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NAS PENSACOLA
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May 7, 1993

Florida Department of Environmental Regulation
Federal Facilities Coordinator
Attn: Eric Nuzie
Twin Towers Office Building
2600 Stone Road
Tallahassee, Florida 32399-2400

RE: Response to the Florida Department of Natural Resources (*FDNR*) Comments for Draft Work Plans: Sites **40, 41, and 42**, NAS-Pensacola, Contract # **N62467-89-D-0318/036**

Dear **Mr.** Nuzie:

Please **find** enclosed a copy of the response to the Florida Department of Natural Resources (*FDNR*) comments for the Work Plans on Site **40, 41, and 42**: Naval ~~Air~~ Station Pensacola in Pensacola, Florida. We look forward to discussing them further at the meeting on **May 12th and 13th** in Atlanta. For the **record**, FDER did not have any comments on **these** Work Plans for Sites **40, 41, and 42**.

If **you** should have any questions or **need** any additional information regarding the plans, please do not hesitate to call **me**.

Sincerely,
EnSafe\Allen & Hoshall

H. Beiro
Task Order Manager

Enclosure
Response to Comments

cc: Linda Martin, SOUTHNAVFACENCOM

Florida Department of Environmental protection
Technical Review and Comment
Draft RI/FS Work Plan for
Site 40 (Bayou Grande)
Naval Air Station (NAS) Pensacola
Pensacola, Florida

RI/FS Work Plan for Site 40 — Bayou Grande

Comment 1. Section 2.5

This section states the average depth of Bayou Grande is 6 feet, while the last sentence on Page 2-1 states the average is 9 feet. Which is correct?

Response

The correct average depth for Bayou Grande is 6 feet.

Comment 2. Section 3.1

Although there are no ARARs for sediments, the National Oceanic and Atmospheric Administration's (NOAA) Effects Range Low (ER-L) values for contaminant impact from sediment should be listed as values to be considered (Long and Morgan, 1991).

Response

The Navy will be submitting trigger level values for joint approval and subsequent use. If needed, the detection limits of the chemical analysis will be lowered to be commensurate with the trigger levels. However, the added cost should be weighed against the usefulness of the analytical data in determining ecological risk.

Comment 3. Section 4.2.5

Water clarity is not always an indicator of water quality. Many wetland habitats have poor water clarity while being of excellent quality for that particular habitat. In a pine forested wetland the acidic tannin level would discolor the water, yet provide excellent habitat for many species. It is true that in an estuarine environment such as Bayou Grande water clarity would be a better indicator. However, some reactions to various contaminants may increase clarity, yet be harmful to the natural habitat.

Responses in bold denote changes
to first draft.

Along with sediment toxicity, sediment contamination, and water clarity **as** a high priority *exposure/habitat* indicators, **you** should **also** include **total suspended solids** in the water.

Response

Water clarity **has** been discontinued **as** an indicator of water quality. **Surface** water samples will be collected at locations where the detected concentrations of the sediments **exceed** the background or trigger levels in **standing bodies** of water (i.e., wetlands) and not in dynamic environments (i.e., **Pensacola Bay** and **Bayou Grande**). **Total suspended solids** **has** been added **as** a parameter of analysis at surface water collection locations. **All** surface water samples will be analyzed for **TAL/TCL**.

Comment 4. Section 4.5

The **last sentence** of this **section** states "... to understanding the complex nature of **processes** in the **Bay near NASP**." In this document, the word **Bay** **needs** to **be changed** to **Bayou**.

Response

Agreed. Bay has been changed to Bayou.

Comment 5. Section 5.2

Under the Surveying and Water Level Measurements portion of **this section** of the document, water level is to **be measured** at "regular intervals." Please **define** the interval of measurement. If this is to **assist** in determining **tidal** influence, **we suggest** a **10** minute interval.

Response

Agreed. Water levels **will** be **measured** at **10** minute intervals over a **24** hour **period** using pressure **transducers** and **data** loggers.

Responses in bold denote changes
to first draft.

Florida Department of Environmental Protection
Technical Review and Comment
Draft **RI/FS** Work Plan for
Site **41** (NAS Pensacola Wetlands)
Naval **Air** Station (NAS) **Pensacola**
Pensacola, Florida

RI/FS Work Plan for Site **41** — **NAS Pensacola Wetlands**

Comment 1. **Section 4.2.3**

These **factors** can be excellent indicators of the health of the wetland as far as the **flora** are concerned. However, the apparent health of the vegetation does **not necessarily** provided a true indication of the wetland's health. **Flora** is **often less** susceptible to **contaminated impacts compared** to fauna. One may see a **good** abundance and diversity of vegetation, but an avoidance of the wetland or an inability to live in the wetland by the fauna would be another indicator of a degraded habitat.

