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DEPARTMENT OF THE NAVY
NAVY PUBLIC WORKS CENTER
NAVAL AIR STATION
PENSACOLA, FLORIDA 32508

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NAS PENSACOLA
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Mr. William E. Kellenberger, P.E.
Florida Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501

Dear Mr. Kellenberger:

On November 17, 1983, representatives from the Department of the Navy and their hydrogeologic consultant, Geraghty & Miller, Inc., met with Florida Department of Environmental Regulation (FDER) representatives to discuss: (1) the Navy's Naval Assessment and Control of Installation Pollutants (NACIP) Program presently being performed at the Naval Air Station, Pensacola, Florida, and (2) the sites requiring monitoring pursuant to Chapters 17-3 and 17-4 of the Florida Administrative Code (FAC).

The NACIP Program is a multi-phased program to evaluate sites posing a potential threat to human health or the environment due to contamination from past hazardous materials operations. The first phase, the Initial Assessment Study (IAS) which was previously submitted to you, evaluates each site based on information from record searches, aerial photographs, field inspections, and personnel interviews. The second phase, the Confirmation Study, consists of two steps; verification and characterization, and consists of on-site investigations to confirm or refute the existence of contamination (verification) and if contamination is present, to quantify the extent of the problem (characterization). Phase III is the implementation of long-term monitoring and/or corrective actions to control or mitigate the contamination.

It is the Navy's desire to integrate the FDER's groundwater monitoring requirements contained in Chapters 17-3 and 17-4 FAC into the overall NACIP program so that a sound monitoring plan can be implemented. With your concurrence, during the verification step we intend to install the monitor wells at the sites required by 17-3 and 17-4 FAC and collect and analyze the first round of water samples for an expanded list of chemical constituents. These data will then be included in the Verification Report along with recommendations as to which constituents should be analyzed for the remaining first year of sampling. The subsequent quarterly sampling and analysis of these monitor wells will be performed during the characterization step of the confirmation study.

During our meeting, it was generally agreed that some of the NACIP sites do not pose a significant risk to human health or the environment, and therefore, warrant no further action. In addition, work has been performed at some of the sites recommended in the IAS, which, based on the results, precludes the need for further actions at these sites. Therefore, presented in Enclosure (1) is a summary of the findings at the sites where further work has been

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performed along with a discussion of the sites requiring further study and the actions that will be undertaken at each during the verification step of the confirmation study. The discussion in Enclosure (1) is further developed in Enclosure (2), the Plan of Action for the NACIP Verification Study.

In closing, I would like to extend my appreciation to the FDER for their cooperation with the Navy in the NACIP study being performed at the NAS, Pensacola. We feel that the phased approach utilized by the Navy in performing these NACIP investigations is a thorough, cost-effective technique to delineate which sites actually need long term monitoring or remedial actions.

If you have any questions concerning the information contained herein, please call Mr. E. A. Pike at 452-4315.

Sincerely

W. H. HARMON
CAPT, CEC, USN
COMMANDING OFFICER

Encls: (2)

Copy to: CO, SOUTHNAVFACENGCOM (11427)

SUMMARY OF FINDINGS

Sanitary Landfill (Site 1)

The sanitary landfill northeast of fort Redoubt was used from the early 1950's until 1976. In 1975, eleven monitor wells were installed around the site. Some of the monitor wells have been damaged or destroyed. Therefore, prior to installing additional monitor wells, the existing wells will be examined to determine which are usable, and water levels will be measured in these and referenced to mean sea level to determine the direction of groundwater movement. Subsequently, up to eight additional monitor wells will be installed and the top of casings will be referenced to mean sea level. Groundwater samples (one round) will be collected and analyzed from these and the usable existing wells for pH, specific conductance, VOCs (volatile organic compounds), acid and base neutral extractables, pesticides, cyanide, cadmium, chromium, lead, mercury, nickel, silver, and zinc.

Waterfront Sediments (Site 2)

Between 1939 and 1972 large amounts of industrial wastes were discharged into Pensacola Bay. Sediment samples were collected from three locations in Pensacola Bay and a composite sample was analyzed for EP toxicity (metals), pH, and phenol. Results of these analyses, which are presented in Table 1 in the back of this enclosure, show the sediment passed the EP toxicity test for metals. Six additional sediment samples will be collected from deeper parts of the bay and analyzed for EP toxicity (metals).

