

24 September 1986
W52-1536

Mr. William Coulombe, LQAC
Environmental Science and Engineering, Inc.
P.O. Box ESE
Gainesville, FL 32602

Dear Mr. Coulombe:

As part of the U.S. Navy's Quality Assurance (QA) Program, analytical chemistry laboratories under contract for Navy Assessment and Control of Installation Pollutants (NACIP) Program confirmation studies are required to submit monthly progress reports to maintain Navy approval. The types of information that are to be included in this monthly progress report are listed in Section 3.6 of the "Sampling and Chemical Analysis Quality Assurance Guide for Navy Assessment and Control of Installation Pollutants (NACIP) Program" (NEESA 20.2-047, hereafter referred to as the guide). Appendix E of the guide contains a suggested table of contents for these monthly reports.

The following ESE QA/QC reports have been reviewed by MITRE:

- QA/QC Progress Report for January 1986 - Puerto Rico Confirmation Study
- QA/QC Final Report - Charleston Lead Evaluation Study
- QA/QC Progress Report for March and April 1986 - Puerto Rico Confirmation Study

The following comments need to be addressed by you to clarify the documents that were submitted:

I. General Comments:

1. The precision data that have been submitted by ESE are not in an acceptable format. These data are currently plotted on the same control charts as the accuracy data, however, the accuracy control charts do not specify the limits for the precision data. Also, there does not appear to be duplicate data for all analytes. Please modify your formats for precision data vis. the above comments.

2. The monthly progress report (January, Puerto Rico) for the data that were generated in January contained only "selected" control

charts "to reduce the volume of control charts processed." All out-of-control points must be noted by ESE, and these out-of-control data must be submitted by ESE to MITRE for review.

3. The January 1986 Puerto Rico monthly progress report mentions out-of-control events and contains the control charts that plot these data, but no corrective action report forms have been submitted. ESE's response to the MITRE QA Plan review states that ESE will document instances of QC problems to include all the criteria mentioned in the Navy guide. The guide requires that the monthly progress report include "references to documentation and corrective action reports" for out-of-control events (pages 3-6 of the guide). These corrective action report forms must be completed and filed with the raw data to provide a complete and reconstructable data set for any further review.

II. Specific Comments:

1. Metals analyses in the January 1986 Puerto Rico report were reported to be in error with respect to the analysis of the QC data. It is stated that this error has been reviewed by the Chemistry Department Manager and the Laboratory Quality Assurance Coordinator (LQAC) who "... have concluded that each batch was in control." Please provide the information upon which this judgement was made.

2. For the January Puerto Rico report, the control limits for PCB-1260 seem inordinately wide. Are your limits consistent with EPA-CLP limits for this analyte? If not, please explain.

3. The March/April Puerto Rico monthly report cites a problem with the soil digestion procedure for hexavalent chromium in soils. Please supply MITRE with a summary of this digestion method for review.

4. The Phenol-D(5) control chart that is included in the March/April Puerto Rico monthly progress report contains two points that are between the UWL and the UCL. This is one of the conditions specified in the ESE response to the MITRE QA Plan review that should alert "... the analyst and department manager [to] investigate the method." No mention of this event was found in the monthly progress report. Please explain.

5. The control charts for the pesticides (March/April, Puerto Rico) show high recoveries and large percent difference between duplicate spikes. This is noted in the monthly progress report, but it is not clear how an incorrect spiking solution can result in the large

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percent difference between the duplicate spikes. The trend does not seem to be random error because the large percent difference is consistent for several analytes. Please explain.

6. For the March/April Puerto Rico report, seven or more consecutive points are noted on the 1,2-Dichloroethane-D(4), Toluene-D(8), and Lead UG/G-D control charts on one side of the central line. This is one of the conditions specified in the ESE response to the MITRE QA plan review that alerts "the analyst and department manager [to] investigate the method." No mention of the above events was found in the monthly progress report. Please explain.

7. A decreasing trend in lead recovery (final, Charleston Lead) was attributed to bad standards. Please describe the findings and actions when new standards were used, as proposed in your final report.

8. Replicate control spikes, No. 30963, February 26, 1986, (March/April, Puerto Rico) were both unacceptable. The analytical batch was released because "all other QC data were acceptable." Please provide these other QC data that were used to release the analytical results.

Please address the above deficiencies, and send to me an addendum to your monthly progress report as soon as possible. This information is necessary for the responsible EIC to properly evaluate the data that were generated by your laboratory.

If you have any questions concerning the above, do not hesitate to call me at (703) 883-7810 or Dr. Jerry Fitzgerald at (703) 883-7884.

Sincerely,



Samuel W. Hopper
Technical Staff
Hazardous Waste and Safety Systems

SWH/seb

cc: EIC - Gale Evens, SouthDiv
EIC - Cheryl Barnett, LantDiv