Interim Data Report) mentions the occurrence of blue crabs, shrimp, and oysters throughout Pensacola Bay but does not indicate the existence of a shellfishing area at or near Site 2. More specific information is needed concerning the occurrence of shellfish at or near areas of contaminated sediments.

Most of the information presented in the habitat/biota survey was taken from studies of Pensacola Bay as a whole. While this general information is useful, more site-specific information is needed. For example, the August 1986 U.S. Navy Gulf Coast Strategic Homeporting Draft Environmental Impact Statement (Appendix IV, Pensacola, Florida) states that the benthic communities near the NAS would be subject to somewhat higher salinities than those found in more inland areas of the bay; the benthos near the NAS might include some species that occur only at higher salinities. The benthic communities in vicinity of Site 2 must be sampled quantitatively and compared to those in a background or control area, to determine whether sediment contaminants have affected the composition of these communities. Knowledge of the specific communities near the site will also aid in the selection of appropriate species for subsequent bioaccumulation and toxicity studies.

2. Page 5-9, Section 5.2:
This section mentions a concern about the production and survival of invertebrate larvae in relation to the contaminated sediments. Plankton tows must be included as part of the biota sampling to be conducted either in this study or during the inveetigation of Operable Unit 41 (Pensacola Bay).

3. Page 6-2, Section 6.2:
This section states that the currents would tend to move wastes to the southwest, out of Pensacola Bay through Pensacola Pass. It also states that the "influence of tidal currents along the bay bottom is unknown at this time," but that tidal currents might carry wastes farther up into Pensacola Bay. The water flow patterns around the NAS must be determined, especially in relation to nearshore structures, dredged areas, etc. that would affect transport of contaminants.

4. Pages 14-38 through 14-39, Section 14.2.3.1:
Indicate how the offshore sampling for this site differs from the sampling to be conducted for Site 41 (Pensacola Bay).

If there are depositional areas in the Bay where sediment samples are going to be taken, sampling to a depth of only 1 foot may not be adequate for delineating the area of contamination.

SITE 13: Magazine Point Rubble Disposal Area

No specific comments.

SITE 14: Dredge Spoil Fill Area

1. Page 14-40, Section 14.2.3.1:
If sufficient water is present in the two settling basins, surface water and sediment samples must be collected from each basin in order to investigate possible contaminant migration offsite via movement of surface water through the water control (overflow) structures.

GROUP D (Operable Unit 4)

SITE 15: Pesticide Rinsate Disposal Area
No specific comments.

ea
No specific comments.

GROUP E (Operable Unit 5)

SITE 30: Buildinus 649 6 755

1. Page 3-2:
while summarizing some previous work, the text states that sediment samples were "analyzed for EP toxicity", and then provides data only for the concentration of metals in the sediment. Did this work include toxicity testing or bioassay work? If so, please include the results.

2. Page 14-13, Section 14.2.1:
Given that the paved ditch is potentially influenced by 8 sites, efforts must be taken to assure that the contaminants for each site have been identified and that the list of analytes for the Site 30 samples takes this information into account.

3. Page 14-15, Figure 14-4:
Indicate the outfall locations on this figure. (See Interim Data Report, Group E, Site 30, Figure 1-2, page 1-3 and Section 3.2, pages 3-2 to 3-3.)

4. Page 14-26, Section 14.2.2.1:
The following additional surface water and sediment samples must be collected:

a) near the Building 649 outfall, especially since stressed vegetation was noted in this area

b) the marsh adjacent to the creek near Site 11 (See review comments for Group B, Site 11.)

c) outfall water near areas of known contamination.

How will the contribution of oily runoff from Chevalier Field and the oily material trapped by the oil boom near Pat Bellinger Road will be addressed in interpreting the surface water and sediment data?

Quantitative biota sampling must be conducted along the surface water pathway for Sites 30 and 11 in this next field effort, since the Phase I screening data indicate the presence of site-related contaminants along this pathway. It is especially important to describe the sampling locations and report the field measurements, since the biota will differ along the pathway from the wetland near Building 649 to the arm of Bayou Grande.