APPENDIX A

DATA USABILITY SUMMARY REPORT

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DATA USABILITY SUMMARY REPORT

ONONDAGA LAKE PRE-DESIGN INVESTIGATION

PHASE II

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SECTION 1

DATA USABILITY SUMMARY

Vibracore, deep boring, peeper, porewater, and surface water samples were collected from the Onondaga Lake Pre-design Investigation (PDI) sites in Solvay, New York from August 9, 2006 through December 5, 2006. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs).

The analytical laboratories for this project were Severn Trent Laboratories (STL) in Pittsburgh, Pennsylvania; STL in Burlington, Vermont; and STL in North Canton, Ohio.

1.1 LABORATORY DATA PACKAGES

The laboratory data packages received from STL were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation reports which are summarized by sample media in Section 2.

1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, shipped under a COC record, and received at STL within one to two days of sampling. All samples were received intact and in good condition at STL.

1.3 LABORATORY ANALYTICAL METHODS

The vibracore samples were collected from the site and analyzed for volatile organic compounds (VOCs), polynuclear aromatic compounds (PAHs), phenol, polychlorinated biphenyls (PCBs), mercury, pH, sulfide, total organic carbon (TOC), and/or ammonia. The deep boring samples were collected and analyzed for VOCs, metals, chloride, nitrate, sulfate, ortho-phosphate, and/or salininty. The peeper samples were collected and analyzed for VOCs, mercury, pH, dissolved organic carbon (DOC), and/or specific conductance. The porewater and surface water samples were collected and analyzed for metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved ortho-phosphate, conductivity, and/or salinity. Summaries of issues concerning these laboratory analyses are presented in Subsections 1.3.1 through 1.3.5. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, and comparability (PARCC) are discussed for each analytical method in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented by media in Attachment A.

1.3.1 Volatile Organic Analysis

Water and sediment samples collected from the site were analyzed by STL for VOCs using the USEPA SW-846 8260B analytical method. Certain reported results for the VOC samples were qualified as estimated due to noncompliant sample preservation, surrogate recoveries, laboratory control sample recoveries, matrix spike/matrix spike duplicate (MS/MSD) recoveries, instrument calibrations, internal standard responses, field duplicate precision, and sample moisture content. Therefore, the final reported VOC analytical results were 100% complete (i.e., usable) for the water and sediment data presented by STL. PARCC requirements were met overall.

1.3.2 PAH and Phenol Organic Analysis

Sediment samples collected from the site were analyzed by STL for PAHs and/or phenol using the USEPA SW-846 8270C analytical method. Certain reported results for these samples were qualified as estimated due to noncompliant sample preservation, internal standard responses, MS/MSD recoveries, instrument calibrations, field duplicate precision, and sample moisture content. Therefore, the reported PAH and phenol analytical results were 100% complete (i.e., usable) for the sediment data presented by STL. PARCC requirements were met overall.

1.3.3 PCB Organic Analysis

Sediment samples collected from the site were analyzed by STL for PCBs using the USEPA SW-846 8082 analytical method. Certain reported results for the PCB samples were qualified as estimated due to sample preservation, surrogate recoveries, laboratory control sample recoveries, MS/MSD recoveries, instrument calibrations, and sample moisture content. Certain reported results for the PCB samples were considered unusable and qualified “R” due to poor surrogate recoveries. Therefore, the reported PCB analytical results were considered 47% to 100% complete (i.e., usable) for the sediment data presented by STL. PARCC requirements were met overall.

1.3.4 Metals Analysis

Water and sediment samples collected from the site were analyzed by STL for metals and/or mercury SW-846 6010B (metals) and 7470A/7471 (mercury) analytical methods. Certain reported results for these samples were qualified as estimated due to noncompliant sample preservation, matrix spike recoveries, serial dilutions, and sample moisture content. Therefore, the reported metals data were considered 100% complete (i.e., usable) for the water and sediment data presented by STL. PARCC requirements were met overall.

1.3.5 Wet Chemistry Analyses

Water and sediment samples collected from the site were analyzed by STL for ammonia, pH, total sulfide, TOC/DOC, specific conductance, chloride/nitrate/phosphate/sulfate, and/or

conductivity/salinity using the 350.1, 150.1/9040/9045C, 9030B/9034, Lloyd Kahn/415.1, MCAWW 120.1, 300.0, and 9050A, respectively. Certain reported results for these samples were qualified as estimated due to noncompliant sample preservation, holding times, matrix spike recoveries, laboratory duplicate precision, laboratory control sample recoveries, instrument calibrations, and sample moisture content. Therefore, the reported analytical results for these samples were 100% complete with all data considered usable and valid for the water and sediment data presented by STL. PARCC requirements were met.

2.2 DEEP BORING SAMPLES

2.2.1 DATA USABILITY SUMMARY FOR SDG #C6I200194

A data usability review and validation has been completed for data packages pertaining to the sediment sample in SDG # C6I200194. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0175-01	09/19/06
OL-0175-01DP	09/19/06

This sample was analyzed for metals and anions. The sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory. Laboratory reported that the VOCs analysis was canceled as requested by Parsons.

Porewater was generated on October 18, 2006 via centrifugation. Porewater was collected, as sample OL-017501DP, and preserved for salinity, anions, and metals.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Metals

The following items were reviewed for compliancy in the metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (manganese, potassium) at concentrations less than the reporting limit; however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   For sample OL-0175-01, MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Magnesium, exceeded the QC

acceptance limit for Potassium, and were not calculated for other metals because sample concentration was greater than 4x spike amount. The OL-0179-01 Potassium result was qualified as estimated. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit	Affected Samples	VAL Flag
OL-0175-01	Potassium	160.3/164.0	75-125	OL-0175-01	J

5. Laboratory Control Sample (LCS) Recoveries

All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. Serial Dilution Analysis

The serial dilution results were acceptable and within the %D QC acceptance limit for Calcium in sample OL-0175-01, but were not within %D QC acceptance limit for Iron, Magnesium, Manganese, Potassium, and Sodium. The serial dilution results were acceptable and within the %D QC acceptance limit for Calcium, Iron, Magnesium, and Manganese in sample OL-0175-01DP, but were not within %D QC acceptance limit for Potassium, and Sodium. Sample results associated with non-compliant serial dilution results were qualified as estimated.

7. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

A sample from a different SDG was utilized for MS/MSD analyses; results are not applicable.

5. Laboratory Control Sample (LCS) Recoveries

LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0. The LCS recovery (112%R) for ortho-phosphate by method 365.2 exceeded the upper control limit; OL-0175-01 orthophosphate result (0.77B) was qualified as estimated (J) based on non-compliant LCS result.

6. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

7. Data Completeness

All Anions sample results were considered 100% complete (i.e., usable).

2.2.2 DATA USABILITY SUMMARY FOR SDG #C6I210289

A data usability review and validation has been completed for data packages pertaining to the sediment sample in SDG # C6I210289. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0176-01	09/20/06
OL-0176-02	09/20/06
OL-0176-03	09/20/06
OL-0176-01DP	09/20/06
OL-0176-02DP	09/20/06
OL-0176-03DP	09/20/06

This sample was analyzed for volatile organic compounds (VOCs), metals, and anions. The sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Porewater was generated on October 18, 2006 via centrifugation. Porewater was collected, as samples OL-0176-01DP, OL-0176-02DP, and OL-0176-03DP, and preserved for salinity, anions, and metals.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A sample from a different SDG was utilized for MS/MSD analyses; results are not applicable

4. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

The laboratory method blank contained a detectable quantity of Methylene chloride. Evaluation results are shown below.

Method Blank ID	Analyte	Blank Conc. (ug/L)	Affected Samples	Sample Conc. (ug/L)	VAL Qual
C6I260000-031	Methylene chloride	4.8J	OL-0176-01	7.3	U
C6I260000-031	Methylene chloride	4.8J	OL-0176-02	6.3	U
C6I260000-031	Methylene chloride	4.8J	OL-0176-03	7.1	U

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
1C30926.D	1,2,4-Trichlorobenzene	-21.7	OL-0176-01, -02, -03	J	J/UJ
1C30926.D	Hexachlorobutadiene	-24.6	OL-0176-01, -02, -03	J	J/UJ
1C30926.D	Naphthalene	-20.7	OL-0176-01, -02, -03	J	J/UJ
1C30926.D	1,2,3-Trichlorobenzene	-22.2	OL-0176-01, -02, -03	J	J/UJ
1C30926.D	1,3,5-Trichlorobenzene	-29.8	OL-0176-01, -02, -03	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals

The following items were reviewed for compliancy in the metals analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals at levels below the reporting limits; however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed.

5. Laboratory Control Sample (LCS) Recoveries

All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. Serial Dilution Analysis

The serial dilution results were acceptable and within the %D QC acceptance limit for Calcium, Magnesium, and Manganese in sample OL-0176-01DP. Sample results for Iron, Potassium and Sodium were qualified as estimated ("J") in OL-0176-01DP, OL-0176-02DP, OL-0176-03DP.

7. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for OL-0179-01 were acceptable and within QC acceptance limits, with the exception of Chloride, which was not calculated because sample was analyzed at dilution.

5. Laboratory Control Sample (LCS) Recoveries

LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0. The LCS recovery (112%R) for ortho-phosphate by method 365.2 exceeded the upper control limit; associated sample results were detected at concentrations below the reporting limit. Evaluation results are shown below.

Analyte	LCS %R	Control Limit %R	Affected Samples	VAL Flag
o-Phosphate	112N	90-110	OL-0176-01	J
o-Phosphate	112N	26-144	OL-0176-02	J
o-Phosphate	112N	26-144	OL-0176-03	J

6. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

7. Data Completeness

All Anions sample results were considered 100% complete (i.e., usable).

2.2.3 DATA USABILITY SUMMARY FOR SDG #C6I220292

A data usability review and validation has been completed for data packages pertaining to the two sediment samples and one water sample in SDG # C6I220292. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0177-01	09/21/06
OL-0177-02	09/21/06
OL-0177-03	09/21/06
Trip Blank	09/21/06

These samples were analyzed for volatile organic compounds (VOCs), metals, and anions. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A sample from a different SDG was utilized for MS/MSD for QC batches 62700212 and 6269031; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank associated with QC batch 6269031 (sediments) contained a concentration of Methylene chloride (4.8J) less than the reporting limit; sample results less than five times blank amount (adjusted for dilution factor) were qualified as undetected (U). The method blank associated with QC batch 6270012 (waters) did not contain target compounds. Evaluation results are shown below.

Analyte	Method Blank/ QC batch	MB Conc. (ug/kg)	Samples Affected	Sample Conc. (ug/kg)	VAL Qual
Methylene chloride	C6I260000-031/ 6269031	4.8	0L-0177-01 OL-0177-03	5.0 8.1	U

6. Trip Blank Contamination

The trip blank associated with project samples did not contain target compounds at reported concentrations.

7. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

8. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC50926N.D	4-Methyl-2-pentanone	25.2	OL-0177-02	J	J/UJ
1C30926.D	Dichlorodifluoromethane	-25.7	OL-0177-01, OL-0177-03	J	J/UJ
1C30926.D	Chloroethane	56.3	OL-0177-01, OL-0177-03	J	J/UJ
1C30926.D	1,2,4-Trichlorobenzene	-21.7	OL-0177-01, OL-0177-03	J	J/UJ
1C30926.D	Naphthalene	-20.7	OL-0177-01, OL-0177-03	J	J/UJ
1C30926.D	Hexachlorobutadiene	-22.2	OL-0177-01, OL-0177-03	J	J/UJ
1C30926.D	1,3,5-Trichlorobenzene	-29.8	OL-0177-01, OL-0177-03	J	J/UJ

9. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0177-01 and OL-0177-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals

The following items were reviewed for compliancy in the metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (potassium, sodium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were not performed.

5. **Laboratory Control Sample (LCS) Recoveries**

   All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. **CRDL Standard**

   The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

7. **Interference Check Sample (ICS)**

   Interference check sample results were acceptable and within QC acceptance limits.

8. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

9. **Data Completeness**

   All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses :

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed for Anions by method 300.0. A sample from a different SDG was utilized for MS/MSD analyses for ortho-phosphate by method 365.2; results are not applicable.

5. Laboratory Control Sample (LCS) Recoveries

LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0. The LCS recovery (112%R) for ortho-phosphate by method 365.2 exceeded the upper control limit; however, all sample results were non-detect so no sample results were qualified based on LCS recovery.

6. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0177-01 and OL-0177-02.

7. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

8. Data Completeness

All Anions sample results were considered 100% complete (i.e., usable).

2.2.4 DATA USABILITY SUMMARY FOR SDG #C6I230157

A data usability review and validation has been completed for data packages pertaining to the two sediment samples and two water samples in SDG # C6I230157. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0178-01	09/22/06
OL-0178-02	09/22/06
OL-0178-03	09/22/06
OL-0178-04	09/22/06

These samples were analyzed for volatile organic compounds (VOCs), metals, and anions. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for sample OL-0178-01 (water) were acceptable and within QC acceptance limits in QC batch 6270012. A sample from a different SDG was utilized for QC batch 6269031 (sediments); results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank associated with QC batch 6269031 (sediments) contained a concentration of Methylene chloride (4.8J) less than the reporting limit; sample results less than five times blank amount (adjusted for dilution factor) were qualified as undetected (U). The method blank associated

with QC batch 6270012 (waters) did not contain target compounds. Evaluation results are shown below.

Analyte	Method Blank/ QC batch	MB Conc. (ug/kg)	Samples Affected	Sample Conc. (ug/kg)	VAL Qual
Methylene chloride	C6I260000-031/ 6269031	4.8	OL-0178-02 OL-0178-04	6.8 7.7	U

6. Trip Blank Contamination

The trip blank associated with project samples did not contain target compounds at reported concentrations.

7. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

8. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC50926N.D	4-Methyl-2-pentanone	25.2	OL-0178-01, OL-0178-03	J	J/UJ
1C30926.D	Dichlorodifluoromethane	-25.7	OL-0178-02, OL-0178-04	J	J/UJ
1C30926.D	Chloroethane	56.3	OL-0178-02, OL-0178-04	J	J/UJ
1C30926.D	1,2,4-Trichlorobenzene	-21.7	OL-0178-02, OL-0178-04	J	J/UJ
1C30926.D	Naphthalene	-20.7	OL-0178-02, OL-0178-04	J	J/UJ
1C30926.D	Hexachlorobutadiene	-22.2	OL-0178-02, OL-0178-04	J	J/UJ
1C30926.D	1,3,5-Trichlorobenzene	-29.8	OL-0178-02, OL-0178-04	J	J/UJ

9. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

10. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

11. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals

The following items were reviewed for compliancy in the metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (potassium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were not performed.

5. **Laboratory Control Sample (LCS) Recoveries**

   All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. **Serial Dilution Analysis**

   The serial dilution results were acceptable and within the %D QC acceptance limit, with exception of Potassium in sample OL-0178-01. Laboratory incorrectly reported that the serial dilution result for Sodium (0.6 %D) exceeded the %D control limit. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Serial Dilution %D	Lab Flag	VAL Qual
OL-0178-01	6279082	Potassium	300000	32.9	E	J

7. **CRDL Standard**

   The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. **Interference Check Sample (ICS)**

   Interference check sample results were acceptable and within QC acceptance limits.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses :

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed for Anions by method 300.0. A sample from a different SDG was utilized for MS/MSD analyses for ortho-phosphate by method 365.2; results are not applicable.

5. Laboratory Control Sample (LCS) Recoveries

LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0. The LCS recovery (112%R) for ortho-phosphate by method 365.2 exceeded the upper control limit; however, all sample results were non-detect so no sample results were qualified based on LCS recovery.

6. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

7. Data Completeness

All Anions sample results were considered 100% complete (i.e., usable).

2.2.5 DATA USABILITY SUMMARY FOR SDG #C6I260106

A data usability review and validation has been completed for data packages pertaining to the sediment sample in SDG # C6I260106. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0179-01	09/25/06

This sample was analyzed for volatile organic compounds (VOCs), metals, and anions. The sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0177-01 was utilized for MS/MSD analyses. MS/MSD results for OL-0177-01 were acceptable and within QC acceptance limits, with the exception of Bromoform, Chlorodibromomethane, Carbon tetrachloride, and 1,1,1,2-Tetrachloroethane, which were qualified as estimated.

Sample ID	Analyte	MS/MSD %R	Control Limit	Affected Samples	VAL Flag
OL-0177-01	Bromoform	44/ok	45-148	OL-0177-01	UJ
OL-0177-01	Chlorodibromomethane	53/ok	61-140	OL-0177-01	UJ
OL-0177-01	Carbon tetrachloride	48/ok	57-134	OL-0177-01	UJ
OL-0177-01	1,1,1,2-Tetrachloroethane	55/ok	71-132	OL-0177-01	UJ

4. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries were considered acceptable and within QC acceptance limits, with the exception of 1,1,1,2-Tetrachloroethane, which had a low recovery. Evaluation results are shown below.

Analytical Parameter	LCS ID/ QC batch	LCS %R	Control Limit	Affected Samples	VAL Flag
1,1,1,2-Tetrachlorethane	JFGA01AC/ 6274016	75	76-124	OL-0179-01	UJ

5. Laboratory Method Blank Contamination

The laboratory method blank did not contain target analytes.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC61001.D	Chloromethane	-29.4	OL-0179-01	J	J/UJ
CC61001.D	Chloroethane	-29.5	OL-0179-01	J	J/UJ
CC61001.D	Trichlorofluoromethane	-51.4	OL-0179-01	J	J/UJ
CC61001.D	Dichlorodifluoromethane	-25.8	OL-0179-01	J	J/UJ
CC61001.D	Acetone	-31.6	OL-0179-01	J	J/UJ
CC61001.D	2,2-Dichloropropane	-35.6	OL-0179-01	J	J/UJ
CC61001.D	2-Butanone	-30.1	OL-0179-01	J	J/UJ
CC61001.D	Carbon tetrachloride	-35.5	OL-0179-01	J	J/UJ
CC61001.D	4-Methyl-2-pentanone	-20.1	OL-0179-01	J	J/UJ
CC61001.D	Trans-1,2-Dichloropropene	-24.5	OL-0179-01	J	J/UJ
CC61001.D	2-Hexanone	-29.9	OL-0179-01	J	J/UJ
CC61001.D	Dibromochloromethane	-25.0	OL-0179-01	J	J/UJ
CC61001.D	1,1,1,2-Tetrachloroethane	-30.4	OL-0179-01	J	J/UJ
CC61001.D	Bromoform	-34.7	OL-0179-01	J	J/UJ
CC61001.D	1,2-Dibromo-3-chloropropane	-39.5	OL-0179-01	J	J/UJ
CC61001.D	Naphthalene	-22.7	OL-0179-01	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

It was noted that this sample was inadvertently analyzed for the full TCL volatiles.

Metals

The following items were reviewed for compliancy in the metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (potassium, sodium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   For sample OL-0179-01, MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Sodium, exceeded the QC acceptance limit for Potassium, and were not calculated for other metals because sample concentration was greater than 4x spike amount. The OL-0179-01 Potassium result was qualified as estimated. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit	Affected Samples	VAL Flag
OL-0179-01	Potassium	128/125	75-125	OL-0177-01	J

5. **Laboratory Control Sample (LCS) Recoveries**

   All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. **Serial Dilution Analysis**

   The serial dilution results were acceptable and within the %D QC acceptance limit for Sodium in sample OL-0179-01. Laboratory incorrectly reported that the serial dilution result for Sodium (1.9%D) exceeded the %D control limit.

7. **CRDL Standard**

   The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. **Interference Check Sample (ICS)**

   Interference check sample results were acceptable and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for OL-0179-01 were acceptable and within QC acceptance limits, with the exception of Chloride, which was not calculated because sample was analyzed at dilution.

5. Laboratory Control Sample (LCS) Recoveries

LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0. The LCS recovery (112%R) for ortho-phosphate by method 365.2 exceeded the upper control limit; however, all sample results were non-detect so no sample results were qualified based on LCS recovery.

6. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

7. Data Completeness

All Anions sample results were considered 100% complete (i.e., usable).

2.2.6 DATA USABILITY SUMMARY FOR SDG #C6I270213

A data usability review and validation has been completed for data packages pertaining to the water sample in SDG # C6I270213. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0180-01	09/26/06

This sample was analyzed for volatile organic compounds (VOCs), metals, and anions. The sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A sample from a different SDG was utilized for MS/MSD; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank associated with QC batch 6272304 contained a concentration of Methylene chloride (0.68 ug/L J) less than the reporting limit; sample results less than five times blank amount (adjusted for dilution factor) were qualified as undetected (U). The method blank Evaluation results are shown below.

Analyte	Method Blank/ QC batch	MB Conc. (ug/L)	Samples Affected	Sample Conc. (ug/L)	VAL Qual

Methylene chloride	C6I260000-304/ 6272304	0.68	0L-0180-01 (100x dilution)	100	U

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were not reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0180-01	6236013	Benzene	7500	10	E

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC50928C.D	Trichlorofluoromethane	38.7	OL-0180-01 (10x dilution)	J	J/UJ
CC50928C.D	Acetone	-25.7	OL-0180-01 (10x dilution)	J	J/UJ
CC50929.D	Trichlorofluoromethane	40.3	OL-0180-01 (100x dilution)	J	J/UJ
CC50929.D	Acetone	-24.4	OL-0180-01 (100x dilution)	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals

The following items were reviewed for compliancy in the metals analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (magnesium, potassium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

A sample from a different SDG was utilized for MS/MSD analyses; results are not applicable.

5. Laboratory Control Sample (LCS) Recoveries

All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. Serial Dilution Analysis

The serial dilution results were acceptable and within the %D QC acceptance limit, with exception of Potassium in sample OL-0180-01. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Serial Dilution %D	Lab Flag	VAL Qual
OL-0180-01	6275043	Potassium	303000	32.1	E	J

7. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Anions associated with project samples did not contain target analytes with exception of Orthophosphate, which was detected at a concentration (0.059B mg/L) less than the reporting limit.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for OL-0179-01 were acceptable and within QC acceptance limits, with the exception of Chloride, which was not calculated because sample was analyzed at dilution.

5. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0. The LCS recovery (112%R) for ortho-phosphate by method 365.2 exceeded the upper control limit; however, all sample results were non-detect so no sample results were qualified based on LCS recovery.

6. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0144-08 and OL-0144-09.

7. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0177-01 and OL-0177-02.

8. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

9. **Data Completeness**

   All Anions sample results were considered 100% complete (i.e., usable).

2.2.7 DATA USABILITY SUMMARY FOR SDG #C6I280215

A data usability review and validation has been completed for data packages pertaining to the water sample in SDG # C6I280215. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0182-01	09/27/06

This sample was analyzed for volatile organic compounds (VOCs), metals, and anions. The sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A sample from a different SDG was utilized for MS/MSD; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank did not contain target analytes. The method blank Evaluation results are shown below.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC61001.D	Chloromethane	-29.4	OL-0182-01	J	J/UJ
CC61001.D	Chloroethane	-29.5	OL-0182-01	J	J/UJ
CC61001.D	Trichlorofluoromethane	-51.4	OL-0182-01	J	J/UJ
CC61001.D	Dichlorodifluoromethane	-25.8	OL-0182-01	J	J/UJ
CC61001.D	Acetone	-31.6	OL-0182-01	J	J/UJ
CC61001.D	2,2-Dichloropropane	-35.6	OL-0182-01	J	J/UJ
CC61001.D	2-Butanone	-30.1	OL-0182-01	J	J/UJ
CC61001.D	Carbon tetrachloride	-35.5	OL-0182-01	J	J/UJ
CC61001.D	4-Methyl-2-pentanone	-20.1	OL-0182-01	J	J/UJ
CC61001.D	Trans-1,2-Dichloropropene	-24.5	OL-0182-01	J	J/UJ
CC61001.D	2-Hexanone	-29.9	OL-0182-01	J	J/UJ
CC61001.D	Dibromochloromethane	-25.0	OL-0182-01	J	J/UJ
CC61001.D	1,1,1,2-Tetrachloroethane	-30.4	OL-0182-01	J	J/UJ
CC61001.D	Bromoform	-34.7	OL-0182-01	J	J/UJ
CC61001.D	1,2-Dibromo-3-chloropropane	-39.5	OL-0182-01	J	J/UJ
CC61001.D	Naphthalene	-22.7	OL-0182-01	J	J/UJ

8. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

9. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals

The following items were reviewed for compliancy in the metals analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (magnesium, potassium); however, associated sample

concentrations were greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A sample from a different SDG was utilized for MS/MSD analyses; results are not applicable.

5. **Laboratory Control Sample (LCS) Recoveries**

   All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. **CRDL Standard**

   The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

7. **Interference Check Sample (ICS)**

   Interference check sample results were acceptable and within QC acceptance limits.

8. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

9. **Data Completeness**

   All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A sample from a different SDG was utilized for analyses; results are not applicable.

5. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0. The LCS recovery (112%R) for

ortho-phosphate by method 365.2 exceeded the upper control limit; however, all sample results were non-detect so no sample results were qualified based on LCS recovery.

6. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

7. Data Completeness

All Anions sample results were considered 100% complete (i.e., usable).

2.2.8 DATA USABILITY SUMMARY FOR SDG #C6I290245

A data usability review and validation has been completed for data packages pertaining to the sediment sample in SDG # C6I290245. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0184-1DP	09/27/06

This sample was analyzed for metals and anions. The sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory. Laboratory reported that the VOCs analysis was canceled as requested by Parsons.

Porewater was generated on October 18, 2006 via centrifugation. Porewater was collected, as sample OL-0184-01DP, and preserved for salinity, anions, and metals.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Metals

The following items were reviewed for compliancy in the metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (potassium) at a concentration less than the reporting limit; however, associated sample concentration was greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were not performed.

5. **Laboratory Control Sample (LCS) Recoveries**

   All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. **Serial Dilution Analysis**

The serial dilution results were acceptable and within the %D QC acceptance limit for Iron, Magnesium, Manganese, and Sodium in sample OL-0184-01DP, but were not within %D QC acceptance limit for Calcium and Potassium. Calcium and Potassium results in sample OL-0184-01DP were qualified as estimated.

7. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed.

5. Laboratory Control Sample (LCS) Recoveries

LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0.

6. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

7. Data Completeness

All Anions sample results were considered 100% complete (i.e., usable).

2.2.9 DATA USABILITY SUMMARY FOR SDG #C6J060229

A data usability review and validation has been completed for data packages pertaining to the water sample in SDG # C6J060229. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0197-01	10/05/06

This samples were analyzed for VOCs, Cations (calcium, iron, magnesium, manganese, potassium, sodium), and Anions (chloride, nitrate as N, orthophosphate, sulfate). This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses was performed on a non-project sample; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	Lab Flag	VAL Qual
OL-0197-01	6283705	Benzene	6600	10	E	J

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0197-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0197-01 was analyzed at dilution.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals (Cations)

The following items were reviewed for compliancy in the cations analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (magnesium, potassium); however, associated sample

concentrations were greater than 5x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were performed on a non-project sample; results are not applicable. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Serial Dilution

The serial dilution results were acceptable and within the %D QC acceptance limit, with exception of Potassium in sample OL-0197-01. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Serial Dilution %D	Lab Flag	VAL Qual
OL-0197-01	6284064	Potassium	268000	18.4	E	J

8. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

9. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

10. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

11. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0197-01.

12. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0197-01 was analyzed at dilution.

13. Data Completeness

All sample results for Metals were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the chloride, nitrate as N, orthophosphate, and sulfate analyses:

1. Holding Times

Analytical holding times met criteria for Chloride and Sulfate analyses. The holding time was slightly exceeded for the reanalyses for Nitrate as N and for Orthophosphate. Evaluation results are shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
Orthophosphate	OL-0197-01	<1	Y	J
Nitrate as N	OL-0197-01	<1	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria for Chloride, Nitrate as N, and Sulfate. A continuing calibration verification for Orthophosphate exceeded the QC acceptance limit. Sample was reanalyzed outside of holding time; both sets of data are reported. Evaluation results are shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
41 CCV 10/06/06 22:06	Orthophosphate	128	OL-0197-01	J	J/UJ

3. Laboratory Blank Contamination

The laboratory blanks for Chloride, Nitrate as N, and Sulfate associated with project samples did not contain target analytes. The method blank for Orthophosphate contained a concentration less than the reporting limit; however, OL-0197-01 was non-detect.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed. LCS/LCSD analyses were performed and RPD values were acceptable and within QC acceptance criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits for Chloride, Nitrate as N, and Sulfate. LCS recoveries for Orthophosphate were above the QC acceptance limit; however, OL-0197-01 was non-detect so no sample results were qualified based on non-compliance LCS recoveries

7. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0197-01.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All sample results for Anions were considered 100% complete (i.e., usable).

2.2.10 DATA USABILITY SUMMARY FOR SDG #C6J120122

A data usability review and validation has been completed for data packages pertaining to soil samples and the porewater samples in SDG # C6J120122. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0213-01DP	10/10/06
OL-0213-01	10/10/06
OL-0213-02	10/10/06

This samples were analyzed for VOCs, Cations (calcium, iron, magnesium, manganese, potassium, sodium), and Anions (chloride, nitrate as N, orthophosphate, sulfate). This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Metals (Cations)

The following items were reviewed for compliancy in the cations analysis:

1. **Holding Times and Preservation**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verification**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals; however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results in OL-0213-01, M acceptable and within QC acceptance limits for Magnesium. MS/MSD recoveries for OL-0213-01, were "diluted out" for Calcium, Iron, Manganese, and Sodium. MS/MSD recoveries for Potassium exceeded the acceptance limit; Potassium results in OL-0213-01 and OL-0213-02 were qualified as estimated. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit	Affected Samples	VAL Flag
OL-0213-01	Potassium	154/141	75-125	All in SDG	J

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Serial Dilution

The serial dilution results were acceptable and within the %D QC acceptance limit for OL-0213-01, with the exception of Potassium, and for OL-0213-01DP, with the exception of Magnesium, Manganese, and Potassium. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Serial Dilution %D	Lab Flag	Val Qual
OL-0213-01	6293069	Potassium	17.3	E	J
OL-0213-01DP	6293069	Magnesium	22.1	E	J
OL-0213-01DP	6293069	Magnesium	11.3	E	J
OL-0213-01DP	6293069	Potassium	27.6	E	J

8. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

9. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

10. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

11. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0213-02.

12. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

13. Data Completeness

All sample results for Metals were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the chloride, nitrate as N, orthophosphate, and sulfate analyses:

1. **Holding Times**

   Analytical holding times met criteria for Anions.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Anions did not contain target analytes.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were acceptable and within QC acceptance criteria for OL-0213-01 with the exception of Chloride for which the MS/MSD recoveries were "diluted out". No sample results were qualified based on MS/MSD results.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed. LCS/LCSD analyses were performed and RPD values were acceptable and within QC acceptance criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   A field duplicate sample was not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0213-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All sample results for Anions were considered 100% complete (i.e., usable).

2.2.11 DATA USABILITY SUMMARY FOR SDG #C6J120221

A data usability review and validation has been completed for data packages pertaining to soil samples and the porewater samples in SDG # C6J120221. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0218-01DP	10/11/06
OL-0218-01DP	10/11/06
OL-0218-01	10/11/06
OL-0218-01	10/11/06

This samples were analyzed for VOCs, Cations (calcium, iron, magnesium, manganese, potassium, sodium), and Anions (chloride, nitrate as N, orthophosphate, sulfate). This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

7. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

8. Surrogate Recoveries

Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

9. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were performed on a non-project sample; results are not applicable.

10. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

11. Laboratory Method Blank Contamination

The laboratory method blank associated with project samples contained a detectable amount of Methylene chloride. Evaluation results are shown below.

Analyte	MB conc. (ug/L)	Affected Samples	Sample Conc.	Lab Flag	Data Qual.

Methylene chloride	2.9	OL-0218-01	4.3	JB	U
Methylene chloride	2.9	OL-0218-02	3.9	JB	U

12. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

13. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC31022.D	Carbon disulfide	-41.7	OL-0218-01, OL-0218-02	J	UJ
CC31022.D	Methylene chloride	25.3	OL-0218-01, OL-0218-02	J	J

14. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

15. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

16. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0218-01.

17. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

18. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals (Cations)

The following items were reviewed for compliancy in the cations analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals; however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were performed on a non-project sample; results are not applicable. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Serial Dilution

The serial dilution results were acceptable and within the %D QC acceptance limit.

8. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

14. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

15. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

16. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0218-01.

17. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

18. Data Completeness

All sample results for Metals were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the chloride, nitrate as N, orthophosphate, and sulfate analyses:

11. Holding Times

Analytical holding times met criteria for Anions.

12. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

13. Laboratory Blank Contamination

The laboratory blanks for Anions did not contain target analytes.

14. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed.

15. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed. LCS/LCSD analyses were performed and RPD values were acceptable and within QC acceptance criteria.

16. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

17. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

18. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0218-01.

19. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

20. Data Completeness

All sample results for Anions were considered 100% complete (i.e., usable).

2.2.12 DATA USABILITY SUMMARY FOR SDG #C6J130166

A data usability review and validation has been completed for data packages pertaining to the water sample in SDG # C6J130166. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0223-01DP	10/12/06
OL-0223-01	10/12/06

These samples were analyzed for VOCs, Cations (calcium, iron, magnesium, manganese, potassium, sodium), and Anions (chloride, nitrate as N, orthophosphate, sulfate). This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Porewater was generated on October 18, 2006 via centrifugation. Porewater was collected, as sample OL-0223-01DP, and preserved for salinity, anions, and metals.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were performed on a non-project sample; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did contain target compounds at reported concentrations. Evaluation results are shown below.

Method Blank ID	Analyte	Blank Conc. (ug/L)	Affected Samples	Sample Conc. (ug/L)	VAL Flag	Usability Qual
C6J220000-018	Methylene chloride	2.9J	OL-0223-01	3.8	U	3.0U

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC31022.D	Carbon disulfide	-41.7	OL-0223-01	J	UJ
CC31022.D	Methylene chloride	25.3	OL-0223-01	J	UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals (Cations)

The following items were reviewed for compliancy in the cations analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable

concentrations of metals (potassium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were performed on a non-project sample; results are not applicable. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification and identification.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All sample results for Metals were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the chloride, nitrate as N, orthophosphate, and sulfate analyses:

1. Holding Times

Analytical holding times met criteria for Anions.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria for Anions.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses results for OL-0223-01 were not calculated because sample concentrations were greater than 4x spike amount. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed. LCS/LCSD analyses were performed and RPD values were acceptable and within QC acceptance criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits for Anions.

7. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification and identification.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All sample results for Anions were considered 100% complete (i.e., usable).

2.2.13 DATA USABILITY SUMMARY FOR SDG #C6J190166

A data usability review and validation has been completed for data packages pertaining to the soil samples and porewater sample in SDG # C6J190166. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0226-01	10/18/06
OL-0226-02	10/18/06
OL-0226-03	10/18/06

Sample OL-0226-01 was analyzed for VOCs, Cations (calcium, iron, magnesium, manganese, potassium, sodium), and Anions (chloride, nitrate as N, orthophosphate, sulfate). Sample OL-0226-02 was analyzed for VOCs only. These samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Porewater was generated on October 26, 2006 via centrifugation. Porewater was collected, as sample OL-0226-03, and preserved for salinity, anions, and metals.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for sample OL-0226-01 were acceptable and within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did contain target compounds at reported concentrations. Evaluation results are shown below.

Method Blank ID	Analyte	Blank Conc. (ug/kg)	Affected Samples	Sample Conc. (ug/kg)	VAL Flag	Usability Qual
C6J220000-018	Methylene chloride	2.9J	OL-0226-01	3.4	U	3.4U
C6J220000-018	Methylene chloride	2.9J	OL-0226-02	4.0	U	4.0U

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC31022.D	Carbon disulfide	-41.7	All in SDG	J	UJ
CC3102.D	Methylene chloride	25.3	All in SDG	J	UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0226-01 and OL-0226-02.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification in OL-0226-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals (Cations)

The following items were reviewed for compliancy in the cations analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (potassium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were performed on OL-0226-01. MS/MSD results were not calculated for calcium, iron, magnesium, manganese, and sodium because sample concentrations were greater than 4x spike amount. Potassium MSD %R exceeded the upper control limit; potassium result in sample OL-0226-01 was qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit	Affected Samples	VAL Flag
OL-0226-01	Potassium	145.7/141/5	75-125	OL-0226-01	J

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Serial Dilution Analysis

The serial dilution results were acceptable and within the %D QC acceptance limit for Potassium and Sodium in sample OL-0226-01, but were not within %D QC acceptance limit for Calcium, Iron, magnesium, and Manganese. Sample results associated with non-compliant serial dilution results were qualified as estimated. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Serial Dilution %D	Lab Flag	VAL Qual
OL-0226-01	6305100	Calcium	11.0	E	J
OL-0226-01	6305100	Iron	14.7	E	J
OL-0226-01	6305100	Magnesium	16.3	E	J
OL-0226-01	6305100	Manganese	14.2	E	J

8. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

9. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

10. Field Duplicate Precision

The field duplicate sample was not analyzed for metals.

11. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification in OL-0226-01.

12. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

13. Data Completeness

All sample results for Metals were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the chloride, nitrate as N, orthophosphate, and sulfate analyses:

1. Holding Times

Analytical holding times met criteria for Anions.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria for Anions.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses results for Chloride in OL-0226-01 were not calculated because sample concentrations were greater than 4x spike amount. Sample results for Sulfate and Orthophosphate were acceptable and within QC limits.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed. LCS/LCSD analyses were performed and RPD values were acceptable and within QC acceptance criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits for Anions.

7. Field Duplicate Precision

The field duplicate sample was not analyzed for Anions.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification in OL-0226-01.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All sample results for Anions were considered 100% complete (i.e., usable).

2.2.14 DATA USABILITY SUMMARY FOR SDG #C6J200420

A data usability review and validation has been completed for data packages pertaining to the water sample in SDG # C6J200420. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0227-01	10/19/06

These samples were analyzed for VOCs, Cations (calcium, iron, magnesium, manganese, potassium, sodium), and Anions (chloride, nitrate as N, orthophosphate, sulfate). This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Porewater was generated on November 06, 2006 via centrifugation. Porewater was collected, as sample OL-0227-01, and preserved for salinity, anions, and metals.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were performed on a non-project sample; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did contain target compounds at reported concentrations. Evaluation results are shown below.

Method Blank ID	Analyte	Blank Conc. (ug/L)	Affected Samples	Sample Conc. (ug/L)	VAL Flag	Usability Qual
C6J220000-018	Methylene chloride	2.9J	OL-0227-01	13	U	13U

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC31022.D	Carbon disulfide	-41.7	OL-0227-01	J	UJ
CC31022.D	Methylene chloride	25.3	OL-0227-01	J	UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals (Cations)

The following items were reviewed for compliancy in the cations analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (potassium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were performed on a non-project sample; results are not applicable. No sample results were qualified based on MS/MSD results.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **CRDL Standard**

   The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. **Interference Check Sample (ICS)**

   Interference check sample results were acceptable and within QC acceptance limits.

9. **Field Duplicate Precision**

   A field duplicate sample was not collected for this SDG.

10. **Sample Result Verification and Identification**

    Instrument raw data were not reviewed for sample result verification and identification.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

12. **Data Completeness**

    All sample results for Metals were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the chloride, nitrate as N, orthophosphate, and sulfate analyses:

1. **Holding Times**

   Analytical holding times met criteria for Anions.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria for Anions.

3. **Laboratory Blank Contamination**

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were performed on a non-project sample: results are not applicable.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed. LCS/LCSD analyses were performed and RPD values were acceptable and within QC acceptance criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits for Anions.

7. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification and identification.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All sample results for Anions were considered 100% complete (i.e., usable).

2.2.15 DATA USABILITY SUMMARY FOR SDG #C6J210181

A data usability review and validation has been completed for data packages pertaining to the water sample in SDG # C6J210181. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0228-01	10/20/06
OL-0228-02	10/20/06

These samples were analyzed for VOCs, Cations (calcium, iron, magnesium, manganese, potassium, sodium), and Anions (chloride, nitrate as N, orthophosphate, sulfate). This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Porewater was generated on November 06, 2006 via centrifugation. Porewater was collected, as sample OL-0228-02, and preserved for salinity, anions, and metals.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were performed on a non-project sample; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did contain target compounds at reported concentrations. Evaluation results are shown below.

Method Blank ID	Analyte	Blank Conc. (ug/L)	Affected Samples	Sample Conc. (ug/L)	VAL Flag	Usability Qual
C6J250000-718	Methylene chloride	2.6J	OL-0228-02	3.0	U	3.0U

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
1C31025N.D	Dichlorodifluoromethane	-44.1	OL-0228-02	J	UJ
1C31025N.D	Chloromethane	-20.8	OL-0228-02	J	UJ
1C31025N.D	Trichlorofluoromethane	-30.2	OL-0228-02	J	UJ
1C31025N.D	Carbon disulfide	-30.6	OL-0228-02	J	UJ
1C31025N.D	1,2-Dibromo-3-chloropropane	-22.0	OL-0228-02	J	UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals (Cations)

The following items were reviewed for compliancy in the cations analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (potassium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were performed on a non-project sample; results are not applicable. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Serial Dilution

The serial dilution results were acceptable and within the %D QC acceptance limit, with exception of Potassium and Sodium in sample OL-0228-01. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Serial Dilution %D	Lab Flag	VAL Qual
OL-0228-01	6313146	Potassium	488000	32.1	E	J
OL-0228-01	6313146	Sodium	23300000	14.0	E	J

8. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

9. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

10. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

11. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification and identification.

12. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

13. Data Completeness

All sample results for Metals were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the chloride, nitrate as N, orthophosphate, and sulfate analyses:

1. **Holding Times**

   Analytical holding times met criteria for Anions.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria for Anions.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for OL-0228-02 were acceptable and within QC acceptance limits, with the exception of Sulfate. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0228-02	Sulfate	68-71		90-110	OL-0228-02	J

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed. LCS/LCSD analyses were performed and RPD values were acceptable and within QC acceptance criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits for Anions.

7. **Field Duplicate Precision**

   A field duplicate sample was not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were not reviewed for sample result verification and identification.

9. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All sample results for Anions were considered 100% complete (i.e., usable).

2.2.16 DATA USABILITY SUMMARY FOR SDG #C6J240203

A data usability review and validation has been completed for data packages pertaining to the porewater sample in SDG # C6J240203. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0229-01	10/20/06

This sample was analyzed for metals and anions. The sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory. Laboratory reported that the VOCs analysis was canceled as requested by Parsons.

Porewater was generated on November 06, 2006 via centrifugation. Porewater was collected, as sample OL-0229-01, and preserved for salinity, anions, and metals.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for inorganic data review. The validated laboratory data are presented in Attachment A.

Metals

The following items were reviewed for compliancy in the metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (manganese, potassium) at concentrations less than the reporting limit; however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were not performed for this SDG.

5. **Laboratory Control Sample (LCS) Recoveries**

   All LCS (LCS/LCSD) recoveries were considered acceptable and within QC acceptance limits.

6. **Serial Dilution Analysis**

   The serial dilution results were acceptable and within the %D QC acceptance limit for Iron, Magnesium, Manganese, and Sodium in sample OL-0229-01, but were not within %D QC acceptance limit for Calcium and

Potassium. Calcium and Sodium results associated with non-compliant serial dilution results were qualified as estimated. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Serial Dilution %D	Lab Flag	VAL Qual
OL-0229-01	6314099	Calcium	12.6	E	J
OL-0229-01	631099	Potassium	32.8	E	J

7. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

8. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All metals sample results were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the Anions analyses:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

A sample from a different SDG was utilized for MS/MSD analyses; results are not applicable.

5. Laboratory Control Sample (LCS) Recoveries

LCS recoveries (LCS/LCSD) were considered acceptable and within QC acceptance limits for Anions by method 300.0.

6. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

7. Data Completeness

All Anions sample results were considered 100% complete (i.e., usable).

2.2.17 DATA USABILITY SUMMARY FOR SDG #C6K030203

A data usability review and validation has been completed for data packages pertaining to the water sample in SDG # C6K030203. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0230-01	11/02/06
OL-0230-02	11/02/06

These samples were analyzed for VOCs, Cations (calcium, iron, magnesium, manganese, potassium, sodium), and Anions (chloride, nitrate as N, orthophosphate, sulfate). This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for sample OL-0230-01 were acceptable and within QC acceptance limits, with the exception of several analytes for which the recovery exceeded the upper QC acceptance limit. However, the analytes were non-detect in OL-0230-01 so no sample results were qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries were considered acceptable and within QC acceptance limits, with the exception of Carbon disulfide for which the recovery exceeded the upper QC acceptance limit. However, carbon disulfide was non-detect in associated samples so no sample results were qualified.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC71106.D	Chloromethane	-21.4	All in SDG	J	UJ
CC71106.D	Bromomethane	31.6	All in SDG	J	UJ
CC71106.D	Chloroethane	-36.3	All in SDG	J	UJ
CC71106.D	Acetone	-27.6	All in SDG	J	UJ
CC71106.D	Methyl acetate	41.9	All in SDG	J	UJ
CC71106.D	1,2-Dichloroethane	-24.4	All in SDG	J	UJ
CC71106.D	4-Methyl-2-pentanone	-24.0	All in SDG	J	UJ
CC71106.D	2-Hexanone	-20.7	All in SDG	J	UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Metals (Cations)

The following items were reviewed for compliancy in the cations analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did contain reportable concentrations of metals (potassium); however, associated sample concentrations were greater than 5x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were performed on a non-project sample; results are not applicable. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Serial Dilution Analysis

The serial dilution results were acceptable and within the %D QC acceptance limit for Iron, Magnesium, Manganese, and Sodium in sample OL-0230-02, but were not within %D QC acceptance limit for Potassium and Sodium. Potassium and Sodium results associated with non-compliant serial dilution results were qualified as estimated. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Serial Dilution %D	Lab Flag	VAL Qual
OL-0230-02	6324308	Potassium	34.0	E	J
OL-0230-02	6324308	Sodium	12.3	E	J

8. CRDL Standard

The contract required detection limit standard (CRDL) recoveries were acceptable and within QC acceptance limits.

9. Interference Check Sample (ICS)

Interference check sample results were acceptable and within QC acceptance limits.

10. Field Duplicate Precision

A field duplicate sample was not collected for this SDG.

11. Sample Result Verification and Identification

Instrument raw data were not reviewed for sample result verification and identification.

12. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

13. Data Completeness

All sample results for Metals were considered 100% complete (i.e., usable).

Anions

The following items were reviewed for compliancy in the chloride, nitrate as N, orthophosphate, and sulfate analyses:

1. **Holding Times**

   Analytical holding times met criteria for Anions.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria for Anions.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Anions associated with project samples did not contain target analytes.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses results for OL-0230-01 were not calculated because sample concentrations were greater than 4x spike amount. No sample results were qualified based on MS/MSD results.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed. LCS/LCSD analyses were performed and RPD values were acceptable and within QC acceptance criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits for Anions.

7. **Field Duplicate Precision**

   A field duplicate sample was not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were not reviewed for sample result verification and identification.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All sample results for Anions were considered 100% complete (i.e., usable).

SECTION 2

DATA VALIDATION REPORTS

2.1 VIBRACORE SAMPLES

2.1.1 DATA USABILITY SUMMARY FOR SDG #C6H100234

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H100234. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0131-01	08/09/06
OL-0131-02	08/09/06
OL-0131-03	08/09/06
OL-0131-04	08/09/06
OL-0131-05	08/09/06
OL-0131-06	08/09/06
OL-0131-07	08/09/06
OL-0131-08	08/09/06
OL-0131-09	08/09/06
OL-0131-10	08/09/06
OL-0131-11	08/09/06
OL-0131-12	08/09/06
OL-0131-13	08/09/06
OL-0131-14	08/09/06
OL-0131-15	08/09/06
OL-0131-16	08/09/06
OL-0131-17	08/09/06
OL-0131-18	08/09/06
OL-0131-19	08/09/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. These samples were properly preserved for inorganics analyses, but not for organics analyses, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. Holding Times and Preservation

All analytical holding times met criteria. Sample preservation (sample temperature) was not acceptable for all samples; samples in coolers 2 and 3 were received at elevated temperature (10.6ºC and 10.1ºC, respectively). Laboratory did not identify which samples were shipped in which cooler; therefore all results for all 19 samples in this SDG were qualified as estimated (J/UJ). Evaluation results are summarized below.

Sample	Properly Preserved? (Y/N)	Qualification
ALL in SDG	N (>10 ºC)	J/UJ

2. Surrogate Recoveries

Several samples were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0131-01, -06, -07, -08, -09, -10, -11, and -12. Surrogate recoveries were acceptable and within QC acceptance range for all other samples. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Samples OL-0131-01 and OL-0131-16 were utilized for MS/MSD analyses. Sample OL-0131-01 was analyzed at dilution; therefore, spiking compounds were "diluted out" and not calculated. MS/MSD results for OL-0131-16 were acceptable and within QC acceptance limits, with the exception of Naphthalene; OL-0131-16 Naphthalene result was qualified as estimated. For OL-0131-16, the RPD value exceeded the lab control limit for 1,2,3-TCB and 1,3,5-TCB, but both the MS%R and the MSD%R were compliant; therefore no sample results were qualified.

Sample ID	Analyte	MS/MSD %R	Control Limit	Affected Samples	VAL Flag
OL-0131-16	Naphthalene	17/0	42-136	OL-0131-16	J

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples analyzed in QC batches 6229168 and 6233232 did not contain target compounds at reported concentrations. The laboratory method blanks associated with project samples

analyzed in QC batch 6228647 and 6229058 did contain target compounds (1,2,3-TCB, 1,2,4-TCB, and 1,3-5-TCB) at reportable concentrations; however, samples analyzed in QC batch 6229058 were non-detect for these analytes. Evaluation results for reportable sample concentrations are shown below.

Analyte	Sample ID	Sample Result (ug/l)	Blank Result (ug/l)	Action Level (ug/l)	Action Level X DF	PQL (ug/l)	Qual.
1,2,3-TCB	OL-0131-04	830	100	500	1000	1500	1500U
1,2,4-TCB	OL-0131-04	810	100	500	1000	1500	1500U
1,3,5-TCB	OL-0131-04	910	110	500	1000	1500	1500U

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC30815k.D	Naphthalene	-28.6	OL-0131-01	J	J/UJ
Vstd50, CC30815k.D	1,2,3-TCB	-29.8	OL-0131-01	J	J/UJ
Vstd50, CC30816.D	1,2,3-TCB	-25.3	OL-0131-08, -09, -10, -11, -12, -13, -14, -19	J	J/UJ
Vstd50, 1C40821.D	Naphthalene	-46.2	OL-0131-16	J	J/UJ
Vstd50, 1C40821.D	1,2,3-TCB	-37.1	OL-0131-16	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate sample pair OL-0131-07 and OL-0131-08.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0131-02 and OL-0131-19.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and Preservation

All analytical holding times met criteria. Sample preservation (sample temperature) was not acceptable for all samples; samples in coolers 2 and 3 were received at elevated temperature (10.6ºC and 10.1ºC, respectively). Laboratory did not identify which samples were shipped in which cooler; therefore all results for all 19 samples in this SDG were qualified as estimated (J/UJ). Evaluation results are summarized below.

Sample	Properly Preserved (Y/N)	Qualification
ALL in SDG	N (>10 ºC)	J/UJ

2. Surrogate Recoveries

All surrogate recoveries were "diluted out" and not calculated by laboratory because samples were analyzed at dilution. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because samples OL-0131-01 and OL-0131-16 were analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Results from the origninal anayysis should be used preferentially, with exception of those that exceeded calibration range. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0131-01	6223017	Anthracene	11000	5	E
OL-0131-01	6223017	Fluoranthene	20000	5	E
OL-0131-01	6223017	Fluorene	13000	5	E
OL-0131-01	6223017	Phenanthrene	36000	5	E
OL-0131-01	6223017	Pyrene	12000	5	E
Ol-0131-03	6223017	Phenanthrene	11000	5	E
OL-0131-06	6223017	Phenanthrene	47000	25	E
OL-0131-08	6223017	Phenanthrene	31000	12.5	E
OL-0131-09	6223017	Fluoranthene	10000	5	E
OL-0131-09	6223017	Phenanthrene	20000	5	E
OL-0131-11	6223017	Phenanthrene	39000	12.5	E

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0, M0811SC1.D	Pyrene	-27.7	OL-0131-01, -01DL, -02, -03, -03DL, -04, -05, -06, -06DL, -07, -08, -08DL, -09, -09DL, -10, -11, -12, -13, -14, -15, -17, -18, -19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate sample pair OL-0131-07 and OL-0131-08

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0131-02 and OL-0131-19.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All analytical holding times met criteria. Sample preservation (sample temperature) was not acceptable for all samples; samples in coolers 2 and 3 were received at elevated temperature (10.6ºC and 10.1ºC, respectively). Laboratory did not identify which samples were shipped in which cooler; therefore all results for all 19 samples in this SDG were qualified as estimated (J/UJ). Evaluation results are summarized below.

Sample	Properly Preserved (Y/N)	Qualification
ALL in SDG	N (>10 ºC)	J/UJ

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for samples OL-0131-01 and OL-0131-16.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0131-07 and OL-0131-08.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0131-02 and OL-0131-19.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for samples OL-0131-01 and OL-0131-16.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate sample pair OL-0131-07 and OL-0131-08.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0131-02 and OL-0131-19.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

For Ammonia, MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not considered acceptable and within QC acceptance limits for sample OL-0131-01, but not for OL-0131-16. Evaluation results are shown below.

For Sulfide, MS/MSD precision measurements (relative percent difference; RPD), but not accuracy measurements (percent recovery; %R), were considered acceptable and within QC acceptance limits for samples OL-0131-01 and OL-0131-16. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0136-16	Ammonia as N	104/115	90-110	ALL in SDG	J
OL-0131-01	Sulfide	61/65	75-125	ALL in SDG	J
OL-0131-16	Sulfide	73/73	75-125	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision results were not considered compliant and within criteria for samples 01-0131-01 and 01-0131-16. Evaluation results are shown below.

Analyte	Field Sample ID	RPD	QC Batch	Affected Samples	Data Qualifier
TOC	OL-0131-01	29	BLKLK081706C	ALL Samples in SDG	J
TOC	OL-0131-16	98	BLKLK081706C	ALL Samples in SDG	J

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

For Ammonia, Sulfide, and TOC, the field duplicate precision (RPD) results were considered acceptable for the field duplicate sample pair OL-0131-07 and OL-0131-08.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0131-01 and OL-0131-19.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.2 DATA USABILITY SUMMARY FOR SDG #C6H100247

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H100247. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0130-01	08/09/06
OL-0130-02	08/09/06
OL-0130-03	08/09/06
OL-0130-04	08/09/06
OL-0130-05	08/09/06
OL-0130-06	08/09/06
OL-0130-07	08/09/06
OL-0130-08	08/09/06
OL-0130-09	08/09/06
OL-0130-10	08/09/06
OL-0130-11	08/09/06
OL-0130-12	08/09/06
OL-0130-13	08/09/06
OL-0130-14	08/09/06
OL-0130-15	08/09/06
OL-0130-16	08/09/06
OL-0130-17	08/09/06
OL-0130-18	08/09/06
OL-0130-19	08/09/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All analytical holding times met criteria. Sample preservation (sample temperature) was not acceptable for all samples; samples in coolers 2 and 3 were received at elevated temperature (10.6ºC and 10.1ºC, respectively). Laboratory

did not identify which samples were shipped in which cooler; therefore all results for all 19 samples in this SDG were qualified as estimated (J/UJ). Evaluation results are summarized below.

Sample	Properly Preserved (Y/N)	Qualification
ALL in SDG	N (>10 ºC)	J/UJ

2. Surrogate Recoveries

Several samples were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0130-07 thru OL-0130-17. Surrogate recoveries were acceptable and within QC acceptance range for all other samples. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Samples OL-0130-03 and OL-0130-04, and OL-0130-07 were utilized for MS/MSD analyses. Sample OL-0130-07 was analyzed at dilution; therefore, spiking compounds were "diluted out" and not calculated. MS/MSD results for OL-0130-03 and OL-0130-04 were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC30811.D	Naphthalene	-25.8	OL-0130-01, -02, -03	J	J/UJ
Vstd50, CC40814.D	Naphthalene	-48.5	OL-0130-07, -08	J	J/UJ
Vstd50, CC40814.D	1,2,3-TCB	--48.1	OL-0130-07, -08	J	J/UJ
Vstd50, 1C040815.D	Naphthalene	-47.9	OL-0130-09,	J	J/UJ
Vstd50, 1C040815.D	1,2,3-TCB	-36.9	OL-0130-10, -11, -12, -13, -14, -15, -16, -17, -18, -19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0130-17 and OL-0130-19.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0130-03 and OL-0130-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All analytical holding times met criteria. Sample preservation (sample temperature) was not acceptable for all samples; samples in coolers 2 and 3 were

received at elevated temperature (10.6ºC and 10.1ºC, respectively). Laboratory did not identify which samples were shipped in which cooler; therefore all results for all 19 samples in this SDG were qualified as estimated (J/UJ). Evaluation results are summarized below.

Sample	Properly Preserved (Y/N)	Qualification
ALL in SDG	N (>10 ºC)	J/UJ

2. Surrogate Recoveries

Several samples were analyzed at dilution and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0130-01 and OL-0130-077 thru OL-0130-19. Surrogate recoveries were acceptable and within QC acceptance range for all other samples. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

A non-project sample was utilized for MS/MSD analyses; results are not applicable to project samples.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0130-07	6224050	Phenanthrene	5200	25	E
OL-0130-08	6224050	Phenanthrene	190000	50	E
OL-0130-09	6224050	Phenanthrene	120000	50	E

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0130-17 and OL-0130-19.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0130-03 and OL-0130-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All analytical holding times met criteria. Sample preservation (sample temperature) was not acceptable for all samples; samples in coolers 2 and 3 were received at elevated temperature (10.6ºC and 10.1ºC, respectively). Laboratory did not identify which samples were shipped in which cooler; therefore all results for all 19 samples in this SDG were qualified as estimated (J/UJ). Evaluation results are summarized below.

Sample	Properly Preserved (Y/N)	Qualification
ALL in SDG	N (>10 ºC)	J/UJ

2. **Surrogate Recoveries**

   Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for samples OL-0130-13, OL-0130-14, and OL-0130-15 due to matrix interference. No sample results were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A non-project sample was utilized for MS/MSD analyses; results are not applicable to project samples.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0130-17 and OL-0130-19.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0130-03 and OL-0130-18.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0130-01.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0130-17 and OL-0130-19.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0130-03 and OL-0130-18.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (4.4 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0130-01 (Ammonia and Sulfide) and for OL-0130-19 (TOC).

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision results were considered acceptable and within criteria for sample 01-0130-19.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0130-17 and OL-0130-19.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0130-03 and OL-0130-18.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.3 DATA USABILITY SUMMARY FOR SDG #C6H110151

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H110151. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0132-01	08/10/06
OL-0132-02	08/10/06
OL-0132-03	08/10/06
OL-0132-04	08/10/06
OL-0132-05	08/10/06
OL-0132-06	08/10/06
OL-0132-07	08/10/06
OL-0132-08	08/10/06
OL-0132-09	08/10/06
OL-0132-10	08/10/06
OL-0132-11	08/10/06
OL-0132-12	08/10/06
OL-0132-13	08/10/06
OL-0132-14	08/10/06
OL-0132-15	08/10/06
OL-0132-16	08/10/06
OL-0132-17	08/10/06
OL-0132-18	08/10/06
OL-0132-19	08/10/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

Several samples were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0132-01 thru OL-0132-04. Surrogate recoveries were acceptable and within QC acceptance range for all other samples. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0132-11.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, 1C40816D	Naphthalene	-43.2	OL-0132-01 thru OL-0132-10, OL-0132-16 thru OL-0132-19	J	J/UJ
Vstd50, 1C40816D	1,2,3-TCB	-33.2	OL-0132-01 thru OL-0132-10, OL-0132-16 thru)L-0132-19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0132-03 and OL-0132-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0132-04 and OL-0132-17.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were "diluted out" and not calculated by laboratory because samples were analyzed at dilution. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0132-11 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0132-03 and OL-0132-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0132-04 and OL-0132-17.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0131-11.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0132-03 and OL-0132-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0132-04 and OL-0132-17.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not considered acceptable and within QC acceptance limits for sample OL-0132-11. Mercury results for all samples were qualified as estimated (J/UJ). Evaluation results are as shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0132-11	Mercury	73/ok	80-120	ALL in SDG	J

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0132-03 and OL-0132-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0132-04 and OL-0132-17.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (4.4 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for samples OL-0132-11 (Ammonia, Sulfide, and TOC). MS/MSD accuracy was not acceptable for sample OL-0132-14. All samples in QC batch 6224072 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0132-11	Total Sulfide	50/45	75-125	OL-0132-14 thru OL-0132-19	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample 01-0132-11. All samples in QC batch (SDG) are qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	Dup RPD	Control Limit %RPD	Affected Samples	VAL Flag
OL-0132-11	TOC	38	20	ALL in SDG (1 QC batch)	J

6. Laboratory Control Sample (LCS) Recoveriesv

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0132-03 and OL-0132-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0132-04 and OL-0132-17.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.4 DATA USABILITY SUMMARY FOR SDG #C6H110165

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H110165. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0133-01	08/10/06
OL-0133-02	08/10/06
OL-0133-03	08/10/06
OL-0133-04	08/10/06
OL-0133-05*	08/10/06
OL-0133-06*	08/10/06
OL-0133-07	08/10/06
OL-0133-08	08/10/06
OL-0133-09	08/10/06
OL-0133-10	08/10/06
OL-0133-11	08/10/06
OL-0133-12	08/10/06
OL-0133-13	08/10/06
OL-0133-14	08/10/06
OL-0133-15	08/10/06
OL-0133-16	08/10/06
OL-0133-17	08/10/06
OL-0133-18	08/10/06
OL-0133-19	08/10/06

*Not Analyzed.

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC, with the exception of OL-0133-05 and OL-0133-106 which were not analyzed with this SDG. All of the samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. No sample bottles were received labeled for sample OL-0133-05. Two sets of bottles were received labeled for sample OL-0133-06. Both sets of sample bottles were analyzed subsequently in SDG C6H150185 and labeled as OL-0134-05 and OL-0134-05a.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were acceptable and within QC acceptance range for OL-0133-11, OL-0133-13, and OL-0133-19. All other samples were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not considered acceptable and within QC acceptance limits for all analytes for sample OL-0133-19. MS/MSD %R values exceeded upper control limit for 1,4-Dichlorobenzene, Naphthalene, and Xylenes; results for OL-0133-19 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Affected Samples	VAL Flag
OL-0133-19	1,4-Dichlorobenzene	123/121	OL-0133-19	J
OL-0133-19	Naphthalene	359/279	OL-0133-19	J
OL-0133-19	Xylenes (total)	145/143	OL-0133-19	J

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits, with the exception of 1,2,3-TCB in QC batch 62290210, which had a low recovery. Evaluation results are shown below.

Analytical Parameter	LCS ID/ QC batch	LCS %R	Control Limit	Affected Samples	VAL Flag
1,2,3-Trichlorobenzene	JCH721AC/ 6229021	35	42-136	OL-0133-15 thru OL-0133-19	J/UJ

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, 1C40816ND	1,2,3-TCB	-41.6	OL-0133-01, -02, -03, OL-0133-15 thru OL-0133-19	J	J/UJ
Vstd50, 1C40817C.D	Naphthalene	-44.5	Ol-0133-04, OL-0133-07 thru OL-0133-14	J	J/UJ
Vstd50, 1C40817C.D	1,2,3-TCB	-32.4	Ol-0133-04, OL-0133-07 thru OL-0133-14	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0133-16 and OL-0133-17.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-07 and OL-0133-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were “diluted out” and not calculated by laboratory because samples were analyzed at dilution. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0133-19 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0, M0816SC1.D	Phenol	45.4	All in SDG	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0133-16 and OL-0133-17.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-07 and OL-0133-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   With the exception of sample OL-0133-13, surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for each sample, except OL-0133-13, due to matrix interference. The decachlorobiphenyl recovery exceeded the upper control limit in OL-0133-13; however all sample results were non-detect, so no qualification was required. No sample results were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0133-19.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0133-16 and OL-0133-17.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-07 and OL-0133-16.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0133-19.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0133-16 and OL-0133-17.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-07 and OL-0133-16.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria for Ammonia and Sulfide. For TOC, all samples were analyzed on 08/18/06 with associated autosampler error affecting samples OL-0133-14 thru OL-0133-19, which were reanalyzed on 09/16/06 with similar results. Samples OL-0133-14 thru OL-0133-19 were reanalyzed on 09/19/06, with acceptable autosampler performance, but outside of 14-day holding time by 23 days. Evaluation results are as shown below.

Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
OL-0133-14 thru OL-0133-19	26	Y	J

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (4.5 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for samples OL-0133-19 (Ammonia, Sulfide, and TOC). MS/MSD accuracy (percent recovery; %R) measurements was considered acceptable and within QC acceptance limits for samples OL-0133-19 (TOC). MS/MSD accuracy was not acceptable for sample OL-0133-19 (Ammonia, Total Sulfide). All samples in QC batch 6224072 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0133-19	Ammonia	86/85	90-110	OL-0133-01 thru OL-0133-19	J
OL-0133-19	Total Sulfide	50/45	75-125	OL-0133-08 thru OL-0133-19	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample 01-0133-19.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0133-16 and OL-0133-17.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-07 and OL-0133-16.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.5 DATA USABILITY SUMMARY FOR SDG #C6H110176

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H110176. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0134-01	08/10/06
OL-0134-02	08/10/06
OL-0134-03	08/10/06
OL-0134-04	08/10/06
OL-0134-05	08/10/06
OL-0134-06	08/10/06
OL-0134-07	08/10/06
OL-0134-08	08/10/06
OL-0134-09	08/10/06
OL-0134-10*	08/10/06
OL-0134-11*	08/10/06
OL-0134-12	08/10/06
OL-0134-13	08/10/06

*Not Analyzed.

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC, with the exception of OL-0134-10 and OL-0134-11 which were not analyzed with this SDG. All of the samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The COC record was not signed (relinquished) by Parsons sampling personnel. No sample bottles were received labeled for sample OL-0134-10. Two sets of bottles were received labeled for sample OL-0134-11. Both sets of sample bottles were analyzed subsequently in SDG C6H150180 and labeled as OL-0134-11 and OL-0134-11a.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were acceptable and within QC acceptance range for OL-0134-05. All other samples were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0134-01 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits, with the exception of 1,3,5-TCB in QC batch 62290210, which had a high recovery. All associated sample results were reported as non-detect: sample results were not required to be qualified. Evaluation results are shown below.

Analytical Parameter	LCS ID/ QC batch	LCS %R	Control Limit	Affected Samples	VAL Flag
1,3,5-Trichlorobenzene	JCH5R1AC/ 6228676	134	60-130	None, all "ND"	J

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC30816CND	Naphthalene	-33.5	All in SDG	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0134-07 and OL-0134-08.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0134-01 and OL-0134-13.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were "diluted out" and not calculated by laboratory because samples were analyzed at dilution. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0134-12 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0134-07 and OL-0133-08.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0134-01 and OL-0134-13.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for each sample, due to matrix interference. The decachlorobiphenyl recovery in exach sample was considered acceptable and within QC acceptance limits. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0143-12.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0134-07 and OL-0134-08.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0134-01 and OL-0134-13.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC

acceptance limits for sample OL-0134-01. MS/MSD %R was not calculated by lab because sample concentration was greater than 4x spike amount.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0134-07 and OL-0134-08.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0134-01 and OL-0134-13.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia and Sulfide. For TOC, all samples were analyzed on 08/17/06 with associated autosampler error affecting samples OL-0134-05 thru OL-0134-13, which were reanalyzed on 08/17/06 with similar results. Samples OL-0134-05 thru OL-0134-13 were reanalyzed on 09/16/06, with acceptable autosampler performance, but outside of 14-day holding time by 23 days. Evaluation results are as shown below.

Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
OL-0134-05 thru OL-0134-13	23	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria for Ammonia and Sulfide. For TOC, a CCV (112%) for the sample analyses performed on

August 17, was slightly above the control limit (90-110%); the associated sample results were qualified as estimated (J).

CCV ID	Target Analyte	%R	Samples Affected	VAL Qual	Usability Qual
08/17/06	TOC	112	OL-0134-01 thru OL-0134-04	J	J

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (4.3 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0134-01 (Ammonia). A lab MS/MSD sample was utilized for Total Sulfide so results are not applicable. MS/MSD analyses were not performed for TOC.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed for TOC.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0134-07 and OL-0134-08.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0134-01 and OL-0134-13.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.6 DATA USABILITY SUMMARY FOR SDG # C6H120149

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H120149. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0137-01	08/11/06
OL-0137-02	08/11/06
OL-0137-03	08/11/06
OL-0137-04	08/11/06
OL-0137-05	08/11/06
OL-0137-06	08/11/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, pH, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All samples were analyzed as methanol dilutions and all samples had their surrogates recoveries "diluted out" and were not calculated. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A non-project sample was utilized for MS/MSD analyses; results are not applicable to project samples.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, 1C40815.D	Naphthalene	-47.9	ALL in SDG	J	J/UJ
Vstd50, 1C40815.D	1,2,3-Trichlorobenzene	-36.9	ALL in SDG	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate were not collected and analyzed with this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0137-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as methanol dilutions and all samples had their surrogates recoveries "diluted out" and were not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

A non-project sample was utilized for MS/MSD analyses; results are not applicable to project samples.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate were not collected and analyzed with this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0137-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries were considered acceptable and within QC acceptance limits, with the exception that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for samples OL-013702, OL-0137-04, and OL-0137-06 due to matrix interference nor for one of two surrogates (decachlorobiphenyl) in sample OL-0137-01.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A non-project sample was utilized for MS/MSD analyses; results are not applicable to project samples.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   Field duplicate were not collected and analyzed with this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0137-01.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. Reporting limits were adjusted according to amount of sample extracted.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Matrix spike analysis was not performed.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate were not collected and analyzed with this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0137-01.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed for TOC. MS recoveries for Ammonia and for Sulfide were non-compliant (slightly low); however, since corresponding MSD recoveries (and MS/MSD RPD values) were compliant, no sample results were qualified based on matrix spike recoveries.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0137-01	Ammonia as N	85/ok	90-110	OL-0137-01	None
OL-0137-04	Sulfide	73/ok	75-125	OL-0137-04	None

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate were not collected and analyzed with this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0137-01.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.7 DATA USABILITY SUMMARY FOR SDG #C6H120152

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H120152. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0135-01	08/11/06
OL-0135-02	08/11/06
OL-0135-03	08/11/06
OL-0135-04	08/11/06
OL-0135-05	08/11/06
OL-0135-06	08/11/06
OL-0135-07	08/11/06
OL-0135-08	08/11/06
OL-0135-09	08/11/06
OL-0135-10	08/11/06
OL-0135-11	08/11/06
OL-0135-12	08/11/06
OL-0135-13	08/11/06
OL-0135-14	08/11/06
OL-0135-15	08/11/06
OL-0135-16	08/11/06
OL-0135-17	08/11/06
OL-0135-18	08/11/06
OL-0135-19	08/11/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Several samples were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0135-01 thru OL-0135-06 and OL-0135-08 thru OL-0135-19. Surrogate recoveries were acceptable and within QC acceptance range for sample OL-0135-07. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0135-18 was utilized for MS/MSD analyses. Sample OL-0135-18 was analyzed at dilution; therefore, spiking compounds were "diluted out" and not calculated. No sample results were qualified based on MS/MSD results

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, 1C40818D	Naphthalene	-41.5	OL-0135-01, -18	J	J/UJ
Vstd50, 1C40818D	1,2,3-TCB	-29.4	OL-0135-01, -18	J	J/UJ
Vstd50, 1C40818N.D	Naphthalene	-44.3	OL-0135-02 thru OL-0135-10	J	J/UJ
Vstd50, 1C40818N.D	1,2,3-TCB	-34.6	OL-0135-02 thru OL-0135-10	J	J/UJ
Vstd50, CC40821N.D	Naphthalene	-26.8	OL-0135-11, -12, -13,	J	J/UJ

Vstd50, CC40821N.D	1,2,3-TCB	-42.1	OL-0135-11, -12, -13,	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0135-14 and OL-0135-15.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0135-02 and OL-0135-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Several samples were analyzed as dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0135-01 thru OL-0135-06 and OL-0135-08 thru OL-0135-19. Surrogate recoveries were acceptable and within QC acceptance range for sample OL-0135-07 and for dilution analysis samples OL-0135-04DL, OL-0135-05DL, and OL-0135-06DL. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0135-18 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Results from the original analysis should be used preferentially, with exception of those that exceeded calibration range. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0135-04	6229213	Fluoranthene	18000	10	E
OL-0135-04	6229213	Phenanthrene	43000	10	E
OL-0135-05	6229213	Phenanthrene	52000	25	E
OL-0135-06	6229213	Phenanthrene	44000	25	E

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0135-14 and OL-0135-15.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0135-02 and OL-0135-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for samples OL-0135-13 thru OL-0135-19 and additionally for the second surrogate (decachlorobiphenyl in Ol-0135-17 and OL-0135-18 due to matrix interfence. The recovery of tetrachloro-m-xylene was non-compliant in sample OL-0135-01 (184% exceeded the upper control limit); however, all analytes were reported as non-detect. No sample results were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0131-11.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0135-14 and OL-0135-15.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0135-02 and OL-0135-18.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0135-16 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0135-14 and OL-0135-15.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0135-02 and OL-0135-18.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (3.5 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0135-16 (Ammonia, Sulfide). MS accuracy was not acceptable for sample OL-0135-16. Sample result for OL-0135-16 was qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0135-16	TOC	148/ n/a	75-125	OL-0135-16	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0135-16.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0135-14 and OL-0135-15.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0135-02 and OL-0135-18.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.8 DATA USABILITY SUMMARY FOR SDG #C6H120168

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H120168. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0136-01	08/11/06
OL-0136-02	08/11/06
OL-0136-03	08/11/06
OL-0136-04	08/11/06
OL-0136-05	08/11/06
OL-0136-06	08/11/06
OL-0136-07	08/11/06
OL-0136-08	08/11/06
OL-0136-09	08/11/06
OL-0136-10	08/11/06
OL-0136-11	08/11/06
OL-0136-12	08/11/06
OL-0136-13	08/11/06
OL-0136-14	08/11/06
OL-0136-15	08/11/06
OL-0136-16	08/11/06
OL-0136-17	08/11/06
OL-0136-18	08/11/06
OL-0136-19	08/11/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0136-01 thru OL-0136-19. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0136-16 was utilized for MS/MSD analyses. Sample OL-0136-16 was analyzed at dilution; therefore, spiking compounds were "diluted out" and not calculated. No sample results were qualified based on MS/MSD results

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries for QC batch 6232043 were considered acceptable and within QC acceptance limits. LCS recoveries for QC batch 6230601 were considered acceptable and within QC acceptance limits, with the exception of 1,2,3-Trichlorobenzene for which the recovery of 151% exceeded the control limit of 60-130%; however, all associated sample results were reported as non-detect for 1,2,3-TCB and were not required to be qualified. No sample results were qualified based on LCS recoveries.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC30818.D	Naphthalene	-26.9	OL-0136-01 thru OL-0136-08, OL-0136-16	J	J/UJ
Vstd50, CC30818.D	1,3,5-TCB	40.6	OL-0136-01 thru OL-0136-08, OL-0136-16	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0136-14 and OL-0136-15.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0136-03 and OL-0136-17.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0136-01 thru OL-0136-19. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0136-16 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 M0818SC1.D	Phenol	21.1	OL-0136-01 thru OL-0136-08, OL-0136-16	J	J/UJ
SSTD4.0 M0819SC1.D	Phenol	-29.2	OL-0136-09 thru OL-0136-08, OL-0136-19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0136-14 and OL-0136-15, with the exceptions shown below. Non-compliant sample results in the field duplicate pair OL-0136-14/OL-0136-15 were qualified as estimated.

Analyte	Field Sample ID	Replicate Sample ID	RPD	Data Qualifier
Anthracene	OL-0136-14	OL-0136-15	120	J
Benzo(a)anthracene	OL-0136-14	OL-0136-15	130	J
Benzo(b)fluoranthene	OL-0136-14	OL-0136-15	129	J
Benzo(k)fluoranthene	OL-0136-14	OL-0136-15	122	J
Benzo(ghi)perylene	OL-0136-14	OL-0136-15	126	J
Benzo(a)pyrene	OL-0136-14	OL-0136-15	128	J
Chrysene	OL-0136-14	OL-0136-15	128	J
Dibenzo(a,h)anthracene	OL-0136-14	OL-0136-15	123	J
Fluoranthene	OL-0136-14	OL-0136-15	114	J
Indeno(1,2,3-cd)pyrene	OL-0136-14	OL-0136-15	121	J
Phenanthrene	OL-0136-14	OL-0136-15	104	J
Phenol	OL-0136-14	OL-0136-15	187	J
Pyrene	OL-0136-14	OL-0136-15	121	J

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0136-03 and OL-0136-17.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for samples OL-0136-01 thru OL-0136-06, OL-0136-08, OL-0136-09, OL-0136-11, and OL-0136-12 due to matrix interference. The recovery of tetrachloro-m-xylene was non-compliant in samples OL-0136-10, OL-0136-13, and OL-0136-16 (181%, 135%, and 191%, respectively, exceeded the upper control limit); however, all analytes were reported as non-detect. The recovery of decachlorophenol was non-compliant in sample OL-0136-09, (164% exceeded the upper control limit); however, all analytes were reported as non-detect. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0136-16.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria, with the exceptions shown below. CCV T0860836 analyzed on August 24 was non-compliant. Associated samples were reanalyzed on August 25 and were associated with non-compliant CCV T0860849.D. Only the August 24th data (original analysis) was reported. Sample results were qualified as estimated based on the non-compliant calibration results. Evaluation results are as shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
T0860836.D	ALL Aroclors	21.1	OL-0136-01 thru OL-0136-16	J	J/UJ

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0136-14 and OL-0136-15.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0136-03 and OL-0136-17.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0136-16 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0136-14 and OL-0136-15.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0136-03 and OL-0136-17.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (2.7 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Ammonia and TOC in sample OL-0136-16. MS/MSD for Sulfide was not calculated because sample concentration was greater than 4x blank amount in OL-0136-16. No sample results were qualified based on method blank results.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample 01-0136-18.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0136-14 and OL-0136-15.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0136-03 and OL-0136-17.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.9 DATA USABILITY SUMMARY FOR SDG #C6H150180

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H150180. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0134-11A	08/10/06
OL-0134-11	08/10/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The COC record was not signed (relinquished) by Parsons sampling personnel. For SDG C6H110176, no sample bottles were received labeled for sample OL-0134-10. Two sets of bottles were received labeled for sample OL-0134-11. Sample analyses were put on hold until approval to analyze was received from Parsons. Both sets of sample bottles were analyzed in SDG C6H150180 and labeled as OL-0134-11 and OL-0134-11a. However, it is noted that all results for these samples were considered unusable per NYSDEC comment dated 2/21/07.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All samples were analyzed as medium-level soils and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0134-11 and OL-0134-11A. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0134-11 was utilized for MS/MSD analyses. Sample OL-0134-11 was analyzed at dilution; therefore, spiking compounds were "diluted out" and not calculated. No sample results were qualified based on MS/MSD results

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC40823.D	Naphthalene	-46.1	OL-0134-11, OL-0134-11A	J	J/UJ
Vstd50, CC40823.D	12,,3-TCB	-44.0	OL-0134-11, OL-0134-11A	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate was not analyzed with SDG C6H150180.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0134-11. However, it was also noted that on the "run log" lab misidentified sample C6H150180-001 (OL-0135-11A) as sample "C6H150182-001". "File ID", as well as "Vial ID" (from extraction log), were traceable to GC/MS sample raw data and sample result form for OL-0134-11A (C6H150180-001).

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times and preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All samples were analyzed as dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0134-11 and OL-0134-11A. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0134-11 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   A field duplicate was not analyzed with SDG C6H150180.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0136-03 and OL-0136-17.

11. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for samples OL-0134-11 and OL-0134-11A due to matrix interference. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0134-11. MS/MSD precision (relative percent difference; RPD) measurements were considered acceptable but were not within QC acceptance limits for sample OL-0134-11; the Aroclor 1260 RPD value (35%) marginally exceeded the control limit (33%). Aroclor 1260 was reported as non-detect in OL-0134-11. No sample results were qualified based on MS/MSD results.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria, with the exceptions shown below. CCV T0860836 analyzed on August 24 was non-compliant. Associated samples were reanalyzed on August 25 and were associated with non-compliant CCV T0860849.D. Only the August 24th data (original analysis) was reported. Sample results were qualified as estimated

based on the non-compliant calibration results. Evaluation results are as shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
T0860836.D	ALL Aroclors	21.1	OL-0136-01 thru OL-0136-16	J	J/UJ

7. Field Duplicate Precision

A field duplicate was not analyzed with SDG C6H150180.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-014-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries not calculated by laboratory because OL-0134-11 concentration was greater than 4x spike amount. No sample results were qualified based on MS/MSD recovery.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

A field duplicate was not analyzed with SDG C6H150180.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0134-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (3.3 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) measurements were considered acceptable and within QC acceptance limits for sample OL-0134-11 (Ammonia, Sulfide, and TOC). MS/MSD accuracy (percent recovery; %R) for TOC was acceptable and within QC acceptance limits for sample OL-0132-14. MS/MSD accuracy (percent recovery; %R) for Ammonia and Sulfide was not acceptable for sample OL-0132-14. Ammonia and Sulfide results for all

samples in SDG C6H150180 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0134-11	Ammonia as N	82/ok	90-110	OL-0134-11, OL-0134-11A	J
OL-0134-11	Total Sulfide	50/55	75-125	OL-0134-11, OL-0134-11A	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample 01-0134-11.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

A field duplicate was not analyzed with SDG C6H150180.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0134-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.10 DATA USABILITY SUMMARY FOR SDG #C6H150185

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H150185. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0133-05A	08/10/06
OL-0133-05A	08/10/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The COC record was not signed (relinquished) by Parsons sampling personnel. For SDG C6H110165, no sample bottles were received labeled for sample OL-0133-06. Two sets of bottles were received labeled for sample OL-0133-05. Sample analyses were put on hold until approval to analyze was received from Parsons. Both sets of sample bottles were analyzed in SDG C6H150185 and labeled as OL-0133-05 and OL-0133-05A. However, it is noted that all results for these samples were considered unusable per NYSDEC comment dated 2/21/07.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All samples were analyzed as medium-level soils and had their surrogates recoveries “diluted out” and not calculated; affected samples were OL-0133-05 and OL-0133-05A. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A sample from a different SDG was utilized for MS/MSD analyses; results are not applicable. No sample results were qualified based on MS/MSD results

4. **Laboratory Control Sample (LCS) Recoveries**

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, 1C40821.D	Naphthalene	-46.2	OL-0133-05, OL-0133-05A	J	J/UJ
Vstd50, 1C40821.D	1,2,3-TCB	-37.1	OL-0133-05, OL-0133-05A	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate was not analyzed with SDG C6H150180.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0133-05.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0133-05 and OL-0133-05A. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

A sample from a different SDG was utilized for MS/MSD; results are not applicable. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Results from the original analysis should be used preferentially, with exception of those that exceeded calibration range. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0133-05	6233095	Phenanthrene	79000	20	E

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

A field duplicate was not analyzed with SDG C6H150185.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-05.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for sample OL-0133-05A due to matrix interference. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

A sample from a different SDG was utilized for MS/MSD analyses. No sample results were qualified based on MS/MSD results.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

A field duplicate was not analyzed with SDG C6H150185.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-05.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed with this SDG. No sample results were qualified based on MS/MSD recovery.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

A field duplicate was not analyzed with SDG C6H150185.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-05.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (3.3 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   A sample from a different SDG was utilized for MS/MSD analyses; results are not applicable (Ammonia, Sulfide); results are not applicable. MS/MSD was not performed with this SDG for TOC.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed for TOC with this SDG.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   A field duplicate was not analyzed with SDG C6H150185.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0133-05.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.11 DATA USABILITY SUMMARY FOR SDG # C6H150215

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H150215. The results for total organic carbon (TOC) for these samples were reported in SDG # C6H150220. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0138-01	8/12/2006
OL-0138-02	8/12/2006
OL-0138-03	8/12/2006
OL-0138-04	8/12/2006
OL-0138-05	8/12/2006
OL-0138-06	8/12/2006
OL-0138-07	8/12/2006
OL-0138-08	8/12/2006
OL-0138-09	8/12/2006
OL-0138-10	8/12/2006
OL-0138-11	8/12/2006
OL-0138-12	8/12/2006
OL-0138-13	8/12/2006
OL-0138-14	8/12/2006
OL-0138-15	8/12/2006
OL-0138-16	8/12/2006
OL-0138-17	8/12/2006
OL-0138-18	8/12/2006
OL-0138-19	8/12/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

The laboratory reported that due to the concentration of target compounds detected, the samples were analyzed as medium level soils. All surrogates were diluted out in the samples. No reported results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

The laboratory reported that due to the concentration of target compounds detected, the samples were diluted and analyzed as medium level soils. All MS/MSD spikes were diluted out. No reported results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibrations associated with project samples were considered acceptable and within criteria.

