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**ESE**

**ENVIRONMENTAL SCIENCE  
AND ENGINEERING, INC.**

December 13, 1985

ESE No. 85 275 1000

Ms. Cherryl Barnett  
Department of the Navy  
Atlantic Division, Code 1143  
Naval Facilities, Engineering Command  
Bldg. N23, Gilbert Street  
Norfolk, Virginia 23511

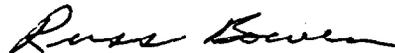
RE: Contract No. N62740-85-B-7972, Confirmation Study, U.S. Naval Complex,  
Puerto Rico

Dear Ms. Barnett:

Enclosed is the progress report for the period of November 16, 1985 through  
December 15, 1985.

Please do not hesitate to call me if you have any questions regarding this  
progress report.

Sincerely,



Russell V. Bowen, P.E.  
Project Manager

RVB/tw

enclosure

cc: Mike Keirn, ESE

## MONTHLY PROGRESS REPORT

PERIOD 11/16/85 THROUGH 12/15/85

U.S. NAVAL COMPLEX, PUERTO RICO  
CONFIRMATION STUDY

### WORK ACCOMPLISHED

1. Responded to Mitre Corp.'s comments following the audit of the ESE laboratory, and obtained verbal approval of ESE laboratory from the EIC.
2. Completed site reconnaissance of sites at NAVSTA Roosevelt Roads.
3. Collected surface water, sediment, and soil samples from Sites 5,6,7,9,12,14,15,16, and 18 at NAVSTA Roosevelt Roads, and Sites 6 and 7 at NSGA Sabana Seca.
4. Initiated analyses of samples collected at the sites listed above under Item 2.
5. Installed the ground water monitoring wells at Sites 7, 10, and 12 at NAVSTA Roosevelt Roads.
6. Initiated revisions to the Preliminary Work and Safety Plan in response to comments received from the EIC, and NAVSTA Roosevelt Roads and NSGA Sabana Seca personnel.

### PROBLEMS ENCOUNTERED

1. Because ongoing labeling of surface water, sediment, and soil sampling locations had to be incorporated into revisions to the Work Plan graphics, a delay in graphics production resulted. Consequently, the final Work and Safety Plan will not be forwarded to the EIC, NAVSTA Roosevelt Roads, and NSGA Sabana Seca until the week of December 20, 1985. However, because the nature of the required revisions to the Work and Safety Plan does not pose a problem to the conduct of the onsite investigation, the onsite investigation is proceeding on schedule with no technical or safety related problems.
2. The hollow-stem augering technique being used for the ground water monitor well installation caused delays in drilling the upgradient well at Site 12, NAVSTA Roosevelt Roads, because of the stiff clays and weathered rock encountered at this upland location. In addition, the drill rig sustained some damage due to the stress on the hollow-stem auger. Because the geology at Site 13 (NAVSTA Roosevelt Roads), Site 1 (NAF Vieques), and Site 7 (NSGA Sabana Seca) is similar to that at the upgradient well location at Site 12, drilling problems are also anticipated at these sites if the hollow-stem augering technique is used. ESE recommends that the mud rotary drilling technique be considered for use at those drilling locations where this problem is encountered.

PERCENTAGE OF WORK COMPLETED

Approximately 18 percent.

PLANS FOR FOLLOWING MONTH

1. Finalize Work and Safety Plan.
2. Complete ground water, surface water, sediment, and soil sampling at Sites 2 and 3 at NAF Vieques.
3. Continue laboratory analyses of samples.
4. Install the monitor wells at Sites 13 and 5 at NAVSTA Roosevelt Roads.

CONFIRMATION OF ANY CLARIFICATIONS OR TECHNICAL GUIDANCE

None