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NAS PENSACOLA
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July 8, 1994

U.S. Environmental Protection Agency
Attn: Ms. Allison Humphris
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: **Final** Comprehensive Sampling and Analysis **Plan**
NAS Pensacola
Contract # **N62467-89-D-0318/CTO-036**

Dear Ms. Humphris:

On behalf of the Navy, EnSafe/Allen & **Hoshall** is **pleased to** submit seven copies of **the** Final Comprehensive Sampling **and** Analysis **Plan** for the **Naval *Air*** Station **Pensacola** in Pensacola, Florida. The Quiescent/Low Flow Sampling Technique **has** been included in **this** version of the ***CSAP.***

Please let me know if you **have any** questions or comments regarding the plan.

Sincerely,

EnSafe/Allen & Hoshall

Allison Dennen
Task Order ***Manager***

Enclosures

cc: **EnSafe/Allen** & Hoshall file
EnSafe/Allen & Hoshall Pensacola file
Bill Hill, SOUTHNAVFACENGCOM — **1 copy**
Bill Gates, SOUTHNAVFACENGCOM — **1 copy**
Ron Joyner, NASP — ***9*** copies
Tom Moody, FDEP — **1** copy
John Mitchell, **FDEP** — **1** copy
Waynon Johnson, N O M — **1 copy**
Lynn Griffin, FDEP — **1 copy**

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
RESPONSE TO COMMENTS
NAVAL AIR STATION PENSACOLA

RI/FS Comprehensive SAP

COMMENT 1:

Section 8.2 (Phase I — Habitat and Biota Survey)

This section states, "The ecologist will then observe how the ecosystem appears to be affected by site-specific contamination by noting any anomalous features such as stressed or absent vegetation, unusual odors, colors, or stains." The ecologist should also look for the absence or shortage of any *expected* fauna.

RESPONSE

***Agreed,* this change** will **be included.**

COMMENT 2:

Section 8.2 Phase 11 — Ecological Sampling)
Refer to Comments #3 and #4 for the RI/FS Work Plans for Sites 40, 41, and 42.

Comment 3 for the RI/FS Work Plans for Sites 40, 41, and 42:
Section 4.2.3 (Sampling Strategy)

These sections state, "If the hot spot samples exceed two *times* maximum background determined through a reference comparison and a particular bench mark for either surface water or sediment, then those areas may be sampled further using focused sampling." We recommend eliminating the word "background" and only use the term reference or control station.

Also, further sampling may be needed if only one the above criteria are met. This would not always be the case, as at times the bench mark standards and guidelines may stand alone as a determinant for further study. The reference location may also show elevated contamination, and therefore not be an adequate control point. A new reference site would then have to be determined.

Comment 4 for the RI/FS Work Plans for Sites 40, 41, and 42:

a. Under the subheading, Evaluation Contaminant Levels, the document requires meeting criteria mentioned above in Comment #3. At times these criteria may require interdependence.

b. Figure 4-2 should be changed to reflect the above mentioned comment. Also the portion of this figure concerning prediction of bio-accumulation should also include toxicity potentials. ALL contaminants do not bio-accumulate, but do have toxic effects (i.e., carcinogenic; teratogenic; mutagenic). Further sampling may be required based on toxicity factors alone.

c. We suggest changing the subheading "Background Comparison" to either "Reference" or "Control."

RESPONSE:

Comment 3 — "Background" has been changed to "reference" throughout Section 8.

E/A&H will be collecting reference samples from many areas and feels that enough reference locations will be sampled to yield adequate information about background conditions. After all background data is collected, it will be analyzed and compared to determine if any contaminants detected can be attributed to any particular source. This may involve contacting PWC to determine what activities may have occurred in the area of certain wetlands.

If reference locations are found to exceed a benchmark concentration for a compound such as DDT, this will likely mean that DDT is ubiquitous throughout the base. With the frequent spraying that occurred at NAS Pensacola, this is a distinct possibility. These reference areas should be studied to determine their potential toxic effects compared to an RI site. Knowing this will influence remedial strategies for RI sites where DDT or other reference compounds are detected.

Comment 4 — E/A&H agrees that both reference concentrations and benchmarks be compared with any contaminants detected at an RI site. If a contaminant from a reference location exceeds a benchmark concentration, this will influence remedial strategies at the corresponding RI site.

GENERAL COMMENTS

Concerning sediment sampling and analysis, the method of sample digestion should be discussed. We have included a separate page which discusses why the FDEP utilizes a total digestion technique.

Also, our sediment research group has learned from prior sediment survey experience that sediment and soil samples may contain high concentrations of organic compounds, both natural and anthropogenic. We have observed that such samples can present a problem for some analytical labs due to interference effects. The result is much higher levels of detection for such samples. By performing sequential extractions using organic solvents, such problems can be reduced to some degree.

This research group has also just finished a sediment chemical (trace metals and organic compounds) and toxicity survey (1993) in the Pensacola Bay system. Three stations were in Bayou Grande. Elevated levels of metals were detected in two of the three stations. Although the results are still arriving from this survey (organics and toxicity studies still underway), there was no toxicity determined in an amphipod test. However, the one station closest to the NASP facility detected toxicity from a series of each urchin egg fertilization and embryological development tests.