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NAS PENSACOLA

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April 16,1993

U.S. Environmental Protection Agency

Attn: Ms. Allison Drew
345 Courtland Street, N.E.
Atlanta, Georgia 30365

RE: Final Sampling and Analysis Plans, Category III: Sites 2, 11, 30, and 38,
NAS-Pensacola, Florida
Contract / N62467-89-D-0318/058

Dear Ms. Drew:

Enclosed please find five copies of each Final Sampling and Analysis Plan, Remedial Investigation/Feasibility Study, for Category III: Sites 2, 11, 30, and 38 for the Naval Air Station Pensacola in Pensacola, Florida.

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

Sincerely,
EnSafe/Allen & Hoshall

Henry H. Beiro
Task Order Manager

Enclosure
Final Sampling and Analysis Plans

EPA REGION IV
TECHNICAL **REVIEW AND COMMENT**
DRAFT SAMPLING AND ANALYSIS PLANS
FOR CATEGORY 3 (**SITE30 — BUILDINGS 649 AND 755**)
NAVAL AIR STATION (NAS) **PENSACOLA**
PENSACOLA, FLORIDA

GENERALCOMMENTS

Comment 1:

The following statement appears in Section 1.0 of each **SAP**: "**This** investigation **will** delineate the nature, magnitude and extent of any contamination identified in **work** previously conducted by E&E as Phase I of the Work **Plan.**" These **SAPs** must also include a brief statement of the provisions/investigative approach which will be followed in characterizing and delineating any additional contamination identified in the upcoming field event.

Response:

Any additional sources or contamination previously not detected will **be** investigated by the collection of additional samples from any given **media**, sampling of additional media not included in the site-specific **SAP**, installation of additional monitoring wells to delineate extent and depth of contaminants, and performance of aquifer response tests to characterize subsurface hydrologic conditions. Prior to the initiation of additional field activities, a field change **request** will be submitted to the Navy for approval, and the EPA and FDER will be notified.

Comment 2:

Section 1.0 of each **SAP** must include a statement indicating that the RI **will** provide the basis(/supporting data) for completion of an **FS** and a **BRA**. Currently, only some of the **SAPs** contain such a statement.

Response:

Agreed. Change made.

Comment 3:

As recommended by EPA in previous correspondence and **agreed** by the Navy, an inventory of all existing wells is planned for the entire base. In order to assure the accessibility and validity of the groundwater sampling locations proposed in these SAPs, this **inventory** must be completed prior to initiating any additional field work. This will **allow** the Navy to reserve adequate time and resources for the installation of any additional temporary or permanent wells needed to complete the planned investigations.

Response:

Agreed. A well inventory has been completed to **assess** the accessibility and validity of the groundwater sampling locations. Any monitoring **wells** that **are** found to be in **disrepair** will be repaired or abandoned in accordance with Florida regulations. The abandoned monitoring wells will be replaced with additional **monitoring** wells **as necessary**.

Comment 4:

Section **4.0** of the SAPs includes the following statement: "Sample locations **are** presented on Figures...and are not expected to vary as they have been based on data collected during Phase I activities." Please amend this statement to include a reference to the paragraph which was inserted in Section **14.2** of each RI/FS Work Plan describing plans to adjust (e.g. redirect or expand) Phase II sampling activities as needed.

Response:

Any additional sources or contamination previously not detected **will** be investigated after SOUTHDIY has been notified. **See** Comment 1 of General Comments for a discussion of the provisions/investigative approach to be followed during the upcoming field investigation.

Comment 5:

The table entitled RI Sampling Analytical Requirements, which appears in **Section 4.0** of each **SAP**, must be expanded to include a column entitled "**DQO Level**" which provides the **DQO** analytical level (**I** through **V**) to be used in analyzing of each sample or group or samples.

