

November 16, 2003

Mr. John Rendall
Maine Yankee
321 Old Ferry Road
Wiscasset, Maine 04578

RE: Project No.: Maine Yankee Soil Samples
Lab Name: Katahdin Analytical Services, Westbrook, Maine
Site Name: Maine Yankee Nuclear Power Plant, Wiscasset Maine
Samples Collected: 10/14/03
4 soil samples
1 aqueous equipment blank sample
Data package: MY144

Method 8082

Samples Collected: (Client IDs)

MY05TP220(0-0.5)	MY05TP221(0-0.5)	MY05TP222(0-0.5) FD	MY05TP223(0-0.5) FD
MY05TP220(EB)			

EB-Equipment Rinsate Blank
FD- Field Duplicate Samples

Dear Mr. Rendall:

A Tier II data validation was performed on the polychlorinated biphenyls (PCBs) analytical data for 4 soil samples and 1 equipment/field blank sample collected at the Maine Yankee Nuclear Power Plant, Wiscasset Maine. The laboratory, Katahdin Analytical Services, Westbrook Maine, prepared and analyzed the samples in accordance with US EPA SW-846 method 8082. Soil samples were extracted following US EPA SW-846 method 3540 (Soxhlet) and aqueous samples were extracted following US EPA SW-846 method 3510 (Sep funnel).

The data validation was conducted in accordance with *Region I, EPA-New England Data Validation Functional Guidelines (12/96)*, the *QAPP for Maine Yankee Decommissioning Project, (rev01)*, *Laboratory Data Validation Functional Guidelines for Evaluating Pesticides/PCBs Analyses (05/85)*, and in conjunction with the individual methods and the laboratory established criteria. The following items were validated:

- Chain of custody documents *
- Sample log in documents *
- Preservation and Technical Holding Times *
- Initial Calibrations *
- Continuing Calibrations *
- Laboratory and Field Blank Analyses *

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- Matrix spike/Matrix Spike Duplicate Results *
 - Laboratory/Field Duplicate Results *
 - Laboratory Control Samples (blank spikes) *
 - System Monitoring Compounds (Surrogate Recoveries)
 - PE Samples/Accuracy Check (NA)
 - Compound Quantitation and Reported Quantitation Limits (NA)

* - All Criteria met

The following information was used to generate the Data Validation Memorandum Attachments:

Table I Recommendation Summary Table- summarizes validation recommendations: 8082.

Table II Overall Evaluation of Data- summarizes site DQOs and potential usability issues: 8082.

Data summary tables to be provided in an electronic format.

Overall Evaluation of Data and Potential Usability Issues

Data Use- To determine the nature and extent of potential contamination, to identify any potential contaminant source areas requiring further evaluation, to support any remedial activities that may be necessary to minimize potential risk to human health and environment.

Accuracy and precision acceptance criteria are specified in the *QAPP for Maine Yankee Decommissioning Project, (rev01)*. QAPP acceptance criteria are used for this validation. Laboratory acceptance criteria are referenced in the data package.

Results were reported to the laboratory's PQLs and adjusted for sample mass, dilution factor, and total solids. Results were reported on a dry weight basis. The low point of the calibration curve is at the laboratory's reporting limit.

The Aroclor-1260 results for samples MY05TP221(0-0.5) and MY05TP222(0-0.5) are reported as estimated (J). Reported results are between the method detection limit (MDL) and the laboratory's reporting limit.

MY05T222(0-0.5) was the MS/MSD reported for this data package. All MS/MSD results met QAPP acceptance criteria for accuracy (percent recovery) and precision (RPD).

One soil and one aqueous LCS were reported. All recoveries met acceptance criteria for the soil LCS and aqueous LCS.

No other data were qualified due to QC results reviewed for this data package.

295 Lower Flying Point Road ☐ Freeport ME 04032
Phone: (207) 865-1256 ☎ Fax: (207) 865-1116 ☐ Electronic Mail: tlewis1260@aol.com

Chain of Custody Documents

The sampling chain of custody documents were properly signed and dated. Internal custody documents were not submitted. Review of internal custody documents is not part of a Tier II validation for this project.

Custody seals were present and intact.

Sample MY05TP222(0-0.5) was identified as MS/MSD sample on the COC.

Sample Log-in Documents

Laboratory Sample Receipt Condition Reports (SRCR) indicate that all samples were received in good condition. The cooler temperature was 2.2° C. No results are qualified based upon the sample cooler temperatures.

There were no deviations indicated on the SRCRs. The validation memo is consistent with the laboratory data package sample IDs.

Preservation and Technical Holding Times

All samples were properly preserved and analyzed within holding times.

Initial Calibration

All initial calibration criteria were within the method calibration acceptance criteria. The laboratory analyzed a 6 point standard curve and reported results from the 2nd order regression. All correlation coefficients exceeded 0.995. The low standard is at the reported method PQL (Practical Quantitation Limit) and the project quantitation limit. The laboratory did include the origin in the calibration curve. US EPA SW846 calibration procedures (section 8000) state "do not include the origin (0,0) as a calibration point."