Target compound trichlorobenzene (40.2%) reported percent difference (%D) greater than the control limit (30%) in the continuing calibration standard CC30821. Reported results for this compound have been qualified as estimated and flagged 'J/UJ'. The following samples were affected: OL-0138-01, OL-0138-02, OL-0138-05 and OL-0138-17.

Target compound naphthalene (32.1%) reported percent difference greater than the control limit in the continuing calibration standard CC30821N. Reported results for this compound have been qualified as estimated and flagged 'J/UJ'. The following samples were affected: OL-0138-03, OL-0138-04, OL-0138-06, OL-0138-07, OL-0138-08, OL-0138-09, OL-0138-10, OL-0138-11, OL-0138-12, OL-0138-13, OL-0138-15, OL-0138-16 and OL-0138-18.

Target compound trichlorobenzene (42.1%) reported %D greater than the control limit in the continuing calibration standard CC40821N. Reported results for this compound have been qualified as estimated and flagged 'J/UJ'. Only sample OL-0138-19 was associated with this continuing calibration standard.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6H150215) one field duplicate sample was collected. Sample OL-0138-15 is the field duplicate of sample OL-0138-14. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0138-01 and OL-0138-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that the samples were analyzed as medium level soil samples. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, all samples were analyzed at a dilution. As a result all surrogate recoveries were diluted out.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

The laboratory reported that all MS/MSD spikes were diluted out due to the necessary dilutions.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0138-14 and OL-0138-15, except for target compound fluorene. Fluorene was detected in sample OL-0138-15 (1200 ppb) but was not detected in sample OL-0138-14. No results have been qualified.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0138-02 and OL-0138-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all samples were diluted due to concentration of target compounds detected. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that the recovery of surrogate tetrachlroro-m-xylene was not calculated for several samples due to matrix interference. Also several samples reported tetrachlroro-m-xylene recoveries outside the control limits. The affected samples (OL-0138-10, OL-0138-11 and OL-0138-18) had acceptable recoveries for surrogate decachlorobiphenyl therefore no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0138-15 and OL-0138-14.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0138-13 and OL-0138-19.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered compliant and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0138-15 and OL-0138-14.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0138-15 and OL-0138-14.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered compliant and within QC acceptance limits for TOC. The MS percent recovery was compliant but the MSD

(118%) was above the upper control limit (110%). No results have been qualified. MS/MSD percent recovery outliers were reported for total sulfide. The reported recoveries (45-64%) were below the lower control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0138-15 and OL-0138-14, except for total sulfide. Total sulfide was detected in sample OL-0138-15 (47.4 ppm) but was not detected in sample OL-0138-14. The reported result for sample OL-0138-15 was less than the RL. No results have been qualified due to the discrepancy between the results for the field duplicates.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0138-01 and OL-0138-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.12 DATA USABILITY SUMMARY FOR SDG # C6H150224

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H150224. The results for total organic carbon (TOC) for these samples were reported in SDG # C6H150227. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0141-01	8/14/2006
OL-0141-02	8/14/2006
OL-0141-03	8/14/2006
OL-0141-04	8/14/2006
OL-0141-05	8/14/2006
OL-0141-06	8/14/2006
OL-0141-07	8/14/2006
OL-0141-08	8/14/2006
OL-0141-09	8/14/2006
OL-0141-10	8/14/2006
OL-0141-11	8/14/2006
OL-0141-12	8/14/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of target compounds detected, the samples were analyzed as medium level soils. All surrogates were

diluted out in the samples (except for sample OL-0141-07). No reported results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

No project specific MS/MSDs were analyzed for this SDG. The laboratory reported results for a laboratory MS/MSD. Recovery outliers were reported for naphthalene for the lab MS/MSD sample. Also, RPD outliers were reported for 1,2,3-trichlorobenzene and 1,3,5-trichlorobenzene. No reported results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibrations associated with project samples were considered acceptable and within criteria.

Target compounds 1,2,3-trichlorobenzene (-37.1%) and naphthalene (-46.2%) reported percent difference (%D) greater than the control limit (30%) in the continuing calibration standard CC40821. Reported results for this compound have been qualified as estimated and flagged 'J/UJ'. The following samples were affected: OL-0141-01, OL-0141-02, OL-0141-03, OL-0141-04, OL-0141-05, OL-0141-06, OL-0141-08, OL-0141-09 and OL-0141-10.

Target compound 1,2,3-trichlorobenzene (-42.1%) reported percent difference greater than the control limit in the continuing calibration standard CC40821N. Reported results for this compound have been qualified as estimated and flagged 'J/UJ'. The following samples were affected: OL-0141-07, OL-0141-11 and OL-0141-12.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

No field duplicates were collected or analyzed for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0141-01 and OL-0141-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that the samples were analyzed as medium level soil samples.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, all samples were analyzed at a dilution. As a result all surrogate recoveries were diluted out.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

No project specific MS/MSD was analyzed with this SDG.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

No field duplicates were collected or analyzed for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0141-03 and OL-0141-04.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all samples were diluted due to concentration of target compounds detected.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that the recovery of surrogate tetrachlroro-m-xylene was not calculated for several samples due to matrix interference. Also several samples reported tetrachlroro-m-xylene recoveries outside the control limits. The affected samples had acceptable recoveries for surrogate decachlorobiphenyl therefore no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

No project specific MS/MSD was analyzed for this SDG.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

Several continuing calibration standards associated with some of the samples did not meet the 15% difference (%D) criteria. The laboratory indicated

that the affected samples were reanalyzed with similar results and attributed the outlier to matrix interferences in the samples. Only one set of data was reported for the samples. The reported results for the affected samples have been qualified as estimated and flagged 'J/UJ'. The affected samples are: OL-0141-07, OL-0141-08, OL-0141-09, OL-0141-10, OL-0141-11 and OL-0141-12.

7. Field Duplicate Precision

No field duplicate was collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0141-11 and OL-0141-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

The laboratory reported that for the MS/MSD associated with sample OL-0141-01, mercury recoveries were not calculated due to the concentration of mercury in the sample being > 4 times the spiking amount.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

No field duplicate was collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0141-11 and OL-0141-12. The laboratory reported that mercury results for the following samples were over the calibration range and required dilution: OL-0141-01, OL-0141-05, OL-0141-06, OL-0141-07, OL-0141-09 and OL-0141-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes except for the method blanks for ammonia and TOC.

The ammonia blank reported ammonia at a concentration between the MDL and the RL (3.3 ppm). Since the reported concentration of ammonia in the affected samples ranged from 119 ppm to 510 ppm the ammonia contamination in the blank is considered insignificant. No reported results have been qualified.

The method blank associated with the TOC analysis also showed a level of contamination below the RL (500 ppm). Since the reported concentration of TOC in the samples ranged from 50,500 ppm to well above 100,000 ppm the TOC contamination in the blank is considered insignificant. No reported results have been qualified.

4. Matrix Spike Recoveries

No project specific MS/MSD was reported for this SDG.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

No field duplicate was collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0141-01 and OL-0141-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.13 DATA USABILITY SUMMARY FOR SDG # C6H150272

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H150272. The results for total organic carbon (TOC) for these samples were reported in SDG # C6H150263. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0139-01	8/14/2006
OL-0139-02	8/14/2006
OL-0139-03	8/14/2006
OL-0139-04	8/14/2006
OL-0139-05	8/14/2006
OL-0139-06	8/14/2006
OL-0139-07	8/14/2006
OL-0139-08	8/14/2006
OL-0139-09	8/14/2006
OL-0139-10	8/14/2006
OL-0139-11	8/14/2006
OL-0139-12	8/14/2006
OL-0139-13	8/14/2006
OL-0139-14	8/14/2006
OL-0139-15	8/14/2006
OL-0139-16	8/14/2006
OL-0139-17	8/14/2006
OL-0139-18	8/14/2006
OL-0139-19	8/14/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of target compounds detected, the following samples were analyzed as medium level soils: OL-0139-01, OL-0139-02, OL-0139-04, OL-0139-06, OL-0139-07, OL-0139-08, OL-0139-09, OL-0139-10 and OL-0139-11. The other samples were analyzed as low level soils. All surrogates were diluted out for samples OL-0139-08 and OL-0139-09. No reported results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0139-16 was analyzed as the MS/MSD for this SDG. No percent recovery or relative percent difference outliers were reported for the MS/MSD results. No reported results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   Samples OL-0139-08 and OL-0139-09 are field duplicates for this SDG. Both samples required dilution. Sample OL-0139-08 was diluted 5:1 and sample OL-0139-09 was diluted 10:1. Generally, there is excellent agreement between the results when the dilutions are considered.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0139-08 and OL-0139-09.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that some of the samples were analyzed as medium level soil samples. Some reported detections are above the method detection limit (MDL) but less than the reporting limit (RL). These results have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, eleven (11) of the samples were analyzed at a dilution. As a result all surrogate recoveries were diluted out for eight of the eleven samples: OL-0139-01, OL-0139-02, OL-0139-03, OL-0139-07, OL-0139-08, OL-0139-09, OL-0139-10 and OL-0139-18. No reported results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0139-16 was analyzed as the MS/MSD for this SDG. Recovery outliers were reported for target compound phenol for both the MS (156%) and MSD (178%). The reported recoveries exceeded the control limits (35-110%). No reported results have been qualified due to the MS/MSD outliers alone.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Samples OL-0139-08 and OL-0139-09 are field duplicates for this SDG. There is excellent agreement (as RPD) between the results for the field duplicates.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0139-08 and OL-0139-09.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that eleven samples were diluted due to concentration of target compounds detected. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The reported recovery of surrogate decachlorobiphenyl (21%) was outside the control limits (23-141%) for sample OL-0139-10. Since the reported recovery for surrogate tetrachlroro-m-xylene was in control for this sample no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0139-16 was analyzed as the project specific MS/MSD for this SDG. All reported MS/MSD results are acceptable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

The continuing calibration standard associated with some of the samples did not meet the 15% difference (%D) criteria. The laboratory indicated that the affected samples were reanalyzed with similar results and attributed the outlier to matrix interferences in the samples. Only one set of data was reported for the samples. The reported results for samples OL-0139-17 through OL-0139-19 have been qualified as estimated and flagged 'J/UJ'.

7. Field Duplicate Precision

Samples OL-0139-08 and OL-0139-09 are field duplicates collected and analyzed for this SDG. All reported results for the field duplicates meet the precision criteria and are acceptable.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0139-08 and OL-0139-09.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All MS/MSD results reported were considered acceptable and within criteria.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0139-08 and OL-0139-09 were collected and analyzed as field duplicates for this SDG. All reported results for the file duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0139-08 and OL-0139-09.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes except for the method blank for ammonia.

The ammonia blank reported ammonia at a concentration between the MDL and the RL (3.2 ppm). Since the reported concentration of ammonia in the affected samples ranged from 66.2 ppm to 287 ppm the ammonia contamination in the blank is considered insignificant. No reported results have been qualified.

4. Matrix Spike Recoveries

Sample OL-0139-16 was analyzed as the project specific MS/MSD for this SDG. Recovery outliers were reported for ammonia (112/113%) and total sulfide (61/70%). Reported results for these parameters have been qualified as estimated and flagged 'J/UJ'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0139-08 and OL-0139-09 were collected and analyzed as field duplicates for this SDG. The reported results for the duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0139-08 and OL-0139-09.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.14 DATA USABILITY SUMMARY FOR SDG # C6H150281

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H150281. The results for total organic carbon (TOC) for these samples were reported in SDG # C6H150266. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0140-01	8/14/2006
OL-0140-02	8/14/2006
OL-0140-03	8/14/2006
OL-0140-04	8/14/2006
OL-0140-05	8/14/2006
OL-0140-06	8/14/2006
OL-0140-07	8/14/2006
OL-0140-08	8/14/2006
OL-0140-09	8/14/2006
OL-0140-10	8/14/2006
OL-0140-11	8/14/2006
OL-0140-12	8/14/2006
OL-0140-13	8/14/2006
OL-0140-14	8/14/2006
OL-0140-15	8/14/2006
OL-0140-16	8/14/2006
OL-0140-17	8/14/2006
OL-0140-18	8/14/2006
OL-0140-19	8/14/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of target compounds detected, all surrogates were diluted except for sample OL-0140-06. The reported surrogate recoveries for this sample meet the criteria. No reported results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0140-18 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   Samples OL-0140-14 and OL-0140-15 are field duplicates for this SDG. Both samples required dilution. Sample OL-0140-14 was diluted 20:1 and sample OL-0140-15 was diluted 10:1. Generally, there is excellent agreement between the results when the dilutions are considered.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0140-14 and OL-0140-15.

11. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that one sample (OL-0140-06) was analyzed as a low level sample. All other samples were analyzed as medium level soil samples. Some reported detections are above the method detection limit (MDL) but less than the reporting limit (RL). These results have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, all of the samples except sample OL-0140-06 were analyzed at a dilution. As a result all surrogate recoveries were diluted out. The reported surrogate recoveries for sample OL-0140-06 were compliant. No reported results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0140-18 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Samples OL-0140-14 and OL-0140-15 are field duplicates for this SDG. There is excellent agreement (as RPD) between the results for the field duplicates.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0140-14 and OL-0140-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all but one (OL-0140-06) of the samples were diluted due to concentration of target compounds detected. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that recoveries of surrogate tetrachlroro-m-xylene for samples OL-0140-02, Ol-0140-04 and OL-0140-10 were not calculated due to matrix interference. Since the reported recoveries for the other PCB surrogate decachlorobiphenyl were in control for this sample no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0140-18 was analyzed as the project specific MS/MSD for this SDG. All reported MS/MSD results are acceptable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

The continuing calibration standard associated with some of the samples did not meet the 15% difference (%D) criteria for Aroclor 1260. The laboratory indicated that the affected samples were reanalyzed with similar results and attributed the outlier to matrix interferences in the samples. Only one set of data was reported for the samples. The reported results for samples OL-0140-12 through OL-0140-19 have been qualified as estimated and flagged 'UJ'.

7. Field Duplicate Precision

Samples OL-0140-14 and OL-0140-15 are field duplicates collected and analyzed for this SDG. All reported results for the field duplicates meet the precision criteria and are acceptable.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0140-14 and OL-0140-15. No PCBs were detected in any of the samples.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

The laboratory reported that mercury recoveries for the MS/MSD (OL-0140-18) were not calculated due to the concentration of mercury in the sample being > 4 times the concentration of the spike. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0140-14 and OL-0140-15 were collected and analyzed as field duplicates for this SDG. All reported results for the field duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0140-14 and OL-0140-15. The following samples required dilution (over the calibration range): OL-0140-04, OL-0140-08, OL-0140-14 and OL-0140-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes except for TOC. The laboratory blank associated with the TOC analysis contained TOC at a concentration less than the reporting limit (500 ppm). Since the TOC concentration in the samples (53000 – 117000 ppm) is significantly greater than the level of blank contamination, no results have been qualified.

4. Matrix Spike Recoveries

Sample OL-0140-18 was analyzed as the project specific MS/MSD for this SDG. Recovery outliers were reported for total sulfide (57/62%). Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0140-14 and OL-0140-15 were collected and analyzed as field duplicates for this SDG. The reported results for the duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0140-14 and OL-0140-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.15 DATA USABILITY SUMMARY FOR SDG # C6H160225

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H160225. The results for total organic carbon (TOC) for these samples were reported in SDG # C6H160193. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0142-01	8/15/2006
OL-0142-02	8/15/2006
OL-0142-03	8/15/2006
OL-0142-04	8/15/2006
OL-0142-05	8/15/2006
OL-0142-06	8/15/2006
OL-0142-07	8/15/2006
OL-0142-08	8/15/2006
OL-0142-09	8/15/2006
OL-0142-10	8/15/2006
OL-0142-11	8/15/2006
OL-0142-12	8/15/2006
OL-0142-13	8/15/2006
OL-0142-14	8/15/2006
OL-0142-15	8/15/2006
OL-0142-16	8/15/2006
OL-0142-17	8/15/2006
OL-0142-18	8/15/2006
OL-0142-19	8/15/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of target compounds detected, 14 of 19 samples had the surrogates diluted out. No reported results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0142-16 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   Calibration verification standard, 1C40825, reported percent difference (%D) outliers for target compounds 1,2,3-trichlorobenzene (-35.4%) and naphthalene (-45.6%). Affected samples include all samples except for samples OL-0142-07 and OL-0142-12. Reported results have been qualified as estimated (J/UJ).

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   Samples OL-0142-10 and OL-0142-11 are field duplicates for this SDG. Both samples required dilution. Target analyte ethylbenzene was detected in sample OL-0142-10 but was not detected in sample OL-0142-11.

10. **Sample Result Verification and Identification**

Instrument raw data were reviewed for sample result verification and identification for samples OL-0142-10 and OL-0142-11.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that 14 of 19 samples were analyzed as methanol dilutions. All other samples were analyzed as medium level soil samples. Some reported detections are above the method detection limit (MDL) but less than the reporting limit (RL). These results have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, all of the samples were analyzed at a dilution. As a result all surrogate recoveries were diluted out. No reported results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0142-16 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits except for sample OL-0142-08. This sample had an internal standard (acenaphthene-d10) outlier. The reported area count was above the upper control limit. Reported detections have been qualified as estimated.

9. Field Duplicate Precision

Samples OL-0142-10 and OL-0142-11 are field duplicates for this SDG. There is excellent agreement (as RPD) between the results for the field duplicates.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0142-10 and OL-0142-11.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due to concentration of target compounds detected. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that recoveries of surrogate tetrachlroro-m-xylene for samples OL-0140-02, Ol-0140-04 and OL-0140-10 were not calculated due to matrix interference. Since the reported recoveries for the other PCB surrogate decachlorobiphenyl were in control for this sample no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0140-18 was analyzed as the project specific MS/MSD for this SDG. All reported MS/MSD results are acceptable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

The continuing calibration standard associated with the samples did not meet the 15% difference (%D) criteria. The laboratory indicated that the affected samples were reanalyzed with similar results and attributed the outlier to matrix interferences in the samples. Only one set of data was reported for the samples. The reported results for samples OL-0142-12 through OL-0142-19 have been qualified as estimated and flagged 'J/UJ'.

7. Field Duplicate Precision

Samples OL-0142-10 and OL-0142-11 are field duplicates collected and analyzed for this SDG. All reported results for the field duplicates meet the precision criteria and are acceptable.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0142-10 and OL-0142-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

Sample OL-0142-16 was analyzed as the MS/MSD for this SDG. All reported MS/MSD results are acceptable.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0142-10 and OL-0142-11 were collected and analyzed as field duplicates for this SDG. All reported results for the field duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0142-10 and OL-0142-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

Sample OL-0142-16 was analyzed as the project specific MS/MSD for this SDG. Recovery outliers were reported for total sulfide (40/40%). Reported results for total sulfide have been qualified as estimated and flagged ‘J/UJ’.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0142-10 and OL-0142-11 were collected and analyzed as field duplicates for this SDG. The reported results for the duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0140-14 and OL-0140-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.16 DATA USABILITY SUMMARY FOR SDG # C6H160231

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H160231. The results for total organic carbon (TOC) for these samples were reported in SDG # C6H160199. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0143-01	8/15/2006
OL-0143-02	8/15/2006
OL-0143-03	8/15/2006
OL-0143-04	8/15/2006
OL-0143-05	8/15/2006
OL-0143-06	8/15/2006
OL-0143-07	8/15/2006
OL-0143-08	8/15/2006
OL-0143-09	8/15/2006
OL-0143-10	8/15/2006
OL-0143-11	8/15/2006
OL-0143-12	8/15/2006
OL-0143-13	8/15/2006
OL-0143-14	8/15/2006
OL-0143-15	8/15/2006
OL-0143-16	8/15/2006
OL-0143-17	8/15/2006
OL-0143-18	8/15/2006
OL-0143-19	8/15/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of target compounds detected, surrogates were diluted out for 14 of the 19 samples. The 14 samples were analyzed as medium level soils. No reported results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0143-16 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   Samples OL-0143-10 and OL-0143-11 are field duplicates for this SDG. Four of eight target compounds detected in sample OL-0143-10 were not detected in sample OL-0143-11. The affected compounds are benzene, chlorobenzene, ethylbenzene and toluene.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0143-10 and OL-0143-11.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that fifteen of the nineteen samples were

analyzed as medium level soils due to the level of target compounds detected in the sample. Some reported detections are above the method detection limit (MDL) but less than the reporting limit (RL). These results have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, all of the samples were analyzed at a dilution. As a result surrogate recoveries were diluted out for 13 of the 19 samples. No reported results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0143-16 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Samples OL-0143-10 and OL-0143-11 are field duplicates for this SDG. There is excellent agreement (as RPD) between the results for the field duplicates.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0143-10 and OL-0143-11.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due to concentration of target compounds detected. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that recoveries of surrogate tetrachlroro-m-xylene for samples OL-0143-03, OL-0143-04, OL-0143-06, OL-0143-10 and OL-0143-19 were below the control limit (31-127%) due to matrix interference. Since the reported recoveries for the other PCB surrogate decachlorobiphenyl were in control for this sample no results have been qualified.

The recovery of surrogate decachlorobiphenyl for sample OL-0143-09 was above the control limit (23-141%). Since the reported recovery for the other surrogate, tetrachloro-m-xylene was in control no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0143-16 was analyzed as the project specific MS/MSD for this SDG. All reported MS/MSD results are acceptable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

The continuing calibration standards associated with some of the samples did not meet the 15% difference (%D) criteria. The laboratory indicated that the affected samples were reanalyzed with similar results and attributed the outlier to matrix interferences in the samples. The reported results for samples OL-0143-01 through OL-0143-12 have been qualified as estimated and flagged 'J/UJ'.

7. Field Duplicate Precision

Samples OL-0143-10 and OL-0143-11 are field duplicates collected and analyzed for this SDG. All reported results for the field duplicates meet the precision criteria and are acceptable.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0143-10 and OL-0143-11. N PCBs were detected in any of the samples.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

The laboratory reported that mercury recoveries for the MS/MSD (OL-0143-16) were not calculated due to the concentration of mercury in the sample being > 4 times the concentration of the spike. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0143-10 and OL-0143-11 were collected and analyzed as field duplicates for this SDG. All reported results for the field duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0143-10 and OL-0143-11. The following samples required dilution (over the calibration range): OL-0143-08, OL-0143-14, OL-0143-15 and OL-0143-17.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria except for the TOC analysis. Samples OL-0143-12, OL-0143-13, OL-0143-14, OL-0143-15, OL-0143-17, OL-0143-18 and OL-0143-19 were reanalyzed outside the required holding time (by 12 days). The reanalyses were necessary due to a noncompliant calibration verification standard. Reported results for the affected samples have been qualified as estimated ('J').

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria except for TOC. The calibration verification standard associated with some of the samples

failed. The affected samples are OL-0143-01 thru OL-0143-11 and OL-0143-16. Reported results for these samples have been qualified as estimated ('J').

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes except for TOC. The laboratory blank associated with the TOC analysis contained TOC at a concentration below the reporting limit (500 ppm). Since the concentration in the samples is significantly greater than the blank contamination no results have been qualified.

4. Matrix Spike Recoveries

Sample OL-0143-16 was analyzed as the project specific MS/MSD for this SDG. All reported results for the MS/MSD were in control.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0143-10 and OL-0143-11 were collected and analyzed as field duplicates for this SDG. The reported results for the duplicates were considered acceptable and within criteria except for total sulfide. Total sulfide was detected in sample OL-0143-11 (618 ppm) but was not detected in sample OL-0143-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0143-10 and OL-0143-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.17 DATA USABILITY SUMMARY FOR SDG #C6H160235

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H160235. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0144-01	08/15/06
OL-0144-02	08/15/06
OL-0144-03	08/15/06
OL-0144-04	08/15/06
OL-0144-05	08/15/06
OL-0144-06	08/15/06
OL-0144-07	08/15/06
OL-0144-08	08/15/06
OL-0144-09	08/15/06
OL-0144-10	08/15/06
OL-0144-11	08/15/06
OL-0144-12	08/15/06
OL-0144-13	08/15/06
OL-0145-01	08/15/06
OL-0145-02	08/15/06
OL-0145-03	08/15/06
OL-0145-04	08/15/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. Samples OL-0145-01, 02, 03, and 04 represent samples from the archived geotechnical samples relating to samples OL-0133-05 and 05A in SDG #C6H150185 and samples OL-0134-11 and 11A in SDG #C6H150180. However, it is noted that all results for these samples were considered unusable per NYSDEC comment dated 2/21/07.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated; affected samples were OL-0144-03, OL0144-08, OL-0144-09, and OL-0145-01 thru OL-0145-04. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0144-10 was utilized for MS/MSD analyses for QC batch 6236011. MS/MSD results for OL-0144-10 were acceptable and within QC acceptance limits, with the exception of Naphthalene; OL-0144-10 Naphthalene result was qualified as estimated. A sample from a different SDG was utilized for QC batches 6235055, 6236083, and 6237172; results are not applicable.

Sample ID	Analyte	MS/MSD %R	Control Limit	Affected Samples	VAL Flag
OL-0144-10	Naphthalene	9/42	23-153	OL-0144-10	J

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC40823.D	Naphthalene	-46.1	OL-0144-01 thru OL-0144-05, -07, -08	J	J/UJ
Vstd50, CC40823.D	1,2,3-TCB	44.0	OL-0144-01 thru OL-0144-05, -07, -08	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0144-08 and OL-0144-09.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0144-03 and OL-0145-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0144-01 thru OL-0144-05, OL-0144-07 thru OL-0144-13, OL-0145-01 thru OL-0145-04. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0144-10 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0145-01	6236013	Phenanthrene	62000	25	E

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 V0824SC1.D	Phenol	20.8	OL-0144-01 thru OL-144-13, OL-0145-02 thru OL-0145-04	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0144-08 and OL-0144-09.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0144-03 and OL-0145-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC limits for OL-0144-04 thru OL-144-06, OL-0144-11 thru OL-0144-13, OL-0145-01, and OL-145-04. Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for sample OL-0145-03. Surrogate recoveries for both surrogates were not calculated for OL-0144-08 and OL-0144-09 because samples were analyzed at dilution. Recovery of one of two of the surrogates was non-compliant in OL-0144-01, OL-0144-02, OL-0144-03, OL-0144-07, OL-0144-10, and OL-0145-02. Sample results for OL-0144-01, OL-0144-03 and OL0144-7, having a surrogate recovery that is <10%, are qualified as rejected. Sample results for OL-0144-02, OL-0144-10, and OL-0145-02 are qualified as estimated. Evaluation results are as shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0144-01	Tetrachloro-m-xylene	6.3	31-127	ALL	R (all ND)
OL-0144-03	Decachlorobiphenyl	3.1	23-141	ALL	R (all ND)
OL-0144-07	Tetrachloro-m-xylene	1.8	31-127	ALL	R (all ND)

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0144-10.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were not considered acceptable and were not within criteria. All sample results were qualified as estimated based on the non-compliant calibration results. Evaluation results are as shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual

X0860399.D	ALL Aroclors	9 of 10 >15%	OL-0144-01 thru OL-0144-07	J	J/UJ
X0860410.D	ALL Aroclors	8 of 10 >15%	OL-0144-10 thru OL-0144-13, OL-0145-01 thru OL-0145-04	J	J/UJ

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0144-08 and OL-0144-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0144-03 and OL-0145-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered complete (i.e., usable) for samples in SDG C6H160235 except OL-0144-01, OL0144-03, and OL-0144-07, for which all Aroclor results were qualified as rejected (R) based on non-compliant surrogate recovery.

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries were not calculated by laboratory because sample OL-0144-10 concentration was greater than 4x spike amount. No sample results were qualified based on MS/MSD recovery.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0144-08 and OL-0144-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0144-03 and OL-0145-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC in sample OL-0144-10. MS/MSD for Ammonia and for Sulfide were not calculated because sample concentration was greater than 4x blank amount in OL-0144-10. No sample results were qualified based on matrix spike results.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0144-10.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0144-08 and OL-0144-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0144-03 and OL-0145-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.18 DATA USABILITY SUMMARY FOR SDG #C6H170212

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H170212. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0146-01	08/16/06
OL-0146-02	08/16/06
OL-0146-03	08/16/06
OL-0146-04	08/16/06
OL-0146-05	08/16/06
OL-0146-06	08/16/06
OL-0146-07	08/16/06
OL-0146-08	08/16/06
OL-0146-09	08/16/06
OL-0146-10	08/16/06
OL-0146-11	08/16/06
OL-0146-12	08/16/06
OL-0146-13	08/16/06
OL-0146-14	08/16/06
OL-0146-15	08/16/06
OL-0146-16	08/16/06
OL-0146-17	08/16/06
OL-0146-18	08/16/06
OL-0146-19	08/16/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

All samples were analyzed as methanol dilutions and, with the exception of OL-0146-06 had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries for OL-0144-06 were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0144-10 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0146-10 and OL-0146-11, with the exception of Naphthalene. Naphthalene, Xylenes, 1,4-Dichlorobenzene, and Toluene results were qualified as estimated (J) in OL-0146-10 and OL-0146-11 Evaluation results are shown below.

Analyte	Field Sample ID	Replicate Sample ID	RPD	Data Qualifier
Naphthalene	OL-0144-10	OL-0144-11	105	J
Xylenes	OL-0144-10	OL-0144-11	105	J
1,4-Dichlorobenzene	OL-0144-10	OL-0144-11	191	J
Toluene	OL-0144-10	OL-0144-11	180	J

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0146-04 and OL-0146-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0146-01 thru OL-0146-05, OL-0146-07 thru OL-0146-19. Surrogate recoveries for OL-0146-06 were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0146-16 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were

analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0146-06	6238012	Phenol	1600	1	E

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 M0826SC1.D	Pyrene	-27.4	OL-0146-01 thru OL-0146-19	J	J/UJ
SSTD4.0 M0828SC1.D	Pyrene	-25.1	OL-0146-01 thru OL-0146-19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0146-10 and OL-0146-11.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0146-04 and OL-0146-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC limits for OL-0146-04 thru OL-0146-10, OL-0146-14 thru OL-0146-19. Surrogate

recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for sample OL-0146-03, OL-0146-12, and OL-0146-13 due to matrix interference. Recovery of one of two of the surrogates was non-compliant in OL-0146-01, OL-0146-02, and OL-0146-11; only one surrogate was non-compliant so no data were qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0146-16.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were considered acceptable.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0146-10 and OL-0146-11.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0146-04 and OL-0146-16.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    PCB sample results were considered complete (i.e., usable) for samples in SDG C6H160235 except OL-0144-01, OL0144-03, and OL-0144-07, for which all Aroclor results were qualified as rejected (R) based on non-compliant surrogate recovery.

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits in sample OL-0146-16.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0146-10 and OL-0146-11.

11. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0146-04 and OL-0146-16.

12. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

13. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Sulfide and TOC in sample OL-0146-16. MS/MSD recoveries for Ammonia were not considered acceptable and were not within QC acceptance limits in sample OL-0146-16. Ammonia results for OL-0146-16 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0146-16	Ammonia as N	84/83	90-110	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0146-16.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0146-10 and OL-0146-11.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0146-04 and OL-0146-16.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.19 DATA USABILITY SUMMARY FOR SDG #C6H170217

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H170217. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0147-01	08/16/06
OL-0147-02	08/16/06
OL-0147-03	08/16/06
OL-0147-04	08/16/06
OL-0147-05	08/16/06
OL-0147-06	08/16/06
OL-0147-07	08/16/06
OL-0147-08	08/16/06
OL-0147-09	08/16/06
OL-0147-10	08/16/06
OL-0147-11	08/16/06
OL-0147-12	08/16/06
OL-0147-13	08/16/06
OL-0147-14	08/16/06
OL-0147-15	08/16/06
OL-0147-16	08/16/06
OL-0147-17	08/16/06
OL-0147-18	08/16/06
OL-0147-19	08/16/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

All samples were analyzed as methanol dilutions and, with the exception of OL-0147-01, OL-0147-107, and OL-0147-16, had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries for OL-0147-01, OL-0147-107, and OL-0147-16 were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0147-16 was utilized for MS/MSD analyses. MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements, with the exception of Naphthalene (%R and RPD) and Xylenes (RPD); OL-0147-16 Naphthalene and Xylenes results were qualified as estimated (J).

Sample ID	Analyte	MS/MSD %R	Control Limit	RPD	Affected Samples	VAL Flag
OL-0147-16	Naphthalene	0/4	23-153	ok	OL-0147-16	J
OL-0147-16	Xylenes	73/ok	75-121	23	OL-0147-16	J

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC40827.D	1,3,5-TCB	30.7	OL-0147-16, -17, -19	J	J/UJ
Vstd50, CC40828.D	1,2,3-TCB	-28.3	OL-0147-01 thru OL-0147-08	J	J/UJ
Vstd50, CC40829.D	Naphthalene	-32.4	OL-0147-09 thru OL-0147-15, OL-0147-18	J	J/UJ
Vstd50, CC40829.D	1,2,3-TCB	-39.7	OL-0147-09 thru OL-0147-15, OL-0147-18		

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0147-10 and OL-0147-11, with the exception of Naphthalene. Naphthalene, Xylenes, 1,4-Dichlorobenzene, and Toluene results were qualified as estimated (J) in OL-0147-10 and OL-0147-11 Evaluation results are shown below.

Analyte	Field Sample ID	Replicate Sample ID	RPD	Data Qualifier
Naphthalene	OL-0147-10	OL-0147-11	105	J
Xylenes	OL-0147-10	OL-0147-11	105	J
1,4-Dichlorobenzene	OL-0147-10	OL-0147-11	191	J
Toluene	OL-0147-10	OL-0147-11	180	J

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0147-05 and OL-0147-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

PHENOL AND PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0147-01 thru OL-0147-19. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0147-16 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 M0828SC1.D	Pyrene	-25.1	OL-0147-01 thru OL-0147-19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0147-10 and OL-0147-11.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0147-05 and OL-0147-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries were considered acceptable and within QC limits for OL-0147-01 thru OL-0147-06, OL-0147-10 thru OL-0147-13. OL-0147-17 thru OL-0147-19 Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for sample OL-0147-08 due to matrix interference. Recovery of one of two of the surrogates was non-compliant in OL-0147-07, OL-0147-02, and OL-0147-11; only one surrogate recovery was non-compliant, so no sample results were qualified. No sample results were qualified based on surrogate recoveries.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0147-16.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were not considered acceptable and were not within criteria. All sample results were qualified as estimated based on the non-compliant calibration results. Evaluation results are as shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Z0860922.D	ALL Aroclors	8 of 10 >15%	OL-0147-01 thru OL-0147-11	J	J/UJ
Z0860934.D	ALL Aroclors	10 of 10 >15%	OL-0147-12 thru OL-0147-19	J	J/UJ

7. **Field Duplicate Precision**

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0147-10 and OL-0147-11.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0147-05 and OL-0147-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not calculated because concentration of OL-0147-16 was greater than 4x spike amount. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0147-16.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0147-10 and OL-0147-11.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0147-05 and OL-0147-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia and Sulfide. For TOC, all samples were analyzed on 08/27/06 with associated instrument error affecting samples OL-0147-12 thru OL-0147-16, which were reanalyzed on 09/22/06 outside of 14-day holding time by 23 days, and samples OL-0147-17 thru OL-0147-19 which were reanalyzed on 09/11/06 outside of 14-day holding time by 12 days. Evaluation results are as shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0147-12 thru OL-0147-16	23	Y	J
TOC	OL-0147-17 thru OL-0147-19	11	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Ammonia and for Sulfide associated with project samples did not contain target analytes. The laboratory method blank for TOC associated with samples analyzed on 09/22/06 contained a reportable concentration (643 mg/kg) which was above the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC in sample OL-0147-16. MS/MSD recoveries for Ammonia and for Sulfide were not considered acceptable and were not within QC acceptance limits in sample OL-0147-16. Ammonia and Sulfide results for OL-0147-16 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0147-16	Ammonia	85/ok	90-110	ALL in SDG	J
OL-0147-16	Sulfide	65/70	90-110	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered not acceptable and not within criteria for sample OL-0147-16. Sample and lab duplicate were analyzed outside of holding time, so duplicate RPD (56%RPD), which was greater than control limit, is considered unreliable and no data were qualified based on laboratory duplicate precision.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0147-10 and OL-0147-11.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0147-05 and OL-0147-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.20 DATA USABILITY SUMMARY FOR SDG #C6H170222

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H170222. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0148-01	08/16/06
OL-0148-02	08/16/06
OL-0148-03	08/16/06
OL-0148-04	08/16/06
OL-0148-05	08/16/06
OL-0148-06	08/16/06
OL-0148-07	08/16/06
OL-0148-08	08/16/06
OL-0148-09	08/16/06
OL-0148-10	08/16/06
OL-0148-11	08/16/06
OL-0148-12	08/16/06
OL-0148-13	08/16/06

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Samples OL-0148-01 thru OL-0148-03, and OL-0148-07 thru OL-0148-11 were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries for OL-0148-04, OL-0148-05, OL-0148-06, OL-0148-12, and OL-0148-13 were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries for QC batch 6244070 were "diluted" out and not calculated by laboratory because sample OL-0148-11 was analyzed at dilution. A sample from a different SDG was utilized for MS/MSD for other batches; results are not applicable. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0148-09 and OL-0148-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0148-01 and OL-0148-13.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHS

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples, except OL-0148-05, OL-0148-12, and OL-0148-13 were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. Surrogate recoveries for OL-0148-05, OL-0148-12, and OL-0148-13 were acceptable and within laboratory compliance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries for QC batch 6244070 were "diluted" out and not calculated by laboratory because sample OL-0148-11 was analyzed at dilution. A sample from a different SDG was utilized for MS/MSD for the other QC batches; results are not applicable. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0148-02	6240012	Phenanthrene	54000	25	E
OL-0148-02	6240012	Anthracene	35000	25	E
OL-0148-03	6240012	Phenanthrene	17000	10	E

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual

SSTD4.0 M0830NCC.D	Indeno(1,2,3-cd)pyrene	26.8	OL-0148-12, -13	J	J/UJ
SSTD4.0 M0830NCC.D	Dibenz(a,h)nthracene	26.4	OL-0148-12, -13	J	J/UJ
SSTD4.0 M0830NCC.D	Benzo(g,h,i)perylene	31.1	OL-0148-12, -13	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0148-09 and OL-0148-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0148-01 and OL-0148-13.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC limits for all samples except OL-0148-06 and OL-0148-07. For OL-0148-06, recovery of one of two of the surrogates was less than the control limit; only one surrogate recovery was non-compliant so sample results were not qualified. For OL-0148-07, recovery of one surrogate (tetrachloro-m-xylene) was less than 10%, so non-detect results were qualified as rejected (R). Evaluation results are shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag

OL-0148-07	Tetrachloro-m-xylene	1.8	31-27	ALL	R, ALL ND

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0148-16.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were considered acceptable and were within criteria.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0148-09 and OL-0148-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0148-01 and OL-0148-13.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not calculated because concentration of OL-0148-11 was greater than 4x spike amount. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0148-09 and OL-0148-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0148-01 and OL-0148-13.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for TOC, Ammonia and Sulfide.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (3.0 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC in sample OL-0148-11. MS/MSD recoveries for Ammonia and for Sulfide were not considered acceptable and were not within QC acceptance limits in sample OL-0148-11. Ammonia and Sulfide results for OL-0148-11 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0148-11	Ammonia	Ok/124	90-110	OL-0148-11	J
OL-0148-11	Sulfide	65/65	90-110	OL-0148-06 thru OL-0148-13	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0148-11.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0148-09 and OL-0148-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0148-01 and OL-0148-13.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.21 DATA USABILITY SUMMARY FOR SDG # C6H180239

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H180239. The results for total organic carbon (TOC) for these samples were reported in SDG #6H180201. The results for ammonia for these samples were reported in SDG #213506. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0149-01	8/17/2006
OL-0149-02	8/17/2006
OL-0149-03	8/17/2006
OL-0149-04	8/17/2006
OL-0149-05	8/17/2006
OL-0149-06	8/17/2006
OL-0149-07	8/17/2006
OL-0149-08	8/17/2006
OL-0149-09	8/17/2006
OL-0149-10	8/17/2006
OL-0149-11	8/17/2006
OL-0149-12	8/17/2006
OL-0149-13	8/17/2006
OL-0149-14	8/17/2006
OL-0149-15	8/17/2006
OL-0149-16	8/17/2006
OL-0149-17	8/17/2006
OL-0149-18	8/17/2006
OL-0149-19	8/17/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of naphthalene (-32.4%D) and 1,2,3-trichlorobenzene (-31.7%D) in the continuing calibration associated with samples OL-0149-1 through OL-0149-10, 15, 16, and 17. Therefore, results for these compounds were considered estimated “J” or “UJ” for these samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0149-09 and its field duplicate OL-0149-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0149-01 and OL-0149-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of phenol (-26.6%D, -36.2%D) in the continuing calibrations associated with all samples; and pyrene (-27.3%D) in the continuing calibration associated with samples OL-0149-14, 17, 18, and 19. Therefore, results for these compounds were considered estimated and qualified "J" and "UJ" for the affected samples.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits with the exception of the high internal standard (IS) response for the IS acenaphthene-d10 in samples OL-0149-09, 10, 11, and 12. Therefore,

positive sample results associated with this noncompliant IS were considered estimated, possibly biased high, and qualified "J".