Response:

All sediment, surface water, groundwater and soil samples **will** be collected at Data Quality Objective Level IV protocol. A column **has** been added to the table entitled RI Sampling Analytical Requirements listing the DQO levels for the sample groups.

Comment 6:

According to Section 4.0 of each **SAP**, the Navy proposes to **modify** the surface **soil** sampling interval from 0-1' to 0-2'. As previously discussed and agreed to by the Parties, surface **soil** samples must be collected from 0-1' for risk assessment purposes.

Response:

Surface soil samples will be collected from 0-1' **using** a **decontaminated** hand auger or Xitech sampler prior to advancement of the soil boring. **The remaining soil** samples to be collected from the soil boring **will** be collected from 1-3', 3-5', etc. to reduce the risk of cross contamination by allocating one sample interval per 2-foot long split-barrel sampler.

Comment 7:

According to Section 4.0 of each **SAP**, soil samples collected from beneath the water table using Shelby tubes will not be analyzed for Full **Scan Analysis (FSA)**. **This** is generally acceptable. However, FSA analyses should be **run** in cases where visual or other field evidence indicates that the sample collected could potentially serve as a contaminant source for the site. In such cases, the FSA analysis may prove useful in characterizing or delineating the source material.

Response:

If physical evidence of contamination is observed below the water table, a sample **will** be collected for FSA analyses for characterization and delineation of the source material.

Comment 8:

According to Section 4.5 of the SAPs for Category 3 sites, "**A** Portland cement grout will be used to construct all monitoring wells..". Available historical records for numerous **hazardous** waste sites indicate that use of a cement-based grout is highly likely to fully or partially compromise the integrity of PVC wells over time. In addition, a bentonite grout will better **seal** the annular space around the well casing, thereby reducing the potential for channelized downward contaminant migration. For these reasons, EPA strongly recommends the use of a bentonite grout during monitor well installation.

Response:

In accordance with Florida Administrative Code Chapter 40A-3, neat cement grout is required in all monitoring well installations. Although bentonite grout might provide a better seal in most areas, bentonite grout should be avoided in coastal areas such as **NAS** Pensacola where concentrations of total dissolved solids in groundwater are high. In

addition, the neat cement grout provides additional protection from storm surge (hurricanes).

Comment 9:

A **full** scale aquifer test (minimum **48** hours) which is designed to evaluate the hydraulic properties of the aquifer and underlying aquitard, the leakage between the two **more** permeable zones of the Sand and Gravel Aquifer, and the **radial** influence of pumping and **any** boundary effects, must be performed for those sites where groundwater extraction and treatment is needed. A minimum of **48** hours of pumping will allow time to collect data which represents the instantaneous release of groundwater from the zone being tested and the effects of gravity drainage within the aquifer. The aquifer test must be preceded by the test needed to design and appropriate pumping test (i.e. (i) slug tests, to provide a rough estimate of aquifer characteristics, and (ii) specific capacity, or step-drawdown, tests to estimate the pumping rates which the aquifer can sustain for given levels of drawdown). The plans for **all** pumping tests must be provided to EPA for review and approval prior to commencement of these tests.

Pumping tests **will** be **required** for the site as soon as it is determined that groundwater remediation is needed at that site. **Based** on Phase I screening results, it appears highly likely that groundwater remediation will be required for several sites in Categories 2 and 3. However, positive confirmation of this need **will** be obtained only through the collection of high quality data as scoped for Phase II. The Navy may therefore choose **to** submit pumping test plans now, **as** part of the present **SAP**, or defer preparation of these plans until receipt of the Phase II data. If the latter option is selected, the current **SAP** must be revised to state that a **Technical** Memorandum detailing full-scale pumping test plans will be submitted as soon as the need for groundwater remediation is determined based on analytical results. In either case, the necessary **data** must be collected in a timely manner which will not delay submittal of the Feasibility Study.