Crash Crew Training Area (Site 3)

The training area consists of nine unlined pits in which fuel is burned for fire fighting practice. Because the pits are clustered in one area, they will be treated collectively as a single source. A total of six monitor wells will be installed around the pits and numerous borings will be drilled to detect the presence of free oil in the groundwater system. Water samples will be collected and analyzed for pH, conductivity, and VOCs.

Fire Fighting School (Site 7)

This facility, located in Building 1713, has been used until 1970 to train fire fighters. Flammable liquids were burned in an open tank of water. The probability of contamination from spillage from the tank does not appear to be significant; therefore, no further study is recommended for this site.

Navy Yard Disposal Site, Chevalier Field Pipeline Leaks, Soil South of Building 3460 (Sites 9, 23, and 29)

Sites 9, 23, and 29 will be treated collectively as a single source. Site 9 was used between 1917 and the early 1930's for disposal of non-hazardous trash and refuse. Site 23 was a fuel oil pipeline leak, and Site 29 is an industrial waste pipeline leak. Four monitor wells will be installed in the area and water samples will be collected and analyzed for pH, specific conductance, VOCs and TOC. Approximately two surface water samples will be collected from the ditch and analyzed for pH, conductivity, VOCs, and TOCs.

North Chevalier Field Disposal Site (Site 11)

This site was used from the early 1930's until the late 1950's for disposal of debris and waste. A sediment sample taken from a branch of Bayou Grande adjoining the site was found to contain high concentrations of total metals, and oil was found in a recent soil boring in the area.

Approximately 15 to 20 borings will be drilled to determine whether or not significant volumes of oil are present in the subsurface. Five monitor wells will then be installed in the area and groundwater samples will be collected and analyzed for pH, specific conductance, VOCs and metals; approximately three surface water samples from the creek will also be collected and analyzed for these same constituents. In addition, six sediment samples from the channel and from Bayou Grande will be analyzed for EP toxicity (metals).

Dredge Spoil Fill (Site 14)

This site was created before 1970 by deposition of spoils from dredging operations in Pensacola Bay. The spoil material was sampled to a depth of 24 inches at four locations and analyzed for metals, pH and Phenol. The results of these analyses, which are summarized in Table 1, show no concentrations exceeding EP toxicity limits. No further study is recommended for this site.

Pesticide Reinseate Disposal Area (Site 15)

This site was used prior to 1979 for disposal of rinsewater from pesticide mixing and spray equipment cleaning. Dilute reinseate solutions were poured directly onto the ground. Soil samples will be collected at three locations from depths of 1 inch, 12 inches, and 24 inches and analyzed for pesticides, herbicides, and arsenic.

Transformer Storage Yard (Site 17)

This site was used from 1964 until 1976 as a storage area for 200 to 300 transformers, some of which contained PCB's. Oil residues at the site were removed and disposed in a secure landfill. At three locations soil samples will be collected at land surface and at depths of one and two feet, and analyzed for PCB's. One boring will be drilled through the asphalt pavement while the others are drilled just outside the paved area.

Fuel Farm Pipeline Leaks (Site 19)

In 1958, a leak occurred in the underground fuel pipeline which led from the fuel farm to the aircraft refueling facility at Forrest Sherman Field. This leak resulted in the direct discharge of several hundred thousand gallons of fuel oil to the ground. Approximately 15 to 20 borings will be drilled to delineate the horizontal extent of the plume, and four monitor wells will then be installed to determine the direction of movement and vertical thickness of the fuel oil, and estimate the amount which may be recoverable.

Berthing Pier Pipeline Leak (Site 20)

In 1981, an excavation crew discovered that a fuel oil pipeline leading to the berthing pier was leaking. Oil-soaked soil was removed from the site during reconstruction of the bulkhead and some fuel oil was recovered from a recovery well. It is recommended that the existing recovery well operations observations with recovery operations as needed be continued and that no additional action be undertaken at this time.

Sludge Disposal at Fuel Tank Area (Site 21)

In the 50 years before 1975, up to nine fuel tanks in this area stored aviation gasoline. The tanks were cleaned periodically by removing tank-bottom sludge, which was disposed of around the-perimeters of the tanks.

In 1982, soil samples were collected to'depths of 24 inches at two locations at this site and analyzed for metals (EP toxicity), phenol, and pH. Results of these analyses, summarized in Table I, show no levels in excess of EP toxicity limits. No further action is recommended at' this site.

Refueler Repair Shop Fuel Disposal Site (Site 22)

This site was used before 1977 for disposal of residual fuel from refueler trucks. Over this period, about 19,000 gallons of aviation gasoline and jet fuel containing tetraethyl lead were disposed of here.