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0149-09 and its field duplicate OL-0149-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0149-01 and OL-0149-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0149-09 and its field duplicate OL-0149-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0149-11 and OL-0149-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0149-09 and its field duplicate OL-0149-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0149-11 and OL-0149-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0149-09 and its field duplicate OL-0149-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0149-01 and OL-0149-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.22 DATA USABILITY SUMMARY FOR SDG # C6H180244

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H180244. The results for total organic carbon (TOC) for these samples were reported in SDG #6H180210. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0150-01	8/17/2006
OL-0150-02	8/17/2006
OL-0150-03	8/17/2006
OL-0150-04	8/17/2006
OL-0150-05	8/17/2006
OL-0150-06	8/17/2006
OL-0150-07	8/17/2006
OL-0150-08	8/17/2006
OL-0150-09	8/17/2006
OL-0150-10	8/17/2006
OL-0150-11	8/17/2006
OL-0150-12	8/17/2006
OL-0150-13	8/17/2006
OL-0150-14	8/17/2006
OL-0150-15	8/17/2006
OL-0150-16	8/17/2006
OL-0150-17	8/17/2006
OL-0150-18	8/17/2006
OL-0150-19	8/17/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of naphthalene (-32.4%D) and 1,2,3-trichlorobenzene (-39.7%D) in the continuing calibration associated with samples OL-0150-08 through OL-0150-11, 14, 15, and 17. Therefore, results for these compounds were considered estimated “J” or “UJ” for these samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0150-09 and its field duplicate OL-0150-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0150-01 and OL-0150-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of indeno(1,2,3-cd)pyrene (26.8%D), dibenz(a,h)anthracene (26.4%D), and benzo(g,h,I)perylene (31.1%D) in the continuing calibration associated with samples OL-0150-01, 02, and 03; and indeno(1,2,3-cd)pyrene (-27%D) and benzo(g,h,I)perylene (-30.1%D) in the continuing calibration associated with samples OL-0150-09 and 10DL. Therefore, results for these compounds were considered estimated and qualified "J" and "UJ" for the affected samples.

8. **Internal Standard Area Counts and Retention Times**

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0150-09 and its field duplicate OL-0150-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0150-01 and OL-0150-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0150-09 and its field duplicate OL-0150-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0150-11 and OL-0150-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0150-09 and its field duplicate OL-0150-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0150-11 and OL-0150-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0150-09 and its field duplicate OL-0150-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0150-01 and OL-0150-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.23 DATA USABILITY SUMMARY FOR SDG # C6H180250

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H180250. The results for total organic carbon (TOC) for these samples were reported in SDG #6H180214. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0151-01	8/17/2006
OL-0151-02	8/17/2006
OL-0151-03	8/17/2006
OL-0151-04	8/17/2006
OL-0151-05	8/17/2006
OL-0151-06	8/17/2006
OL-0151-07	8/17/2006
OL-0151-08	8/17/2006
OL-0151-09	8/17/2006
OL-0151-10	8/17/2006
OL-0151-11	8/17/2006
OL-0151-12	8/17/2006
OL-0151-13	8/17/2006
OL-0151-14	8/17/2006
OL-0151-15	8/17/2006
OL-0151-16	8/17/2006
OL-0151-17	8/17/2006
OL-0151-18	8/17/2006
OL-0151-19	8/17/2006

These samples were analyzed for Volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision for all detected results were not considered acceptable for sample OL-0151-15 and its field duplicate OL-0151-16. Therefore, all detected results and the associated duplicate result were considered estimated and qualified “J” or “UJ”.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0151-01 and OL-0151-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of phenol (-36.2%D) and pyrene (-27.3%D) in the continuing calibration associated with sample OL-0151-02; pyrene (-29.8%D) in the continuing calibration associated OL-0151-01, 02DL, 08DL, and 09DL; and phenol (-29.2%D) in the continuing calibration associated with samples OL-0151-03 through 19. Therefore, results for these compounds were considered estimated and qualified "J" and "UJ" for the affected samples.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0151-15 and its field duplicate OL-0151-16 with the exception of the results

for benzo(k)fluoranthene. Therefore, results for this compound were considered "J" and "UJ" for these field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0151-01 and OL-0151-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0151-15 and its field duplicate OL-0151-16.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0151-11 and OL-0151-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0151-15 and its field duplicate OL-0151-16.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0151-11 and OL-0151-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the low matrix spike recoveries for sulfide (55%R, 55%R; QC limit 75-125%R) associated with samples OL-0151-02 through 13. Therefore, the sulfide results for these samples were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0151-15 and its field duplicate OL-0151-16.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0151-01 and OL-0151-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.24 DATA USABILITY SUMMARY FOR SDG # C6H190162

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H190162. The results for total organic carbon (TOC) for these samples were reported in SDG #6H190153. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0152-01	8/18/2006
OL-0152-02	8/18/2006
OL-0152-03	8/18/2006
OL-0152-04	8/18/2006
OL-0152-05	8/18/2006
OL-0152-06	8/18/2006
OL-0152-07	8/18/2006
OL-0152-08	8/18/2006
OL-0152-09	8/18/2006
OL-0152-10	8/18/2006
OL-0152-11	8/18/2006
OL-0152-12	8/18/2006
OL-0152-13	8/18/2006
OL-0152-14	8/18/2006
OL-0152-15	8/18/2006
OL-0152-16	8/18/2006
OL-0152-17	8/18/2006
OL-0152-18	8/18/2006
OL-0152-19	8/18/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits with the exception of the low surrogate recoveries for dibromofluoromethane (QC limit 59-138%R), 1,2-dichloroethane-d4 (QC limit 61-130%R), and toluene-d8 (QC limit 60-143%R) in samples OL-0152-01 (56%R, 58%R, and 51%R, respectively) and OL-0152-08 (OK, 60%R, and 59%R, respectively). Therefore, all results for these samples were considered estimated, possibly biased low, and qualified "J" or "UJ".

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blank JDL9L1AA associated with sample OL-0152-01, 07, 08, and 19 contained 1,4-dichlorobenzene, naphthalene, and 1,2,4-trichlorobenzene at concentrations of 11, 13, and 21 μg/kg, respectively; and the laboratory method blank JDMAT1AA associated with samples OL-0152-05, 06, 11, 12, and 13 contained 1,2-dichlorobenzene, 1,4-dichlorobenzene, and 1,2,4-trichlorobenzene at concentrations of 0.28, 0.34, and 0.75 μg/kg, respectively. Therefore, positive results for these compounds less than the validation action concentrations were considered not detected and qualified "U" for the associated samples.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision results were considered acceptable for the sample OL-0152-09 and its field duplicate OL-0152-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0152-01 and OL-0152-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of pyrene (-29.8%D) in the continuing calibration associated with samples OL-0152-03DL, 08 through 15, and 17; phenol (-29.2%D) in the continuing calibration associated

with samples OL-0152-01 through 07; and indeno(1,2,3-cd)pyrene (-27%D) and benzo(g,h,I)perylene (-30.1%D) associated with sample OL-0152-16. Therefore, results for these compounds were considered estimated and qualified "J" and "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0152-09 and its field duplicate OL-0152-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0152-01 and OL-0152-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0152-09 and its field duplicate OL-0152-10.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0152-11 and OL-0152-12.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0152-09 and its field duplicate OL-0152-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0152-11 and OL-0152-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the low matrix spike recoveries for sulfide (30%R, 39%R, 61%R, 52%R; QC limit 75-125%R) and ammonia (83%R, 82%R; QC limit 90-110%R) associated with all samples. Therefore, the sulfide and ammonia results for these samples were considered estimated, possibly biased low, and qualified “J” or “UJ”.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0152-09 and its field duplicate OL-0152-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0152-01 and OL-0152-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.25 DATA USABILITY SUMMARY FOR SDG #C6H190167

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H190167. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0153-01	08/18/06
OL-0153-02	08/18/06
OL-0153-03	08/18/06
OL-0153-04	08/18/06
OL-0153-05	08/18/06
OL-0153-06	08/18/06
OL-0153-07	08/18/06
OL-0153-08	08/18/06
OL-0153-09	08/18/06
OL-0153-10	08/18/06
OL-0153-11	08/18/06
OL-0153-12	08/18/06
OL-0153-13	08/18/06
OL-0153-14	08/18/06
OL-0153-15	08/18/06
OL-0153-16	08/18/06
OL-0153-17	08/18/06
OL-0153-18	08/18/06
OL-0153-19	08/18/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. COC record #1053 accompanied samples; Parsons confirmed that sample SDG should be #0153, not #1053. Laboratory reported samples as associated with COC 0153.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Samples OL-0153-02, OL-0153-03, OL-0153-07 thru OL-0153-11, and OL-0153-14 thru OL-0153-17 were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries for all other samples were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0153-16 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The method blank associated with QC batch 6242220 contained a detectable level of 1,2,3-Trichlorobenzene; sample results less than five times blank amount (adjusted for dilution factor and %moisture) were qualified as undetected (U). Evaluation results are shown below.

Analyte	Method Blank QC batch	MB Conc. (ug/L)	Samples Affected	Sample Conc. (ug/L)	VAL Qual
1,2,3-Trichlorobenzene	624220	120	OL-0153-01 (2.5x)	1600	U
1,2,3-Trichlorobenzene	624220	120	OL-0153-02 (10x)	2700	U
1,2,3-Trichlorobenzene	624220	120	OL-0153-03 (10x)	2600	U
1,2,3-Trichlorobenzene	624220	120	OL-0153-07 (20x)	4600	U
1,2,3-Trichlorobenzene	624220	120	OL-0153-11 (5x)	1500	U
1,2,3-Trichlorobenzene	624220	120	OL-0153-13	450	U
1,2,3-Trichlorobenzene	624220	120	OL-0153-14 (20x)	11000	U
1,2,3-Trichlorobenzene	624220	120	OL-0153-16 (5x)	2400	U

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual

Vstd50, CC40830.N	1,2,4-TCB	-27.0	OL-0153-03, OL-0153-06 thru OL-0153-17	J	J/UJ
Vstd50, CC40830.N	Naphthalene	-48.9	OL-0153-03, OL-0153-06 thru OL-0153-17	J	J/UJ
Vstd50, CC40830.N	1,2,3-TCB	-48.5	OL-0153-03, OL-0153-06 thru OL-0153-17	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0153-08 and OL-0153-09.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0153-02 and OL-0153-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples, except OL-0153-06, OL-0153-11, and OL-0153-12 were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. Surrogate recoveries for OL-0153-06, OL-0153-11, and OL-0153-12 were acceptable and within laboratory compliance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0153-16 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Evaluation results are shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0/ M0901SC1.D	Pyrene	-23.5	OL-0153-09 thru OL-0153-19	J	J/UJ
SSTD4.0/ M0901SC1.D	Indeno(1,2,3-cd)pyrene	-27.0	OL-0153-09 thru OL-0153-19	J	J/UJ
SSTD4.0/ M0901SC1.D	Dibenz(a,h)anthracene	-23.4	OL-0153-09 thru OL-0153-19	J	J/UJ
SSTD4.0/ M0901SC1.D	Benzo(g,h,i)perylene	-30.1	OL-0153-09 thru OL-0153-19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0153-08 and OL-0153-09, with the exception of Acenaphthylene and Anthracene; sample results were qualified as estimated (J). Evaluation results are shown below.

Analyte	Field Sample ID	Replicate Sample ID	RPD	Data Qualifier
Acenaphthylene	OL-0153-08	OL-0153-09	137	J
Anthracene	OL-0153-08	OL-0153-09	123	J

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0153-02 and OL-0153-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC limits for all samples except OL-0153-02 and OL-0153-13; only one surrogate was non-compliant so sample results were not qualified. Surrogate recoveries were considered acceptable for samples OL-0153-01, OL-0153-07, OL-0153-08, OL-0153-14, and OL-0153-15, with the consideration that recovery of both surrogates was not calculated due to analysis at dilution. Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for samples OL-0153-04, OL-0153-05, OL-0153-06, OL-0153-09, OL-0153-11, OL-0153-12, due to matrix interference. The decachlorobiphenyl recovery in each sample was considered acceptable and within QC acceptance limits. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered not acceptable and not within QC acceptance limits for sample OL-0153-16. However, sample results were all not detected and were not qualified based on the high MS/MSD %R results. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0153-16	Aroclor 1016	202/200	26-144	OL-015316	None, ALL ND

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0153-08 and OL-0153-09.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0153-02 and OL-0153-18.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not calculated because concentration of OL-0153-16 was greater than 4x spike amount. No sample results were qualified based on MS/MSD results.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0153-08 and OL-0153-09.

11. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0153-02 and OL-0153-18.

12. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

13. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia and Sulfide. For TOC, all samples were analyzed on 08/27/06 with associated instrument error affecting samples OL-0147-12 thru OL-0147-16, which were reanalyzed on 09/22/06 outside of 14-day holding time by 23 days, and samples OL-0147-17 thru OL-0147-19 which were reanalyzed on 09/11/06 outside of 14-day holding time by 12 days. Evaluation results are as shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0147-12 thru OL-0147-16	23	Y	J
TOC	OL-0147-17 thru OL-0147-19	11	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for

Ammonia contained a reportable concentration (3.2 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC in sample OL-0153-16. MS/MSD recoveries for Ammonia and for Sulfide were not considered acceptable and were not within QC acceptance limits in sample OL-0153-16. Ammonia and Sulfide results for OL-0153-16 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0153-16	Ammonia	77/76	90-110	ALL in SDG	J
OL-0153-16	Sulfide	56/61	75-125	OL-0153-08 thru OL-0153-19	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered not acceptable and not within criteria for sample OL-0153-16. Evaluation results are shown below.

Sample ID	Analyte	Lab Dup RPD	Control Limit %RPD	Affected Samples	VAL Flag
OL-0153-16	TOC	24	20	ALL in SDG	J

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0153-08 and OL-0153-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0153-02 and OL-0153-18.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.26 DATA USABILITY SUMMARY FOR SDG #C6H190169

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H190169. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0154-01	08/18/06
OL-0154-02	08/18/06
OL-0154-03	08/18/06
OL-0154-04	08/18/06
OL-0154-05	08/18/06
OL-0154-06	08/18/06
OL-0154-07	08/18/06
OL-0154-08	08/18/06
OL-0154-09	08/18/06
OL-0154-10	08/18/06
OL-0154-11	08/18/06
OL-0154-12	08/18/06
OL-0154-13	08/18/06
OL-0154-14	08/18/06
OL-0154-15	08/18/06
OL-0154-16	08/18/06
OL-0154-17	08/18/06
OL-0154-18	08/18/06
OL-0154-19	08/18/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

Samples OL-0154-01, OL-0154-06, OL-0154-09, OL-0154-13 were analyzed as methanol dilutions and had their surrogates recoveries "diluted out" and not calculated. Samples OL-0154-02, OL-0154-03, OL-0154-08, and OL-0154-15 thru OL-0154-18 were analyzed at dilution and had their surrogate recoveries "diluted out" and not calculated. Surrogate recoveries for all other samples were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries for QC batch 6242267 were "diluted" out and not calculated by laboratory because sample OL-0154-17 was analyzed at dilution. A sample from a different SDG was utilized for MS/MSD in QC Batch 6243020; results are not applicable. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0154-11 and OL-0154-12.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0154-03 and OL-0154-17.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0154-17 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0, M0901NC1.D	Pyrene	-25.6	OL-0154-01, -03, -04, -05, OL-0154-07 THRU OL-0154-13	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0154-11 and OL-0154-12.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0154-03 and OL-0154-17.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable for all samples. Surrogate recoveries were considered acceptable for samples OL-0154-01 thru OL-0154-03, OL-0154-07 thru OL-0154-098, OL-0154-14, and OL-0154-15, with the consideration that recovery of both surrogates was not calculated due to analysis at dilution. Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for samples OL-0154-04 thru OL-0154-06, OL-0154-10 thru OL-0154-13, and OL0154-17 due to matrix interference. Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (decachlorobiphenyl) was not calculated for sample OL-0154-18 due to matrix interference. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0154-17.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits, with the exception that recovery of Aroclor 1260 was slightly low.

Associated sample results were qualified as estimated (J) based on LCS recovery. Evaluation results are shown below.

Analyte	QC batch	LCS %R	Control Limit	Affected Samples	VAL Flag
Aroclor 1260	6244017	49	51-127	OL-0154-01 thru OL-0154-19	J/UJ

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were not considered acceptable and were not within criteria. All sample results were qualified as estimated based on the non-compliant calibration results. Evaluation results are as shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
MH1660, W0960254.D	Aroclor-1016	4 of 5 >!5%D	OL-0154-04, -05, -06, -10, -11, -12, -13, -16, -17	J	J/UJ
MH1660, W0960254.D	Aroclor-1260	5 of 5 >15%D	OL-0154-04, -05, -06, -10, -11, -12, -13, -16, -17	J	J/UJ
MH1660, W0960262.D	Aroclor-1260	5 of 5 >15%D	OL-0154-01, -02, -03, -07, -08, -18, -19	J	J/UJ
MH1660, W0960336.D	Aroclor-1260	5 of 5 >15%D	OL-0154-09, -14, -15	J	J/UJ

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0154-11 and OL-0154-12.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0154-03 and OL-0154-17.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not calculated because concentration of OL-0154-17 was greater than 4x spike amount. No sample results were qualified based on MS/MSD results.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0154-11 and OL-0154-12.

14. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0154-03 and OL-0154-17.

15. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

16. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for TOC, Ammonia and Sulfide.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (2.7 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC in sample OL-0154-17. MS/MSD recovery for Ammonia was not calculated because sample OL-0154-17 was analyzed at dilution and the spike as "diluted out". MS/MSD recovery for Sulfide was not considered acceptable and was not within QC acceptance limits in sample OL-0154-17. Ammonia and Sulfide results for OL-0148-11 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0154-17	Sulfide	57/57	90-110	ALL in SDG, except -01 thru -04	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0154-17.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0154-11 and OL-0154-12.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0154-03 and OL-0154-17.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.27 DATA USABILITY SUMMARY FOR SDG #C6H220140

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H220140. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0158-01	08/21/06
OL-0158-02	08/21/06
OL-0158-03	08/21/06
OL-0158-04	08/21/06
OL-0158-05	08/21/06
OL-0158-06	08/21/06
OL-0158-07	08/21/06
OL-0158-08	08/21/06
OL-0158-09	08/21/06
OL-0158-10	08/21/06
OL-0158-11	08/21/06
OL-0158-12	08/21/06
OL-0158-13	08/21/06
OL-0158-14	08/21/06
OL-0158-15	08/21/06
OL-0158-16	08/21/06
OL-0158-17	08/21/06
OL-0158-18	08/21/06
OL-0158-19	08/21/06
OL-0158-20	08/21/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Samples OL-0158-02 thru OL-01584-06, and OL-0158-10 thru OL-0158-18 had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries were not acceptable and not within QC acceptance limits for OL-0158-01, OL-0158-07, OL-0158-09, and OL-0158-19. Samples were re-analyzed with similar results. Based on the low surrogate recoveries, results for the four samples were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0158-01	Dibromofluoromethane	56	59-138	ALL	J/UJ
OL-0158-01	Toluene-d8	48	60-143	ALL	J/UJ
OL-0158-01	4-Bromofluorobenzene	46	47-158	ALL	J/UJ
OL-0158-07	Toluene-d9	58	60-143	ALL	J/UJ
OL-0158-09	Dibromofluoromethane	53	59-138	ALL	J/UJ
OL-0158-09	Toluene-d8	43	60-143	ALL	J/UJ
OL-0158-09	4-Bromofluorobenzene	45	47-158	ALL	J/UJ
OL-0158-19	Dibromofluoromethane	51	59-138	ALL	J/UJ
OL-0158-19	Toluene-d8	53	60-143	ALL	J/UJ

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0158-10 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

Each of the three method blanks contained detectable levels of target analytes; sample results less than five times blank amount (adjusted for dilution factor) were qualified as undetected (U). Evaluation results are shown below.

Analyte	Method Blank QC batch	MB Conc. (ug/L)	Samples Affected	Sample Conc. (ug/L)	VAL Qual
1,2-Dichlorobenzene	6248409	0.25	OL-0158-08	4.7	U
1,2,4-Trichlorobenzene	6248409	0.65	None	-	-
Naphthalene	6245103	42	OL-0158-01	150	U
1,2,4-Trichlorobenzene	6245103	20	OL-0158-01	45	U
1,2,4-Trichlorobenzene	6245103	20	OL-0158-02 (1.25x)	260	U
1,2,4-Trichlorobenzene	6245103	20	OL-0158-03 (12.5x)	550	U
1,2,4-Trichlorobenzene	6245103	20	OL-0158-04 (3.99x)	210	U
1,2,4-Trichlorobenzene	6245103	20	OL-0154-06	45	U

1,2,4-Trichlorobenzene	6245103	20	OL-0154-07	30	U
1,2,4-Trichlorobenzene	6245103	20	OL-0154-09	210	U
1,2,4-Trichlorobenzene	6245103	20	OL-0154-12	55	U
1,2,4-Trichlorobenzene	6245103	20	OL-0154-16	180	U
1,2-Dichlorobenzene	6248318	0.24	None	-	-
Naphthalene	6248318	0.93	None	-	-
1,2,4-Trichlorobenzene	6248318	0.74	None	-	-

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
250NG-CC, 141558.D	1,2,3-TCB	-29.9	OL-0158-02, -04, -06, -10, -12, -14, -16, -20	J	J/UJ

8. Internal Standard Area Counts and Retention Times

Sample internal standard responses were compliant and within QC acceptance limits, with the exception that the recovery of 1,4-Dichlorobenzene-d4 was below the control limit n OL-0158-20. Associated sample results were qualified as estimated (J). Evaluation results are shown below.

Internal Standard	Area	Lower Limit	Samples Affected	Analytes Affected	Usability Qual
1,4-Dichlorobenzene-d4	197678	287789	OL-0158-20	1,2-DCB, 1,3-DCB, 1,4-DCB, Naphthalene, 1,2,3-TCB, 12,4-TCB, 1,3,5-TCB	J

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0158-06 and OL-0158-07

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0158-06 and OL-0158-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0158-10 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0, M0901NC1.D	Pyrene	-25.6	OL-0158-01 thru OL-0158-03	J	J/UJ

SSTD4.0, M0901NC1.D	Indeno(1,2,3-cd)pyrene	-25.9	OL-0158-01 thru OL-0158-03	J	J/UJ
SSTD4.0, M0901NC1.D	Dibenz(a,h)anthracene	-22.2	OL-0158-01 thru OL-0158-03	J	J/UJ
SSTD4.0, M0901NC1.D	Benzo(g,h,i)perylene	-28.1	OL-0158-01 thru OL-0158-03	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0158-06 and OL-0158-07.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0158-06 and OL-0158-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (decachlorobiphenyl) was not calculated for samples OL-0158-06, OL-0158-07, OL-0158-09, OL-0158-12, and OL-0158-15 due to matrix interference. Recovery of one of two of the surrogates was non-compliant in OL-0158-01 thru OL-0158-03, OL-0158-05, OL-0158-10, OL-0158-12, OL-0158-18, and OL-158-20; only one surrogate was non-compliant so no sample results were qualified. For OL-0158-05, having a surrogate recovery that is <10%, non-detect results are qualified as rejected (R) and detected results are qualified as estimated (J). Evaluation results are as shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0158-05	Tetrachloro-m-xylene	3.3	31-127	Aroclor 1248, Aroclor 1254, Arochlors (total)	J
				Aroclor 1016, 1221, 1342, 1242, 1260, 1268	R

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not considered acceptable and within not QC acceptance limits for sample OL-0158-10. However, the since the %R results were only slightly high and MS/MSD RPD was acceptable for both analytes, no sample results were qualified. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0158-10	Aroclor 1016	145/ok	26-114	OL-0158-10	None
OL-0158-10	Aroclor 1260	155/158	37-138	OL-0158-10	None

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were considered acceptable and were within criteria.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0158-06 and OL-0158-07.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0158-06 and OL-0158-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 97% complete (i.e., usable), with the exception of 6 Aroclors in OL-0158-05 that were qualified as rejected (R).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not calculated because concentration of OL-0158-10 was greater than 4x spike amount. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0158-06 and OL-0158-07.

17. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0158-06 and OL-0158-15.

18. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

19. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia and Sulfide. For TOC, all samples were prepared on 09/01/06, but analyzed on 09/05/06. Evaluation results are as shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0158-01 thru OL-0158-20	1	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (2.7 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Ammonia and TOC in sample OL-0158-10. MS/MSD recovery for Sulfide was not considered acceptable and was not within QC acceptance limits in samples OL-0158-01 and OL-0158-10. Sulfide results for OL-0158-01 and OL-0158-10 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0158-01	Sulfide	65/65	90-110	ALL in SDG	J
OL-0158-10	Sulfide	39/43	90-110	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0158-10.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0158-06 and OL-0158-07.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0158-06 and OL-0158-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.28 DATA USABILITY SUMMARY FOR SDG #C6H220162

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H220162. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0159-01	08/21/06
OL-0159-02	08/21/06
OL-0159-03	08/21/06
OL-0159-04	08/21/06
OL-0159-05	08/21/06
OL-0159-06	08/21/06
OL-0159-07	08/21/06
OL-0159-08	08/21/06
OL-0159-09	08/21/06
OL-0159-10	08/21/06
OL-0159-11	08/21/06
OL-0159-12	08/21/06
OL-0159-13	08/21/06
OL-0159-14	08/21/06
OL-0159-15	08/21/06
OL-0159-16	08/21/06
OL-0159-17	08/21/06
OL-0159-18	08/21/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

All samples except OL-0159-13 and OL-0159-14 were analyzed as methanol dilutions. Samples OL-0159-01 thru OL-0159-06, OL-0159-08, OL-0159-09, and OL-0159-17 had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries were acceptable and within QC acceptance limits for all other samples.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0159-17 was analyzed at dilution in QC batch 6243010. A sample from a different SDG was utilized for MS/MSD for QC batch 6244053; results are not applicable. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

Sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0159-03 and OL-0159-04

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0159-07 and OL-0159-08.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times and preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0159-17 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	VAL Qual
OL-0159--08	6245013	Phenanthrene	16000	10	E

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0, V0906SCC.D	Indeno(1,2,3-cd)pyrene	-23.7	OL-0159-01 thru OL-0159-14	J	J/UJ
SSTD4.0, V0906SCC.D	Dibenz(a,h)anthracene	-27.1	OL-0159-01 thru OL-0159-14	J	J/UJ
SSTD4.0, V0906SCC.D	Benzo(g,h,i)perylene	-22.7	OL-0159-01 thru OL-0159-14	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0159-03 and OL-0159-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0159-07 and OL-0159-08.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The following samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated: OL-0159-05, OL-0159-10 thru OL-0159-18. Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for sample OL-0159-02 due to matrix interference. Recovery of one of two of the surrogates was non-compliant in OL-0159-01, OL-0159-04, OL-0159-08, and OL-0159-09; results are not-qualified.

For OL-0159-03 and OL-059-05, having a surrogate recovery that is <10%, non-detect results are qualified as rejected (R) and detected results are qualified as estimated (J). Evaluation results are as shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0159-03	Tetrachloro-m-xylene	7.0	23-141	Aroclor-1260 Arochlors (total) Aroclor-1016, 1221, 1232, 1242, 1248, 1254, 1268	J R
OL-0159-05	Tetrachloro-m-xylene	4.8	23-141	Aroclor- 1260 Arochlors (total)	R (ALL ND)

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0159-17 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were considered acceptable and were within criteria.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0159-03 and OL-0159-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0159-07 and OL-0159-08.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 94% complete (i.e., usable), with the exception of 7 Aroclors in OL-0159-03 and 2 Aroclors in OL-0159-05 that were qualified as rejected (R).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were not calculated because concentration of OL-0159-17 was greater than 4x spike amount. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0159-03 and OL-0159-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0159-07 and OL-0159-08.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia and Sulfide. For TOC, the analytical holding time was exceeded for all samples; all samples were prepared and analyzed on 09/05/06. Evaluation results are as shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0159-01 thru OL-0159-19	1	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Ammonia, Sulfide and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Ammonia and TOC in sample OL-0158-10. MS/MSD recovery for Sulfide was not considered acceptable and was not within QC acceptance limits in sample OL-0159-17. Sulfide result for OL-0159-17 was qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0159-17	Sulfide	47/48	90-110	ALL in SDG, except -01, -18	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0158-10.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0159-03 and OL-0159-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0159-07 and OL-0159-08.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.29 DATA USABILITY SUMMARY FOR SDG #C6H220199

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H220199. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0160-01	08/21/06
OL-0160-02	08/21/06
OL-0160-03	08/21/06
OL-0160-04	08/21/06
OL-0160-05	08/21/06
OL-0160-06	08/21/06
OL-0160-07	08/21/06
OL-0160-08	08/21/06
OL-0160-09	08/21/06
OL-0160-10	08/21/06
OL-0160-11	08/21/06
OL-0160-12	08/21/06
OL-0160-13	08/21/06
OL-0160-14	08/21/06
OL-0160-15	08/21/06
OL-0160-16	08/21/06
OL-0160-17	08/21/06
OL-0160-18	08/21/06
OL-0160-19	08/21/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as methanol dilutions. All samples except OL-0160-10, OL-0160-13, and OL-0160-14 had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries were acceptable and within QC acceptance limits for all other samples.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0160-17 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC70831N.D	Naphthalene	-36.4	OL-0160-01 thru OL-0160-12, OL-0160-14 thru OL-0160-19	J	J/UJ
Vstd50, CC40823.D	1,2,3-TCB	-25.9	OL-0160-13	J	J/UJ
Vstd50, CC40901.D	1,2,3-TCB	-35.4	OL-0160-13	J	J/UJ

8. Internal Standard Area Counts and Retention Times

Sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0160-13 and OL-0160-14, with the exception of 1,2-Dichlorobenzene. 1,2-Dichlorobenzene results in field

duplicate pair OL-0160-13 and OL-0160-14 have been qualified as estimated (J). Evaluation results are as shown below.

Analyte	Field Sample ID	Replicate Sample ID	RPD	Data Qualifier
1,2-Dichlorobenzene	OL-0160-13	OL-0160-14	128	J

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0160-09 and OL-0160-10.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0160-17 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0, M0907SC1.D	Phenol	-27.0	OL-0160-01 thru OL-0160-19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0160-13 and OL-0160-14.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0160-09 and OL-0160-10.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The following samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated: OL-0160-13, OL-0160-09, OL-0160-11, and OL-0160-18; results are not-qualified. For OL-0160-03, OL-0160-04, OL-0160-07, OL-0160-08, OL-0160-10, OL-0160-12, OL-0160-15, OL-0160-16, OL-0160-17, and OL-0160-19, having a surrogate recovery that is <10%, non-detect results are qualified as rejected (R) and detected results are qualified as estimated (J). Evaluation results are as shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0160-03	Tetrachloro-m-xylene	1.9	31-127	ALL	R (ALL ND)
OL-0160-04	Tetrachloro-m-xylene	1.6	31-127	ALL	R (ALL ND)
OL-0160-07	Tetrachloro-m-xylene	5.5	31-127	ALL	R (ALL ND)
OL-0160-08	Tetrachloro-m-xylene	4.8	31-127	ALL	R (ALL ND)
OL-0160-10	Tetrachloro-m-xylene	8.8	31-127	ALL	R (ALL ND)
OL-0160-12	Tetrachloro-m-xylene	5.7	31-127	ALL	R (ALL ND)
OL-0160-15	Tetrachloro-m-xylene	1.1	31-127	ALL	R (ALL ND)
OL-0160-16	Tetrachloro-m-xylene	6.9	31-127	ALL	R (ALL ND)
OL-0160-17	Tetrachloro-m-xylene	3.3	31-127	ALL	R (ALL ND)
OL-0160-19	Tetrachloro-m-xylene	4.5	31-127	ALL	R (ALL ND)

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits in sample OL-0160-17.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were considered acceptable and were within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
ML1660, Z0960317.D	Aroclor-1016	4 of 5 >15%	OL-0160-13, -14	J	J/UJ

ML1660, Z0960317.D	Aroclor-1260	5 of 5 >15%	OL-0160-13, -14	J	J/UJ

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0160-13 and OL-0160-14.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0160-09 and OL-0160-10.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 47% complete (i.e., usable), with the exception of all 9 Aroclors in samples OL-0160-03, OL-0160-04, OL-0160-07, OL-0160-08, OL-0160-10, OL-0160-12, OL-0160-15, OL-0160-16, OL-0160-17, and OL-0160-19 that were qualified as rejected (R).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) was acceptable and within QC acceptance limits. MS/MSD accuracy (percent recovery; %R) measurements were not acceptable and were not within QC acceptance limits for OL-0160-17. Sample result for OL-0160-17 has been qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0160-17	Mercury	85/74	75-125	OL-0160-17	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0160-13 and OL-0160-14.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0160-09 and OL-0160-10.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia and Sulfide. For TOC, the analytical holding time was exceeded for all samples; all samples were prepared and analyzed on 09/05/06. Evaluation results are as shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0160-01 thru OL-0160-19	1	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained a reportable concentration (2.8 mg/kg), which was below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Sulfide and TOC in sample OL-0160-17. MS/MSD recovery for Ammonia was not considered acceptable and was not within QC acceptance limits in sample OL-0160-17. Ammonia result for OL-0160-17 was qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0160-17	Ammonia	160/148	90-110	OL-0160-17	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0160-17.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0160-13 and OL-0160-14.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0160-09 and OL-0160-10.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.30 DATA USABILITY SUMMARY FOR SDG #C6H220232

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H220232. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0161-01	08/21/06
OL-0161-02	08/21/06
OL-0161-03	08/21/06
OL-0161-04	08/21/06
OL-0161-05	08/21/06
OL-0161-06	08/21/06
OL-0161-07	08/21/06
OL-0161-08	08/21/06
OL-0161-09	08/21/06
OL-0161-10	08/21/06
OL-0161-11	08/21/06
OL-0161-12	08/21/06
OL-0161-13	08/21/06
OL-0161-14	08/21/06
OL-0161-15	08/21/06
OL-0161-16	08/21/06
OL-0161-17	08/21/06
OL-0161-18	08/21/06
OL-0161-19	08/21/06
OL-0161-20	08/21/06
OL-0162-01	08/21/06
OL-0162-02	08/21/06
OL-0162-03	08/21/06
OL-0162-04	08/21/06
OL-0162-05	08/21/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as methanol dilutions. Samples OL-0161-02 thru OL-0161-05, OL-0161-09 thru OL-0161-13, OL-0161-15 thru OL-0161-20, and OL-0162-01 thru OL-0162-05 had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries for OL-0161-01, OL-0161-06, OL-0161-07, OL-0161-08, and OL-0161-14 were acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries for QC batch 6243542 were "diluted" out and not calculated by laboratory because sample OL-0161-20 was analyzed at dilution. A sample from a different SDG was utilized for the other two QC batches; results are not applicable. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits, with the exception of 1,2-Dichlorobenzene in QC batch 6243542, which had a high recovery. All associated sample results reported as non-detect sample results were not required to be qualified. Evaluation results are shown below.

Analyte	LCS ID/ QC batch	LCS %R	Control Limit	Affected Samples	VAL Flag
1,3,5-TCB	JCH5R1AC/ 6228676	134	60-130	OL-0161-02 thru OL-0161-07, OL-0161-09 thru OL-0161-13, OL-0161-15 thru OL-0161-20,	J

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual

Vstd50, CC40901.D	1,2,3-TCB	-35.4	OL-0162-01 thru OL-0162-05	J	J/UJ

8. Internal Standard Area Counts and Retention Times

Sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0161-07 and OL-0161-08, with the exception of Benzene. Benzene results in field duplicate pair OL-0161-07 and OL-0161-08 have been qualified as estimated (J). Evaluation results are as shown below.

Analyte	Field Sample ID	Replicate Sample ID	RPD	Data Qualifier
Benzene	OL-0161-07	OL-0161-08	136	J

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0161-02, OL-0161-12 and OL-0162-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0161-20 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0, V0908SC1.D	Benzo(g,h,i)perylene	26.6	OL-0161-20	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0161-07 and OL-0161-08.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0161-02, OL-0161-12 and OL-0162-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The following samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated: OL-0161-01, OL-0161-02, OL-0161-07, OL-0161-08, OL-0161-09, OL-0161-14, OL-0161-15, OL-0161-19, and OL-0162-01 thru OL0162-05; results are not-qualified. Recovery of one of two of the surrogates was non-compliant in OL-0161-03 thru OL-0161-05, OL-0161-12, OL-0161-17, and OL-0161-18; only one surrogate was non-compliant so no sample results were qualified. For OL-0161-10, both surrogates were non-compliant, with one being recovered high and one being recovered low; sample results were not qualified for OL-0161-10. For OL-0161-03, OL-0161-04, OL-0161-05, and OL-0161-17, having a surrogate recovery that is <10%, non-detect results are qualified as rejected (R) and detected results are qualified as estimated (J). Evaluation results are as shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0161-03	Tetrachloro-m-xylene	5.1	31-127	Aroclor-1016, 1221, 1232, 1242, 1254, 1268	R (ALL ND)
				Aroclor 1248, 1260, Aroclors (total)	J
OL-0161-04	Tetrachloro-m-xylene	9.5	31-127	Aroclor-1016, 1221, 1232, 1242, 1254, 1268	R (ALL ND)
				Aroclor 1248, 1260, Aroclors (total)	J
OL-0161-05	Tetrachloro-m-xylene	7.0	31-127	ALL Aroclors	R (ALL ND)
OL-0161-17	Tetrachloro-m-xylene	7.0	31-127	Aroclor-1016, 1221, 1232, 1242,1248, 1254, 1268, Aroclors (total)	R (ALL ND)
				Aroclor 1260	J

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits in sample OL-0161-20.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were considered acceptable and were within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
ML1660, W0960501.D	Aroclor-1260	4 of 5 >15%	OL-0161-03 thru OL-0161-06, OL-0161-10 thru OL-0161-13, OL-0161-16 thru OL-0161-18, OL-0161-20	J	J/UJ

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0161-07 and OL-0161-08.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0161-02, OL-0161-12 and OL-0162-01.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 87% complete (i.e., usable), with the exception of all 9 Aroclors in sample OL-0161-05 and selected Aroclors in OL-0161-03, OL-0161-04, and OL-0161-17 that were qualified as rejected (R).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries were not calculated by laboratory because sample OL-0161-20 and OL-0162-02 concentration was greater than 4x spike amount. No sample results were qualified based on MS/MSD recovery.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0161-07 and OL-0161-08.

20. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0161-02, OL-0161-12 and OL-0162-01.

21. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

22. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia and Sulfide. For TOC, the analytical holding time was exceeded for all samples; all samples were prepared and analyzed on 09/06/06. Evaluation results are as shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0161-01 thru OL-0161-20, OL-0162-01 thru OL-0162-05	2	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory method blanks for Ammonia contained reportable concentrations (3.9 and 4.0 mg/kg), which were below the reporting limit. Associated sample concentrations were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC in OL-0161-20 and for Sulfide in samples OL-0161-03 and OL-0161-20. MS/MSD recovery for Ammonia was not considered acceptable and was not within QC acceptance limits in sample OL-0161-01. Ammonia result for OL-0161-01 was qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0161-01	Ammonia	Ok/117	90-110	OL-0161-01	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0161-20.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0161-07 and OL-0161-08.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0161-02, OL-0161-12 and OL-0162-01.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.31 DATA USABILITY SUMMARY FOR SDG #C6H220290

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H220290. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0155-01	08/19/06
OL-0155-02	08/19/06
OL-0155-03	08/19/06
OL-0155-04	08/19/06
OL-0155-05	08/19/06
OL-0155-06	08/19/06
OL-0155-07	08/19/06
OL-0155-08	08/19/06
OL-0155-09	08/19/06
OL-0155-10	08/19/06
OL-0155-11	08/19/06
OL-0155-12	08/19/06
OL-0155-13	08/19/06
OL-0155-14	08/19/06
OL-0155-15	08/19/06
OL-0155-16	08/19/06
OL-0155-17	08/19/06
OL-0155-18	08/19/06
OL-0155-19	08/19/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples, except OL-0155-01 and OL-0155-18, were analyzed as methanol dilutions. Samples OL-0155-02 OL-0155-03, OL-0155-07 thru OL-0155-11, and OL-0155-15 thru OL-0155-17 had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries for all other samples were acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries for QC batch 6242282 were "diluted" out and not calculated by laboratory because sample OL-0155-15 was analyzed at dilution. A sample from a different SDG was utilized for MS/MSD analyses for other QC batch. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	% D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC70830P.D	Naphthalene	20.8	OL-0155-11 thru OL-0155-14, -16, -17, -19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

Sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0155-08 and OL-0155-09.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0155-07 and OL-0155-13.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0155-15 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0155-08 and OL-0155-09.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0155-07 and OL-0155-13.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated for samples OL-0155-02, OL-0155-07 thru OL-0155-10, OL-0155-13 and OL-0155-15. Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (decachlorobiphenyl) was not calculated for samples OL-0155-04, OL-0155-16, and OL-0155-18. Recovery of one of two of the surrogates (tetrachloro-m-xylene) was non-compliant (high recovery) in OL-0155-01, OL-0155-05, OL-0155-11, OL-0155-14, and OL-0155-198; only one surrogate was non-compliant so no sample results were qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

The MS/MSD recoveries were not calculated for OL-0155-15 due to matrix interference. No sample results were qualified based on MS/MSD results.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were considered acceptable and were within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
ML1660, Z0960317.D	Aroclor-1016	4 of 5 >15%	OL-0155-01 thru OL-0155-19	J	J/UJ
	Aroclor-1260	5 of 5 >15%	OL-0155-01 thru OL-0155-19	J	J/UJ
ML1660, Z0960337.D	Aroclor-1016	4 of 5 >15%	OL-0155-01 thru OL-0155-19	J	J/UJ
	Aroclor-1260	5 of 5 >15%	OL-0155-01 thru OL-0155-19	J	J/UJ

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0155-08 and OL-0155-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0155-07 and OL-0155-13.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks and continuing calibration blanks associated with project samples did not contain mercury. The method blank (preparation

blank) associated with project samples contained Mercury (0.0073 mg/kg) at a concentration below the RL. Associated sample concentrations were all greater than 10x blank amount (times dilution factor), so no sample results were qualified based on method blank results.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD recoveries were not calculated by laboratory because sample OL-0155-15 concentration was greater than 4x spike amount. No sample results were qualified based on MS/MSD recovery.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0155-08 and OL-0155-09.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0155-07 and OL-0155-13.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria for TOC, Ammonia, and Sulfide.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

The laboratory blank for Sulfide associated with project samples did not contain target analytes. The laboratory method blank for Ammonia contained reportable concentration (4.8 mg/kg), which was below the reporting limit. The laboratory method blank for TOC contained reportable concentration (650 mg/kg), which was above the reporting limit. Associated sample concentrations for Ammonia and for TOC were all greater than 10x blank amount, so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC and Sulfide in OL-0155-15. MS/MSD recoveries for Ammonia were "diluted out" because OL-0155-15 was analyzed at dilution. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0155-15.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0155-08 and OL-0155-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0155-07 and OL-0155-13.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.32 DATA USABILITY SUMMARY FOR SDG # C6H220298

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H220298. The results for total organic carbon (TOC) for these samples were reported in SDG #6H220284. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0156-01	8/19/2006
OL-0156-02	8/19/2006
OL-0156-03	8/19/2006
OL-0156-04	8/19/2006
OL-0156-05	8/19/2006
OL-0156-06	8/19/2006
OL-0156-07	8/19/2006
OL-0156-08	8/19/2006
OL-0156-09	8/19/2006
OL-0156-10	8/19/2006
OL-0156-11	8/19/2006
OL-0156-12	8/19/2006
OL-0156-13	8/19/2006
OL-0156-14	8/19/2006
OL-0156-15	8/19/2006
OL-0156-16	8/19/2006
OL-0156-17	8/19/2006
OL-0156-18	8/19/2006
OL-0156-19	8/19/2006
OL-0157-01	8/19/2006
OL-0157-02	8/19/2006
OL-0157-03	8/19/2006
OL-0157-04	8/19/2006
OL-0157-05	8/19/2006
OL-0157-06	8/19/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified “J” and nondetected results qualified “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits with the exception of all low surrogate recoveries in samples OL-0156-10 and 10RE. Therefore, all results for these samples were considered estimated, possibly biased low, and qualified "J" or "UJ".

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   The field duplicate precision results were considered acceptable for the sample OL-0156-14 and its field duplicate OL-0156-15.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0156-01 and OL-0156-02.

11. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibrations associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of dibenzo(a,h)anthracene (-27.1%D) associated with samples OL-0156-05DL, 10DL, 18DL, and OL-0157-01. Therefore, results for these compounds were considered estimated and qualified "J" and "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0156-14 and its field duplicate OL-0156-15.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0156-01 and OL-0156-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0156-14 and its field duplicate OL-0156-15.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0156-11 and OL-0156-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0156-14 and its field duplicate OL-0156-15.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0156-11 and OL-0156-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by five to six days. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes with the exception of ammonia. Ammonia was detected in laboratory method blanks at concentrations of 3.7, 3.7, and 4.3 mg/kg. However, project sample results were not affected by the contamination found in these blanks.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the noncompliant matrix spike recoveries for ammonia (84%R, 85%R, 118%R, 112%R; QC limit 90-110%R) associated with all samples. Therefore, the ammonia results for these samples were considered estimated and qualified "J" or "UJ".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0156-14 and its field duplicate OL-0156-15.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0156-01 and OL-0156-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.33 DATA USABILITY SUMMARY FOR SDG # C6H230169

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H230169. The results for total organic carbon (TOC) for these samples were reported in SDG #6H230152. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0163-01	8/22/2006
OL-0163-02	8/22/2006
OL-0163-03	8/22/2006
OL-0163-04	8/22/2006
OL-0163-05	8/22/2006
OL-0163-06	8/22/2006
OL-0163-07	8/22/2006
OL-0163-08	8/22/2006
OL-0163-09	8/22/2006
OL-0163-10	8/22/2006
OL-0163-11	8/22/2006
OL-0163-12	8/22/2006
OL-0163-13	8/22/2006
OL-0163-14	8/22/2006
OL-0163-15	8/22/2006
OL-0163-16	8/22/2006
OL-0163-17	8/22/2006
OL-0163-18	8/22/2006
OL-0163-19	8/22/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of m,p-xylene (27.2%D), total xylenes (25.4%D), and 1,2,3-trichlorobenzene (-44%D) in the continuing calibration associated with sample OL-0163-12. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ".

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision results were considered acceptable for the sample OL-0163-09 and its field duplicate OL-0163-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0163-01 and OL-0163-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibrations associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of phenol (-27%D) associated with samples OL-0163-02 through 06. Therefore, results for these compounds were considered estimated and qualified “J” and “UJ” for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0163-09 and its field duplicate OL-0163-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0163-01 and OL-0163-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0163-09 and its field duplicate OL-0163-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0163-11 and OL-0163-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0163-09 and its field duplicate OL-0163-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0163-11 and OL-0163-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by two to three days. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes with the exception of sulfide. Sulfide was detected in the laboratory method blank associated with samples OL-0163-01 through 10 at a concentration of 7.1 mg/kg. Therefore, sulfide results less than the validation action concentration for these samples were considered not detected and qualified "U".

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the high matrix spike recoveries for ammonia (112%R; QC limit 90-110%R) associated with all samples; and sulfide (177%R, 186%R; QC limit 50-150%R) associated with samples OL-0163-11 through 19. Therefore, the ammonia and sulfide results were considered estimated, possibly biased high, and qualified "J" for the affected samples.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0163-09 and its field duplicate OL-0163-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0163-01 and OL-0163-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.34 DATA USABILITY SUMMARY FOR SDG # C6H230175

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H230175. The results for total organic carbon (TOC) for these samples were reported in SDG #6H230154. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0164-01	8/22/2006
OL-0164-02	8/22/2006
OL-0164-03	8/22/2006
OL-0164-04	8/22/2006
OL-0164-05	8/22/2006
OL-0164-06	8/22/2006
OL-0164-07	8/22/2006
OL-0164-08	8/22/2006
OL-0164-09	8/22/2006
OL-0164-10	8/22/2006
OL-0164-11	8/22/2006
OL-0164-12	8/22/2006
OL-0164-13	8/22/2006
OL-0164-14	8/22/2006
OL-0164-15	8/22/2006
OL-0164-16	8/22/2006
OL-0164-17	8/22/2006
OL-0164-18	8/22/2006
OL-0164-19	8/22/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision results were considered acceptable for the sample OL-0164-12 and its field duplicate OL-0164-13 with the exception of the precision for chlorobenzene (140%RPD). Therefore, the chlorobenzene results for this field duplicate pair were considered estimated and qualified "J".

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0164-01 and OL-0164-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0164-12 and its field duplicate OL-0164-13.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0164-01 and OL-0164-02.

11. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable with the exception of the less than 10% recovery of tetrachloro-meta-xylene (QC limit 31-127%R) in the samples OL-0164-06 (9.1%R) and OL-0164-10 (6.6%R). Therefore, positive results for these samples were considered estimated, possibly biased low, and qualified "J" while nondetected results were considered unusable and qualified "R".

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0164-12 and its field duplicate OL-0164-13.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0164-11 and OL-0164-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 89.5% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0164-12 and its field duplicate OL-0164-13.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0164-11 and OL-0164-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by two days. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes with the exception of ammonia. Ammonia was detected in the laboratory method blank associated with all samples at a concentration of 3.6 mg/kg. However, sample results were not affected by the contamination found in this blank.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0164-12 and its field duplicate OL-0164-13.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0164-01 and OL-0164-02.

9. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.35 DATA USABILITY SUMMARY FOR SDG # C6H230179

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H230179. The results for total organic carbon (TOC) for these samples were reported in SDG #6H230156. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0165-01	8/22/2006
OL-0165-02	8/22/2006
OL-0165-03	8/22/2006
OL-0165-04	8/22/2006
OL-0165-05	8/22/2006
OL-0165-06	8/22/2006
OL-0165-07	8/22/2006
OL-0165-08	8/22/2006
OL-0165-09	8/22/2006
OL-0165-10	8/22/2006
OL-0165-11	8/22/2006
OL-0165-12	8/22/2006
OL-0165-13	8/22/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and a maximum percent difference (%D) of ±25% for all compounds with the exception of 1,2,3-trichlorobenzene (-35.4%D) in the continuing calibration associated with all samples. Therefore, all results for this compound were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision results were considered acceptable for the sample OL-0165-12 and its field duplicate OL-0165-13.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0165-01 and OL-0165-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0165-12 and its field duplicate OL-0165-13.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0165-01 and OL-0165-02.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

12. **Data Completeness**

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable with the exception of the less than 10% recovery of tetrachloro-meta-xylene (QC limit 31-127%R) in the samples OL-0165-06 (9.1%R) and OL-0165-10 (6.6%R). Therefore, positive results for these samples were considered estimated, possibly biased low, and qualified "J" while nondetected results were considered unusable and qualified "R".

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0165-12 and its field duplicate OL-0165-13 with the exception of the duplicate results for PCB-1242. Therefore, these results were considered estimated and qualified "J" and "UJ".

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0165-11 and OL-0165-12.

9. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 84.6% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits with the exception of the high mercury recoveries (130%R, 126%R; QC limit 75-125%R) associated with all samples. Therefore, positive mercury results were considered estimated, possibly biased high, and qualified "J".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0165-12 and its field duplicate OL-0165-13.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0165-11 and OL-0165-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by one day. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes with the exception of ammonia and sulfide. Ammonia was detected in the laboratory method blank associated with all samples at a concentration of 3.7 mg/kg; and sulfide was detected in the laboratory method blank associated with samples OL-0165-12 and 13 at a concentration of 11.2 mg/kg. However, sample results were not affected by the ammonia and sulfide contamination found in these blanks.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the high sulfide recoveries (200%R, 196%R; QC limit 50-150%R) and low ammonia recoveries (84%R, 85%R; QC limit 90-110%R) associated with all samples. Therefore, positive sulfide results were considered estimated, possibly biased high, and qualified "J". All ammonia results were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0165-12 and its field duplicate OL-0165-13.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0165-01 and OL-0165-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.36 DATA USABILITY SUMMARY FOR SDG #C6H240180

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H240180. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0166-01	08/23/06
OL-0166-02	08/23/06
OL-0166-03	08/23/06
OL-0166-04	08/23/06
OL-0166-05	08/23/06
OL-0166-06	08/23/06
OL-0166-07	08/23/06
OL-0166-08	08/23/06
OL-0166-09	08/23/06
OL-0166-10	08/23/06
OL-0166-11	08/23/06
OL-0166-12	08/23/06
OL-0166-13	08/23/06
OL-0166-14	08/23/06
OL-0166-15	08/23/06
OL-0166-16	08/23/06
OL-0166-17	08/23/06
OL-0166-18	08/23/06
OL-0166-19	08/23/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

All samples were analyzed as methanol dilutions. All samples, except OL-0166-10 had their surrogates recoveries "diluted out" and not calculated. Surrogate recoveries for OL-0166-10 were acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0166-17 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, 1C70902.D	Naphthalene	-46.5	OL-0166-01 thru OL-0166-05, -08, -17	J	J/UJ
Vstd50, 1C70902.D	1,2,3-TCB	-37.9	OL-0166-01 thru OL-0166-05, -08, -17	J	J/UJ
Vstd50, CC70903.D	Naphthalene	-44.0	OL-0166-06, -07, OL-0166-09 thru OL-0166-16, -18	J	J/UJ

8. Internal Standard Area Counts and Retention Times

Sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0166-04 and OL-0166-05, with the exception of Chlorobenzene. Chlorobenzene results were qualified as estimated (J) in OL-0166-04 and OL-0166-05 Evaluation results are shown below.

Analyte	Field Sample ID	Replicate Sample ID	RPD	Data Qualifier
Chlorobenzene	OL-0166-04	OL-0166-05	121	J

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0166-09 and OL-0166-11.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples, except OL-0166-17 and OL-0166-18, were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. Surrogate recoveries for OL-0166-17 and OL-0166-18 were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for OL-0166-17 were acceptable and within QC acceptance limits, with the exception of Acenaphthene, Anthracene, Benzo(a)anthracene, Fluoranthene, Phenanthrene, and Phenol. All six analytes were detected in OL-0166-17 and have been qualified as estimated (J)

Sample ID	Analyte	MS/ MSD %R	QC Limit	% RPD	Affected Samples	VAL Flag
OL-0166-17	Acenaphthene	31/33	40-115		OL-0166-17	J
OL-0166-17	Anthracene	260/197	40-115		OL-0166-17	J
OL-0166-17	Benzo(a)anthracene	Ok/24	40-115		OL-0166-17	J
OL-0166-17	Fluoranthene	151/153	40-115		OL-0166-17	J
OL-0166-17	Phenanthrene	289/301	40-115		OL-0166-17	J
OL-0166-17	Phenol	151/354	35-110	53	OL-0166-17	J

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0166-04 and OL-0166-05.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0166-09 and OL-0166-11.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Recovery of one of two of the surrogates (tetrachloro-m-xylene) was non-compliant (high recovery) in OL-0166-08 and OL-0166-14; only one surrogate

was non-compliant so no sample results were qualified. Surrogate recoveries for all other samples were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   The MS/MSD recoveries were acceptable and within QC acceptance limits for OL-0166-17.

4. **Laboratory Control Sample (LCS) Recoveries**

   LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0166-04 and OL-0166-05.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0166-09 and OL-0166-11.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries were not calculated by laboratory because sample OL-0166-17 concentration was greater than 4x spike amount. No sample results were qualified based on MS/MSD recovery.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0166-04 and OL-0166-05.

11. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0166-09 and OL-0166-11.

12. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

13. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia, and Sulfide. For TOC, analytical holding time was exceeded for all samples. Samples, with the exception of OL-0166-03, were analyzed on 09/08/06. OL-0166-03 was analyzed on 09/19/06. Evaluation results are as shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.

TOC	ALL except OL-0166-03	2	Y	J
TOC	OL-0166-03	13	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blank for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) measurements were considered acceptable and within QC acceptance limits for Ammonia, TOC and Sulfide in OL-0166-17. MS/MSD accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC and Ammonia in OL-0166-17. MS/MSD recoveries for Sulfide were considered not acceptable and not within QC acceptance limits. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0166-17	Sulfide	70/65	75-125	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0166-17.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0166-04 and OL-0166-05.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0166-09 and OL-0166-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.37 DATA USABILITY SUMMARY FOR SDG #C6H240182

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H240182. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0167-01	08/23/06
OL-0167-02	08/23/06
OL-0167-03	08/23/06
OL-0167-04	08/23/06
OL-0167-05	08/23/06
OL-0167-06	08/23/06
OL-0167-07	08/23/06
OL-0167-08	08/23/06
OL-0167-09	08/23/06
OL-0167-10	08/23/06
OL-0167-11	08/23/06
OL-0167-12	08/23/06
OL-0167-13	08/23/06
OL-0167-14	08/23/06
OL-0167-15	08/23/06
OL-0167-16	08/23/06
OL-0167-17	08/23/06
OL-0167-18	08/23/06
OL-0167-19	08/23/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

All samples were analyzed as methanol dilutions. All samples had their surrogates recoveries "diluted out" and not calculated. No sample results were qualified based on surrogate recoveries.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0167-19 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC40902.D	Naphthalene	-39.4	OL-0167-01 thru OL-0167-05, OL-0167-08 thru OL-0167-15, OL-0167-19	J	J/UJ
Vstd50, CC40902.D	1,2,3-TCB	-49.8	OL-0167-01 thru OL-0167-05, OL-0167-08 thru OL-0167-15, OL-0167-19	J	J/UJ

8. Internal Standard Area Counts and Retention Times

Sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0167-09 and OL-0167-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0167-01 and OL-0167-19.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All samples, except OL-0167-03, were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated. Surrogate recovery for OL-0167-03 was acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0167-19 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0167-09 and OL-0167-10.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0167-01 and OL-0167-19.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Recovery of one of two of the surrogates (decachlorobiphenyl) was non-compliant in OL-0167-01 and OL-0166-14; only one surrogate was non-compliant so no sample results were qualified. Recovery of one of two of the surrogates (tetrachloro-m-xylene) was non-compliant in OL-0167-03, OL-0167-07, OL-0167-11, OL-0167-14, and OL-0167-16; only one surrogate was non-compliant so no sample results were qualified. Sample results for OL-0167-02, OL-0144-03 and OL0144-7, having a surrogate recovery that is <10%, are qualified as rejected. Surrogate recoveries for other samples were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery. Evaluation results are as shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0167-02	Tetrachloro-m-xylene	1.7	31-127	Aroclor-1260, Aroclors (total)	J
				Aroclor -1016, -1221, -1232, -1242, -1248, -1254, 1268	R (all ND)

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

The MS/MSD recoveries and RPD value were not acceptable and not within QC acceptance limits for OL-0167-19; however, since only one surrogate was slightly non-compliant (for both %R and RPD), sample results were not qualified. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0167-19	Aroclor-1260	33/ok	35-138	OL-0167-19	None

4. Laboratory Control Sample (LCS) Recoveries

LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0167-09 and OL-0167-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0167-01 and OL-0167-19.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD recoveries were not calculated by laboratory because sample OL-0167-19 concentration was greater than 4x spike amount. No sample results were qualified based on MS/MSD recovery.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0167-09 and OL-0167-10.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0167-01 and OL-0167-19.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria for TOC, Ammonia, and Sulfide.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

The laboratory blank for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Ammonia in OL-0167-16 and OL-0167-19. MS/MSD measurements were considered acceptable and within QC acceptance limits for TOC in OL-0167-19. MS/MSD recoveries for Sulfide in OL-0167-03 and OL-0167-19 were considered not acceptable and not within QC acceptance limits. Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0167-03	Sulfide	65/65	75-125	OL-0167-03 thru OL-0167-18	J
OL-0167-19	Sulfide	Ok/74	75-125	OL-0167-03	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0166-17.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0167-09 and OL-0167-10.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0167-01 and OL-0167-19.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.38 DATA USABILITY SUMMARY FOR SDG # C6H240187

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H240187. The results for total organic carbon (TOC) for these samples were reported in SDG # C6H240153. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0168-01	8/23/2006
OL-0168-02	8/23/2006
OL-0168-03	8/23/2006
OL-0168-04	8/23/2006
OL-0168-05	8/23/2006
OL-0168-06	8/23/2006
OL-0168-07	8/23/2006
OL-0168-08	8/23/2006
OL-0168-09	8/23/2006
OL-0168-10	8/23/2006
OL-0168-11	8/23/2006
OL-0168-12	8/23/2006
OL-0168-13	8/23/2006
OL-0168-14	8/23/2006
OL-0168-15	8/23/2006
OL-0168-16	8/23/2006
OL-0168-17	8/23/2006
OL-0168-18	8/23/2006
OL-0168-19	8/23/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

The laboratory reported that due to the concentration of target compounds detected, all samples were analyzed as methanol dilutions. All surrogate recoveries were diluted out. No reported results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0168-09 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Samples OL-0168-17 and OL-0168-18 are field duplicates for this SDG. Generally, there is excellent agreement between the results.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0168-17 and OL-0168-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all samples were analyzed as methanol dilutions. Some reported detections are above the method detection limit (MDL) but less than the reporting limit (RL). These results have been qualified as estimated and flagged ‘J’.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of target compounds detected, all of the samples were analyzed at a dilution. As a result all surrogate recoveries were diluted out. No reported results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0168-09 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   Samples OL-0168-17 and OL-0168-18 are field duplicates for this SDG. There is excellent agreement (as RPD) between the results for the field duplicates.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0168-17 and OL-0168-18.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due

to concentration of target compounds detected. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that recovery for surrogate tetrachlroro-m-xylene for sample OL-0168-01 was above the control limits. Since the reported recovery for the other PCB surrogate decachlorobiphenyl was in control for this sample no results have been qualified.

Surrogate recoveries were diluted out for sample OL-0168-19. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0168-09 was analyzed as the project specific MS/MSD for this SDG. All reported MS/MSD results are acceptable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

Samples OL-0168-17 and OL-0168-18 are field duplicates collected and analyzed for this SDG. All reported results for the field duplicates meet the precision criteria and are acceptable.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0168-17 and OL-0168-18.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial and continuing calibration blanks associated with project samples did not contain mercury.

The preparation blank associated with the samples contained mercury at a concentration between the MDL and the RL. No results have been qualified because the level of mercury detected in the samples is significantly greater than the level of blank contamination.

4. Matrix Spike Recoveries

The laboratory reported that mercury recoveries for the MS/MSD (OL-0168-09) were not calculated due to the concentration of mercury in the sample being > 4 times the concentration of the spike. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0168-17 and OL-0168-18 were collected and analyzed as field duplicates for this SDG. All reported results for the field duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0168-17 and OL-0168-18. The laboratory reported that all samples for mercury analysis required dilution.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria except for TOC. The samples for TOC analysis were analyzed six days outside the 14-day method holding time requirement. All reported results have been qualified as estimated.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes except for ammonia. The laboratory blank associated with the ammonia analysis contained ammonia at a concentration less than the reporting limit (5 ppm). Since the ammonia concentration in the samples (155 – 837 ppm) is significantly greater than the level of blank contamination, no results have been qualified.

4. Matrix Spike Recoveries

Sample OL-0168-09 was analyzed as the project specific MS/MSD for this SDG. Recovery outliers were reported for total sulfide (66/70%) and ammonia (111/112%). Reported results for total sulfide and ammonia have been qualified as estimated and flagged ‘J/UJ’.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria except for TOC. The RPD for the lab duplicates was calculated as

32%, above the control limit of 20%. Since the TOC results have already been qualified as estimated no additional action is required.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0168-17 and OL-0168-18 were collected and analyzed as field duplicates for this SDG. The reported results for the duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0140-14 and OL-0140-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.39 DATA USABILITY SUMMARY FOR SDG # C6H240192

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6H240192. The results for total organic carbon (TOC) for these samples were reported in SDG # C6H240154. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0169-01	8/23/2006
OL-0169-02	8/23/2006
OL-0169-03	8/23/2006
OL-0169-04	8/23/2006
OL-0169-05	8/23/2006
OL-0169-06	8/23/2006
OL-0169-07	8/23/2006
OL-0169-08	8/23/2006
OL-0169-09	8/23/2006
OL-0169-10	8/23/2006
OL-0169-11	8/23/2006
OL-0169-12	8/23/2006
OL-0169-13	8/23/2006
OL-0169-14	8/23/2006
OL-0169-15	8/23/2006
OL-0169-16	8/23/2006
OL-0169-17	8/23/2006
OL-0169-18	8/23/2006
OL-0169-19	8/23/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

The laboratory reported that due to the concentration of target compounds detected, all surrogates were diluted out except for sample OL-0169-09. The reported recoveries for two of the volatile surrogates for sample OL-0169-09 were below the lower control limit. The reported recovery for surrogate dibromofluoromethane (1.4%) was less than 10%. Reported detections for sample OL-0169-09 have been qualified as estimated ('J'). Reported nondetects have been qualified as unusable ('R').

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0169-09 was analyzed as the MS/MSD for this SDG. Spike recovery outliers were reported for the MSD (OL-0169-09) for 1,4-dichlorobenzene and 1,2-dichlorobenzene. The recoveries exceeded the upper control limits. Since the recoveries for the MS for these compounds were in control, no results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Samples OL-0169-14 and OL-0169-15 are field duplicates for this SDG. Both samples required dilution. Sample OL-0169-14 was diluted 30:1 and sample OL-0169-15 was diluted 15:1. Generally, there is agreement between the results when the dilutions are considered except for ethylbenzene. Ethylbenzene was detected in sample OL-0169-15 but was not detected in sample OL-0169-14. The difference may be due to the difference in the dilutions. No results have been qualified.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0169-14 and OL-0169-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all samples, except OL-0169-09, were analyzed as methanol dilutions. Some reported detections are above the method detection limit (MDL) but less than the reporting limit (RL). These results have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered complete (i.e., usable) except for the nondetects for sample OL-0169-09.

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, all of the samples were analyzed at a dilution. As a result all surrogate recoveries were diluted out.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0169-09 was analyzed as the MS/MSD for this SDG. All spikes were diluted out. No reported results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Samples OL-0169-14 and OL-0169-15 are field duplicates for this SDG. There is excellent agreement (as RPD) between the results for the field duplicates.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0169-14 and OL-0169-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due to concentration of target compounds detected. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported surrogate outliers for samples OL-0169-02 and OL-0169-08. The reported recoveries for both PCB surrogates were above the upper control limits. Since no PCBs were detected in any of the affected samples, no results have been qualified.

Samples OL-0169-01 and OL-0169-15 had recovery outliers for decachlorobiphenyl. Since the recoveries for the other surrogate, tetrachloro-m-xylene are in control, no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0169-09 was analyzed as the project specific MS/MSD for this SDG. All reported MS/MSD results are acceptable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   Samples OL-0169-14 and OL-0169-15 are field duplicates collected and analyzed for this SDG. All reported results for the field duplicates meet the precision criteria and are acceptable.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0169-14 and OL-0169-15.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   The laboratory reported that mercury recoveries for the MS/MSD (OL-0169-09) were not calculated due to the concentration of mercury in the sample being > 4 times the concentration of the spike. No results have been qualified.

5. **Laboratory Duplicate Precision**

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0169-14 and OL-0169-15 were collected and analyzed as field duplicates for this SDG. All reported results for the field duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0169-14 and OL-0169-15. The laboratory reported that all samples were over the instrument's calibration range for mercury and required dilution.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria except for TOC. The samples were analyzed two days outside the 14-day method holding time. Results have been qualified as estimated and flagged 'J/UJ'.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes except for TOC and ammonia. One of the laboratory blanks associated with the TOC analysis contained TOC at a concentration above the reporting limit (500 ppm). Since the TOC concentration in the samples (31000 – 74000 ppm) is significantly greater than the level of blank contamination, no results have been qualified. A similar situation existed for ammonia. Ammonia was detected in a laboratory blank (3 ppm compared to the reporting limit of 5

ppm). Since the ammonia concentration in the samples (146 – 654 ppm) is significantly greater than the level of blank contamination, no results have been qualified.

4. Matrix Spike Recoveries

Sample OL-0169-09 was analyzed as the project specific MS/MSD for this SDG. Recovery outliers were reported for total ammonia (154/198%). Reported detections of ammonia have been qualified as estimated and flagged 'J'. The MSD recovery for sulfide (74%) was outside the control limit (75-125%). Since the corresponding MS recovery (83%) is in control, no sulfide results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0169-14 and OL-0169-15 were collected and analyzed as field duplicates for this SDG. The reported results for the duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0169-14 and OL-0169-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. All of the samples for sulfide were analyzed at dilutions.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.40 DATA USABILITY SUMMARY FOR SDG # C6H250154

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H250154. The results for total organic carbon (TOC) for these samples were reported in SDG #6H250162. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0170-01	8/24/2006
OL-0170-02	8/24/2006
OL-0170-03	8/24/2006
OL-0170-04	8/24/2006
OL-0170-05	8/24/2006
OL-0170-06	8/24/2006
OL-0170-07	8/24/2006
OL-0170-08	8/24/2006
OL-0170-09	8/24/2006
OL-0170-10	8/24/2006
OL-0170-11	8/24/2006
OL-0170-12	8/24/2006
OL-0170-13	8/24/2006
OL-0170-14	8/24/2006
OL-0170-15	8/24/2006
OL-0170-16	8/24/2006
OL-0170-17	8/24/2006
OL-0170-18	8/24/2006
OL-0170-19	8/24/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of naphthalene (-44.7%D) in the continuing calibration associated with sample OL-0170-19; and naphthalene (-30.4%D) and 1,2,3-trichlorobenzene (-30.8%D) in the continuing calibration associated with samples OL-0170-04 and OL-0170-09. Therefore, results for these compounds were considered estimated “J” or “UJ” for these samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0170-06 and its field duplicate OL-0170-07.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0170-01 and OL-0170-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

13. Holding Times

All extraction and analytical holding times met criteria.

14. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

15. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

16. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

17. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

18. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

19. Initial and Continuing Calibrations

All initial calibrations associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of phenol (26.2%D) in the continuing calibration associated with samples OL-0170-10 through 19. Therefore, results for these compounds were considered estimated and qualified "J" and "UJ" for the affected samples.

20. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

21. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0170-06 and its field duplicate OL-0170-07.

22. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0170-01 and OL-0170-02.

23. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

24. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0170-06 and its field duplicate OL-0170-07.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0170-11 and OL-0170-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0170-06 and its field duplicate OL-0170-07.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0170-11 and OL-0170-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by seven days. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the low sulfide recoveries (61%R, 65%R; QC limit 75-125%R) associated with samples OL-0170-03 through 18. Therefore, the sulfide results for these samples were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0170-06 and its field duplicate OL-0170-07.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0170-01 and OL-0170-02.

9. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.41 DATA USABILITY SUMMARY FOR SDG # C6H250213

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H250213. The results for total organic carbon (TOC) for these samples were reported in SDG #6H250219. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0171-01	8/24/2006
OL-0171-02	8/24/2006
OL-0171-03	8/24/2006
OL-0171-04	8/24/2006
OL-0171-05	8/24/2006
OL-0171-06	8/24/2006
OL-0171-07	8/24/2006
OL-0171-08	8/24/2006
OL-0171-09	8/24/2006
OL-0171-10	8/24/2006
OL-0171-11	8/24/2006
OL-0171-12	8/24/2006
OL-0171-13	8/24/2006
OL-0171-14	8/24/2006
OL-0171-15	8/24/2006
OL-0171-16	8/24/2006
OL-0171-17	8/24/2006
OL-0171-18	8/24/2006
OL-0171-19	8/24/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of naphthalene (-31.5%D) and 1,2,3-trichlorobenzene in the continuing calibration associated with samples OL-0171-02 through 10, 14, and 16 through 19; and naphthalene (-30.4%D) and 1,2,3-trichlorobenzene (-30.8%D) in the continuing calibration associated with samples OL-0171-01, 11, 12, 13, and 15. Therefore, results for these compounds were considered estimated “J” or “UJ” for these samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0171-08 and its field duplicate OL-0171-09.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0171-01 and OL-0171-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibrations associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0171-08 and its field duplicate OL-0171-09.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0171-01 and OL-0171-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria with the exception of the reextracted sample OL-0171-18RE. This sample grossly exceeded the 14-day reextraction holding time criteria by 29 days. Therefore, positive results for this sample were considered estimated, possibly biased low, and qualified "J" while nondetected results for this sample were considered unusable and qualified "R". Sample results from the original analysis of OL-0171-18 were reported in the validated data in Attachment A.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0171-08 and its field duplicate OL-0171-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0171-11 and OL-0171-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All final PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits with the exception of the low mercury recovery (45%R; QC limit 75-125%R) associated with all samples. Therefore, all mercury results were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0171-08 and its field duplicate OL-0171-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0171-11 and OL-0171-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by 14 days. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes with the exception of TOC. The laboratory method blank associated with sample OL-0171-19 contained TOC at a concentration of 643 mg/kg. However, the associated sample result was not affected by the contamination detected in this blank.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the low sulfide recoveries (74%R, 65%R; QC limit 75-125%R) associated with samples OL-0171-16 through 19; and the high TOC recovery (150%R; QC limit 75-125%R) associated with all samples. Therefore, the sulfide results for the affected samples were considered estimated, possibly biased low, and qualified "J" or "UJ". Positive TOC results were considered estimated, possibly biased high, and qualified "J" for the affected samples.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0171-08 and its field duplicate OL-0171-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0171-01 and OL-0171-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.42 DATA USABILITY SUMMARY FOR SDG # C6H250275

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H250275. The results for total organic carbon (TOC) for these samples were reported in SDG #6H250282. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0172-01	8/24/2006
OL-0172-02	8/24/2006
OL-0172-03	8/24/2006
OL-0172-04	8/24/2006
OL-0172-05	8/24/2006
OL-0172-06	8/24/2006
OL-0172-07	8/24/2006
OL-0172-08	8/24/2006
OL-0172-09	8/24/2006
OL-0172-10	8/24/2006
OL-0172-11	8/24/2006
OL-0172-12	8/24/2006
OL-0172-13	8/24/2006
OL-0172-14	8/24/2006
OL-0172-15	8/24/2006
OL-0172-16	8/24/2006
OL-0172-17	8/24/2006
OL-0172-18	8/24/2006
OL-0172-19	8/24/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of naphthalene (-44.7%D) in the continuing calibration associated with samples OL-0172-01 and OL-0172-02. Therefore, results for these compounds were considered estimated "J" or "UJ" for these samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0172-10 and its field duplicate OL-0172-11.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0172-01 and OL-0172-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of phenol (26.2%D) in the continuing calibration associated with samples OL-0172-01 through 11. Therefore, phenol results were considered estimated and qualified "J" or "UJ" for the affected samples.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

All field duplicate precision results were considered acceptable for sample OL-0172-10 and its field duplicate OL-0172-11.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0172-01 and OL-0172-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0172-10 and its field duplicate OL-0172-11 with the exception of the PCB-1254 and total PCB results for these samples. Therefore, these results were considered estimated and qualified “J” and “UJ” for this duplicate pair.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0172-11 and OL-0172-12.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All final PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0172-10 and its field duplicate OL-0172-11.

8. **Sample Result Verification and Identification**

Instrument raw data were reviewed for sample result verification and identification for samples OL-0172-11 and OL-0172-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by 11 days. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the low sulfide recoveries (74%R, 65%R; QC limit 75-125%R) associated with samples OL-0172-01 through 12. Therefore, the sulfide results for the affected samples were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0172-10 and its field duplicate OL-0172-11.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0172-01 and OL-0172-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.43 DATA USABILITY SUMMARY FOR SDG # C6H250315

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H250315. The results for total organic carbon (TOC) for these samples were reported in SDG #6H250327. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0173-01	8/24/2006
OL-0173-02	8/24/2006
OL-0173-03	8/24/2006
OL-0173-04	8/24/2006
OL-0173-05	8/24/2006
OL-0173-06	8/24/2006
OL-0173-07	8/24/2006
OL-0173-08	8/24/2006
OL-0173-09	8/24/2006
OL-0173-10	8/24/2006
OL-0173-11	8/24/2006
OL-0173-12	8/24/2006
OL-0173-13	8/24/2006
OL-0173-14	8/24/2006
OL-0173-15	8/24/2006
OL-0173-16	8/24/2006
OL-0173-17	8/24/2006
OL-0173-18	8/24/2006
OL-0173-19	8/24/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits with the exception of the low LCS recoveries for 1,2,3-trichlorobenzene (19%R; QC limit 42-136%R) and 1,2,4-trichlorobenzene (44%R; QC limit 48-131%R) associated with all samples. Therefore, results for these noncompliant compounds were considered estimated, possibly biased low, and qualified "J" or "UJ" for these samples.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of naphthalene (-25.2%D) in the continuing calibration associated with samples OL-0173-11, and 13 through 19. Therefore, results for these compounds were considered estimated "J" or "UJ" for these samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0173-16 and its field duplicate OL-0173-17.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0173-01 and OL-0173-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

All field duplicate precision results were considered acceptable for sample OL-0173-16 and its field duplicate OL-0173-17.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0173-01 and OL-0173-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

There were many noncompliant surrogate recoveries. However, sample results were not affected by these noncompliances.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0173-16 and its field duplicate OL-0173-17.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0173-11 and OL-0173-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0173-16 and its field duplicate OL-0173-17.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0173-11 and OL-0173-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by seven days. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes with the exception of ammonia. Ammonia was detected in the laboratory blank associated with all samples at a concentration of 2.7 mg/kg. However, sample results were not affected by the ammonia contamination detected in this blank.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the high ammonia recoveries (112%R, 113%R; QC limit 90-110%R) associated with all samples. Therefore, positive ammonia results for the affected samples were considered estimated, possibly biased high, and qualified "J".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0173-16 and its field duplicate OL-0173-17.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0173-01 and OL-0173-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.44 DATA USABILITY SUMMARY FOR SDG # C6H260116

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6H260116. The results for total organic carbon (TOC) for these samples were reported in SDG #6H260117. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0174-01	8/25/2006
OL-0174-02	8/25/2006
OL-0174-03	8/25/2006
OL-0174-04	8/25/2006
OL-0174-05	8/25/2006
OL-0174-06	8/25/2006
OL-0174-07	8/25/2006
OL-0174-08	8/25/2006
OL-0174-09	8/25/2006
OL-0174-10	8/25/2006
OL-0174-11	8/25/2006
OL-0174-12	8/25/2006
OL-0174-13	8/25/2006
OL-0174-14	8/25/2006
OL-0174-15	8/25/2006
OL-0174-16	8/25/2006
OL-0174-17	8/25/2006
OL-0174-18	8/25/2006
OL-0174-19	8/25/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0174-08 and its field duplicate OL-0174-09.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0174-08 and OL-0174-09.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria with a minimum relative response factor (RRF) of 0.05 and maximum percent difference (%D) of ±25% with the exception of benzo(g,h,I)perylene (26.8%D) in the continuing calibration associated with all samples. Therefore, results for this noncompliant compound were considered estimated and qualified "J" or "UJ".

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0174-08 and its field duplicate OL-0174-09.

10. **Sample Result Verification and Identification**

Instrument raw data were reviewed for sample result verification and identification for samples OL-0174-01 and OL-0174-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All sample surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0174-08 and its field duplicate OL-0174-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0174-11 and OL-0174-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0174-08 and its field duplicate OL-0174-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0174-11 and OL-0174-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria with the exception of TOC. All TOC samples exceeded the 14-day holding time criteria by 12 to 14 days. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes with the exception of ammonia. Ammonia was detected in the laboratory blank associated with all samples at a concentration of 3.5 mg/kg. However, sample results were not affected by the ammonia contamination detected in this blank.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the low ammonia recoveries (62%R, 51%R; QC limit 90-110%R) and the low sulfide recoveries (70%R, 70%R, 39%R, 48%R; QC limit 75-125%R) associated with all samples. Therefore, the ammonia and sulfide results for the affected samples were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0174-08 and its field duplicate OL-0174-09.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0174-01 and OL-0174-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.45 DATA USABILITY SUMMARY FOR SDG #C6I270206

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6I270206. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0181-01	09/26/06
OL-0181-02	09/26/06
OL-0181-03	09/26/06
OL-0181-04	09/26/06
OL-0181-05	09/26/06
OL-0181-06	09/26/06
OL-0181-07	09/26/06
OL-0181-08	09/26/06
OL-0181-09	09/26/06
OL-0181-10	09/26/06
OL-0181-11	09/26/06
OL-0181-12	09/26/06
OL-0181-13	09/26/06
OL-0181-14	09/26/06
OL-0181-15	09/26/06
OL-0181-16	09/26/06
OL-0181-17	09/26/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

Sample OL-0181-05 (re-analysis) was analyzed as a medium-level soil and had the surrogates recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0181-06 were acceptable and within QC acceptance limits in QC batch 6271072. A sample from a different SDG was utilized for QC batches 6272062 and 6274016; results are not applicable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were not reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	Lab Flag	VAL Qual
OL-0181-05	6274016	Naphthalene	38000	1	E	J

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, CC61001.D	Naphthalene	-22.7	OL-0181-05, OL-0181-14	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0181-11 and OL-0181-12.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0181-02 and OL-0181-17.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

25. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

26. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0181-01, OL-0181-05, OL-0181-06, OL-0181-09, and OL-0181-14. No data were qualified based on surrogate recovery.

27. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0183-06 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

28. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

29. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

30. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

31. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	Lab Flag	VAL Qual
OL-0181-01	6272012	Fluoranthene	38000	25	E	J
OL-0181-01	6272012	Phenanthrene	41000	25	E	J
OL-0181-01	6272012	Pyrene	38000	25	E	J
OL-0181-05	6272012	Phenanthrene	37000	25	E	J

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 M1002SC1.D	Indeno(1,2,3 -cd)pyrene	-22.9	OL-0181-01DL, -02, -03, -04, -05DL, -07, -08, -10, -12, -13, -15, -16, -17	J	J/UJ
SSTD4.0 M1002SC1.D	Dibenz(a,h) anthracene	-26.4	OL-0181-01DL, -02, -03, -04, -05DL, -07, -08, -10, -12, -13, -15, -16, -17	J	J/UJ
SSTD4.0 M1002SC1.D	Benzo(g,h,i) perylene	-20.6	OL-0181-01DL, -02, -03, -04, -05DL, -07, -08, -10, -12, -13, -15, -16, -17	J	J/UJ

32. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

33. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0181-11 and OL-0181-12.

34. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0181-02 and OL-0181-17.

35. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

36. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

11. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

12. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC limits for OL-0181-01 thru OL-0181-04, OL-0181-06 thru OL-0181-08, OL-0181-15 thru OL-0181-17. Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (tetrachloro-m-xylene) was not calculated, due to matrix interference, for sample OL-0181-14. Surrogate recoveries for both surrogates were not calculated for OL-0181-05 and OL-0181-09 because samples were analyzed at dilution. No sample results were qualified based on surrogate recovery.

13. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0181-06.

14. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

15. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

16. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria.

17. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0181-11 and OL-0181-12.

18. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0181-02 and OL-0181-17.

19. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

20. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

11. Holding Times

All analytical holding times met criteria.

12. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

13. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

14. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries were not calculated by laboratory because sample OL-0181-06 concentration was greater than 4x spike amount. No sample results were qualified based on MS/MSD recovery.

15. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

16. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0181-11 and OL-0181-12.

23. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0181-02 and OL-0181-17.

24. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

25. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

11. Holding Times

All analytical holding times met criteria for Ammonia as N, Sulfide, and all samples for TOC except OL-0181-17, which was analyzed outside of 14-day holding time by 9 days. Evaluation results are as shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0181-17	9	Y	J

12. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

13. Laboratory Blank Contamination

The laboratory blanks for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes, with the exception of a continuing calibration blank (CCB) associated with the TOC analysis of OL-0181-17. The CCB had a TOC concentration greater than the RL, however the TOC concentration of OL-0181-17 was greater than 10x CCB, so the sample result was not qualified.

14. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Sulfide and TOC in sample OL-0181-06.

For Ammonia as N, MS/MSD precision measurements (relative percent difference; RPD), but not accuracy measurements (percent recovery; %R), were considered acceptable and within QC acceptance limits for sample OL-0181-06. All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0181-06	Ammonia as N	124/130	90-110	ALL in SDG	J

15. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0181-06.

16. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

17. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0181-11 and OL-0181-12.

18. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0181-02 and OL-0181-17.

19. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

20. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.46 DATA USABILITY SUMMARY FOR SDG #C6I270211

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6I270211. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0183-01	09/26/06
OL-0183-02	09/26/06
OL-0183-03	09/26/06
OL-0183-04	09/26/06
OL-0183-05	09/26/06
OL-0183-06	09/26/06
OL-0183-07	09/26/06
OL-0183-08	09/26/06

These samples were analyzed for volatile organic compounds (VOCs), phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries were acceptable and within QC acceptance criteria for all samples.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for OL-0183-07 were acceptable and within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank associated with project samples did not contain target compounds at reported concentrations.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0183-01.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

11. **Data Completeness**

    All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times and preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Certain samples were analyzed as dilutions and had their surrogate recoveries “diluted out” and not calculated; affected samples were OL-0183-01 and OL-0183-05. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for OL-0183-07 were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blank associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 M1002SC1.D	Indeno(1,2,3 -cd)pyrene	-22.9	OL-0183-02 thru OL-0183-08	J	J/UJ
SSTD4.0 M1002SC1.D	Dibenz(a,h) anthracene	-26.4	OL-0183-02 thru OL-0183-08	J	J/UJ
SSTD4.0 M1002SC1.D	Benzo(g,h,i) perylene	-20.6	OL-0183-02 thru OL-0183-08	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0183-01.

10. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

11. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries were considered acceptable and within QC limits for all samples except OL-0183-01. Recovery of one of two of the surrogates was non-compliant in OL-0183-01; detected analyte concentrations were qualified as estimated. Evaluation results are as shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0183-01	Tetrachloro-m-xylene	130	31-127	Aroclor 1248, Aroclor 1260, Arochors (total)	J

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0183-01.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial calibrations associated with project samples were considered acceptable and within criteria. Continuing calibration verifications associated with project samples were considered acceptable and were within criteria.

7. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0183-01.

8. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

9. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0183-01.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0183-01.

8. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

9. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Ammonia and TOC in sample OL-0183-07. MS/MSD recoveries for Sulfide were not considered acceptable and were not within QC acceptance limits in sample OL-0183-07. Sulfide results for samples OL-0183-01 thru OL-0183-08 were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0183-07	Sulfide	13/13	75-125	All in SDG	J

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0183-07.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0183-01.

8. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

9. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.47 DATA USABILITY SUMMARY FOR SDG #C6I280207

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6I280207. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0185-01	09/27/06
OL-0185-02	09/27/06
OL-0185-03	09/27/06
OL-0185-04	09/27/06
OL-0185-05	09/27/06
OL-0185-06	09/27/06
OL-0185-07	09/27/06
OL-0185-08	09/27/06
OL-0185-09	09/27/06
OL-0185-10	09/27/06
OL-0185-11	09/27/06
OL-0185-12	09/27/06
OL-0185-13	09/27/06
OL-0185-14	09/27/06
OL-0185-15	09/27/06
OL-0185-16	09/27/06
OL-0185-17	09/27/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Sample OL-0185-05 (re-analysis) was analyzed as a medium-level soil and had the surrogates recoveries “diluted out” and not calculated. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

MS/MSD results for sample OL-0185-11 were acceptable and within QC acceptance limits in QC batch 6275053. A sample from a different SDG was utilized for QC batches 6272062 and 6276043; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0185-01 and OL-0185-02.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0185-03 and OL-0185-15.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

12. **Data Completeness**

    All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times and preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0185-02, OL-0185-03, OL-0185-04, OL-0185-05, OL-0185-10, and OL-0185-14. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0185-11 were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	Lab Flag	VAL Qual
OL-0185-10	6275010	Anthracene	24000	10	E	J
OL-0185-10	6275010	Benzo(a)anthracene	18000	10	E	J
OL-0185-10	6275010	Benzo(b)fluoranthene	13000	10	E	J
OL-0185-10	6275010	Chrysene	14000	10	E	J
OL-0185-10	6275010	Fluoranthene	38000	10	E	J
OL-0185-10	6275010	Phenanthrene	53000	10	E	J
OL-0185-10	6275010	Pyrene	22000	10	E	J
OL-0185-14	6275010	Acenaphthene	22000	20	E	J
OL-0185-14	6275010	Anthracene	25000	20	E	J
OL-0185-14	6275010	Fluoranthene	30000	20	E	J
OL-0185-14	6275010	Phenanthrene	57000	20	E	J

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 M1004SC1.D	Phenol	-22.0	OL-0185-01, -03, -04, -06 thru -17	J	J/UJ
SSTD4.0 M1005SC1.D	Phenol	26.7	OL-0185-10DL, -14DL	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0185-01 and OL-0185-02.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0185-03 and OL-0185-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries for both surrogates were not calculated for OL-0185-03, OL-0185-04, and OL-0185-05 because samples were analyzed at dilution and surrogate recoveries were “diluted out”. Surrogate recoveries for all other samples were acceptable and within QC limits. No sample results were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0185-06.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0185-01 and OL-0185-22.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0185-03 and OL-0185-15.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for sample OL-0185-11 were acceptable and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0185-01 and OL-0185-02.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0185-03 and OL-0185-15.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria for Ammonia as N, Sulfide, and TOC.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

The laboratory blanks for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Sulfide in sample OL-0185-11.

For Ammonia as N, MS/MSD precision measurements (relative percent difference; RPD) and accuracy measurements (percent recovery; %R), were not considered acceptable and within QC acceptance limits for sample OL-0185-11. For TOC, MS accuracy measurements (percent recovery; %R), were not considered acceptable and within QC acceptance limits for sample OL-0185-11. All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0185-11	Ammonia as N	88	27	90-110	ALL in SDG	J
OL-0185-11	TOC	121		75-125	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was not considered acceptable and within criteria for sample OL-0185-11. Evaluation results are shown below.

Sample ID	Analyte	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0185-11	TOC	62	20	ALL in SDG	J

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0185-01 and OL-0185-02.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0185-03 and OL-0185-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.48 DATA USABILITY SUMMARY FOR SDG #C6I280213

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6I280213. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0186-01	09/27/06
OL-0186-02	09/27/06
OL-0186-03	09/27/06
OL-0186-04	09/27/06
OL-0186-05	09/27/06
OL-0186-06	09/27/06
OL-0186-07	09/27/06
OL-0186-08	09/27/06
OL-0186-09	09/27/06
OL-0186-10	09/27/06
OL-0186-11	09/27/06
OL-0186-12	09/27/06
OL-0186-13	09/27/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for samples OL-0186-07, and OL-0186-12 were acceptable and within QC acceptance limits in QC batches 6276071 and 6276043,

respectively. A sample from a different SDG was utilized for QC batches 6275053 and 6275043; results are not applicable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
Vstd50, 1C41003.D	1,2,4-Trichlorobenzene	-24.5	OL-0186-07, -10	J	J/UJ
Vstd50, 1C41003.D	Naphthalene	-23.0	OL-0186-07, -10	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0186-05 and OL-0186-06.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0186-04 and OL-0186-10.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times and preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0186-06 and OL-0186-10. Surrogate recoveries for all other samples were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for sample OL-0186-12 were acceptable and within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were not considered acceptable (<100%RPD) for the field duplicate sample pair OL-0186-05 and OL-0186-06 for six of sixteen PAHs, which were qualified as estimated (J). Evaluation results are shown below.

Analyte	Field Sample ID	Replicate Sample ID	RPD	Data Qualifier
Acenaphthene	OL-0186-05	OL-0186-06	124	J
Acenaphthylene	OL-0186-05	OL-0186-06	127	J
Benzo(a)anthracene	OL-0186-05	OL-0186-06	103	J
Benzo(b)fluoranthene	OL-0186-05	OL-0186-06	101	J
Fluoranthene	OL-0186-05	OL-0186-06	101	J
Phenanthrene	OL-0186-05	OL-0186-06	115	J

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0186-04 and OL-0186-10.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0186-12.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0186-05 and OL-0186-06.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0186-04 and OL-0186-10.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0186-12.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0186-05 and OL-0186-06.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0186-04 and OL-0186-10.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia as N, Sulfide, and TOC.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for TOC in sample OL-0186-12.

For Ammonia as N and Sulfide, MS/MSD precision measurements (relative percent difference; RPD), but not accuracy measurements (percent recovery; %R), were considered acceptable and within QC acceptance limits for sample OL-0186-12. All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0186-12	Ammonia as N	115/115	90-110	ALL in SDG	J

OL-0186-12	Sulfide	61/65	75-125	ALL in SDG	J/UJ

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0186-12.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0186-05 and OL-0186-06.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0186-04 and OL-0186-10.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.49 DATA USABILITY SUMMARY FOR SDG #C6I290234

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6I290234. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0187-01	09/28/06
OL-0187-02	09/28/06
OL-0187-03	09/28/06
OL-0187-04	09/28/06
OL-0187-05	09/28/06
OL-0187-06	09/28/06
OL-0187-07	09/28/06
OL-0187-08	09/28/06
OL-0187-09	09/28/06
OL-0187-10	09/28/06
OL-0187-11	09/28/06
OL-0187-12	09/28/06
OL-0187-13	09/28/06
OL-0187-14	09/28/06
OL-0187-15	09/28/06
OL-0187-16	09/28/06
OL-0187-17	09/28/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

Sample OL-0187-05 (re-analysis) was analyzed as a medium-level soil and had the surrogates recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0187-09 and OL-0187-13 were acceptable and within QC acceptance limits in QC batches 6277074 and 6275103, respectively. A sample from a different SDG was utilized for QC batches 6276071, 6278037, and 6279081; results are not applicable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC41002.D	Naphthalene	-32.1	OL-0187-13	J	J/UJ
CC41002.D	1,2,3-Trichlorobenzene	-49.9	OL-0187-13	J	J/UJ
1C41003.D	Naphthalene	-23.0	OL-0187-06, -07, -08, -09, -14, -15, -16, -17	J	J/UJ
1C41003.D	1,2,4-Trichlorobenzene	-24.5	OL-0187-06, -07, -08, -09, -14, -15, -16, -17	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0187-06 and OL-0187-07.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0187-04 and OL-0187-14.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0187-06 through OL-01877-17 were analyzed as methanol dilutions.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0187-07 thru OL-0187-16. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD recoveries were "diluted" out and not calculated by laboratory because sample OL-0187-13 was analyzed at dilution. No sample results were qualified based on MS/MSD recovery.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the

laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	Lab Flag	VAL Qual
OL-0187-05	6277011	Phenol	2200	0.5	E	J
OL-0187-06	6277011	Phenol	2900	0.5	E	J

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 M1004SC1.D	Phenol	-22.0	OL-0187-01, thru -05,	J	J/UJ
SSTD4.0 M1005SC1.D	Phenol	26.7	OL-0187-05D, -06DL OL-0187-07 thru -017	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0187-06 and OL-0187-07.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0187-04 and OL-0187-14.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0187-05 thru OL-0187-16 were analyzed at dilution.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries for all samples were acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0187-13.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
T1060203.D	4 of 5 Aroclors	17.2 avg.	OL-0187-01 thru OL-0187-17	J	J/UJ

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0187-06 and OL-0187-07.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0187-04 and OL-0187-14.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for sample OL-0187-13 were acceptable and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0187-06 and OL-0187-07.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0187-04 and OL-0187-14.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia as N, Sulfide, and TOC.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC associated with project samples did not contain target analytes. The laboratory blank for Ammonia as N contained the analyte at a concentration (4.7B mg/kg) below the reporting limit; however, all sample results >5x spike amount so no data were qualified based on method blank contamination.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Sulfide and TOC in sample OL-0187-13.

For Ammonia as N, MS/MSD accuracy measurements (percent recovery; %R), were not considered acceptable and within QC acceptance limits for sample OL-0187-113 All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0187-13	Ammonia as N	84	27	90-110	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0187-11.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0187-06 and OL-0187-07.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0187-04 and OL-0187-14.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.50 DATA USABILITY SUMMARY FOR SDG # C6I290240

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6I290240. The results for total organic carbon (TOC) for these samples were reported in SDG # C6I290225. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0188-01	9/28/2006
OL-0188-02	9/28/2006
OL-0188-03	9/28/2006
OL-0188-04	9/28/2006
OL-0188-05	9/28/2006
OL-0188-06	9/28/2006
OL-0188-07	9/28/2006
OL-0188-08	9/28/2006
OL-0188-09	9/28/2006
OL-0188-10	9/28/2006
OL-0188-11	9/28/2006
OL-0188-12	9/28/2006
OL-0188-13	9/28/2006
OL-0188-14	9/28/2006
OL-0188-15	9/28/2006
OL-0188-16	9/28/2006
OL-0188-17	9/28/2006
OL-0188-18	9/28/2006
OL-0188-19	9/28/2006

These samples were analyzed for volatiles, phenol, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, sample OL-0188-15 was analyzed as a methanol dilution (medium level). All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0188-08 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6I290240) one field duplicate sample was collected. Sample OL-0188-04 is the field duplicate of sample OL-0188-03. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0188-01 and OL-0188-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that sample OL-0188-15 was analyzed as a methanol dilution. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged ‘J’.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol

The following items were reviewed for compliancy in the phenol analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of phenol detected, samples OL-0188-14, OL-0188-15, OL-0188-16, OL-0188-17, OL-0188-18 and OL-0188-19 were analyzed at a dilution. As a result all surrogate recoveries were diluted out. No results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0188-08 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   Phenol was detected in sample OL-0188-03 (6.6 ppb) but was not detected in sample OL-0188-04. No results have been qualified.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0188-02 and OL-0188-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that several samples were diluted due to concentration of phenol detected. The laboratory reported that due to matrix interference, sample OL-0188-09 was analyzed at a dilution. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0188-03 and OL-0188-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0188-15 and OL-0188-16. Detections above the MDL but below the RL have been qualified as estimated and flagged 'J'.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0188-01 and OL-0188-02 were analyzed at a dilution for mercury.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits except for sulfide. MS/MSD percent recovery outliers were reported for total sulfide. The reported recoveries (65/65%) were below the lower control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0188-03 and OL-0188-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0188-01 and OL-0188-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples except OL-0188-01, OL-0188-02 and OL-0188-03 were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.51 DATA USABILITY SUMMARY FOR SDG # C6I300165

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6I300165. The results for total organic carbon (TOC) for these samples were reported in SDG # C6I300159. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0189-01	9/29/2006
OL-0189-02	9/29/2006
OL-0189-03	9/29/2006
OL-0189-04	9/29/2006
OL-0189-05	9/29/2006
OL-0189-06	9/29/2006
OL-0189-07	9/29/2006
OL-0189-08	9/29/2006
OL-0189-09	9/29/2006
OL-0189-10	9/29/2006
OL-018911	9/29/2006
OL-0189-12	9/29/2006
OL-0189-13	9/29/2006
OL-0189-14	9/29/2006
OL-0189-15	9/29/2006
OL-0189-16	9/29/2006

These samples were analyzed for volatiles, phenol, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of target compounds detected, sample OL-0188-15 was analyzed as a methanol dilution (medium

level). All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0189-10 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6I300165) one field duplicate sample was collected. Sample OL-0189-04 is the field duplicate of sample OL-0189-03. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0189-05 and OL-0189-13.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged ‘J’.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol

The following items were reviewed for compliancy in the phenol analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that samples OL-0189-01, OL-0189-09, OL-0189-12 and OL-0189-13 had the surrogates diluted out. No results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0189-10 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0189-03 and OL-0189-04.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0189-02 and OL-0189-16.

11. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to matrix interference and/or phenol concentration, samples OL-0189-01, OL-0189-09, OL-0189-11, OL-0189-12, OL-0189-13, OL-0189-14 and OL-0189-16 were analyzed at a dilution. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

Sample OL-0189-10 was analyzed as the MS/MSD sample for this SDG. The laboratory reported that mercury recoveries were not calculated for the MS/MSD due to the concentration of mercury in the native sample being > 4 times the spike level. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Mercury was detected in both field duplicate samples. Sample OL-0189-03 reported 0.7 mg/kg mercury while sample OL-0189-04 reported 1.4 mg/kg.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0189-14 and OL-0189-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all samples except OL-0189-03, OL-0189-04, OL-0189-11, OL-0189-12 and OL-0189-13 were analyzed at a dilution for mercury.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes except for TOC. The laboratory blank associated with samples OL-0189-01, OL-0189-02, OL-0189-05, OL-0189-06, OL-0189-07 and OL-0189-08 contained TOC above the RL. Since the level of blank contamination was comparable to the level of TOC concentration in the affected samples the reported results have been qualified as probable blank contamination.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits except for sulfide. The reported recoveries (61/65%) were below the lower control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0189-03 and OL-0189-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0189-01 and OL-0189-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.52 DATA USABILITY SUMMARY FOR SDG # C6I300167

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6I300167. The results for total organic carbon (TOC) for these samples were reported in SDG # C6I300162. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0190-01	09/29/2006
OL-0190-02	09/29/2006
OL-0190-03	09/29/2006
OL-0190-04	09/29/2006
OL-0190-05	09/29/2006
OL-0190-06	09/29/2006
OL-0190-07	09/29/2006
OL-0190-08	09/29/2006
OL-0190-09	09/29/2006
OL-0190-10	09/29/2006
OL-0190-11	09/29/2006
OL-0190-12	09/29/2006
OL-0190-13	09/29/2006
OL-0190-14	09/29/2006
OL-0190-15	09/29/2006
OL-0190-16	09/29/2006

These samples were analyzed for volatiles, phenol, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0190-02 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6I300167) one field duplicate sample was collected. Sample OL-0190-02 is the field duplicate of sample OL-0190-01. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0190-05 and OL-0190-04.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'. The laboratory reported that samples OL-0190-01 and OL-0190-02 were analyzed as methanol dilutions due to the concentration of target analytes.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol

The following items were reviewed for compliancy in the phenol analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were acceptable and within control limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0190-09 was analyzed as the MS/MSD for this batch. All recoveries for the MS/MSD were acceptable and within control limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits. The laboratory reported internal standard area outliers for perylene-d12 but this internal standard is not used for the quantitation of phenol. The internal standard used to quantitate for phenol is 1,4-dichlorobenzene-d4 which was in control. No results have been qualified.

9. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0190-01 and OL-0190-02.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0190-02 and OL-0190-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to matrix interference and/or phenol concentration, samples OL-0190-02, OL-0190-03, OL-0190-04, OL-0190-06, OL-0190-07, OL-0190-09, OL-0190-13, OL-0190-14 and OL-0190-15 were analyzed at a dilution. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

Sample OL-0190-09 was analyzed as the MS/MSD sample for this SDG. The laboratory reported that mercury recoveries were not calculated for the MS/MSD due to the concentration of mercury in the native sample being > 4 times the spike level. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples. The field duplicate samples for this SDG are samples OL-0190-01 and OL-0190-02.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0190-14 and OL-0190-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0190-01, OL-0190-02, OL-0190-03, OL-0190-08, OL-0190-09, OL-0190-10, OL-0190-11, OL-0190-14 and OL-0190-15 were analyzed at a dilution for mercury.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

Sample OL-0190-09 was analyzed as the MS/MSD for this SDG. All matrix spike recoveries were considered compliant and within QC acceptance limits except for ammonia and sulfide. The reported recoveries for sulfide (52/52%) were below the lower control limit (75%) for the MS/MSD. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'. The reported MS recovery for ammonia (121%) exceeded the upper control limit (110%). However, since the recovery for the MSD was in control (103%) no results for ammonia have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits except for sulfide.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0190-01 and OL-0190-02.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0190-01 and OL-0190-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.53 DATA USABILITY SUMMARY FOR SDG # C6I300173

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6I300173. The results for total organic carbon (TOC) for these samples were reported in SDG # C6I300163. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0191-01	09/29/2006
OL-0191-02	09/29/2006
OL-0191-03	09/29/2006
OL-0191-04	09/29/2006
OL-0191-05	09/29/2006
OL-0191-06	09/29/2006

These samples were analyzed for volatiles, phenol, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0191-06 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits except for 1,3-dichlorobenzene (78%) and 1,3,5-trichlorobenzene (80%) in the MSD. Since all recoveries for the spiked VOCs were in control in the MS no results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   No field duplicate sample was collected for this SDG.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0191-05 and OL-0191-04.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

12. **Data Completeness**

    All volatile sample results were considered 100% complete (i.e., usable).

Phenol

The following items were reviewed for compliancy in the phenol analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were acceptable and within control limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0191-06 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries wee acceptable and within control limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   No field duplicate was collected for this SDG.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0191-02 and OL-0191-06.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

12. **Data Completeness**

    All phenol sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   Sample OL-0191-06 was analyzed as the MS/MSD sample for this SDG. The recoveries for the MS/MSD were acceptable and within the control limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   No field duplicate was collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0191-04 and OL-0191-05.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes except for ammonia. The laboratory blank associated with this

SDG contained ammonia at 4.3 ppm. Reported detections of ammonia at comparable concentrations have been qualified as probable blank contamination.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits except for ammonia and sulfide. The reported recoveries for sulfide (61/65%) were below the lower control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'. The reported recoveries for ammonia (142/143) exceeded the upper control limit (110%). Reported detections of ammonia have been qualified as estimated and flagged 'J'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits except for sulfide. The sulfide recovery for the LCS was below the control limit.

7. Field Duplicate Precision

No field duplicate was collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0191-01 and OL-0191-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.54 DATA USABILITY SUMMARY FOR SDG # C6J030176

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J030176. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J030151. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0192-01	9/30/2006
OL-0192-02	9/30/2006
OL-0192-03	9/30/2006
OL-0192-04	9/30/2006
OL-0192-05	9/30/2006
OL-0192-06	9/30/2006
OL-0192-07	9/30/2006
OL-0192-08	9/30/2006
OL-0192-09	9/30/2006
OL-0192-10	9/30/2006
OL-0192-11	9/30/2006
OL-0192-12	9/30/2006
OL-0192-13	9/30/2006
OL-0192-14	9/30/2006
OL-0192-15	9/30/2006
OL-0192-16	9/30/2006
OL-0192-17	9/30/2006
OL-0192-18	9/30/2006
OL-0192-19	9/30/2006
OL-0192-20	9/30/2006

These samples were analyzed for volatiles, phenol, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries reported were acceptable and within quality control criteria.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0192-12 was analyzed as the MS/MSD for this SDG. Spike recoveries for 1,3,5-trichlorobenzene were outside of criteria. No reported results have been qualified based on the MS/MSD results alone.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Samples OL-0192-14 and OL-0192-15 are field duplicates for this SDG. Generally, there is excellent agreement between the results.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0192-08 and OL-0192-09.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Some reported detections are above the method detection limit (MDL) but less than the reporting limit (RL). These results have been qualified as estimated and flagged ‘J’.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol

The following items were reviewed for compliancy in the phenol analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were acceptable and within quality control criteria.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0192-12 was analyzed as the MS/MSD for this SDG. Recovery outliers were reported for phenol for both the MS (252%) and MSD (167%). The reported recoveries exceeded the control limits (35-110%). No reported results have been qualified due to the MS/MSD outliers alone.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits, except for sample OL-0192-20. The area counts for perylene-d12 for this sample were above the control limits. Since the only target analyte, phenol, is calculated from another internal standard 1,4-dichlorobenzene, no results have been qualified.

9. **Field Duplicate Precision**

   Samples OL-0192-14 and OL-0192-15 are field duplicates for this SDG. There is excellent agreement (as RPD) between the results for the field duplicates.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0192-08 and OL-0192-09.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that nine samples were diluted due matrix interference. Samples OL-0192-12, OL-0192-14, Ol-0192-15 and OL-0192-16 were diluted due to the concentration of phenol detected. Results for phenol for these samples are reported from the diluted sample runs. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

Sample OL-0192-12 was analyzed as the MS/MSD for this SDG. Mercury recoveries were not calculated due to the concentration of mercury in the sample being > 4 times the spike added. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0192-14 and OL-0192-15 were collected and analyzed as field duplicates for this SDG. All reported results for the field duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0192-08 and OL-0192-09.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Sample Ol-0192-07 through OL-0192-20 required dilution. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria except for TOC. All samples were analyzed for TOC one day past the required holding time. Reported results for TOC have been qualified as estimated.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

Sample OL-0192-12 was analyzed as the project specific MS/MSD for this SDG. Recovery outliers were reported for total sulfide (48/57%). Reported results for sulfide have been qualified as estimated and flagged 'J/UJ'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Samples OL-0192-14 and OL-0192-15 were collected and analyzed as field duplicates for this SDG. The reported results for the duplicates were considered acceptable and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0192-08 and OL-0192-09.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. All of the samples were analyzed at a dilution for sulfide. Some reported detections are below the reporting limit (RL) and have been qualified as estimated and flagged 'J'.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.55 DATA USABILITY SUMMARY FOR SDG # C6J030179

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J030179. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J030154. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0193-01	10/02/2006
OL-0193-02	10/02/2006
OL-0193-03	10/02/2006
OL-0193-04	10/02/2006
OL-0193-05	10/02/2006
OL-0193-06	10/02/2006
OL-0193-07	10/02/2006
OL-0193-08	10/02/2006
OL-0193-09	10/02/2006
OL-0193-10	10/02/2006
OL-0193-11	10/02/2006
OL-0193-12	10/02/2006
OL-0103-13	10/02/2006
OL-0193-14	10/02/2006
OL-0193-15	10/02/2006
OL-0193-16	10/02/2006

These samples were analyzed for volatiles, phenol, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0193-10 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J030179) one field duplicate sample was collected. Sample OL-0193-05 is the field duplicate of sample OL-0193-04. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples. Target VOC chlorobenzene was detected in sample OL-0193-04 but was not detected in sample OL-0193-05. No results have been qualified.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0193-05 and OL-0193-04.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol

The following items were reviewed for compliancy in the phenol analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were acceptable and within control limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0193-10 was analyzed as the MS/MSD for this batch. The MS recovery for phenol (97%) was in control but the MSD recovery (135%) was out of control (35-110%). No results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits. The laboratory reported internal standard area outliers for perylene-d12 but this internal standard is not used for the quantitation of phenol. The internal standard used to quantitate for phenol is 1,4-dichlorobenzene-d4 which was in control. No results have been qualified.

9. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0193-05 and OL-0193-04.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0193-02 and OL-0193-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to matrix interference and/or phenol concentration, samples OL-0193-01, OL-0193-03, OL-0193-05, OL-0193-06, OL-0193-07, OL-0193-08, OL-0193-10, OL-0193-14 and OL-0193-16 were analyzed at a dilution. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All phenol sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

Sample OL-0193-10 was analyzed as the MS/MSD sample for this SDG. The laboratory reported that mercury recoveries were not calculated for the MS/MSD due to the concentration of mercury in the native sample being > 4 times the spike level. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples. The field duplicate samples for this SDG are samples OL-0193-04 and OL-0193-05.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0193-14 and OL-0193-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0193-01, OL-0193-08, OL-0193-12, OL-0193-13, OL-0193-15 and OL-0193-16 were analyzed at a dilution for mercury.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

Sample OL-0193-10 was analyzed as the MS/MSD for this SDG. All matrix spike recoveries were considered compliant and within QC acceptance limits except for ammonia and sulfide. The reported recoveries for sulfide (65/70%) were below the lower control limit (75%) for the MS/MSD. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'. The reported recoveries for ammonia (151/140) exceeded the upper control limit (110%). Reported detections of ammonia have been qualified as estimated and flagged 'J'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits except for sulfide. The sulfide recovery for the LCS was below the control limit. Since the results affected have already been qualified as estimated no additional action is taken.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0193-05 and OL-0193-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0193-01 and OL-0193-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.56 DATA USABILITY SUMMARY FOR SDG #C6J030180

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J030180. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0194-01	10/02/06
OL-0194-02	10/02/06
OL-0194-03	10/02/06
OL-0194-04	10/02/06
OL-0194-05	10/02/06
OL-0194-06	10/02/06
OL-0194-07	10/02/06
OL-0194-08	10/02/06
OL-0194-09	10/02/06
OL-0194-10	10/02/06
OL-0194-11	10/02/06
OL-0194-12	10/02/06
OL-0194-13	10/02/06
OL-0194-14	10/02/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

MS/MSD results for sample OL-0194-09 were acceptable and within QC acceptance limits in QC batch 6278010. A sample from a different SDG was utilized for QC batch 6277074; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0194-04 and OL-0194-05.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0194-04 and OL-0194-11.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0194-04, OL-0194-05, and OL-0194-07 were analyzed at dilution.

12. **Data Completeness**

    All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times and preservation**

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0194-08 and OL-0194-09. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0194-09 were "diluted out"; no sample results were qualified based on MS/MSD results.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
SSTD4.0 M1012SC1.D	Phenol	35.5	OL-0194-08, -09, -11, -12, -13, -14	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits, with the exception of OL-0194-14 for which the recovery of Perylene-d12 was above the daily control limit but does not apply to Phenol.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0194-04 and OL-0194-05.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0194-04 and OL-0194-11.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0194-03 thru OL-0194-09 were analyzed at dilution due to high concentration of Phenol. Samples OL-0194-01, OL-0194-02, OL-0194-10 thru OL-0194-14 were analyzed at dilution due to matrix interference.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0194-09 were “diluted out”; no sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0194-04 and OL-0194-05.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0194-04 and OL-0194-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. All samples except OL-0194-01 were analyzed at dilution.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia as N and Sulfide. All analytical holding times met criteria for TOC with the exception of OL-0194-14. Evaluation results are shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0194-14	13	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Ammonia, Sulfide, and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Sulfide in sample OL-0194-09. For TOC, MS accuracy measurements (percent recovery; %R), were considered acceptable and within QC acceptance limits for sample OL-0194-09.

For Ammonia as N, MS/MSD precision measurements (relative percent difference; RPD) were considered acceptable and within QC limits, but accuracy measurements (percent recovery; %R), were not considered acceptable and within QC acceptance limits for sample OL-0194-09. All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0194-09	Ammonia as N	Ok/119		90-110	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0194-09.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0194-04 and OL-0194-05.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0194-04 and OL-0194-11.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. All of the samples were analyzed at dilution for Sulfide.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.57 DATA USABILITY SUMMARY FOR SDG #C6J040170

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J040170. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0195-01	10/03/06
OL-0195-02	10/03/06
OL-0195-03	10/03/06
OL-0195-04	10/03/06
OL-0195-05	10/03/06
OL-0195-06	10/03/06
OL-0195-07	10/03/06
OL-0195-08	10/03/06
OL-0195-09	10/03/06
OL-0195-10	10/03/06
OL-0195-11	10/03/06
OL-0195-12	10/03/06
OL-0195-13	10/03/06
OL-0195-14	10/03/06
OL-0195-15	10/03/06
OL-0195-16	10/03/06
OL-0195-17	10/03/06
OL-0195-18	10/03/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0195-09 and OL-0195-13 were acceptable and within QC acceptance limits in QC batches 6277074 and 6275103, respectively. A sample from a different SDG was utilized for QC batches 6276071, 6278037, and 6279081; results are not applicable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC31008.D	1,3,5-Trichlorobenzene	37.2	OL-0195-06, -11, -14	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0195-03 and OL-0195-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0195-09 and OL-0195-10.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Sample OL-0195-13 was analyzed at dilution.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0195-02 thru OL-0195-05, OL-0195-08, OL-0195-09, OL-0195-11 thru OL-0195-17 were analyzed at dilution. Recoveries for other samples were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries were acceptable and within QC acceptance criteria for sample OL-0195-09 with the exception of Phenol for which the sample result was qualified as estimated (J) based on the low recoveries. Sample Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0195-09	Phenol	13/0		90-110	OL-0195-09	J

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were

analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	Lab Flag	VAL Qual
OL-0195-08	6284011	Phenol	5700	2.5	E	J
OL-0195-09	6284011	Phenol	5400	2.5	E	J
OL-0195-14	6284011	Phenol	12000	5	E	J

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
V1011SC1.D	Phenol	21.2	OL-0195-01 thru OL-0195-09, OL-0195-11 thru OL-0195-18	J	J/UJ
V1012SC1.D	Phenol	30.4	OL-0195-08DL, -09DL, -10, -14DL	J	J/UJ
V1012SC1.D	2,4,6-Tribromophenol	46.2	OL-0195-08DL, -09DL, -10, -14DL	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0195-03 and OL-0195-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0195-09 and OL-0195-10..

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0195-02 thru OL-0195-05, OL-0195-08, OL-0195-09, OL-0195-11 thru OL-0195-17 were analyzed at dilution.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries for all samples were acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0195-09.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blank associated with project samples contained Mercury at a concentration below the reporting limit; associated sample concentrations were greater than 5x blank amount so no sample results were qualified.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0195-03 and OL-0195-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0195-09 and OL-0195-10.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0195-13 were acceptable and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0195-03 and OL-0195-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0195-09 and OL-0195-10.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0195-10 thru OL-0195-12 were analyzed at dilution.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia as N and Sulfide. For TOC, reanalysis was required for all samples due to an initial calibration deficiency. All samples were reanalyzed outside of the analytical holding time. Evaluation results are shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0195-01 thru OL-0195-18	11	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Ammonia as N, Sulfide and TOC associated with project samples did not contain target analytes.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD accuracy (percent recovery; %R) measurements and precision (relative percent difference; RPD) measurements were considered acceptable and within QC acceptance limits for Ammonia as N in sample OL-0195-09.

For Sulfide and TOC, MS/MSD accuracy measurements (percent recovery; %R), were not considered acceptable and within QC acceptance limits for sample OL-0195-113. All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0195-09	Sulfide	68/ok		90-110	ALL in SDG	J
OL-0195-09	TOC	138		75-125	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0195-09.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0195-03 and OL-0195-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0195-09 and OL-0195-10.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.58 DATA USABILITY SUMMARY FOR SDG #C6J040175

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J040175. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0196-01	10/03/06
OL-0196-02	10/03/06
OL-0196-03	10/03/06
OL-0196-04	10/03/06
OL-0196-05	10/03/06
OL-0196-06	10/03/06
OL-0196-07	10/03/06
OL-0196-08	10/03/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Sample OL-0196-05 (re-analysis) was analyzed as a medium-level soil and had the surrogates recoveries "diluted out" and not calculated. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for sample OL-0196-06 were acceptable and within QC acceptance limits in QC batch 6279081, with the exception of a slightly low MSD%R recovery of Benzene; no sample results were qualified based on MS/MSD results. A sample from a different SDG was utilized for QC batches 6281040 and 6284010; results are not applicable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC31008.D	1,3,5-Trichlorobenzene	37.2	OL-0196-02, -03, -04, -07	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0196-03 and OL-0196-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0196-05 and OL-0196-06.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0196-03 thru OL-0196-06 were analyzed at dilution.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0196-01, OL-0196-02, OL-0196-07, and OL-0196-08. No data were qualified based on surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD results for sample OL-0196-06 were acceptable and within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below.

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
V1011SC1.D	Phenol	21.2	OL-0196-02, -03	J	J/UJ
V1012SC1.D	Phenol	30.4	OL-0196-01, -04, -05, -06, -07, -08	J	J/UJ
V1012SC1.D	2,4,6-Tribromophenol	46.2	OL-0196-01, -04, -05, -06, -07, -08	J	J/UJ

8. **Internal Standard Area Counts and Retention Times**

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0196-03 and OL-0196-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0196-05 and OL-0196-06.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0196-01, OL-0196-02, OL-0196-06, OL-0196-07, and OL-0196-08 were analyzed at dilution due to high concentration of Phenol.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries for all samples were acceptable and within QC limits, with the exception of OL-0196-08 for which the surrogates were “diluted out”. No sample results were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0196-06.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0196-03 and OL-0196-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0196-05 and OL-0196-06.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0196-07 and OL-0196-09 were analyzed at dilution.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks associated with project samples did not contain mercury. The preparation blank contained a concentration of Mercury below the reporting limit; associated sample contained Mercury at concentrations greater than 5x blank amount so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0196-06 were “diluted out”; no sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0196-03 and OL-0196-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0196-05 and OL-0196-06.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0196-01, OL-0196-02, OL-0196-07, and OL-0196-08 were analyzed at dilution.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia as N, Sulfide, and TOC.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide, and TOC associated with project samples did not contain target analytes. The method blank for Ammonia as N contained a concentration below the reporting limit; associated sample contained Ammonia as N at concentrations greater than 5x blank amount so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for Sulfide in sample OL-0196-06. For TOC, MS accuracy measurements (percent recovery; %R), were considered acceptable and within QC acceptance limits for sample OL-0196-06.

For Ammonia as N, MS/MSD precision measurements (relative percent difference; RPD) were considered acceptable and within QC limits, but accuracy measurements (percent recovery; %R), were not considered acceptable and within QC acceptance limits for sample OL-0196-06. All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0196-06	Ammonia as N	124/116		90-110	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0196-09.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0196-03 and OL-0196-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0196-05 and OL-0196-06.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. All of the samples were analyzed at dilution for Sulfide.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.59 DATA USABILITY SUMMARY FOR SDG #C6J050219

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J050219. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0199-01	10/04/06
OL-0199-02	10/04/06
OL-0199-03	10/04/06
OL-0199-04	10/04/06
OL-0199-05	10/04/06
OL-0199-06	10/04/06
OL-0199-07	10/04/06
OL-0199-08	10/04/06
OL-0199-09	10/04/06
OL-0199-10	10/04/06
OL-0199-11	10/04/06
OL-0199-12	10/04/06
OL-0199-13	10/04/06
OL-0199-14	10/04/06
OL-0199-15	10/04/06
OL-0199-16	10/04/06
OL-0199-17	10/04/06
OL-0199-18	10/04/06
OL-0199-19	10/04/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0199-07 and OL-0199-19 were acceptable and within QC acceptance limits in QC batches 6279102 and 6283700, respectively. A sample from a different SDG was utilized for QC batches 6281040; results are not applicable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	Lab Flag	VAL Qual
OL-0199-06	6283700	Naphthalene	1200	2.5	E	J

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
CC31008.D	1,3,5-Trichlorobenzene	37.2	OL-0199-18	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0199-02 and OL-0199-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0199-07 and OL-0199-14.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0199-06 and OL-0199-07 were analyzed at dilution.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0199-01 thru OL-0199-07. Recoveries for other samples were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries OL-0199-07 "diluted out" because sample was analyzed at dilution. No sample results were qualified based on MS/MSD results.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria, with the exceptions shown below. Certain sample results exceeded the calibration range, were "E" flagged by the laboratory, and were qualified as estimated (J). All affected samples were analyzed at higher dilution with results being in calibration range. Re-analysis results for the affected analytes were reported with "DL" suffix added to field sample ID. Evaluation results are shown below.

Sample ID	Analytical Batch ID	Analyte	Sample Result	Dilution Factor	Lab Flag	VAL Qual
OL-0199-06	6285076	Fluoranthene	33000	25	E	J
OL-0199-06	6285076	Phenanthrene	79000	25	E	J
OL-0199-06	6285076	Pyrene	41000	25	E	J
OL-0199-07	6285076	Phenanthrene	35000	25	E	J

CCV ID	Target Analyte	%D	Samples Affected	VAL Qual	Usability Qual
V1012SC1.D	Phenol	30.4	OL-0199-01 thru OL-0199-05	J	J/UJ
V1013SC1.D	Benzo(g,h,i)perylene	27.5	OL-0199-06, -06DL, -07, -07DL, OL-0199-08 thru OL-0199-14	J	J/UJ

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0199-02 and OL-0199-04.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0199-07 and OL-0199-14..

