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Florida Department of Environmental Regulation

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Lawton Chiles, Governor

Virginia B. Wetherelf, Secretary

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NAS PENSACOLA
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March 22, 1993

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Linda Martin
Department of the Navy
Southern Division - Code 1851
Naval Facilities Engineering Command
Post Office Box 10068
Charleston, South Carolina 29411-0068

Dear Ms. Martin:

Department personnel have completed the technical review of the Draft RI/FS Sampling and Analysis Plan, Category III, Sites 2, 11, 30 and 38, NAS Pensacola. I have enclosed a memorandum addressed to me from Mr. Jorge R. Caspary. It documents our comments on the referenced report.

If I can be of any further assistance with this matter, please contact me at 904/488-0190.

Sincerely,

Jorge R. Caspary for

Eric S. Nuzie
Federal Facilities Coordinator

ESN/bb

cc: Jorge Caspary
Bill Kellenberger
Ron Joyner
Allison Drew
Satish Kastury
Lynn Griffin
John Mitchell

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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Interoffice Memorandum

TO: Eric S. Nuzie, Federal Facilities Coordinator
Bureau of Waste Cleanup

THROUGH: Dr. James J. Crane, PG III/Administrator
Technical Review Section JJC

FROM: Jorge R. Caspary, PG I/Base Coordinator
Technical Review Section JRC.

DATE: March 19, 1993

SUBJECT: Review of Draft RI/FS Sampling and Analysis Plan, Category 111: Sites 2, 11, 30, and 38. NAS Pensacola.

I have reviewed the above referenced documents provided by the Navy and have the following comments.

General Comments

1.- The Navy proposes to change the RCRA-based Appendix IX analysis requirement to the CERCLA-based "Full Scan" analysis plus the collection of additional information about soil and groundwater physical parameters necessary to prepare the upcoming Feasibility Study. Given the fact that this course of action is being implemented at other NPL listed military facilities in the State of Florida, the proposed change is acceptable.

2.- The Navy has changed soil sample intervals from the already approved 0.0-1.0, 1.0-2.5, 2.5-5.0, etc. feet below ground surface to continuous split-spoon sampling from ground surface to the water table (0.0-2.0, 2.0-4.0, etc. below ground surface) "to ensure a regular and consistent sampling interval". The Navy should be aware that during the July 14, 1992 RPM meeting, the Navy agreed to sample from 0.0-1.0, 1.0-2.5, **etc. feet bgs. At** that **time, FDER and EPA** presented technical reasons why the 0-1.0 and the 1.0-2.5 feet bgs are perhaps the most important intervals in soil sampling; furthermore, FDER approved the RI/FS Workplans for groups H, I, P, and Q and those workplans were approved based on this change. In addition, page 4-11 of the approved Sampling and Analysis Plan (SAP) for Operable Unit 10 indicates that surficial soil samples (0.0-1.0 foot bgs) will be obtained. The Department encourages the Navy to clarify its final position regarding the soil sampling intervals.

3.- As a result of various discussions between the Navy, FDER, and EPA the Navy has changed the intermediate and deep monitoring well annular grout materials from bentonite to a Portland cement grout with some percentage of bentonite. This is an acceptable change.

The use of bentonite as exclusive grout material was initially required by EPA for the Operable Unit 10 SAP and other SAPs. At the last RPM meeting held in Atlanta, the issue of EPA's requiring the Navy to exclusively use bentonite as grout in monitoring wells came up for discussion. At the time, EPA's hydrogeologists stated that they were merely following their region's SOP/QAM. A review of EPA's Region IV SOP/QAM Rev. 0 Section E.3 pp. 2 has failed to reveal the above requirement. Also, personnel from EPA-ESD stated that they were aware of bentonite grout being the exclusive annular grout material at various Superfund sites throughout Florida.

A literature search done by this reviewer as well as phone conversations with various water well industry authorities, has failed to reveal a compelling reason for using bentonite as the exclusive annular grout material in monitoring well installations Bentonite, non shrinking neat cement, or neat cement with shrinkage compensating additives -usually bentonite- are among the most effective materials used as annular seals (Barcelona et al., 1983, 1985a; Calhoun, 1988; Johnson et al., 1980). Likewise, a nationwide EPA "Handbook on Suggested Practices for the Design and Installation of Groundwater Monitoring Wells" considers the use of bentonite and cement as acceptable borehole grout materials.

As explained to the EPA's RPM and various EPA-ESD hydrogeologists the State of Florida regulates the construction of groundwater monitoring and water supply wells by means of Rule 17-532 F.A.C. which states on pp. 11 that "Casing for wells which obtain their water from a rock layer shall, as a minimum, be seated, or sealed with neat cement grout, into that rock layer or other consolidated formation"; further, Section 500 (4) pp. 12 states that "alternate grouting methods providing equivalent protection (to a neat cement grout) shall be approved in writing by the permitting agency". As stated in Section 500 (4) pp. 12 the Department recognizes the viability of alternate grouting methods.

As discussed with the Navy and EPA RPMs, the Department does not oppose the use of bentonite as grout material if the appropriate permitting agencies deem that the technical justifications are sufficient enough to waive Rule 17-532.500 (D); however, the Department does not agree with EPA Region IV's position that bentonite shall be the sole grout material to be used in intermediate and deep monitoring well installations. The Department believes that decisions regarding the choice of annular seal material should primarily follow the intent of Rule 17-532 F.A.C. and exceptions allowed by this Rule should be handled between the Navy and the permitting agency, namely, the Northwest Florida Water Management District.

4.- The Navy indicates that short pump tests will be conducted at these sites to obtain aquifer properties. This is an acceptable course of action in order to get an initial assessment of aquifer properties; however, there seems to be some confusion regarding the Department's position on pump tests. Operable Unit 10 (OU-10) Sampling and Analysis Plan Section 4.5.4 Hydrologic Assessment was approved by the Department due to the fact that Sites 32, 33, and 35 are probably the most studied sites at the Facility in terms of aquifer properties. The Department felt that a long pump test was not necessary at these sites due to the fact that the Navy has installed a pump and treat system at the Operable Unit as part of the RCRA Corrective Actions Plan, and according to design specifications, a long pump test should have been conducted prior to the system coming on line. However, and as opposed to the Operable Unit 10 sites, most of the remaining sites at the Facility lack any information on aquifer properties and the Department suggests that a pump test be carried out at these sites as soon as it's practical. Furthermore, the Department's position on pump tests is clearly stated in a December 29, 1992 memorandum. The Department expects that longer than eight hour pump tests will be conducted at the majority of Pensacola's sites before proceeding to the implementation of any Feasibility Study and subsequent remediation. The Department encourages the Navy to clarify its position on this issue.

REFERENCES

Barcelona, M.J., J.P. Gibb and R. Miller, 1983. A guide to the selection of materials for monitoring well construction and groundwater sampling ; Illinois State Water Survey, SWS Contract Report 327, Champaign, Illinois, 78pp.

REFERENCES - CONT'D

Barcelona, M.J., **J.P.** Gibb, **J.A.** Helfrich **and E.,E.** Garske, 1985a. Practical Guide for Ground-water sampling; Illinois State Water Survey, SWS Contract Report 374, Champaign, Illinois, 93 PP.

Calhoun, D.E., 1988, Sealing Well Casings: An Idea Whose Time Has Come; Water Well Journal, Vol. 42, No. 2, pp. 25-29.

Johnson, R. C., Jr., C.E. Kurt and G. F. Dunham, Jr., 1980, Well Grouting and Casing Temperature Increases; Ground Water, Vol. 18, No. 1, pp. 7-13.