



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING  
NEW YORK, NEW YORK 10278

AUG 28 1991

Gerald F. Hoover  
Project Engineer, Code 142  
Environmental Restoration Branch  
U.S. Navy, Northern Division  
Naval Facilities Engineering Command  
U.S. Naval Base, Bldg. 77 Low  
Philadelphia, PA 19112-5094

Re: Data Validation

Dear Mr. Hoover:

The U.S. Environmental Protection Agency (EPA) has performed an audit of the Data Validation performed for NWS Earle and have enclosed the following comments in the attached memorandums: Monitoring Management Branch Data Validation of NWS Earle by Heartland Environmental Services, Inc., dated July 15, 1991 and Revalidation of Inorganic Data for the Naval Weapons Station, dated August 6, 1991.

Please distribute these comments to the appropriate personnel so that these discrepancies do not happen on future data validations. Also, please submit a response to these comments to EPA within two weeks.

If you have any questions concerning this matter, please contact me at 212-264-6609.

Sincerely yours,

A handwritten signature in cursive script that reads "Paul G. Ingrisano".

Paul G. Ingrisano  
Project Manager  
Federal Facilities Section

Enclosures

cc: Capt. W.M. Migrala, Jr., NWS Earle, w/encl  
G. Hermann, NWS Earle, w/encl  
J. Freudenberg, NJDEP, w/encl  
R. Johnson, Weston, w/encl

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION II

DATE:

JUL 15 1991

SUBJECT: Monitoring Management Branch Data Validation of NWS Earle by  
Heartland Environmental Services, Inc.

FROM: George Karras, Chemist *George Karras*  
Monitoring Management Branch

TO: Amelia Jackson, Chemist  
Monitoring Management Branch

My revalidation of the NWS Earle Organic (VOA) data yield the following discrepancies in the data assessment reported by Heartland Environmental Services, Inc.:

1. The data validators were not aware that sample #19-028-S202 is a field blank and sample #19-030-S302 is a trip blank. This information was found in the Final QA Project Plan prepared by Weston, Inc., Section 1.6.2.1; pages 1-27 & 1-28. As a result of identifying these blanks, the validation results need to be modified. The wording in the "Blank Contamination" section of the data assessment would appear as follows:

B) Field or blank contamination

The following analyte result in the sample specified was qualified with "U" (non-detect with the value listed as the detection limit):

Acetone : 19-028-S002, 19-029-S002, 19-030-S002 & 19-031-S002

D) Trip blank contamination

The following analyte result in the sample specified was qualified with "U" (non-detect with the value listed as the detection limit):

Methylene Chloride: 19-028-S002, 19-029-S002, 19-030-S002, & 19-031-S002

2. The data validators misinterpreted the "Action" section of the Region II Standard Operation Procedure (SOP), Section 6.2, page 8 for blank contamination "Reject sample result & report CRQL; cross off 'B' flag" when sample conc < CRQL & is <10X blank value. The word reject does not mean to add "R" flag, it means to cross off sample value and replace it with the CRQL for that analyte. To prevent further confusion, "Reject" has now been replaced with "Cross off" in our present SOP.

3. I was not able to understand which samples and analytes were qualified for being outside the %RSD and %D limits in the calibration section of the data assessment. The appropriate way to word this section is as following :

The following positive values in the samples shown were qualified "J" (estimate) for  $25 < \%D < 50$  :

Acetone : 19-028-S002, 19-029-S002, 19-031-S002, 19-030-S302,  
& 19-028-S202

The following analyte (non-detect) in the sample shown was qualified "J" (estimate) for  $50 < \%D < 90$  :

Acetone : 19-030-S002

4. The data validator needs to contact the Laboratory for an explanation on why 2-Butanone has Ave. RF = 0.298 in the soil Initial Calibration but Ave. RF = 0.087 in the water Initial Calibration.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION II

DATE: AUG 06 1991

SUBJECT: Revalidation of Inorganic Data for the Naval Weapons Station

FROM: Hanif Sheikh, Chemist  
Toxic and Hazardous Waste Section

*Amelia Jackson for*

TO: Amelia Jackson, Chemist  
Toxic and Hazardous Waste Section

As per your request, I have reviewed the data generated from the samples collected at Naval Weapons Station Earle, Colts Neck, New Jersey during February 1991 and analyzed by Roy F. Weston, Inc. The samples reviewed consisted of 20 soil samples for Cadmium and lead, 8 soil and two water samples for full Target Analyte List (TAL) inorganics. The data was initially validated by Heartland Environmental Services, Inc. of St. Peters, Missouri, using the Region II SOP for evaluation of metals data.

I feel Hartland Environmental Services, Inc. performed a thorough review of the data, with a few discrepancies as noted below.

Water Samples - (for full TAL inorganics)

1. ICP Serial Dilution Analysis -

The ICP Serial Dilution Analysis is out of control (i.e. the percent difference > 10%) for Ca, iron and sodium. According to the Region II SOP, the results of iron and sodium, in addition to the calcium results, should also be flagged (J) as estimated. Only the positive data  $\geq 10 \times$  IDL are flagged as estimated due to this QC criterion. The statement in the data assessment narrative used for Calcium "Flag all positive and non-detect results as estimated" is not entirely correct.

Soil Samples - (for full TAL inorganics)

1. The "Summary of Data Qualifications" sheet provided by Heartland Environmental Services, Inc. in their validation report indicates that validation was performed for several analytes (Sb, Cd, Ba, Cr, Co, Cu, Mn, Ni, Hg, V, Zn, and CN) for the samples with the lab ID number 9103L757-15 through 9103L757-31. Of these, however, the samples that were

analyzed only for Pb and Cd need not be qualified for all the other analytes mentioned above. Those samples are: 1903L757-15, 16, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 31. These samples have the following EPA sample numbers:

19-001-S001	19002-S001,	19-003-S002
19-004-S001,	19-005-S001,	19-006-S001
19-007-S001,	19-008-S001,	19-009-S002
19-010-S001,	19-011-S001,	19-012-S001
19-013-S002		

2. CRDL Standard Analysis -

Recoveries of the CRDL standards for copper and antimony are 124% and 123.5% respectively. According to the Region II SOP, only the samples with positive results of copper and antimony within the affected ranges (true value  $\pm$  2xCRDL) should be flagged as estimated. The samples that should be flagged as estimated are:

Cu - 19-003-S001, 19-009-S001, 19-009-S101,  
19-013-S001, 19-018-S001, 26-002-D001  
26-002-D101,

Sb - 19-013-S001, 19-003-S001, 26-002-D001  
26-002-D101, 26-004-D001

The Heartland, ESI validator, however, has incorrectly qualified all the sample results of copper and antimony.

Soil Samples - (for Cadmium and lead only)

No comments.

If you have any questions please see me.