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0199-01 thru OL-0199-09, OL-0199-11, OL-0199-13 thru OL-0199-19 were analyzed at dilution.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries were considered acceptable and within QC limits for OL-0199-01 thru OL-199-04 and OL-0199-07 thru OL-0199-19. Surrogate recoveries were considered acceptable and within QC acceptance limits, with the consideration that recovery of one of two surrogates (decachlorobiphenyl) was not calculated for samples OL-0199-01 and OL-0199-05 because samples were analyzed at dilution. Recovery of one of two of the surrogates was non-compliant in OL-0199-06. Positive (detected) sample results for OL-0199-06 were qualified as estimated. Evaluation results are as shown below.

Sample ID	Surrogate	Surrogate %R	Control Limit	Analytes Affected	VAL Flag
OL-0199-06	Decachlorobiphenyl	167	23-141	Aroclor 1254, Aroclors (Total)	J

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0199-07.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank associated with project samples contained Mercury at a concentration below the reporting limit; associated sample concentrations were greater than 5x blank amount so no sample results were qualified.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0199-02 and OL-0199-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0199-07 and OL-0199-14.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0199-01 and OL-0199-05 were analyzed at dilution.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0199-13 were "diluted out" and not calculated. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0199-02 and OL-0199-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0199-07 and OL-0199-14.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0199-01 thru OL-0199-07 were analyzed at dilution.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia as N and Sulfide. For TOC, all samples were reanalyzed outside of the analytical holding time. Evaluation results are shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0199-01 thru OL-0199-19	2	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Ammonia as N and Sulfide associated with project samples did not contain target analytes. A continuing calibration blank (CCB#2) performed on 10/20/06 contained a concentration of TOC (540 mg/kg), which is above the reporting limit of 500 mg/kg. However, all associated samples contained TOC concentrations greater than 10x the CCB amount, so no sample results were qualified based on blank contamination.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD accuracy (percent recovery; %R) measurements and precision (relative percent difference; RPD) measurements were considered acceptable and within QC acceptance limits for TOC in sample OL-0199-07.

MS/MSD precision (relative percent difference; RPD) measurements were considered acceptable and within QC acceptance limits for Ammonia as N and Sulfide in sample OL-0199-07.

For Ammonia and Sulfide, MS/MSD accuracy measurements (percent recovery; %R), were not considered acceptable and within QC acceptance limits for sample OL-0199-113. All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0199-07	Ammonia	67/74		90-110	ALL in SDG	J
OL-0199-07	Sulfide	68/68		75-125	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0199-09.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0199-02 and OL-0199-04.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0199-07 and OL-0199-14.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0199-06 and OL-0199-07 were analyzed at dilution for Ammonia as N. All of the samples were analyzed at dilution for Sulfide.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.60 DATA USABILITY SUMMARY FOR SDG # C6J050229

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6J050229. The results for total organic carbon (TOC) for these samples were reported in SDG #6J050214. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0200-01	10/04/2006
OL-0200-02	10/04/2006
OL-0200-03	10/04/2006
OL-0200-04	10/04/2006
OL-0200-05	10/04/2006
OL-0200-06	10/04/2006
OL-0200-07	10/04/2006
OL-0200-08	10/04/2006
OL-0200-09	10/04/2006
OL-0200-10	10/04/2006
OL-0200-11	10/04/2006
OL-0200-12	10/04/2006
OL-0200-13	10/04/2006
OL-0200-14	10/04/2006
OL-0200-15	10/04/2006
OL-0200-16	10/04/2006
OL-0200-17	10/04/2006
OL-0200-18	10/04/2006
OL-0200-19	10/04/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0200-06 and its field duplicate OL-0200-07.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0200-08 and OL-0200-09.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0200-06 and its field duplicate OL-0200-07.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0200-01 and OL-0200-02.

11. **Quantitation Limits**

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All sample surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0200-06 and its field duplicate OL-0200-07.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0200-11 and OL-0200-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0200-06 and its field duplicate OL-0200-07.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0200-11 and OL-0200-12.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes with the exception of ammonia. Ammonia was detected in the laboratory blank associated with all samples at a concentration of 4.6 mg/kg. However, sample results were not affected by the ammonia contamination detected in this blank.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the high ammonia recoveries (124%R; QC limit 90-110%R) and the low sulfide recoveries (73%R, 66%R, 71%R, 73%R; QC limit 75-125%R) associated with all samples. Therefore, positive ammonia results were considered estimated, possibly biased high, and qualified "J". The sulfide results for the affected samples were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0200-06 and its field duplicate OL-0200-07.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0200-01 and OL-0200-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.61 DATA USABILITY SUMMARY FOR SDG # C6J050235

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6J050235. The results for total organic carbon (TOC) for these samples were reported in SDG #6J050217. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0201-01	10/04/2006
OL-0201-02	10/04/2006
OL-0201-03	10/04/2006
OL-0201-04	10/04/2006
OL-0201-05	10/04/2006
OL-0201-06	10/04/2006
OL-0201-07	10/04/2006
OL-0201-08	10/04/2006
OL-0201-09	10/04/2006
OL-0201-10	10/04/2006
OL-0201-11	10/04/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0201-02 and its field duplicate OL-0201-03.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0201-08 and OL-0201-09.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

12. **Data Completeness**

    All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibrations associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0201-02 and its field duplicate OL-0201-03.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0201-01 and OL-0201-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All sample surrogate recoveries were considered acceptable.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0201-02 and its field duplicate OL-0201-03.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0201-01 and OL-0201-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0201-02 and its field duplicate OL-0201-03.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0201-01 and OL-0201-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the noncompliant ammonia recoveries (89%R, 112%R; QC limit 90-110%R) associated with all samples; and the low sulfide recoveries (71%R, 66%R; QC limit 75-125%R) associated with samples OL-0201-01 through 04. Therefore, ammonia and sulfide results were considered estimated, possibly biased low, and qualified "J" or "UJ" for the affected samples.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0201-02 and its field duplicate OL-0201-03.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0201-01 and OL-0201-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.62 DATA USABILITY SUMMARY FOR SDG # C6J060215

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG #C6J060215. The results for total organic carbon (TOC) for these samples were reported in SDG #6J060207. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0202-01	10/05/2006
OL-0202-02	10/05/2006
OL-0202-03	10/05/2006
OL-0202-04	10/05/2006
OL-0202-05	10/05/2006
OL-0202-06	10/05/2006
OL-0202-07	10/05/2006
OL-0202-08	10/05/2006
OL-0202-09	10/05/2006
OL-0202-10	10/05/2006
OL-0202-11	10/05/2006
OL-0202-12	10/05/2006
OL-0202-13	10/05/2006
OL-0202-14	10/05/2006
OL-0202-15	10/05/2006
OL-0202-16	10/05/2006
OL-0202-17	10/05/2006
OL-0202-18	10/05/2006
OL-0202-19	10/05/2006
OL-0202-20	10/05/2006

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that many samples contained mostly water (i.e., percent solids were less than 50%). Therefore, all results for those samples where the percent solids were less than 50%, were considered estimated with positive results qualified “J” and nondetected results qualified “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   All field duplicate precision results were considered acceptable for sample OL-0202-02 and its field duplicate OL-0202-03.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0202-08 and OL-0202-09.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0202-02 and its field duplicate OL-0202-03 with the exception of the precision for benzo(a)pyrene (104%RPD), benzo(a)anthracene (103%RPD), and chrysene (101%RPD). Therefore, these results were considered estimated and qualified "J" for this duplicate pair.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0202-01 and OL-0202-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All sample surrogate recoveries were considered acceptable.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0202-02 and its field duplicate OL-0202-03.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0202-11 and OL-0202-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0202-02 and its field duplicate OL-0202-03.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0202-11 and OL-0202-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria with the exception of TOC. The TOC results exceeded the 14-day analytical holding time by one to two days for all samples. Therefore, all TOC results were considered estimated, possibly biased low, and qualified "J" or "UJ".

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the high ammonia recoveries (119%R, 133%R; QC limit 90-110%R) associated with all samples; and the low sulfide recoveries (52%R, 57%R; QC limit 75-125%R) associated with samples OL-0202-11 through 14. Therefore, positive ammonia results were considered estimated, possibly biased high, and qualified "J". The sulfide results for the affected samples were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

All field duplicate precision results were considered acceptable for sample OL-0202-02 and its field duplicate OL-0202-03.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0202-01 and OL-0202-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.63 DATA USABILITY SUMMARY FOR SDG #C6J060223

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J060223. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0203-01	10/05/06
OL-0203-02	10/05/06
OL-0203-03	10/05/06
OL-0203-04	10/05/06
OL-0203-05	10/05/06
OL-0203-06	10/05/06
OL-0203-07	10/05/06

These samples were analyzed for volatiles, phenol, PAHs, PCBs, mercury, ammonia, sulfide, and TOC, with the exception of OL-0203-01 and OL-0203-02 that were analyzed for Mercury and TOC only. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within acceptance criteria.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Non-project samples were utilized for MS/MSD analyses; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   Initial calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   The field duplicate sample was not analyzed for VOCs.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0203-03 and OL-0203-04.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors.

12. **Data Completeness**

    All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. **Holding Times and preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   Surrogate recoveries for all samples were acceptable and within acceptance criteria.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Non-project samples were utilized for MS/MSD analyses; results are not applicable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate sample was not analyzed for Phenol and PAHs.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0203-03 and OL-0203-04.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC limits for OL-0203-01 thru OL-203-04 and OL-0203-07. Recovery of one of two of the

surrogates was non-compliant in OL-0203-06; however, all Aroclors were non-detect so no sample results were qualified based on non-compliant surrogate recovery.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Non-project samples were utilized for MS/MSD analyses; results are not applicable.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   Initial calibrations associated with project samples were considered acceptable and within criteria

7. **Field Duplicate Precision**

   The field duplicate sample was not analyzed for PCBs.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0203-03 and OL-0203-04.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

The initial calibration blanks and preparation blanks associated with project samples did not contain mercury. A continuing calibration blank contained Mercury at a level less than the reporting limit; all associated sample concentrations were greater than 10x blank amount so no sample results were qualified based on blank contamination.

4. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   MS/MSD analyses were not performed.

5. **Laboratory Duplicate Precision**

   Laboratory duplicate analysis was not performed.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0203-01 and OL-0203-02.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0203-03 and OL-0203-04.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria for Ammonia as N, Sulfide, and TOC.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

The laboratory blanks for Sulfide, and TOC associated with project samples did not contain target analytes. The method blank for Ammonia as N contained a concentration below the reporting limit; associated sample contained Ammonia as N at concentrations greater than 5x blank amount so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD analyses were not performed.

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was not performed for TOC.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0203-01 and OL-0203-02, which was analyzed only for TOC.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0203-03 and OL-0203-04.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. All of the samples were analyzed at dilution for Sulfide.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.64 DATA USABILITY SUMMARY FOR SDG #C6J070176

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J070176. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0204-01	10/06/06
OL-0204-02	10/06/06
OL-0204-03	10/06/06
OL-0204-04	10/06/06
OL-0204-05	10/06/06
OL-0204-06	10/06/06
OL-0204-07	10/06/06
OL-0204-08	10/06/06
OL-0204-09	10/06/06
OL-0204-10	10/06/06
OL-0204-11	10/06/06
OL-0204-12	10/06/06
OL-0204-13	10/06/06
OL-0204-14	10/06/06
OL-0204-15	10/06/06
OL-0204-16	10/06/06
OL-0204-17	10/06/06

Samples OL-0204-01 thru OL-0204-11 were analyzed for Mercury and TOC only. Samples OL-0204-12 thru OL-0204-17 were analyzed for Volatiles, Phenol, PAHs, PCBs, Mercury, Ammonia, Sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times and Preservation**

   All samples were properly preserved. All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

Surrogate recoveries for all samples were acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0204-13 were acceptable and within QC acceptance limits in QC batch 6284807. A non-project sample was utilized for QC batch 6284674; results are not applicable.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds at reported concentrations.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate sample was not analyzed for VOCs.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0204-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Phenol and PAHs

The following items were reviewed for compliancy in the phenol and PAHs analysis:

1. Holding Times and preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Certain samples were analyzed as dilutions and had their surrogate recoveries "diluted out" and not calculated; affected samples were OL-0204-12, OL-0204-14, and OL-0204-17. Recoveries for other samples were acceptable and within QC acceptance limits. No data were qualified based on surrogate recovery.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD recoveries of OL-0204-13 were acceptable and within QC acceptance criteria with the exception of Benzo(b) fluoranthene, Fluoranthene, Phenanthrene, Pyrene, and Phenol; sample results for these analytes were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	Control Limit %R	Affected Samples	VAL Flag
OL-0204-13	Benzo(b)fluoranthene	Ok/34	36-115	OL-0204-13	J
OL-0204-13	Fluoranthene	117/134	40-115	OL-0204-13	J
OL-0204-13	Phenanthrene	138/ok	40-115	OL-0204-13	J
OL-0204-13	Pyrene	36/21	40-115	OL-0204-13	J
OL-0204-13	Phenol	116/ok	35-110	OL-0204-13	J

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

Initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

The field duplicate sample was not analyzed for Phenol and PAHs.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0204-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All phenol and PAH sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times and Preservation

All samples were properly preserved. All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Surrogate recoveries were considered acceptable and within QC limits for all samples.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for sample OL-0204-13.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blank associated with project samples did not contain target analytes.

6. Initial Calibrations and Continuing Calibration Verifications

Initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

The field duplicate sample was not analyzed for PCBs.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0204-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks and continuing calibration blanks, associated with project samples did not contain Mercury. The preparation blank contained Mercury at a concentration below the reporting limit; however, associated sample concentration were greater than 5x blank amount so no sample results were qualified based on preparation blank contamination.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD results for sample OL-0204-13 were “diluted out” and not calculated. No sample results were qualified based on MS/MSD results.

5. Laboratory Duplicate Precision

The laboratory duplicate analysis was not performed.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0204-10 and OL-0204-11.

26. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0204-15.

27. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

28. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria for Ammonia as N and Sulfide. Analytical holding times were not met for TOC analyses. Evaluation results are shown below.

Analyte	Sample	Days HT Exceeded	Properly Preserved (Y/N)	Qual.
TOC	OL-0204-01 thru OL-0204-17	10	Y	J

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks for Sulfide and TOC did not contain target analytes.

The laboratory blank for Ammonia as N contained a concentration below the reporting limit; however, all associated sample concentration were greater than 5x blank amount so no sample results were qualified.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

MS/MSD accuracy (percent recovery; %R) measurements and precision (relative percent difference; RPD) measurements were considered acceptable and within QC acceptance limits for TOC in sample OL-0204-13.

For Ammonia and Sulfide, MS/MSD accuracy measurements (percent recovery; %R), were not considered acceptable and within QC acceptance limits for sample OL-0204-13. All sample results in SDG were qualified as estimated (J). Evaluation results are shown below.

Sample ID	Analyte	MS/MSD %R	RPD	Control Limit %R	Affected Samples	VAL Flag
OL-0213-01	Ammonia	113/ok		90-110	ALL in SDG	J
OL-0213-01	Sulfide	62/62		75-125	ALL in SDG	J

5. Laboratory Duplicate Precision

Laboratory duplicate analysis was performed for TOC, the laboratory duplicate precision result was considered acceptable and within criteria for sample OL-0204-09.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable (<100%RPD) for the field duplicate sample pair OL-0204-10 and OL-0204-11.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0204-15.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All ammonia, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.65 DATA USABILITY SUMMARY FOR SDG # C6J070179

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J070179. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J070172. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0205-01	10/06/2006
OL-0205-02	10/06/2006
OL-0205-03	10/06/2006
OL-0205-04	10/06/2006
OL-0205-05	10/06/2006

These samples were analyzed for volatiles, semivolatiles, PCBs, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries reported were acceptable and within control limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0205-02 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were acceptable and within control limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J070179) one field duplicate sample was collected. Sample OL-0205-05 is the field duplicate of sample OL-0205-04. Target analyte naphthalene was detected in sample OL-0205-04 but was not detected in sample OL-0205-05. No results have been qualified based on the field duplicate results.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0205-01 and OL-0205-05.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0205-04 and OL-0205-05 were analyzed as methanol dilutions. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of semivolatiles detected or matrix interferences, all surrogates were diluted out. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0205-02 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Sample OL-0205-05 is the field duplicate of sample OL-0205-04. Target SVOC fluorene was detected in sample OL-0205-04 but was not detected in OL-0205-05 while phenol was detected in sample OL-0205-05 but was not detected in sample OL-0205-04. No results have been qualified based on the field duplicate results.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0205-02 and OL-0205-04.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due to concentration of semivolatiles detected or matrix interference. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All semivolatiles sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were acceptable and within criteria.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0205-02 was analyzed as the MS/MSD for this SDG. All reported MS/MSD recoveries are above the control limits. No results have been qualified based on the MS/MSD results alone.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

7. **Field Duplicate Precision**

   The field duplicate collected for this SDG is sample OL-0205-05 which is a duplicate of sample OL-0205-04. All reported results for the field duplicate are acceptable and within control limits.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0205-01 and OL-0205-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to the concentration of target PCBs detected, all samples were analyzed at a dilution. Detections above the MDL but less than the RL have been qualified as estimated and flagged ‘J’.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   Sample OL-0205-02 was analyzed as the MS/MSD for this SDG. The laboratory reported that spike recoveries could not be calculated for mercury because the mercury concentration in the unspiked sample was greater than 4X the spike amount. No results have been qualified.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0205-05 and OL-0205-04.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0205-04 and OL-0205-05. Detections above the MDL but below the RL have been qualified as estimated and flagged ‘J’.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all samples were analyzed at a dilution for mercury.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria except for TOC. The laboratory reported that all of the samples were analyzed 11 days outside the holding time. Reported results have been qualified as estimated.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered compliant and within QC acceptance limits except for sulfide. MS/MSD percent recovery outliers were reported for total sulfide. The reported recoveries (52/52%) were below the lower control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria except for TOC. The calculated RPD for the laboratory duplicate was 31%. Reported results have been qualified as estimated.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0205-05 and OL-0205-04.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0205-01 and OL-0205-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.66 DATA USABILITY SUMMARY FOR SDG # C6J100159

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J100159. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J100153. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0206-01	10/07/2006
OL-0206-02	10/07/2006
OL-0206-03	10/07/2006
OL-0206-04	10/07/2006
OL-0206-05	10/07/2006
OL-0206-06	10/07/2006
OL-0206-07	10/07/2006
OL-0206-08	10/07/2006
OL-0206-09	10/07/2006
OL-0206-10	10/07/2006
OL-0206-11	10/07/2006
OL-0206-12	10/07/2006

These samples were analyzed for volatiles, semivolatiles, PCBs, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were acceptable and within quality control criteria.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0206-10 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were acceptable and within criteria.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   For this SDG (C6J110159) no field duplicate sample was collected.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0206-01 and OL-0206-12.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. **Data Completeness**

    All volatile sample results were considered 100% complete (i.e., usable).

Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of semivolatiles detected or matrix interferences, all of the samples were diluted. As a result all surrogate recoveries were diluted out. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0206-10 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J110159) no field duplicate sample was collected.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0206-02 and OL-0206-06.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due to concentration of semivolatiles detected. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All semivolatiles sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were acceptable and within quality control criteria.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0206-10 was analyzed as the MS/MSD for this SDG. All reported MS/MSD recoveries and RPDs are acceptable and within control limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations associated with project samples were considered acceptable and within criteria.

   The continuing calibration associated with the samples had compounds outside the %D criteria. Since the associated sample results were below the reporting limit no results have been qualified.

7. **Field Duplicate Precision**

   For this SDG (C6J110159) no field duplicate sample was collected.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0206-11 and OL-0206-12.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. All samples were diluted due to the concentration of PCBs.

10. **Data Completeness**

    All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   The laboratory reported that matrix spike recoveries were not calculated because the concentration of mercury in the unspiked sample greater than 4X the level of the spike. No results have been qualified.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   For this SDG (C6J110159) no field duplicate sample was collected.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0206-11 and OL-0206-12. Detections above the MDL but below the RL have been qualified as estimated and flagged ‘J’.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were analyzed at a dilution for mercury.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria except for TOC. The laboratory reported that all samples were analyzed 10 days outside the holding time. Reported results for these samples have been qualified as estimated.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered compliant and within QC acceptance limits except for ammonia. The recoveries for the MS/MSD sample for ammonia (82/126%) were outside the criteria (90-110%). Reported results for ammonia have been qualified as estimated.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   For this SDG (C6J110159) no field duplicate sample was collected.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0206-01 and OL-0206-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. **Data Completeness**

    All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.67 DATA USABILITY SUMMARY FOR SDG # C6J100162

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J100162. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J100156. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0207-01	10/9/2006
OL-0207-02	10/9/2006
OL-0207-03	10/9/2006
OL-0207-04	10/9/2006
OL-0207-05	10/9/2006
OL-0207-06	10/9/2006
OL-0207-07	10/9/2006
OL-0207-08	10/9/2006
OL-0207-09	10/9/2006
OL-0207-10	10/9/2006
OL-0207-11	10/9/2006
OL-0207-12	10/9/2006
OL-0207-13	10/9/2006
OL-0207-14	10/9/2006
OL-0207-15	10/9/2006
OL-0207-16	10/9/2006
OL-0207-17	10/9/2006
OL-0207-18	10/9/2006
OL-0207-19	10/9/2006
OL-0207-20	10/9/2006

These samples were analyzed for volatiles, semivolatiles, PCBs, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, samples OL-0207-11, OL-0207-12, OL-0207-13, OL-0207-14, OL-0207-18, OL-0207-19 and OL-0207-20 were analyzed as a methanol dilution (medium level). Surrogate recoveries were diluted out for samples OL-0207-12, OL-0207-13, OL-0207-14, OL-0207-18, OL-0207-19 and OL-0207-20. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0207-12 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J100162) one field duplicate sample was collected. Sample OL-0207-14 is the field duplicate of sample OL-0207-13. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples except for toluene. Toluene was detected in sample OL-0207-14 but was not detected in OL-0207-13. No results have been qualified.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0207-01 and OL-0207-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0207-11, OL-0207-12, OL-0207-13, OL-0207-14, OL-0207-18, OL-0207-19 and OL-0207-20 were analyzed as methanol dilutions. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of semivolatiles detected or matrix interferences, surrogate recoveries were diluted out for samples OL-0207-01, OL-0207-02, OL-0207-03, OL-0207-04, OL-0207-05, OL-0207-11, OL-0207-12, OL-0207-13, OL-0207-14, OL-0207-18, OL-0207-19 and OL-0207-20. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0207-12 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J100162) one field duplicate sample was collected. Sample OL-0207-14 is the field duplicate of sample OL-0207-13. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples except for phenol. Phenol was detected in sample OL-0207-13 but was not detected in sample OL-0207-14. No results have been qualified.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0207-02 and OL-0207-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to matrix interference, all of the samples, except OL-0207-16 and OL-0207-17 were diluted. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. Sample OL-0207-14 was analyzed at a secondary dilution (25:1) because the level of target SVOCs fluoranthene and Phenanthrene exceeded the calibration range for the original dilution. The results from the secondary dilution should be reported.

12. Data Completeness

All semivolatiles sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Samples OL-0207-11, OL-0207-12 and OL-0207-18 had the surrogates diluted out. Surrogate outlier was reported for tetrachloro-m-xylene for sample OL-0207-20. The reported recovery (154%) exceeded the upper control limit (127%). Since the reported recovery for the other surrogate, decachlorobiphenyl was in control, no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0210-12 was analyzed as the MS/MSD for this SDG. All reported MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

The laboratory reported that the continuing calibration associated with the samples had compounds outside the % difference (%D) criteria. Since the associated results were nondetects or below the reporting limits no further action was taken.

7. Field Duplicate Precision

The field duplicate collected for this SDG is sample OL-0207-14 which is a duplicate of sample OL-0207-13. All reported results for the field duplicate are acceptable and within control limits.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0207-11 and OL-0207-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to the concentration of target compounds detected, samples OL-0207-11, OL-0207-12 and OL-0207-18 were analyzed at a dilution. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

Sample OL-0207-12 was analyzed as the MS/MSD for this SDG. The laboratory reported that the spike recoveries could not be calculated for mercury because the mercury concentration in the unspiked sample was greater than 4X the spike amount. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0207-14 and OL-0207-13.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0207-15 and OL-0207-16. Detections above the MDL but below the RL have been qualified as estimated and flagged 'J'.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all samples except OL-0207-01, OL-0207-04, OL-0207-15, OL-0207-16, OL-0207-17, OL-0207-19 and OL-0207-20 were analyzed at a dilution for mercury. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria except for TOC. The laboratory reported that all of the samples were analyzed nine (9) days outside holding time. The reported results have been qualified as estimated.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered compliant and within QC acceptance limits except for sulfide. MS/MSD percent recovery outliers were reported for total sulfide. The reported recoveries (57/57%) were below the lower control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0207-13 and OL-0207-14 except for sulfide. Sulfide was detected in sample OL-0207-14 but was not detected in OL-0207-13. No results have been qualified.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0207-01 and OL-0207-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. **Data Completeness**

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.68 DATA USABILITY SUMMARY FOR SDG # C6J100163

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J100163. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J100157. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0208-01	10/09/2006
OL-0208-02	10/09/2006
OL-0208-03	10/09/2006
OL-0208-04	10/09/2006
OL-0208-05	10/09/2006
OL-0208-06	10/09/2006
OL-0208-07	10/09/2006
OL-0208-08	10/09/2006
OL-0208-09	10/09/2006
OL-0208-10	10/09/2006
OL-0208-11	10/09/2006
OL-0208-12	10/09/2006

These samples were analyzed for volatiles, semivolatiles, PCBs, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of target compounds detected, all of the samples except OL-0208-06 were analyzed as methanol dilutions. Surrogate recoveries for sample OL-0208-06 were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0208-08 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out due to matrix interference. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J110163) one field duplicate sample was collected. Sample OL-0208-05 is the field duplicate of sample OL-0208-03. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0208-01 and OL-0208-12.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples except OL-0208-06 and OL-0208-11 were analyzed as methanol dilutions. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged ‘J’.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that due to the concentration of semivolatiles detected or matrix interferences, all of the samples were diluted. As a result all surrogate recoveries were diluted out. No results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0208-08 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   Sample OL-0208-05 is the field duplicate of sample OL-0208-03. All reported results for the field duplicate are acceptable and within control limits.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0208-02 and OL-0208-06. Sample OL-0208-04 reported phenanthrene above the calibration range for the method. The sample was diluted and reanalyzed. The result reported for phenanthrene in the diluted run is considered more reliable.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due to concentration of semivolatiles detected. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All semivolatiles sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that the recovery for surrogate tetrachloro-m-xylene could not be calculated for samples OL-0208-02, OL-0208-03 and OL-0208-05 due to matrix interference. No results have been qualified for these samples. The laboratory also reported that surrogate recoveries were diluted out for sample OL-0208-06. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0208-08 was analyzed as the MS/MSD for this SDG. All reported MS/MSD recoveries and RPDs are acceptable and within control limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

7. Field Duplicate Precision

The field duplicate collected for this SDG is sample OL-0208-05 which is a duplicate of sample OL-0208-03. All reported results for the field duplicate are acceptable and within control limits.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0208-11 and OL-0208-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to matrix interference, sample OL-0208-06 was analyzed at a dilution. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

The laboratory reported that matrix spike recoveries were not calculated because the concentration of mercury in the unspiked sample greater than 4X the level of the spike. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0208-05 and OL-0208-03.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0208-11 and OL-0208-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0208-06 and OL-0208-07 were analyzed at a dilution for mercury.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria except for TOC. The laboratory reported that all samples were analyzed 10-12 days outside the holding time. Reported results for these samples have been qualified as estimated.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes except for TOC. The laboratory blank contained TOC at 686 mg/kg but the level of TOC in the samples is greater than 10X the blank level so no results have been qualified.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits except for ammonia. The recoveries reported for ammonia (83/72%) are outside the control limits (90-110%). Reported results for ammonia have been qualified as estimated and flagged 'J'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria except for TOC. The RPD for the laboratory duplicate for TOC was 34%, above the control limit of 20%. Results for TOC have already been qualified due to holding time violation so no additional qualification is necessary.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0208-03 and OL-0208-05.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0208-01 and OL-0208-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.69 DATA USABILITY SUMMARY FOR SDG # C6J110204

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J110204. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J110192. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0210-01	10/10/2006
OL-0210-02	10/10/2006
OL-0210-03	10/10/2006
OL-0210-04	10/10/2006
OL-0210-05	10/10/2006
OL-0210-06	10/10/2006
OL-0210-07	10/10/2006
OL-0210-08	10/10/2006
OL-0210-09	10/10/2006
OL-0210-10	10/10/2006
OL-0210-11	10/10/2006
OL-0210-12	10/10/2006
OL-0210-13	10/10/2006
OL-0210-14	10/10/2006
OL-0210-15	10/10/2006
OL-0210-16	10/10/2006
OL-0210-17	10/10/2006
OL-0210-18	10/10/2006

These samples were analyzed for volatiles, semivolatiles, PCBs, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, sample OL-0210-15 was analyzed as a methanol dilution (medium level). All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0210-07 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6I290240) one field duplicate sample was collected. Sample OL-0210-05 is the field duplicate of sample OL-0210-03. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0210-01 and OL-0210-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples except OL-0210-09, OL-0210-14 and OL-0210-16 were analyzed as methanol dilutions.

Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of semivolatiles detected or matrix interferences, all of the samples were diluted. As a result all surrogate recoveries were diluted out. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0210-07 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Sample OL-0210-05 is the field duplicate of sample OL-0210-03. All reported results for the field duplicate are acceptable and within control limits.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0210-02 and OL-0210-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that several samples were diluted due to concentration of semivolatiles detected. The laboratory reported that due to matrix interference, all of the samples were diluted. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All semivolatiles sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Samples OL-0210-11, OL-0210-14 and OL-0210-17 had the surrogates diluted out. No results have been qualified for these samples. The laboratory reported tetrachlroro-m-xylene recoveries outside the control limits for samples OL-0210-10, OL-0210-12 and OL-0210-18. All of the reported recoveries were above the upper control limit. Since the reported recoveries for the other PCB surrogate, decachlorobiphenyl, are within the control limits no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0210-07 was analyzed as the MS/MSD for this SDG. All reported MS/MSD recoveries and RPDs are acceptable and within control limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

The laboratory reported that the continuing calibration associated with the samples had compounds outside the % difference (%D) criteria. Since the associated results were nondetects or below the reporting limits no further action was taken.

7. Field Duplicate Precision

The field duplicate collected for this SDG is sample OL-0210-05 which is a duplicate of sample OL-0210-03. All reported results for the field duplicate are acceptable and within control limits.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0210-11 and OL-0210-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to the concentration of target compounds detected, samples OL-0210-10, OL-0210-11, OL-0210-14 and OL-0210-17 were analyzed at a dilution.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0210-05 and OL-0210-03.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0210-15 and OL-0210-16. Detections above the MDL but below the RL have been qualified as estimated and flagged 'J'.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0210-09 through OL-0210-18 were analyzed at a dilution for mercury.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria except for TOC. The laboratory reported that due to instrument error samples OL-0210-14 through OL-0210-18 were analyzed one day outside the holding time. Reported results for these samples have been qualified as estimated.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits except for sulfide. MS/MSD percent recovery outliers were reported for total sulfide. The reported recoveries (64/64%) were below the lower

control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0210-03 and OL-0210-05.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0210-01 and OL-0210-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.70 DATA USABILITY SUMMARY FOR SDG # C6J110210

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J110210. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J110195. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0211-01	10/10/2006
OL-0211-02	10/10/2006
OL-0211-03	10/10/2006
OL-0211-04	10/10/2006
OL-0211-05	10/10/2006
OL-0211-06	10/10/2006
OL-0211-07	10/10/2006
OL-0211-08	10/10/2006
OL-0211-09	10/10/2006
OL-0211-10	10/10/2006
OL-0211-11	10/10/2006
OL-0211-12	10/10/2006
OL-0211-13	10/10/2006
OL-0211-14	10/10/2006
OL-0211-15	10/10/2006
OL-0211-16	10/10/2006
OL-0211-17	10/10/2006
OL-0211-18	10/10/2006
OL-0211-19	10/10/2006

These samples were analyzed for volatiles, semivolatiles, PCBs, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified “J” or “UJ”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of target compounds detected, sample OL-0211-15 was analyzed as a methanol dilution (medium level). All surrogate recoveries were considered acceptable and within QC acceptance limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0211-07 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries and RPDs were acceptable and within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J110211) one field duplicate sample was collected. Sample OL-0211-05 is the field duplicate of sample OL-0211-01. The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0211-01 and OL-0211-18.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples except OL-0211-09, OL-0211-14 and OL-0211-16 were analyzed as methanol dilutions.

Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of semivolatiles detected or matrix interferences, all of the samples were diluted. As a result all surrogate recoveries were diluted out. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0211-07 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J110211) one field duplicate sample was collected. Sample OL-0211-05 is the field duplicate of sample OL-0211-01. The field

duplicate precision (RPD) results were considered acceptable for the field duplicate samples.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0211-02 and OL-0211-16.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that several samples were diluted due to concentration of semivolatiles detected. The laboratory reported that due to matrix interference, all of the samples were diluted. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All semivolatiles sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

Samples OL-0211-07 and OL-0211-14 had the surrogates diluted out. No results have been qualified for these samples. The laboratory reported that the surrogate recoveries tetrachloro-m-xylene could not be calculated due to matrix interference for samples OL-0210-01, OL-0210-05 and OL-0210-10. The laboratory also reported the tetrachloro-m-xylene recovery was outside the control limits for sample OL-0211-02. The reported recovery was above the upper control limit. Since the reported recovery for the other PCB surrogate, decachlorobiphenyl is within the control limits no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0210-07 was analyzed as the MS/MSD for this SDG. All reported MS/MSD recoveries and RPDs are acceptable and within control limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

The laboratory reported that the continuing calibration associated with the samples had compounds outside the % difference (%D) criteria. Since the associated results were nondetects or below the reporting limits no further action was taken.

7. Field Duplicate Precision

The field duplicate collected for this SDG is sample OL-0211-05 which is a duplicate of sample OL-0211-01. All reported results for the field duplicate are acceptable and within control limits.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0211-11 and OL-0211-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to the concentration of target compounds detected, samples OL-0211-07 and OL-0211-14 were analyzed at a dilution.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0211-05 and OL-0211-01.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0211-15 and OL-0211-16. Detections above the MDL but below the RL have been qualified as estimated and flagged 'J'.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0211-09 through OL-0211-18 were analyzed at a dilution for mercury.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. **Holding Times**

   All analytical holding times met criteria except for TOC. The laboratory reported that due to instrument error samples OL-0211-01 and OL-0211-02 were analyzed one day outside holding time. The reported results for these samples have been qualified as estimated.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes.

4. **Matrix Spike Recoveries**

All matrix spike recoveries were considered compliant and within QC acceptance limits except for sulfide. MS/MSD percent recovery outliers were reported for total sulfide. The reported recoveries (67/67%) were below the lower control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0211-05 and OL-0211-01.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0211-01 and OL-0211-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.71 DATA USABILITY SUMMARY FOR SDG # C6J110216

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J110216. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J110197. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0215-01	10/10/2006
OL-0215-02	10/10/2006
OL-0215-03	10/10/2006
OL-0215-04	10/10/2006
OL-0215-05	10/10/2006
OL-0215-06	10/10/2006
OL-0215-07	10/10/2006
OL-0215-08	10/10/2006
OL-0215-09	10/10/2006
OL-0215-10	10/10/2006
OL-0215-11	10/10/2006
OL-0215-12	10/10/2006
OL-0215-13	10/10/2006
OL-0215-14	10/10/2006
OL-0215-15	10/10/2006

These samples were analyzed for volatiles, semivolatiles, PCBs, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   The laboratory reported that the surrogates were diluted out in samples OL-0215-03, OL-0215-04, OL-0215-11 and OL-0215-12. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0215-03 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds except for naphthalene. Naphthalene was reported at 1.5 ppb in a laboratory blank associated with some of the samples. Reported results for naphthalene for samples OL-0215-01, OL-215-09, OL-0215-13 and OL-0215-15 are within 5X the blank level and have been qualified as not detected ('U').

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibrations associated with project samples were considered acceptable and within criteria.

A continuing calibration outlier was reported for naphthalene for the CCV standard CC41012. The %D for naphthalene (21.7%) exceeded the control limit (20%). The affected continuing calibration is associated with the following samples: OL-0215-01, OL-0215-07, OL-0215-08, OL-0215-09, OL-0215-13, OL-0215-14 and OL-0215-15. Reported results for naphthalene in these samples have been qualified as estimated (J/UJ).

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J110216) one field duplicate sample was collected. Sample OL-0215-08 is the field duplicate of sample OL-0215-06. Target analytes benzene, naphthalene, toluene and total xylenes were detected in both the sample and field duplicate but there is discrepancy between the concentrations reported. Also, ethylbenzene was detected in the field duplicate but was not detected in the sample. No results have been qualified based on the field duplicate results.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0215-01 and OL-0215-15.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0215-02, OL-0215-03, OL-0215-04, OL-0215-05, OL-0215-06, OL-0215-10, OL-0215-11 and OL-0215-12 were analyzed as methanol dilutions. Also, sample OL-0215-08 was analyzed as a 1 gram soil dilution. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of semivolatiles detected or matrix interferences, surrogates were diluted out for all of the samples except OL-0215-09, OL-0215-13, OL-0215-14 and OL-0215-15. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0215-03 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Sample OL-0215-08 is the field duplicate of sample OL-0215-06. All reported results for the field duplicate are acceptable and within control limits.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0215-02 and OL-0215-14.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due to concentration of semivolatiles detected or matrix interference. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

12. Data Completeness

All semivolatiles sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The surrogates were diluted out for sample OL-0215-10. The surrogate recovery for decachlorobiphenyl was not calculated for samples OL-0215-05 and OL-0215-06 due to matrix interference. No results have been qualified because the other surrogate was in control.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0215-03 was analyzed as the MS/MSD for this SDG. All reported MS/MSD recoveries are above the control limits. No results have been qualified based on the MS/MSD results alone.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

The laboratory reported that the continuing calibration associated with the samples had compounds outside the % difference (%D) criteria. Since the associated results were nondetects or below the reporting limits no further action was taken.

7. Field Duplicate Precision

The field duplicate collected for this SDG is sample OL-0215-08 which is a duplicate of sample OL-0215-06. All reported results for the field duplicate are acceptable and within control limits.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0215-11 and OL-0215-12.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that due to the concentration of target PCBs detected, samples OL-0215-02, OL-0215-03 and OL-0215-10 were analyzed at a dilution. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

Sample OL-0215-03 was analyzed as the MS/MSD for this SDG. The laboratory reported that spike recoveries could not be calculated for mercury because the mercury concentration in the unspiked sample was greater than 4X the spike amount. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0215-08 and OL-0215-06.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0215-14 and OL-0215-15. Detections above the MDL but below the RL have been qualified as estimated and flagged 'J'.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0215-01, OL-0215-02, OL-0215-03, OL-0215-06, OL-0215-08 and OL-0215-10 were analyzed at a dilution for mercury.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria except for TOC. The laboratory reported that due to instrument error all of the samples were analyzed slightly outside the holding time. According to the laboratory the violation ranged from a couple of minutes to about an hour. Reported results for these samples have been qualified as estimated.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered compliant and within QC acceptance limits except for sulfide. MS/MSD percent recovery outliers were reported for total sulfide. The reported recoveries (71/67%) were below the lower control limit (75%) for the MS/MSDs associated with this SDG. Reported results for total sulfide have been qualified as estimated and flagged 'J/UJ'.

The laboratory reported that the recovery for ammonia in the MS/MSD could not be calculated because the level of ammonia in the unspiked sample is greater than 4X the spike amount. No results have been qualified.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

The field duplicate precision (RPD) results were considered acceptable for the field duplicate samples OL-0215-08 and OL-0215-06.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0215-01 and OL-0215-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide. Sample OL-0215-03 was analyzed at a dilution for ammonia.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.1.72 DATA USABILITY SUMMARY FOR SDG # C6J110221

A data usability review and validation has been completed for data packages pertaining to the sediment samples in SDG # C6J110221. The results for total organic carbon (TOC) for these samples were reported in SDG # C6J110201. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0217-01	10/10/2006
OL-0217-02	10/10/2006
OL-0217-03	10/10/2006
OL-0217-04	10/10/2006
OL-0217-05	10/10/2006
OL-0217-06	10/10/2006
OL-0217-07	10/10/2006
OL-0217-08	10/10/2006

These samples were analyzed for volatiles, semivolatiles, PCBs, mercury, ammonia, pH, sulfide, and TOC. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that certain sediment samples contained mostly water (i.e., percent solids was less than 50%). Therefore, all results for those sediment samples where the percent solids was less than 50% were considered estimated, and qualified "J" or "UJ".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were acceptable and within quality control criteria except for samples OL-0217-03 and OL-0217-04. The surrogates for these samples were diluted out. No results have been qualified.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   Sample OL-0217-04 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blanks associated with project samples did not contain target compounds.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

   All sample internal standard responses were compliant and within QC acceptance limits.

9. **Field Duplicate Precision**

   For this SDG (C6J110221) one field duplicate sample was collected. Sample OL-0217-08 is the field duplicate of sample OL-0217-07. All field duplicate results were compliant and within criteria.

10. **Sample Result Verification and Identification**

    Instrument raw data were reviewed for sample result verification and identification for samples OL-0217-01 and OL-0217-08.

11. **Quantitation Limits**

    All quantitation limits were calculated using the correct percent solids and dilution factors. Detections above the method detection limit (MDL) but less than the reporting limit (RL) have been qualified as estimated and flagged 'J'.