Soil samples were collected to a depth of 24 inches at three locations on this site and analyzed for metals, phenol, and pH. Results of these analyses, presented in Table I, show no levels in excess of EP toxicity limits. Approximately five to 10 soil borings will be drilled to determine the presence or absence of fuel oil in the subsurface.

Supply Department Outside Storage (Site 26)

Until 1964, industrial chemicals, including paint strippers and acids, were stored on this site. Soil samples were taken to depths of 24 inches at three locations at the site and analyzed for EP toxicity (metals). Results of the analyses, presented in Table I, show no samples exceeding EP toxicity limits.

One monitor well will be installed and a groundwater sample will be collected and analyzed for pH, specific conductance, selected metals, and VOCs.

Radium-Dial Shop Sanitary Sewer (Site 27)

From the 1940's until 1975, it was common practice at the Radium Dial Shop to wash spent cleaning solutions and luminous paint into the sanitary sewer. One monitor well will be installed at this site and a groundwater sample will be collected and analyzed for pH, specific conductance, VOCs and gross alpha.

Building 649/755

From the mid 1940's until the early 1970's, metal plating was done in this building. Liquid wastes were drained into a ditch which flows toward Chevalier Field and into an arm of Bayou Grande. Four sediment samples will be collected from this ditch and analyzed by EP toxicity for tin, cadmium, magnesium, chromium, nickel, silver, lead, copper and cyanide.

Building 648

Reportedly, 20,000 gallons of waste paint thinner and waste paint were disposed of adjacent to this building. One monitor well will be installed at this site and groundwater samples will be analyzed for pH, specific conductance, and VOCs.

Industrial Waste Sludge Drying Beds

In compliance with Chapters 17-3 and 17-4 of the Florida Administrative Code, three monitor wells will be installed to depths of approximately 15 feet around the industrial waste sludge drying beds. Groundwater samples will be analyzed for pH, specific conductance, metals, TOC and VOCs.

In addition, six soil samples will be collected at various depths beneath the beds and above the water table, and these will be analyzed for EP toxicity (metals).

Domestic Wastewater Treatment Ponds

Operation of the phenol pond and the polishing pond at the domestic wastewater treatment plant is covered under provisions of Chapters 17-3 and 17-4 of the Florida Administrative Code. Approximately four monitor wells will be installed around these two ponds. Groundwater samples will be analyzed for pH, specific conductance, metals, TOC, and VOCs.

Table 1. Results of EP Toxicity Tests on Soil and Sediment Samples at Five Sites Located at NAS Pensacola.

Site No.	pH[1/]	Constituent Analyzed, in mg/l									
		Phenol	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Nickel
2	8 ≤	<0 001	0.07	0 32	0.01	<0.02	<0 05	<0 002	0 02	<0.05	0 0≤
14	8.2	<0.001	0.18	0.48	0.10	<0.02	0.21	<0.002	<0.01	<0.05	0.12
	7.2	<0.001	0.10	<0.05	<0.01	<0.02	<0.05	<0.002	<0.01	<0.05	0.03
	6.3	<0.001	0.15	0.16	<0.01	<0.02	0.08	<0.002	0.03	<0.05	0.39
	7.1	<0.001	0.07	<0.05	<0.01	<0.02	<0.05	<0.002	<0.01	<0.05	0.06
21	5.9	<0.001	0.13	0.[illegible]	<0.01	<0.02	0.09	<0.002	<0.01	<0.05	0.15
	7.8	<0.001	0.07	1.11	<0.01	<0.02	<0.05	<0.002	<0.01	<0.05	0.21
22	[illegible].4	<0.001	0.13	<0.05	<0.01	<0.02	<0.05	<0.002	<0.01	<0.05	<0.01
	[illegible].3	<0.001	0.09	<0.05	<0.01	<0.02	<0.05	<0.002	0.02	<0.05	0.51
	[illegible].2	<0.001	0.09	<0.05	<0.01	<0.02	<0.05	<0.002	<0.01	<0.05	0.54
26	6.8	<0.001	0 1B	<0.05	<0.01	<0.02	<0.05	<0.002	<0.01	<0.05	0.03
	6.2	<0.001	0 09	<0.05	<0.01	<0.02	<0.05	<0.002	0.02	<0.05	0.02
	6.6	<0.001	0 09	<0.05	0.05	<0.02	0.03	<0.002	0.04	<0 05	<0.01

1/ Units

Geraghty & Miller, Inc.