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SEDIMENT ASSESSMENT REPORT
LONG POND SEDIMENT ANALYSIS SITE
GREECE, MONROE COUNTY, NEW YORK

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
GREAT LAKES RESTORATION INITIATIVE
NEW YORK WATERSHED MANAGEMENT SECTION
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ACRONYMS AND ABBREVIATIONS

%	Percent
ADR	Automated Data Review
amsl	Above mean sea level
AOS	Area of Study
bss	Below sediment surface
bws	Below water surface
Cadmus	The Cadmus Group, Inc.
CAS	Columbia Analytical Services, Inc.
COPC	Contaminant of potential concern
ft	Foot
GLNPO	Great Lakes National Program Office
GPS	Global positioning system
lb/yr	Pound per year
LCI	Lake Classification and Inventory
mg/kg	Milligram per kilogram
mg/l	Milligram per liter
NYSDEC	New York State Department of Environmental Conservation
NYWMS	New York Watershed Management Section
QA	Quality assurance
QC	Quality control
QAPP	Quality Assurance Project Plan
START	Superfund Technical Assistance and Response Team
U.S. EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VSP	Visual Sampling Program
WESTON	Weston Solutions, Inc.

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EXECUTIVE SUMMARY

Weston Solutions, Inc. (WESTON®) prepared this Sediment Assessment Report to summarize field investigation activities for the Long Pond project area in Greece, Monroe County, New York, as part of the Long Pond Area of Study (AOS) under the United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) New York Watershed Management Section (NYWMS) project. The purposes of the field investigation activities were to (1) determine the depth and thickness of unconsolidated sediment in the Long Pond main and south basins and (2) define the horizontal and vertical distribution of total phosphorous in the unconsolidated lake sediment. The data collection activities were conducted in accordance with WESTON's Quality Assurance Project Plan (QAPP) dated August 2011. The objective of field investigation activities was to collect samples for total phosphorous analysis to support project area characterization and potential remediation activities.

Long Pond is a shallow embayment along the southern edge of Lake Ontario in the town of Greece, Monroe County, New York. Long Pond has a direct drainage basin area of 14,438 acres, excluding the surface area of the pond. Elevations in the Long Pond drainage basin range from approximately 659 feet above mean sea level (amsl) to approximately 245 feet amsl at the surface of Long Pond. Long Pond is a 481-acre water body with a mean depth of approximately 5 feet (ft).

The Long Pond AOS was designated primarily due to degraded water quality that has reduced the pond's recreational and aesthetic value. In recent decades, Long Pond has become hypereutrophic as a result of excess nutrients, mainly phosphorous, transported to the pond by Northrup Creek from sources within the drainage basin. Although the phosphorous loads in Northrup Creek have been reduced through improved sewage treatment, water quality in Long Pond is still influenced by internal loading (phosphorous in unconsolidated lake sediment). Water quality in Long Pond is also influenced by runoff from the drainage basin, residential septic systems, and atmospheric deposition (United States Geological Survey [USGS] 1999a).

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A total of 199 sediment samples (including field duplicate samples) were collected from 86 sampling locations within the Long Pond project area. Originally, 100 sampling locations were projected, but lack of sediment deposition near the pond shoreline affected the overall number of samples collected. The original sampling design for Long Pond was based on collecting sediment cores from 100 sampling locations within the Long Pond main basin and south basin, collecting sediment samples from 0 to 1 and 1 to 2 feet below sediment surface (bss) at each of the 100 sampling locations, and collecting sediment samples from 1-foot intervals to the bottom of the unconsolidated lake sediment at 10 of the 100 sampling locations.

Where sediment recovery was adequate, sediment samples were collected from 0 to 1 and 1 to 2 feet bss at 86 sampling locations. Sediment samples were collected from 1-foot intervals below 2 feet bss at eight of the 86 sampling locations. Sediment cores were collected from the Long Pond main basin using a 20-foot, pontoon boat-mounted vibracore system. Sediment cores were collected from the Long Pond south basin using hand coring equipment and a 12-foot inflatable boat.

All sediment samples were analyzed for total phosphorous. Because the purpose of sediment sampling was to define the horizontal and vertical distribution of phosphorous in the unconsolidated lake sediment, the sample results were not compared to a regulatory or project-specific action limit. Phosphorous was detected in all 199 sediment samples above the laboratory reporting limits at concentrations ranging from 223 to 3,180 milligrams per kilogram (mg/kg).