12. **Data Completeness**

    All volatile sample results were considered 100% complete (i.e., usable).

Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

1. **Holding Times**

   All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

The laboratory reported that due to the concentration of semivolatiles detected or matrix interferences, all of the samples were diluted. As a result all surrogate recoveries were diluted out except for samples OL-0217-06, OL-0217-07 and OL-0217-08. No results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0217-04 was analyzed as the MS/MSD for this batch. All MS/MSD recoveries were diluted out. No results have been qualified.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial and continuing calibrations associated with project samples were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

For this SDG (C6J110221) one field duplicate sample was collected. Sample OL-0217-08 is the field duplicate of sample OL-0217-07. All field duplicate results were compliant and within criteria.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0217-02 and OL-0217-06.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that all of the samples were diluted due to concentration of semivolatiles detected. Detections above the MDL but less than the RL have been qualified as estimated and flagged ‘J’.

12. Data Completeness

All semivolatiles sample results were considered 100% complete (i.e., usable).

PCBs

The following items were reviewed for compliancy in the PCBs analysis:

1. Holding Times

All extraction and analytical holding times met criteria.

2. Surrogate Recoveries

All surrogate recoveries were acceptable and within quality control criteria except for sample OL-0217-04. For this sample, surrogate decachlorobiphenyl was recovered outside the control limits. Since the recovery for the other surrogate, tetrachloro-m-xylene, was within criteria no results have been qualified.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

Sample OL-0217-04 was analyzed as the MS/MSD for this SDG. All reported MS/MSD recoveries and RPDs are acceptable and within control limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank Contamination

The laboratory method blanks associated with project samples did not contain target compounds.

6. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations associated with project samples were considered acceptable and within criteria.

Several continuing calibrations associated with the samples had compounds outside the %D criteria. The laboratory attributed the problem to matrix interference. Reported results have been qualified as estimated.

7. Field Duplicate Precision

For this SDG (C6J110221) one field duplicate sample was collected. Sample OL-0217-08 is the field duplicate of sample OL-0217-07. All field duplicate results were compliant and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0217-01 and OL-0217-07.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Samples OL-0217-02 and OL-0217-03 were diluted due to the concentration of PCBs.

10. Data Completeness

All PCB sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

The laboratory reported that matrix spike (OL-0217-04) recoveries (142/138%) were outside the control limits for mercury. Reported results for mercury have been qualified as estimated.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

For this SDG (C6J110221) one field duplicate sample was collected. Sample OL-0217-08 is the field duplicate of sample OL-0217-07. All field duplicate results were compliant and within criteria.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0217-06 and OL-0217-08. Detections above the MDL but below the RL have been qualified as estimated and flagged 'J'.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. The laboratory reported that samples OL-0217-01, OL-0217-02, OL-0217-03 and OL-0217-05 were analyzed at a dilution for mercury. Detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Ammonia, pH, Sulfide, and TOC

The following items were reviewed for compliancy in the ammonia, pH, sulfide, and TOC analysis:

1. Holding Times

All analytical holding times met criteria except for TOC. The laboratory reported that sample OL-0217-03 was analyzed one day outside the holding time. The reported TOC result for this sample has been qualified as estimated.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike (OL-0217-04) recoveries were considered compliant and within QC acceptance limits except for ammonia and sulfide. The recoveries for the MS/MSD sample for ammonia (66/70%) and sulfide (67/67%) were outside the criteria. Reported results for ammonia and sulfide have been qualified as estimated.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

For this SDG (C6J110221) one field duplicate sample was collected. Sample OL-0217-08 is the field duplicate of sample OL-0217-07. All field duplicate results were compliant and within criteria except for sulfide. Sulfide was detected in sample OL-0217-07 but was not detected in sample OL-0217-08. No results have been qualified.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0217-01 and OL-0217-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors. Reported detections above the MDL but less than the RL have been qualified as estimated and flagged 'J'. The laboratory reported that all samples were analyzed at a dilution for sulfide.

10. Data Completeness

All ammonia, pH, sulfide, and TOC sample results were considered 100% complete (i.e., usable).

2.3 PEEPER SAMPLES

2.3.1 DATA USABILITY SUMMARY FOR SDG # C6J100148

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J100148. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0209-01	10/09/2006
OL-0209-02	10/09/2006
OL-0209-03	10/09/2006
OL-0209-04	10/09/2006
OL-0209-05	10/09/2006
OL-0209-06	10/09/2006
OL-0209-07	10/09/2006
OL-0209-08	10/09/2006

These samples were analyzed for volatiles, mercury, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank JGHX21AA associated with samples OL-0209-04RE, 05RE, 06RE, and 07RE contained 1,2,3-trichlorobenzene at a concentration of 1.4 µg/L. Therefore, results for this compound less than the

validation action concentration were considered not detected and qualified "U" for the affected samples.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) of ±25% for all compounds with the exception of naphthalene (-39.2%D) associated with samples OL-0209-04RE, 05RE, 06RE, and 07RE. Therefore, results for this noncompliant compound were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0209-01 and OL-0209-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0209-01 and OL-0209-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

DOC

The following items were reviewed for compliancy in the DOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blank associated with all samples contained DOC at a concentration of 0.66 mg/L. However, sample results were not affected by the contamination detected in this blank.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0209-01 and OL-0209-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All DOC sample results were considered 100% complete (i.e., usable).

2.3.2 DATA USABILITY SUMMARY FOR SDG # C6J110307

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J110307. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0212-01	10/10/2006
OL-0212-02	10/10/2006
OL-0212-03	10/10/2006
OL-0212-04	10/10/2006
OL-0212-05	10/10/2006
OL-0212-06	10/10/2006
OL-0212-07	10/10/2006
OL-0212-08	10/10/2006
OL-0212-09	10/10/2006
OL-0212-10	10/10/2006
OL-0212-11	10/10/2006
OL-0212-12	10/10/2006
OL-0212-13	10/10/2006
OL-0212-14	10/10/2006
OL-0212-15	10/10/2006
OL-0212-16	10/10/2006
OL-0212-17	10/10/2006
OL-0212-18	10/10/2006
OL-0212-19	10/10/2006
OL-0212-20	10/10/2006
TRIP BLANK	10/10/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that pH was not analyzed upon laboratory receipt. The pH holding time was exceeded for all samples by two days. Therefore, all pH results were considered estimated and qualified "J".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank and Trip Blank Contamination

The QC TRIP BLANK sample associated with all samples contained naphthalene at a concentration of 1.7 µg/L. Therefore, results for this compound less than the validation action concentration were considered not detected and qualified "U" for the affected samples.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) of ±25% for all compounds with the exception of 1,2,3-trichlorobenzene (30.2%D) in the continuing calibration associated with samples OL-0212-01, 05, 07 through 20, 02RE, 03RE, 04RE, 06RE, and 16RE; and 1,2,3-trichlorobenzene (34.3%D) and 1,3,5-trichlorobenzene (26.6%D) in the continuing calibration associated with samples OL-0212-05RE, 07RE, 08RE, 10RE, 11RE, 13RE, 14RE, 15RE, 17RE, 18RE, and 19RE. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0212-01 and OL-0212-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0212-01 and OL-0212-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not detect any contamination.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0212-01 and OL-0212-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.3 DATA USABILITY SUMMARY FOR SDG # C6J110327

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J110327. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0214-01	10/10/2006
OL-0214-02	10/10/2006
OL-0214-03	10/10/2006
OL-0214-04	10/10/2006
OL-0214-05	10/10/2006
OL-0214-06	10/10/2006
OL-0214-07	10/10/2006
OL-0214-08	10/10/2006
OL-0214-09	10/10/2006
OL-0214-10	10/10/2006
OL-0214-11	10/10/2006
OL-0214-12	10/10/2006
OL-0214-13	10/10/2006
OL-0214-14	10/10/2006
OL-0214-15	10/10/2006
OL-0214-16	10/10/2006
OL-0214-17	10/10/2006
OL-0214-18	10/10/2006
OL-0214-19	10/10/2006
OL-0214-20	10/10/2006
TRIP BLANK	10/10/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that pH was not analyzed upon laboratory receipt. The pH holding time was exceeded for all samples by two days. Therefore, all pH results were considered estimated and qualified “J”.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

All surrogate recoveries were considered acceptable and within QC limits with the exception of the low surrogate recovery for 1,2-dichloroethane-d4 (QC limit 70-125%R) in sample OL-0214-01RE (58%R). Therefore, results for this sample were considered estimated, possibly biased low, and qualified "J" and "UJ". However, since this sample was a reanalysis, results from the original sample analysis were reported in the validated data in Attachment A for OL-0214-01.

3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy

All MS/MSD precision and accuracy measurements were within QC acceptance limits with the exception of the low MS/MSD recoveries for chlorobenzene (66%R/34%R; QC limit 78-122%R) during the spiked analyses of sample OL-0214-01. Therefore, the chlorobenzene result for the unspiked sample OL-0214-01 was considered estimated, possibly biased low, and qualified "J" or "UJ".

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank and Trip Blank Contamination

The QC TRIP BLANK sample associated with all samples contained naphthalene at a concentration of 1.9 μg/L; and the laboratory method blank JGKNR1AA associated with samples OL-0214-01, 02, 03, 04, 06, and 07 contained 1,2,3-trichlorobenzene at a concentration of 2.2 μg/L. Therefore, results for these compounds less than the validation action concentrations were considered not detected and qualified "U" for the affected samples.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) of ±25% for all compounds with the exception of 1,2,3-trichlorobenzene (26%D) in the continuing calibration associated with samples OL-0214-13, 11RE, 12RE, 15RE, 16RE, 17RE, 18RE, 19RE, and 20RE; and 1,3,5-trichlorobenzene (29.9%D) in the continuing calibration associated with samples OL-0214-16 and 18. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0214-01 and OL-0214-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0214-01 and OL-0214-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not detect any contamination.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0214-01 and OL-0214-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.4 DATA USABILITY SUMMARY FOR SDG # C6J110335

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J110335. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0216-01	10/10/2006
OL-0216-02	10/10/2006
OL-0216-03	10/10/2006
OL-0216-04	10/10/2006
OL-0216-05	10/10/2006
OL-0216-06	10/10/2006
OL-0216-07	10/10/2006
OL-0216-08	10/10/2006
OL-0216-09	10/10/2006
OL-0216-10	10/10/2006
OL-0216-11	10/10/2006
OL-0216-12	10/10/2006
OL-0216-13	10/10/2006
OL-0216-14	10/10/2006
OL-0216-15	10/10/2006
OL-0216-16	10/10/2006
OL-0216-17	10/10/2006
TRIP BLANK	10/10/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that pH was not analyzed upon laboratory receipt. The pH holding time was exceeded for all samples by two days. Therefore, all pH results were considered estimated and qualified "J".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank and Trip Blank Contamination

The laboratory method blank JGHX21AA associated with samples OL-0216-04RE, 05RE, 06RE, 07RE, and 08RE contained 1,2,3-trichlorobenzene at a concentration of 1.4 μg/L. Therefore, results for this compound less than the validation action concentration were considered not detected and qualified "U" for the affected samples.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) of ±25% for all compounds with the exception of naphthalene (-26.2%D) in the continuing calibration associated with all samples except OL-0216-04RE through 17RE; naphthalene (-39.2%D) in the continuing calibration associated with samples OL-0216-04RE, 05RE, 06RE, 07RE, and 08RE; and 1,2,3-trichlorobenzene (-26.1%D), naphthalene (-49.5%D), and 1,2,4-trichlorobenzene (-30.8%D) in the continuing calibration associated with samples OL-0216-09RE through 17RE. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0216-01 and OL-0216-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0216-01 and OL-0216-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blank associated with all samples contained DOC at a concentration of 0.52 mg/L. However, sample results were not affected by the contamination detected in this blank.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0216-01 and OL-0216-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.5 DATA USABILITY SUMMARY FOR SDG # C6J120204

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J120204. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0219-01	10/11/2006
OL-0219-02	10/11/2006
OL-0219-03	10/11/2006
OL-0219-04	10/11/2006
OL-0219-05	10/11/2006
OL-0219-06	10/11/2006
OL-0219-07	10/11/2006
OL-0219-08	10/11/2006
OL-0219-09	10/11/2006
OL-0219-10	10/11/2006
OL-0219-11	10/11/2006
OL-0219-12	10/11/2006
OL-0219-13	10/11/2006
OL-0219-14	10/11/2006
OL-0219-15	10/11/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

It was noted that pH was not analyzed upon laboratory receipt. The pH holding time was exceeded for all samples by one day. Therefore, all pH results were considered estimated and qualified "J".

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits with the exception of the low MS/MSD recoveries for chlorobenzene (62%R/58%R; QC limit 78-122%R) during the spiked analyses of

sample OL-0219-02. Therefore, the chlorobenzene result for the unspiked sample OL-0219-02 was considered estimated, possibly biased low, and qualified "J" or "UJ".

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank and Trip Blank Contamination

The QC trip blank sample OL-0221-01 associated with all samples contained naphthalene at a concentration of 1.4 μg/L. Therefore, results for this compound less than the validation action concentration were considered not detected and qualified "U" for the affected samples.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0219-01 and OL-0219-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0219-01 and OL-0219-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain any contamination.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0219-01 and OL-0219-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.6 DATA USABILITY SUMMARY FOR SDG # C6J120215

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J120215. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0221-01	10/11/2006

This sample was analyzed for volatiles. This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank associated with this project sample did not contain any contamination.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) of ±25% for all compounds with the exception of 1,2,3-trichlorobenzene (26%D) associated with this project sample.

Therefore, the result for this compound was considered estimated and qualified "J" or "UJ".

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0221-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

2.3.7 DATA USABILITY SUMMARY FOR SDG # C6J120216

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J120216. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0222-01	10/11/2006

This sample was analyzed for volatiles. This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank associated with this project sample did not contain any contamination.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) of ±25% for all compounds with the exception of 1,2,3-trichlorobenzene (26%D) associated with this project sample.

Therefore, the result for this compound was considered estimated and qualified "J" or "UJ".

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0222-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

2.3.8 DATA USABILITY SUMMARY FOR SDG # C6J130171

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J130171. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0224-01	10/12/2006
OL-0224-02	10/12/2006
OL-0224-03	10/12/2006
OL-0224-04	10/12/2006
OL-0224-05	10/12/2006
OL-0224-06	10/12/2006
OL-0224-07	10/12/2006
OL-0224-08	10/12/2006

These samples were analyzed for volatiles, mercury, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits with the exception of the high surrogate recovery for 1,2-dichloroethane-d4 (QC limit 70-125%R) in sample OL-0224-01RE (126%R). Therefore, positive results for this sample were considered estimated, possibly biased high, and qualified "J".

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank and Trip Blank Contamination**

   The laboratory method blanks and trip blank associated with the project samples did not contain any contamination.

6. **GC/MS Instrument Performance**

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0224-01 and OL-0224-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0224-01 and OL-0224-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

DOC

The following items were reviewed for compliancy in the DOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blank associated with all samples contained DOC at a concentration of 0.52 mg/L. However, DOC sample results were not affected by the contamination detected in this blank.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0224-01 and OL-0224-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All DOC sample results were considered 100% complete (i.e., usable).

2.3.9 DATA USABILITY SUMMARY FOR SDG # C6J130180

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6J130180. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0225-01	10/12/2006

This sample was analyzed for volatiles. This sample was properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank Contamination**

   The laboratory method blank associated with this project sample did not contain any contamination.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. **Internal Standard Area Counts and Retention Times**

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for sample OL-0225-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

2.3.10 DATA USABILITY SUMMARY FOR SDG # C6K070207

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K070207. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0238-01	11/06/2006
OL-0238-02	11/06/2006
OL-0238-03	11/06/2006
OL-0238-04	11/06/2006
OL-0238-05	11/06/2006
OL-0238-06	11/06/2006
OL-0238-07	11/06/2006
OL-0238-08	11/06/2006
OL-0238-09	11/06/2006
OL-0238-10	11/06/2006
OL-0238-11	11/06/2006
OL-0238-12	11/06/2006
OL-0238-13	11/06/2006
OL-0238-14	11/06/2006
OL-0238-15	11/06/2006
OL-0238-16	11/06/2006
OL-0238-17	11/06/2006
OL-0238-18	11/06/2006
OL-0238-19	11/06/2006
OL-0238-20	11/06/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits with the exception of the high LCS recoveries for 1,2,4-trichlorobenzene (169%R; QC limit 35-163%R) and 1,3,5-trichlorobenzene (134%R; QC limit 65-130%R) associated with samples OL-0238-17RE, 18RE, 19RE, and 20RE. Validation qualification of these samples for these compounds was not warranted since these compounds were not detected.

5. Laboratory Method Blank and Trip Blank Contamination

The laboratory method blanks and trip blank associated with the project samples did not contain any contamination.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria with relative response factors (RRFs) greater than 0.05 and maximum percent relative standard deviation (%RSD) of 30% for all compounds with the exception of naphthalene (39.58%RSD) and 1,2,3-trichlorobenzene (34.09%RSD) in the initial calibration associated with all reanalyzed samples. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

All continuing calibration compounds were considered acceptable and within criteria with relative response factors (RRFs) greater than 0.05 and maximum percent differences (%Ds) within ±25% for all compounds with the exception of naphthalene (49.7%D) and 1,2,4-trichlorobenzene (27%D) in the continuing calibration associated with all reanalyzed samples. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0238-01 and OL-0238-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0238-01 and OL-0238-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain any contamination.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0238-01 and OL-0238-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.11 DATA USABILITY SUMMARY FOR SDG # C6K070212

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K070212. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0239-01	11/06/2006
OL-0239-02	11/06/2006
OL-0239-03	11/06/2006
OL-0239-04	11/06/2006
OL-0239-05	11/06/2006

These samples were analyzed for volatiles. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank and Trip Blank Contamination**

   The laboratory method blank JJJ0J1AA associated with the project samples contained 1,2,3-trichlorobenzene at a concentration of 1.4 µg/L. Validation qualification of these samples was not warranted since this compound was not detected.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0239-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

2.3.12 DATA USABILITY SUMMARY FOR SDG # C6K070216

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K070216. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0240-01	11/06/2006
OL-0240-02	11/06/2006
OL-0240-03	11/06/2006
OL-0240-04	11/06/2006
OL-0240-05	11/06/2006
OL-0240-06	11/06/2006
OL-0240-07	11/06/2006
OL-0240-08	11/06/2006
OL-0240-09	11/06/2006
OL-0240-10	11/06/2006
OL-0240-11	11/06/2006
OL-0240-12	11/06/2006
OL-0240-13	11/06/2006
OL-0240-14	11/06/2006
OL-0240-15	11/06/2006
OL-0240-16	11/06/2006
OL-0240-17	11/06/2006
OL-0240-18	11/06/2006
OL-0240-19	11/06/2006
OL-0240-20	11/06/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank and Trip Blank Contamination

The laboratory method blanks and trip blank associated with the project samples did not contain any contamination.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) within ±25% for all compounds with the exception of naphthalene (-28.4%D) and 1,2,3-trichlorobenzene (-35.4%D) in the continuing calibration associated with samples OL-0240-01RE, 02RE, 03RE, and 06RE through 10RE; and naphthalene (-28.8%D) and 1,2,3-trichlorobenzene (-27.1%D) in the continuing calibration associated with samples OL-0240-04RE and 05RE. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0240-01 and OL-0240-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0240-01 and OL-0240-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blank associated with samples OL-0240-16 through 20 contained DOC at a concentration of 0.72 mg/L. However, sample results were not affected by the contamination detected in this blank.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0240-01 and OL-0240-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.13 DATA USABILITY SUMMARY FOR SDG # C6K070217

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K070217. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0241-01	11/06/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank and Trip Blank Contamination**

   The laboratory method blanks and trip blank associated with project samples did not contain any contamination.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

   All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0241-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0241-01.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blank associated with all the project samples contained DOC at a concentration of 0.72 mg/L. However, sample DOC results were not affected by the contamination detected in this blank.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0241-01.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.14 DATA USABILITY SUMMARY FOR SDG # C6K080160

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K080160. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0242-01	11/07/2006
OL-0242-02	11/07/2006
OL-0242-03	11/07/2006
OL-0242-04	11/07/2006
OL-0242-05	11/07/2006
OL-0242-06	11/07/2006
OL-0242-07	11/07/2006
OL-0242-08	11/07/2006
OL-0242-09	11/07/2006
OL-0242-10	11/07/2006
OL-0242-11	11/07/2006
OL-0242-12	11/07/2006
OL-0242-13	11/07/2006
OL-0242-14	11/07/2006
OL-0242-15	11/07/2006
OL-0242-16	11/07/2006
OL-0242-17	11/07/2006
OL-0242-18	11/07/2006
OL-0242-19	11/07/2006
OL-0242-20	11/07/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank and Trip Blank Contamination

The laboratory method blank JJJ0J1AA associated with the samples OL-0242-17 through 20 and 17RE contained 1,2,3-trichlorobenzene at a concentration of 1.4 µg/L. Therefore, results for this compound less than the validation action concentration were considered not detected and qualified "U" for the affected samples.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) within ±25% for all compounds with the exception of naphthalene (-28.4%D) and 1,2,3-trichlorobenzene (-35.4%D) in the continuing calibration associated with samples OL-0242-18RE through 20RE; naphthalene (-28.8%D) and 1,2,3-trichlorobenzene (-27.1%D) in the continuing calibration associated with samples OL-0242-01 through 08, and 01RE through 07RE; and naphthalene (-40.7%D), 1,2,3-trichlorobenzene (-42.1%D), and 1,2,4-trichlorobenzene (-32.2%D) in the continuing calibration associated with samples OL-0242-08RE through 16RE. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0242-01 and OL-0242-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0242-01 and OL-0242-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain any contamination.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0242-01 and OL-0242-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.15 DATA USABILITY SUMMARY FOR SDG # C6K080164

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K080164. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0243-01	11/07/2006
OL-0243-02	11/07/2006
OL-0243-03	11/07/2006

These samples were analyzed for volatiles. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank and Trip Blank Contamination**

   The laboratory method blank JJJ0J1AA associated with the project samples contained 1,2,3-trichlorobenzene at a concentration of 1.4 µg/L. Validation qualification of these samples was not warranted since this compound was not detected.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0243-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

2.3.16 DATA USABILITY SUMMARY FOR SDG # C6K080165

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K080165. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0244-01	11/07/2006
OL-0244-02	11/07/2006
OL-0244-03	11/07/2006
OL-0244-04	11/07/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits with the exception of the low LCS recoveries for naphthalene (7%R; QC limit 10-202%R), 1,2,3-trichlorobenzene (4%R; QC limit 10-193%R), 1,2,4-trichlorobenzene (14%R; QC limit 35-163%R), and 1,3,5-trichlorobenzene (43%R; QC limit 65-130%R) associated with all reanalyzed samples. Therefore, results for these noncompliant compounds were considered estimated, possibly biased low, and qualified "J" or "UJ" for the affected samples. However, nondetected sample results for those noncompliant compounds where LCS recoveries fell below 10%, were considered unusable and qualified "R" for the affected samples. Since the affected samples were reanalyzed samples, sample results from the original analysis were reported in the validated data in Attachment A.

5. **Laboratory Method Blank and Trip Blank Contamination**

The laboratory method blank JJJ0J1AA associated with the samples OL-0244-01 through 04 contained 1,2,3-trichlorobenzene at a concentration of 1.4 µg/L. Therefore, results for this compound less than the validation action concentration were considered not detected and qualified "U" for the affected samples.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria. However, reanalyzed sample OL-0244-04RE exceeded the 12-hour injection time. Therefore, positive results for this sample were considered estimated and qualified "J" while nondetected results were considered unusable and qualified "R". As a result, original sample results for OL-0244-04 were reported in the validated data in Attachment A.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent relative standard deviations (%RSDs) within 30% for all compounds with the exception of naphthalene (39.58%RSD) and 1,2,3-trichlorobenzene (34.090%RSD) in the initial calibration associated with all reanalyzed samples.

All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) within ±25% for all compounds with the exception of naphthalene (25.8%D) in the continuing calibration associated with all reanalyzed samples. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0244-01 and OL-0244-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All final volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0244-01 and OL-0244-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain any contamination.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0244-01 and OL-0244-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct percent solids and dilution factors.

10. **Data Completeness**

    All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.3.17 DATA USABILITY SUMMARY FOR SDG # C6K090114

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K090114. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0246-01	11/08/2006
OL-0246-02	11/08/2006

These samples were analyzed for volatiles. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

5. **Laboratory Method Blank and Trip Blank Contamination**

   The laboratory method blank JJJ0J1AA associated with the project samples contained 1,2,3-trichlorobenzene at a concentration of 1.4 µg/L. Validation qualification of these samples was not warranted since this compound was not detected.

6. **GC/MS Instrument Performance**

   Instrument performance checks were considered acceptable and within criteria.

7. **Initial and Continuing Calibrations**

   All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0246-01.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All volatile sample results were considered 100% complete (i.e., usable).

2.3.18 DATA USABILITY SUMMARY FOR SDG # C6K090115

A data usability review and validation has been completed for data packages pertaining to the peeper samples in SDG #C6K090115. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0247-01	11/08/2006
OL-0247-02	11/08/2006
OL-0247-03	11/08/2006
OL-0247-04	11/08/2006
OL-0247-05	11/08/2006
OL-0247-06	11/08/2006
OL-0247-07	11/08/2006
OL-0247-08	11/08/2006
OL-0247-09	11/08/2006
OL-0247-10	11/08/2006
OL-0247-11	11/08/2006
OL-0247-12	11/08/2006
OL-0247-13	11/08/2006
OL-0247-14	11/08/2006
OL-0247-15	11/08/2006
OL-0247-16	11/08/2006
OL-0247-17	11/08/2006

These samples were analyzed for volatiles, mercury, specific conductance, and dissolved organic carbon (DOC). All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Volatiles

The following items were reviewed for compliancy in the volatile analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Surrogate Recoveries**

   All surrogate recoveries were considered acceptable and within QC limits.

3. **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Precision and Accuracy**

   All MS/MSD precision and accuracy measurements were within QC acceptance limits.

4. **Laboratory Control Sample (LCS) Recoveries**

All LCS recoveries were considered acceptable and within QC acceptance limits.

5. Laboratory Method Blank and Trip Blank Contamination

The laboratory method blanks and trip blank associated with the project samples did not contain any contamination.

6. GC/MS Instrument Performance

Instrument performance checks were considered acceptable and within criteria.

7. Initial and Continuing Calibrations

All initial calibration compounds associated with project samples were considered acceptable and within criteria.

All continuing calibration compounds were considered acceptable and within criteria with minimum relative response factors (RRFs) of 0.05 and maximum percent differences (%Ds) within ±25% for all compounds with the exception of naphthalene (-42.3%D) and 1,2,3-trichlorobenzene (-40.5%D) in the continuing calibration associated with samples OL-0247-02, 03, 04, 06, and 07. Therefore, results for these noncompliant compounds were considered estimated and qualified "J" or "UJ" for the affected samples.

8. Internal Standard Area Counts and Retention Times

All sample internal standard responses were compliant and within QC acceptance limits.

9. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

10. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0247-01 and OL-0247-02.

11. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

12. Data Completeness

All final volatile sample results were considered 100% complete (i.e., usable).

Mercury

The following items were reviewed for compliancy in the mercury analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain mercury.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0247-01 and OL-0247-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All mercury sample results were considered 100% complete (i.e., usable).

Specific Conductance and DOC

The following items were reviewed for compliancy in the specific conductance and DOC analysis:

1. Holding Times

All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with all project samples contained DOC at concentrations of 0.56 and 0.51 mg/L. Therefore, DOC sample results less than the validation action concentrations were considered not detected and qualified "U".

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0247-01 and OL-0247-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct percent solids and dilution factors.

10. Data Completeness

All specific conductance and DOC sample results were considered 100% complete (i.e., usable).

2.4 POREWATER SAMPLES

2.4.1 DATA USABILITY SUMMARY FOR SDG # C6K100206

A data usability review and validation has been completed for data packages pertaining to the porewater samples in SDG #C6K100206. The results for conductivity and salinity for these samples were reported in SDG #6K100206. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0253-01	12/05/2006
OL-0253-02	12/05/2006
OL-0253-03	12/05/2006
OL-0253-04	12/05/2006
OL-0253-05	12/05/2006
OL-0253-06	12/05/2006
OL-0253-07	12/05/2006
OL-0253-08	12/05/2006
OL-0253-09	12/05/2006
OL-0253-10	12/05/2006
OL-0253-11	12/05/2006
OL-0253-12	12/05/2006
OL-0253-13	12/05/2006
OL-0253-14	12/05/2006
OL-0253-15	12/05/2006
OL-0253-16	12/05/2006
OL-0253-17	12/05/2006
OL-0253-18	12/05/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Serial Dilution Results

All ICP serial dilution results were compliant and within QC limits with the exception of the serial dilution result for dissolved potassium. Therefore, all dissolved potassium results greater that two times the instrument detection limit were considered estimated and qualified "J".

8. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

9. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0253-01 and OL-0253-02.

10. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

11. Data Completeness

All dissolved metals sample results were considered 100% complete (i.e., usable).

2.4.2 DATA USABILITY SUMMARY FOR SDG # C6K100210

A data usability review and validation has been completed for data packages pertaining to the porewater samples in SDG #C6K100210. The results for conductivity and salinity for these samples were reported in SDG #6K100210. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0252-01	12/04/2006
OL-0252-02	12/04/2006
OL-0252-03	12/04/2006
OL-0252-04	12/04/2006
OL-0252-05	12/04/2006
OL-0252-06	12/04/2006
OL-0252-07	12/04/2006
OL-0252-08	12/04/2006
OL-0252-09	12/04/2006
OL-0252-10	12/04/2006
OL-0252-11	12/04/2006
OL-0252-12	12/04/2006
OL-0252-13	12/04/2006
OL-0252-14	12/04/2006
OL-0252-15	12/04/2006
OL-0252-16	12/04/2006
OL-0252-17	12/04/2006
OL-0252-18	12/04/2006
OL-0252-19	12/04/2006
OL-0252-20	12/04/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Serial Dilution Results**

   All ICP serial dilution results were compliant and within QC limits.

8. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0252-01 and OL-0252-02.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct dilution factors.

11. **Data Completeness**

    All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits with the exception of the low matrix spike recoveries for dissolved sulfate (71%R, 72%R; QC limit 80-120%R) associated with all samples. Therefore, all dissolved sulfate results were considered estimated, possibly biased low, and qualified "J" or "UJ".

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0252-01 and OL-0252-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

10. Data Completeness

All wet chemistry sample results were considered 100% complete (i.e., usable).

2.4.3 DATA USABILITY SUMMARY FOR SDG # C6K100228

A data usability review and validation has been completed for data packages pertaining to the porewater samples in SDG #C6K100228. The results for conductivity and salinity for these samples were reported in SDG #6K100228. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0251-01	11/20/2006
OL-0251-02	11/20/2006
OL-0251-03	11/20/2006
OL-0251-04	11/20/2006
OL-0251-05	11/20/2006
OL-0251-06	11/20/2006
OL-0251-07	11/20/2006
OL-0251-08	11/20/2006
OL-0251-09	11/20/2006
OL-0251-10	11/20/2006
OL-0251-11	11/20/2006
OL-0251-12	11/20/2006
OL-0251-13	11/20/2006
OL-0251-14	11/20/2006
OL-0251-15	11/20/2006
OL-0251-16	11/20/2006
OL-0251-17	11/20/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Serial Dilution Results**

   All ICP serial dilution results were compliant and within QC limits.

8. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0251-01 and OL-0251-02.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct dilution factors.

11. **Data Completeness**

    All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain any contamination.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0251-01 and OL-0251-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

10. Data Completeness

All wet chemistry sample results were considered 100% complete (i.e., usable).

2.4.4 DATA USABILITY SUMMARY FOR SDG # C6K100230

A data usability review and validation has been completed for data packages pertaining to the porewater samples in SDG #C6K100230. The results for conductivity and salinity for these samples were reported in SDG #6K100230. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0254-01	11/09/2006
OL-0254-02	11/09/2006
OL-0254-03	11/09/2006
OL-0254-04	11/09/2006
OL-0254-05	11/09/2006
OL-0254-06	11/09/2006
OL-0254-07	11/09/2006
OL-0254-08	11/09/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Serial Dilution Results**

   All ICP serial dilution results were compliant and within QC limits.

8. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0254-01.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct dilution factors.

11. **Data Completeness**

    All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain any contamination.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0254-01.

9. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

10. Data Completeness

All wet chemistry sample results were considered 100% complete (i.e., usable).

2.4.5 DATA USABILITY SUMMARY FOR SDG # C6K110154

A data usability review and validation has been completed for data packages pertaining to the porewater samples in SDG #C6K110154. The results for conductivity and salinity for these samples were reported in SDG #6K110154. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0255-01	12/07/2006
OL-0255-02	12/07/2006
OL-0255-03	12/07/2006
OL-0255-04	12/07/2006
OL-0255-05	12/07/2006
OL-0255-06	12/07/2006
OL-0255-07	12/07/2006
OL-0255-08	12/07/2006
OL-0255-09	12/07/2006
OL-0255-10	12/07/2006
OL-0255-11	12/07/2006
OL-0255-12	12/07/2006
OL-0255-13	12/07/2006
OL-0255-14	12/07/2006
OL-0255-15	12/07/2006
OL-0255-16	12/07/2006
OL-0255-17	12/07/2006
OL-0255-18	12/07/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Serial Dilution Results**

   All ICP serial dilution results were compliant and within QC limits.

8. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0255-01 and OL-0255-02.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct dilution factors.

11. **Data Completeness**

    All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with samples OL-0255-01 through 10 contained dissolved orthophosphate at a concentration of 0.036 mg/L. Therefore, all results for this analyte less than the validation action concentration were considered not detected and qualified "U" for the affected samples.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0255-01 and OL-0255-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

10. Data Completeness

All wet chemistry sample results were considered 100% complete (i.e., usable).

2.4.6 DATA USABILITY SUMMARY FOR SDG # C6K110157

A data usability review and validation has been completed for data packages pertaining to the porewater samples in SDG #C6K110157. The results for conductivity and salinity for these samples were reported in SDG #6K110157. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0257-01	12/05/2006
OL-0257-02	12/05/2006
OL-0257-03	12/05/2006
OL-0257-04	12/05/2006
OL-0257-05	12/05/2006
OL-0257-06	12/05/2006
OL-0257-07	12/05/2006
OL-0257-08	12/05/2006
OL-0257-09	12/05/2006
OL-0257-10	12/05/2006
OL-0257-11	12/05/2006
OL-0257-12	12/05/2006
OL-0257-13	12/05/2006
OL-0257-14	12/05/2006
OL-0257-15	12/05/2006
OL-0257-16	12/05/2006
OL-0257-17	12/05/2006
OL-0257-18	12/05/2006
OL-0257-19	12/05/2006
OL-0257-20	12/05/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination

The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within QC limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Serial Dilution Results

All ICP serial dilution results were compliant and within QC limits with the exception of the serial dilution result for dissolved potassium. Therefore, all dissolved potassium results greater that two times the instrument detection limit were considered estimated and qualified "J".

8. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

9. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0257-01 and OL-0257-02.

10. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

11. Data Completeness

All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain target analytes.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

8. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0257-01 and OL-0257-02.

9. **Quantitation Limits**

   All quantitation limits were calculated using the correct dilution factors.

10. **Data Completeness**

    All wet chemistry sample results were considered 100% complete (i.e., usable).

2.4.7 DATA USABILITY SUMMARY FOR SDG # C6K110159

A data usability review and validation has been completed for data packages pertaining to the porewater samples in SDG #C6K110159. The results for conductivity and salinity for these samples were reported in SDG #6K110159. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0258-01	12/06/2006
OL-0258-02	12/06/2006
OL-0258-03	12/06/2006
OL-0258-04	12/06/2006
OL-0258-05	12/06/2006
OL-0258-06	12/06/2006
OL-0258-07	12/06/2006
OL-0258-08	12/06/2006
OL-0258-09	12/06/2006
OL-0258-10	12/06/2006
OL-0258-11	12/06/2006
OL-0258-12	12/06/2006
OL-0258-13	12/06/2006
OL-0258-14	12/06/2006
OL-0258-15	12/06/2006
OL-0258-16	12/06/2006
OL-0258-17	12/06/2006
OL-0258-18	12/06/2006
OL-0258-19	12/06/2006
OL-0258-20	12/06/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Serial Dilution Results**

   All ICP serial dilution results were compliant and within QC limits with the exception of the serial dilution result for dissolved potassium. Therefore, all dissolved potassium results greater that two times the instrument detection limit were considered estimated and qualified "J".

8. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0258-01 and OL-0258-02.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct dilution factors.

11. **Data Completeness**

    All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. Initial Calibrations and Continuing Calibration Verifications

All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. Laboratory Blank Contamination

The laboratory blanks associated with project samples did not contain target analytes.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0258-01 and OL-0258-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

10. Data Completeness

All wet chemistry sample results were considered 100% complete (i.e., usable).

2.4.8 DATA USABILITY SUMMARY FOR SDG # C6K110164

A data usability review and validation has been completed for data packages pertaining to the porewater samples in SDG #C6K110164. The results for conductivity and salinity for these samples were reported in SDG #6K110164. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0259-01	12/07/2006
OL-0259-02	12/07/2006
OL-0259-03	12/07/2006
OL-0259-04	12/07/2006
OL-0259-05	12/07/2006
OL-0259-06	12/07/2006
OL-0259-07	12/07/2006
OL-0259-08	12/07/2006
OL-0259-09	12/07/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Serial Dilution Results**

   All ICP serial dilution results were compliant and within QC limits.

8. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0259-01 and OL-0259-02.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct dilution factors.

11. **Data Completeness**

    All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain any contamination.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0259-01 and OL-0259-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

10. Data Completeness

All wet chemistry sample results were considered 100% complete (i.e., usable).

2.5 SURFACE WATER SAMPLES

2.5.1 DATA USABILITY SUMMARY FOR SDG # C6L010287

A data usability review and validation has been completed for data packages pertaining to the surface water samples in SDG #C6L010287. The results for conductivity and salinity for these samples were reported in SDG #6L010287. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0269-01	11/30/2006
OL-0269-02	11/30/2006
OL-0269-03	11/30/2006
OL-0269-04	11/30/2006
OL-0269-05	11/30/2006
OL-0269-06	11/30/2006
OL-0269-07	11/30/2006
OL-0269-08	11/30/2006
OL-0269-09	11/30/2006
OL-0269-10	11/30/2006
OL-0269-11	11/30/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Serial Dilution Results**

   All ICP serial dilution results were compliant and within QC limits.

8. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0269-01 and OL-0269-02.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct dilution factors.

11. **Data Completeness**

    All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain any contamination.

4. Matrix Spike Recoveries

All matrix spike recoveries were compliant and within QC acceptance limits.

5. Laboratory Duplicate Precision

The laboratory duplicate precision results were considered compliant and within criteria.

6. Laboratory Control Sample (LCS) Recoveries

All LCS recoveries were considered acceptable and within QC acceptance limits.

7. Field Duplicate Precision

Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0269-01 and OL-0269-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

10. Data Completeness

All wet chemistry sample results were considered 100% complete (i.e., usable).

2.5.2 DATA USABILITY SUMMARY FOR SDG # C6L060118

A data usability review and validation has been completed for data packages pertaining to the surface water samples in SDG #C6L060118. The results for conductivity and salinity for these samples were reported in SDG #6L060118. The specific samples contained within this SDG are the following:

SAMPLE ID	SAMPLE DATE
OL-0270-01	12/05/2006
OL-0270-02	12/05/2006
OL-0270-03	12/05/2006

These samples were analyzed for dissolved metals, dissolved chloride, dissolved nitrate, dissolved sulfate, dissolved orthophosphate, conductivity, and salinity. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. The validated laboratory data are presented in Attachment A.

Dissolved Metals

The following items were reviewed for compliancy in the dissolved metals analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Initial and Continuing Calibration Blank and Laboratory Preparation Blank Contamination**

   The initial calibration blanks, continuing calibration blanks, and laboratory preparation blanks associated with project samples did not contain metals.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were considered acceptable and within QC limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Serial Dilution Results**

   All ICP serial dilution results were compliant and within QC limits.

8. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

9. **Sample Result Verification and Identification**

   Instrument raw data were reviewed for sample result verification and identification for samples OL-0270-02.

10. **Quantitation Limits**

    All quantitation limits were calculated using the correct dilution factors.

11. **Data Completeness**

    All dissolved metals sample results were considered 100% complete (i.e., usable).

Conductivity, Salinity, Dissolved Chloride, Dissolved Nitrate, Dissolved Sulfate, and Dissolved Orthophosphate

The following items were reviewed for compliancy in the wet chemistry analysis:

1. **Holding Times**

   All analytical holding times met criteria.

2. **Initial Calibrations and Continuing Calibration Verifications**

   All initial calibrations and continuing calibration verifications associated with project samples were considered acceptable and within criteria.

3. **Laboratory Blank Contamination**

   The laboratory blanks associated with project samples did not contain any contamination.

4. **Matrix Spike Recoveries**

   All matrix spike recoveries were compliant and within QC acceptance limits.

5. **Laboratory Duplicate Precision**

   The laboratory duplicate precision results were considered compliant and within criteria.

6. **Laboratory Control Sample (LCS) Recoveries**

   All LCS recoveries were considered acceptable and within QC acceptance limits.

7. **Field Duplicate Precision**

   Field duplicate samples were not collected for this SDG.

8. Sample Result Verification and Identification

Instrument raw data were reviewed for sample result verification and identification for samples OL-0270-02.

9. Quantitation Limits

All quantitation limits were calculated using the correct dilution factors.

10. Data Completeness

All wet chemistry sample results were considered 100% complete (i.e., usable).