Response:

In accordance with the site-specific **SAPs** and work plans, slug tests will be performed at selected monitoring wells. If groundwater remediation will be **required**, the results of the slug tests will be used to design the appropriate pumping tests. Full-scale pumping tests (up to **48** hours) will be performed at each site with the objective of **evaluating** the hydraulic properties of the aquifer and underlying aquitard, the leakage between the two more permeable zones of the Sand and Gravel Aquifer, the radial influence of pumping, and any boundary effects. Pumping **tests** will continue until the above **listed** objectives are achieved. The EPA and FDER will be kept apprised of the investigation **as** it progresses, and will be notified prior to conducting full-scale pumping tests. The **Navy** will take technical responsibility for the design and **implementation** of these tests. Pumping tests will be performed in accordance with the procedures provided in Section **9.6.2** of the Comprehensive Sampling and Analysis Plan (**CSAP**).

SPECIFIC COMMENTS

SITE 30 (Buildings 649 and 755)

Comment 1: Page 1, Section 1.0

- A. The proposed investigation is premature. The source **area** which was identified by **U.S. EPA** in the study **performed** last summer must be **removed before** initiating an extensive monitoring program of these wetlands.
- B. **As** discussed and agreed to by the Parties, Operable Unit **5** shall be expanded to include Site **31: Soil North of Building 648**. A **SAP** for this site must therefore be submitted for review and approval before work on this Operable Unit commences.
- C. The goals of this site 30 investigation must be expanded to include plans to **assess** the nature and extent of contamination associated with (i) the former UST sites in the vicinity of Building 649 and **755** which were transferred to the **CERCLA** program, and (ii) the northeast and northwest segments of the **IWTP** sewer line (following **final agreement** to this approach by the Parties). The appropriate information must **also** be added to **all** other applicable sections of the **SAP** (e.g. "Background Information", "Field **sampling** Plan", etc.). In addition, in order to properly document the extensive scope change which the above additions will entail, the Navy must submit an addendum to the present RI/FS Work Plan. The addendum should contain the bulk of the information required to document the changes in investigative scope. Text, tables and **figure** additions to the **SAP** could then be minimal and, in many cases, copied directly from the work plan addendum. This approach is in accordance with the NCP (**40 CFR S300.430 (b)**) which describes the **SAP** as only one component of a **full** RI/FS Work Plan.

Response:

- A. Removal of the source area (sump) identified by the **EPA** in July **1992** will be evaluated **as** part of this investigation. Until an assessment can be made of the damage that will be **caused** (e.g., destruction of the wetland) and the hazards of removing the source area, it will not be removed.
- B. Site **31: Soil North of Building 648** has been added to the **SAP** completed for Site 30.
- C. The Site 30 investigation has been expanded to include the former **UST** sites in the vicinity of Building **649** and **755**. All applicable sections of the **SAP** have been updated to reflect the change in scope of work. All changes in the **scope** of work will be documented in the **SAP**, therefore an addendum to the work plan **will** not

be necessary. The investigation of the northeast and northwest segments of the IWTP sewer line will be addressed in an amendment to the Site 30 and 31 SAP.

Comment 2: Page 11, **Figure 4-2**

It seems likely that, by now, the solvent contamination plume originating from this site has reached Bayou Grande. Instead of centering permanent monitoring wells around the site now, the plume should first be delineated using temporary wells, cone penetrometers, etc. Once the location and extent of the plume is known, permanent wells should **be** installed to monitor the extent/movement of the plume.

Response:

It is agreed that the location and extent of the solvent contamination plume be delineated before installation of the permanent wells. A soil **gas** survey will be performed to aid in the delineation. The soil gas survey will be based on a 100 foot sampling grid and will be decreased in size to address areas of elevated **readings**. Heated headspace analysis of groundwater will be performed at each of the grid nodes with elevated readings. **Based** on the results of the soil gas survey, the permanent wells will be installed **to** monitor the extent and movement of the plume. The soil gas survey will be performed in accordance with Section **32** of the CSAP.