Response

Diversity of fauna **including** species diversity, species evenness, and species richness **will** be investigated as part of **Phase IIB** of the ecological assessment, as discussed in the **meeting** on May 12 and 13, 1993. **A** brief outline of all of the phases is **presented** below.

Phase I

For Pensacola Bay and Bayou Grande during **Phase I**, transects **will be** extended 300 feet perpendicular to the shore. Bathymetry will be measured along the length of **the transect** and sediment samples will be collected at **0** feet (shoreline), **150** feet and **300** feet along the transect. Sediment samples will be submitted for analysis of **grain size** and total organic carbon.

During **Phase I** at the **NAS Pensacola Wetlands**, all **listed wetlands** and/or potential wetlands **as impacted** by a **corresponding** site at **NAS Pensacola** will be investigated to identify basic biological characteristics of **the** wetland, to **delineate** the wetland **boundary** and to develop a sampling strategy for **Phase II**, as required. **If** impact is suspected, a grid will be **established across** the wetland. Bathymetry **will be measured across** the wetland, and sediment samples **will** be collected from selected locations for **grain size** and total organic carbon analysis.

A technical memorandum will be submitted upon completion of **the Phase I** activities. The memorandum **will** detail the results of **Phase I** sampling and will present **the Phase IIA**

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sampling locations. The technical memorandum will also present the rationale for additional sampling or the rationale for no further investigation.

Phase IIA

Phase IIA consists of **collecting sediment and surface water samples for Target Analyte List/Target Compound List (TAL/TCL) analysis using CLP protocol.** Phase II sampling locations will be selected based on various criteria, **including but not limited to:**

- e storm water discharge points,
- e areas hydraulically downgradient of other identified potential sources of contamination (PSCs),
- e areas of surface water discharge,
- e areas of **high** total organic carbon,
- e areas of small grain **size** (e.g., high clay and **silt** content),
- e background locations.

One sediment sample will be collected at **each** of these hot **spot** locations. The **results** of the analyses will initially be compared to background **conditions.** Locations where the detected concentrations of the sediments are **greater than** twice background will be further compared to the **agreed** trigger levels. At locations **where** the detected concentrations **exceed** the background or trigger levels, **three** additional **sediment** samples will be collected for analysis to delineate the extent. Surface water samples will be collected at locations where the detected concentrations of the sediments **exceed** the background or trigger levels in **standing** bodies of water (i.e., **wetlands**) and not in dynamic environments (i.e., Pensacola Bay and Bayou Grande). **A technical memorandum will be written upon completion of Phase IIA detailing the analytical results and the comparison to background and the trigger levels.** The technical memorandum will also present the rationale and locations for the subsequent **Phase IIB sampling** or the rationale for no further investigation.

Phase IIB

Phase IIB consists of diversity and toxicity tests of potentially **impacted organisms.** During this phase of the investigation, a **known** volume of sediment will be collected. The sample will be submitted to the selected laboratory and the diversity of the organisms **within** the sediment will be determined.

Toxicity tests will also be performed during **this** phase. Selected **species** of organisms will be directly **exposed** in the laboratory to the site water and sediment. Acute (**48** hour) toxicity will be tested on a portion of the selected organisms. Chronic (**28** days) tests will be performed on all of the selected organisms.

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A technical memorandum will be written upon completion of Phase IIB detailing the analytical results. The technical memorandum will also present the rationale and locations for the subsequent Phase III sampling or the rationale for no further investigation.

Phase III

Phase III consists of collection of selected *organisms* for studying the bioaccumulation of contaminants. Phase III tests may be performed if needed to further gauge the ecological impact of a site. This information must be weighed against time and expense to determine an agreement for clean up levels.

Comment 2. Section 4.2.8

This section states, "though critical wetland habitats likely exist at NASP, no wide ranging regional coastal investigation beyond the NASP boundaries will be included in the study to correlate NASP observation." If outside observation of similar wetlands will not be performed or used for background, then research through existing literature or through local/state organizations may be helpful in correlation the NAS Pensacola wetlands to similar wetlands in the Pensacola vicinity.

Response

It is believed reference wetlands can be identified and sampled at NAS Pensacola. If non-impacted wetlands cannot be located within the NAS Pensacola boundaries, the investigation may extend outside the boundaries. In addition, a qualified ecologist familiar with the flora and fauna of the area will be consulted.

Comment 3. Section 5.2.1

1. This section states that surface water and sediment/soil samples will be analyzed using Contract Lab Protocols (CLP). Many CLP detection limits are above the surface water ARARs, and the NOAA sediment ER_L values. The detection limits should be lowered to adequately meet these ARARs and to be considered values.

2. On page 5-4, the second paragraph states, "overall wetland health will be typified by generalizing species abundance and diversity." General abundance and diversity of species does not necessarily mean the wetland is healthy. Mutagenic and teratogenic effect may be occurring which would not always be noticeable.

