MARTIN MARIETTA

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ARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX P
OAK RIDGE, TENNESSEE 37831

October 12, 1988

Mr. Rick Smith
Hunter Environmental Services/ESE
Five Miles West of I75 on State Road 26
Gainesville, FL 32607

Dear Mr. Smith:

Performance Evaluation Samples for Laboratory Approval

The requirements for quality control of analytical data from Navy subcontractors and their selected analytical laboratory(s) are outlined in the Navy document "NEESA 20.2-047B". The Analytical Chemistry Department, Analytical Environmental Support Group, at the K-25 Plant is responsible for ensuring that the appropriate project QC requirements are identified and that conditions for laboratory approval are fulfilled. Analysis of performance samples is part of the laboratory approval process, as outlined in Section 5 of the above document.

The accompanying test samples are to be analyzed by your laboratory for the parameters indicated in Attachment 1 and in compliance with the following conditions:

1. Performance samples MUST be analyzed by your laboratory organization. NO SUBCONTRACTING IS ALLOWED for the analysis of the performance samples. Performance samples and the project samples must be analyzed by the same laboratory. If a particular analysis will be subcontracted, we must be notified and a PE sample will be sent to that lab for the parameter that will be subcontracted.

2. The samples shall be logged into the laboratory and designated with a sample number.

3. The laboratory shall utilize the EPA Contract Laboratory Protocol (CLP) methods and criteria to identify and quantitate the concentrations of mercury, antimony, arsenic, lead, selenium, and thallium. For the determination of volatile compounds, Methods 8010 and 8020 are to be used. Supporting documentation, per Level C requirements, and calibration response factors with chromatograms, must be supplied. Such criteria will include, but not be limited to, the use of: approved instruments, digestion and analysis methods, QC requirements and documentation.

4. The test results shall be reported in a full CLP data package and format.

5. The term analysis shall mean and include sample extraction/digestion specified by the appropriate analytical method of quantitation.

6. The analysis report shall be signed by the Laboratory Director or the Laboratory Quality Assurance Coordinator and sent to Energy Systems within 20 working days after receipt of samples.

   If data is sent by PREMIUM transport, the address is :

   Gloria J. Mencer
   Martin Marietta Energy Systems, Inc.
   Highway 58, Building K-1004A, Drop A20
   Oak Ridge, TN 37830

   If data is sent by regular mail, the address is:

   Gloria J. Mencer
   Martin Marietta Energy Systems, Inc.
   P. O. Box 2003, Mail Stop 7440
   Oak Ridge, TN 37831-7440

7. The attached instruction sheet indicates the requested analysis parameters and the necessary sample preparation prior to extraction/digestion.

If you have any questions, please call me at (615) 576-1570.

Sincerely,

Gloria Mencer

Gloria J. Mencer
Project Manager
U. S. Navy

GJM:mpo

Attachment:
As stated

cc: N. Johnson, Atlantic Division
M. S. Miller
A. R. Sturtzer, NEESA
G. J. Mencer File (2)

Sample Preparation Instructions for Performance Evaluation Samples

These sample are concentrates (with the exception of the volatile organics) and must be diluted by the following instruction before analysis.

The laboratory shall use proven instruments and techniques to identify and measure the concentrations of volatile, semi-volatile, pesticide/PCB compounds, and the metals listed on the Target Compound List (TCL) in the 7/87 revision.

The package provided to you for the approval consists of volatiles, PCB's, and metals. Please follow the appropriate directions for the samples provided.

_X_	Sample A	Base/Neutrals: Equilibrate the concentrate to ambient temperature. Volumetrically pipet 1.0 ml of the concentrate into 1 liter of reagent water. Add the concentrate with the pipet tip held 1 cm below the surface of the water. Thoroughly mix the sample before analysis.
_X_	Sample B	Acids: Equilibrate the concentrate to ambient temperature. Volumetrically pipet 1.0 ml of the concentrate into 1 liter of reagent water. Add the concentrate with the pipet tip held 1 cm below the surface of the water. Thoroughly mix the sample before analysis.
_X_	Sample C	Volatiles: Equilibrate the sample to ambient temperature and analyze.
_X_	Sample D	Pesticides: Equilibrate the concentrate to ambient temperature. Volumetrically pipet 1.0 ml of the concentrate into 1 liter of reagent water. Add the concentrate with the pipet tip held 1 cm below the surface of the water. Thoroughly mix the sample before analysis.
_X_	Sample E	PCB's: Equilibrate the concentrate to ambient temperature. Volumetrically pipet 1.0 ml of the concentrate into 1 liter of reagent water. Add the concentrate with the pipet tip held 1 cm below the surface of the water. Thoroughly mix the sample before analysis.

Sample F — Metals: Three vials are available for the trace metals analyses. The vials should be diluted as noted: Pipet 1.5 ml of reagent grade Nitric Acid and 10.0 ml of the vial into a 1 liter volumetric flask and dilute to the mark with laboratory-grade water.

X — Vial #1 is for the ICAP analysis (an AA may be used if an ICAP is unavailable) and the following metals should be analyzed: Aluminum, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Nickel, Silver, and Zinc.

X — Vial #2 is for Mercury analysis.

X — Vial #3 is for Graphite Furnace AA Analyses and should include the following metals: Antimony, Arsenic, Lead, Selenium, and Thallium.