No results are qualified based upon the initial calibration results.

Continuing Calibration

All continuing calibration criteria were met on at least one of the reported channels for all compounds. Note that continuing calibration compound % differences may be > 15% on one column and < 15% on the other column. No data were qualified due to continuing calibration results.

Laboratory and Field Blank Analyses

Sample MY05TP220(EB) was analyzed as the equipment blank. All PCB results were reported by the laboratory as non-detected (U).

One aqueous and one soil laboratory preparation blank were reported in the data package. All PCB results were reported by the laboratory as non-detected.

No field sample data were qualified due to laboratory or field/equipment rinsate blank results.

Matrix Spike/Matrix Spike Duplicate Results

No aqueous MS/MSD was analyzed. The equipment rinsate blank was the only aqueous sample.

MY05TP222(0-0.5) was the MS/MSD reported for this data package. Aroclor-1016 and Aroclor-1260 were the spiked compounds for the MS/MSD samples. Note that the acceptance criteria in the data package are not the QAPP acceptance criteria. All recoveries were evaluated according to the QAPP criteria.

All soil PCB MS/MSD results met QAPP acceptance criteria for precision (percent recovery) and accuracy (RPD). No soil field sample data were qualified due to MS/MSD results.

Field/Laboratory Duplicates

Soil samples MY05TP222(0-0.5) and MYTP223(0-0.5) were a field duplicate pair. Aroclor-1260 was reported in both samples at 14 ug/Kg and 19 ug/Kg respectively. The laboratory's reporting limit is 17 ug/Kg. No results are qualified based upon the field replicate precision.

No laboratory duplicate sample was analyzed.

Laboratory Control Sample Results

One aqueous LCS/LCSD pair and one soil LCS were analyzed. Note that the acceptance criteria in the data package are not the QAPP acceptance criteria. All recoveries were evaluated according to the QAPP criteria. All aqueous LCS/LCSD results were within the QAPP acceptance criteria.

All soil PCB LCS recoveries met QAPP acceptance criteria. No soil field sample data were qualified due to LCS results. Precision was evaluated from the soil MS/MSD recoveries.

System Monitoring Compounds (Surrogate Recoveries)

All surrogate recoveries were within QAPP acceptance criteria on both channels. The acceptance criteria specified in the data package are not the QAPP specified acceptance criteria. Recoveries were evaluated against the QAPP acceptance criteria.

PE/Accuracy Check

Performance evaluation results were not submitted. The LCSs were from an independent, referenced source.

Compound Quantitation and Reported Quantitation Limits

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Results were reported to the laboratory's PQLs and adjusted for sample mass, dilution factor, and total solids. The low point of the calibration curve is at the laboratory's reporting limit.

The Aroclor-1260 results for samples MY05TP221(0-0.5) and MY05TP222(0-0.5) are reported as estimated (J). Reported results are between the method detection limit (MDL) and the laboratory's reporting limit.

All positive PCB results are confirmed by GC analyses on a 2nd column of different polarity. The acceptance criteria is < 40% difference. All positive results differ by less than 40%.

Note that the laboratory reports the higher of the two positive results. US EPA SW-846 GC methods recommend that the higher result be reported.

Sincerely,
Kestrel Environmental Technologies, Inc.

Timothy Lewis
Validator

Attachments:

Table I: Validation Recommendation Summary

Table II: Overall Evaluation of Data for 8082

Maine Yankee Samples
MY144

Table I-Method 8082 PCBs Recommendation Summary

Sample ID	Matrix	Qualifier
MY05TP220(0-0.5)	Soil	A
MY05TP221(0-0.5)	Soil	J ¹
MY05TP222(0-0.5)	Soil	J ¹
MY05TP223(0-0.5)	Soil	A
MY05TP220(0-0.5)	Aqueous	A

A Accept all data.

J¹ Report the Aroclor-1260 result as estimated (J). The reported result is between the MDL and the laboratory's reporting limit.

TABLE II

EPA NE-Data Validation Worksheet
Overall Evaluation of Data

MY144 Katahdin Analytical Services

8082					
DQOs	Sampling/ Analytical	Measurement Error		Sampling Variability	Potential Usability Issues
		Analytical	Sampling		
To determine the nature and extent of potential contamination, to identify any potential contaminant source areas requiring further evaluation, to support any remedial activities that may be necessary to minimize potential risk to human health and environment.	Aqueous extracted by sep funnel (3510). Soil samples extracted by Soxhlet PCBs- 8082	A J ¹		*not assessed	Accept all results. Report the Aroclor-1260 results for MY05TP221(0-0.5) and MY05TP222(0-0.5) as estimated (J). The reported results are between the MDL and the laboratory's reporting limit.

Validator: _____

Date: _____