



March 16, 2005

Mr. Stephen Evans  
 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: 2/8/05  
 2 soil samples  
 1 aqueous equipment rinsate blank  
 Data package: WV0573

**Method 8082**

Samples Collected: (Client IDs)

MY05SS68(0-0.5)FD	MY05SS68A(0-0.5)FD	MY05SS68EB	
EB-Equipment Rinsate Blank		FD- Field Duplicate Samples	

Dear Mr. Evans:

A Tier II data validation was performed on the polychlorinated biphenyls (PCBs) analytical data for samples 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). Aqueous samples were extracted following USEPA SW-846 method 3510 (separatory 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 \*
- 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)*.

All PCB results for the aqueous equipment blank MY05SS68(EB), except Aroclor-1260, are qualified as non-detected estimated (UJ) due to the potential for low bias indicated by the LCS result. The laboratory reported the sample results as non-detected (U).

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

Note that the laboratory did not use QAPP acceptance criteria to flag the data. The validation was performed using QAPP acceptance criteria.

**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.

The laboratory provided sample pick-up. Custody seals were not present.

---

**Sample Log-in Documents**

Laboratory Sample Receipt Condition Reports (SRCR) indicate that all samples were received in good condition. The cooler temperatures were 2.9° C and 4.9° C.

There were no additional 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. All reported samples were 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 2<sup>nd</sup> 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**

No positive PCB results were reported in the laboratory preparation blanks. There were no positive PCB results reported for equipment blank sample MY05TP329(EB). No data are qualified due to contamination in laboratory or field blank samples.

**Matrix Spike/Matrix Spike Duplicate Results**

MY05SS68(0-0.5) is the MS/MSD reported for this data package. The QAPP acceptance criteria for recovery are 76-137% for Aroclor-1016 and 75-132% for Aroclor-1260. The QAPP acceptance criteria for %RPD is ≤ 50%. All results meet QAPP acceptance criteria.

No data are qualified due to the MS/MSD results.

---

**Field/Laboratory Duplicates**

Samples MY05SS68(0-0.5) and MY05SS68A(0-0.5) are reported as the field duplicates for this data package. The laboratory reported all field sample results as non-detected (U). All acceptance criteria are met. No data are qualified due to field duplicate results.

No laboratory duplicate sample was analyzed.

**Laboratory Control Sample Results**

The LCS recoveries were evaluated according to the QAPP criteria. One LCS was reported for the soil samples and one LCS was reported for the aqueous sample. The QAPP criteria for recovery for soils are 76-137% for Aroclor-1016 and 75-132% for Aroclor-1260. The QAPP criteria for recovery for aqueous samples are 67-137% for Aroclor-1016 and 69-133% for Aroclor-1260. All LCS results met the recovery acceptance criteria, except the aqueous LCS recovery for Aroclor-1016 (66%). All PCB results for the aqueous equipment blank MY05SS68(EB), except Aroclor-1260, were qualified as non-detected estimated (UJ) due to the potential for low bias indicated by the LCS result. The laboratory reported the sample results as non-detected (U).

The %RPD acceptance criteria for aqueous samples are  $\leq 30\%$ . Precision for aqueous samples could not be evaluated. Precision for soil samples was evaluated from MS/MSD results.

No field sample results are qualified due to LCS results.

**System Monitoring Compounds (Surrogate Recoveries)**

QAPP acceptance criteria for soils are 36-118% for TCMX and 34-127% for DCB. All surrogate recoveries for soil samples were within QAPP acceptance criteria.

QAPP acceptance criteria for aqueous samples are 51-113% for TCMX and 51-118% for DCB. All surrogate recoveries for aqueous field samples were within QAPP acceptance criteria. No field sample results were qualified due to surrogate recoveries.

It should be noted that the surrogate recoveries for TCMX for both the laboratory blank and the LCS were below 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**

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

No positive PCB results were reported in this data package.

Results were reported to the laboratory 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.

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.

Please contact Kestrel Environmental Technologies, Inc. with any questions regarding this information.

Sincerely,  
Kestrel Environmental Technologies, Inc.



Deborah Smith  
Validator

- Attachments:  
Table I: Validation Recommendation Summaries  
Table II: Overall Evaluation of Data for 8082

Maine Yankee Samples  
WV0573

**Table I-Method 8082 PCBs Recommendation Summary**

Sample ID	Matrix	Qualifier
MY05SS68(0-0.5)FD	Soil	A
MY05SS68A(0-0.5)FD	Soil	A
MY05SS68EB	Aqueous	J <sup>1</sup>

A Accept all data.

J<sup>1</sup> Report all results, except Aroclor-1260, as non-detected estimated (UJ) due to low recovery for the LCS. The laboratory reported the results as non-detected (U).

**TABLE II**

EPA NE-Data Validation Worksheet  
**Overall Evaluation of Data**

**WV0573 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.	Soil samples extracted by 3540. Aqueous samples extracted by 3510.  PCB 8082	A  J <sup>1</sup>		*not assessed	Accept all data.  Report all aqueous results, except Aroclor-1260, as non-detected estimated (UJ) due to low recovery for the LCS. The laboratory reported the results as non-detected (U).

Validator: \_\_\_\_\_

Date: \_\_\_\_\_