Also on this page the first sentence of the next to last paragraph should include "diversity and pollution indicator species." Also the soil profiling methods should denote soil size and type.

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Response

1. If **needed**, the detection **limits** of the **chemical** analysis **will be** lowered to **be** commensurate with the trigger levels. However, the added **cost** should be weighed against the usefulness of the **analytical data** in **determining** ecological risk.
2. Samples will also **be collected** for **toxicity analysis** during the Phase IIB of the ecological **assessment** to detect mutagenic or **teratogenic** effects. If **a** more refined determination of the ecological **impact** is **needed**, phase III **sampling will** be conducted to **assess** the bioaccumulation of potential **contaminants**. **See** the response to **F'DEP** Comment **1** on the Site **41 NAS** Pensacola Wetlands for **a** more **detailed** description of the ecological assessment.

Please **see** the response to FDEP Comment 1 on the Site 41 NAS Pensacola Wetlands for a description of the procedures and protocols to be followed for the ecological assessment. **Soil size** and **type will be** described by **a** geologist **using** the Unified Soil Classification System (USCS) in the field, and **grain size** analysis **will be performed** in the laboratory on sediment samples **submitted** during Phase I.

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Florida Department of Environmental Protection
Technical Review and **Comment**
Draft RI/FS Work Plan for
Site 42 (Pensamla Bay)
Naval **Air Station (NAS) Pensacola**
Pensacola, Florida

RI/FS Work Plan for Site 42 — Pensacola Bay

Comment 1. **Section 3.1**

See comment for the RYFS **Work Plan** For Site 40 — Bayou Grande.

Response

This comment addresses the use of the National **Oceanic** and Atmospheric Administration's (NOAA) **Effects** Range Low (**ER-L**) values for **contaminant impact** from sediment. The Navy will be submitting trigger level values for joint approval and subsequent **use**.

Comment 2. **Section 3.2**

As Site 2, which is in Pensacola Bay, is being **studied** separately **from** Site 42, the sample data collected for the Site 2 investigation should match **what** is being performed for Site 42 (Pensacoh Bay) for comparability purposes.

Response

To aid in **comparability**, Site 2 is being investigated **using** the same sampling approach and protocols **as** the Site 42 (Pensamla Bay) investigation. The **figures** are being **clarified** to aid distinction between the two sites. **All data from** Site 2 will **also** be included **as part** of the Site 42 investigation.

Comment 3. **Section 4.2.5**

See comments for the RYFS **Work Plan** for Site 40 — Bayou **Grande**.

Response

Water **clarity has been** discontinued **as** an indicator of water **quality**. **Surface** water samples **will** be collected at locations **where** the detected **concentrations** of the sediments **exceed** the background or trigger levels in **standing** bodies of water (i.e., **wetlands**) and not in dynamic environments (i.e., Pensacola Bay and Bayou Grande). Total suspended **solids**

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has been added as a parameter of analysis at surface water collection locations. All surface water samples will be analyzed for TAL/TCL.

Comment 4. Section 5.2

Under the Surveying and **Water** Level Measurements portion of **this** section of the document, water level is to be **measured** at "regular intervals." **Please define** the interval of measurement. If this is to **assist** in determining tidal influence, we **suggest** a **10 minute interval**.

Response

Agreed. Water levels will be **measured at 10 minute intervals** over a **24 hour period** using pressure **transducers** and **data** loggers.

Comment 4. Section 5.2.2

The length of the sediment sample **transects** in **Pensacola Bay** should be doubled due to the larger **areas** which the bay **composes**, and the **fact that** most groundwater flow from **the NAS Pensacola** is toward the bay. Groundwater seepage from the **NAS Pensacola** likely **occurs** at a further **distance from the shore**, compared to Bayou Grande. The hydrologic monitoring could be **used** to give a modeled projection of likely **outfall** of the groundwater **into** the bay.

Response

sediment sampling will be performed in areas of small grain size and high total organic carbon as discussed in the response to FDEP Comment 1 on the Site 41 NAS Pensacola Wetlands.

Comment 5.

In general, the methodology for assessing Pensacola Bay should provide **adequate information** for analysis. However, we do believe **additional** groundwater and **surface** water sampling should be established in the areas of the bay directly adjacent to **or downgradient** from known sites (**i.e., Sites 13, 14, 20, 21, 28, 36, 37 and 39**).

Response

The necessity for non-point source and point source monitoring for the Bay will be identified during Phase I of the ecological assessment. **All specific PSCs adjacent to Pensacola Bay will have adequate groundwater monitoring systems to determine migration**

Responses in bold denote changes to first draft.

to the Bay, and samples **will** be collected during the specific PSC investigation. If additional surface water sampling is required to address these PSCs, **sampling will** be conducted during Phase **IIA**, as necessary.

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