Horizontal and vertical distribution of total phosphorous in the unconsolidated lake sediment, as indicated by the concentrations of total phosphorous for all sampled sediment depth intervals, appears to coincide with water (basin) depth and sediment thickness. As the basin depth increases, sediment thickness increases, and phosphorous concentrations increase at all sampled sediment depth intervals. Furthermore, vertical distribution of total phosphorous in the unconsolidated lake sediment, as indicated by the average concentration of total phosphorous for each of the sampled sediment depth intervals, appears to be consistent throughout the Long Pond

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main and south basins. Average concentrations of total phosphorous are highest in the shallow (0 to 1 foot) interval and decrease as the sampled sediment depth interval increases (deepens).

While the horizontal and vertical distribution of total phosphorous in unconsolidated lake sediment has been defined by this assessment, further information is required to determine how the concentrations of total phosphorous in the unconsolidated lake sediment affect the phosphorous concentrations in the water column. Potential remediation activities will need to focus on how to control internal loading caused by the re-suspension of unconsolidated lake sediment, in order to maintain phosphorous concentrations in the water column below the state guidance value of 0.025 milligram per liter (mg/l). Recommendations regarding potential remediation activities and focus areas cannot be made until a target concentration for total phosphorous in unconsolidated lake sediment, at which it is likely that re-suspension of the unconsolidated lake sediment would result in phosphorous concentrations in the water column exceeding the state guidance value, has been defined.

1. INTRODUCTION

Weston Solutions, Inc. (WESTON®) prepared this Sediment Assessment Report to summarize field investigation activities for the Long Pond project area in Greece, Monroe County, New York (**Figure 1**). WESTON prepared this Sediment Assessment Report in response to a request from the United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) under the Superfund Technical Assessment and Response Team (START) III Contract No. EP-S5-06-04, Technical Direction Document No. S05-0008-1004-036. The site characterization activities were conducted as part of the Long Pond Area of Study (AOS) New York Watershed Management Section (NYWMS) project. The purposes of the field investigation activities were to (1) determine the depth and thickness of unconsolidated sediment in the Long Pond main and south basins and (2) define the horizontal and vertical distribution of total phosphorous in the unconsolidated lake sediment. The data collection activities were conducted in accordance with WESTON's Quality Assurance Project Plan (QAPP) dated August 2011. The objective of field investigation activities was to collect samples for total phosphorous analysis to support project area characterization and potential remediation activities.

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The sections below discuss the report organization, Site description, Site background and history, possible sources of contamination, the purpose of the study and project objectives, and the contaminant of potential concern (COPC) and target analyte.

1.1 REPORT ORGANIZATION

This Sediment Assessment Report is organized as follows:

- Section 1 – Introduction
- Section 2 – Field Investigation Activities
- Section 3 – Sample Analytical Results
- Section 4 – Data Completeness
- Section 5 – Summary and Conclusions
- Section 6 - References

Tables and figures are presented after Section 6. **Appendix A** provides the figures showing the bathymetric survey locations and cross sections, **Appendix B** provides the analytical data validation report for all samples collected, and **Appendix C** provides a photographic log of Site conditions and field investigation activities.

1.2 SITE DESCRIPTION

Long Pond is a shallow embayment along the southern edge of Lake Ontario in the town of Greece, Monroe County, New York (**Figure 1**). The Long Pond AOS consists of the Long Pond main basin and Long Pond south basin, which are connected by a small channel under the Lake Ontario State Parkway (**Figure 2**). Northrup Creek is the only major tributary feeding the Long Pond AOS. Northrup Creek begins southwest of the Village of Spencerport, New York, and flows northeast through the Village of Spencerport, under the Erie Canal, through mostly undeveloped land, and into the Long Pond south basin. The Long Pond AOS is connected to Lake Ontario by a small channel in the northeast corner of the Long Pond main basin. The boundaries of the Long Pond AOS are illustrated in **Figure 2.**

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Long Pond has a direct drainage basin area of 14,438 acres, excluding the surface area of the pond. Elevations in the Long Pond drainage basin range from approximately 659 feet above mean sea level (amsl) to approximately 245 feet amsl at the surface of Long Pond. Long Pond is a 481-acre water body with a mean depth of approximately 5 feet. Long Pond's mass residence time and hydraulic residence time are 0.2 year (The Cadmus Group, Inc. [Cadmus] 2010a).

1.3 SITE BACKGROUND AND HISTORY

Long Pond is one of many small, shallow embayments along the southern edge of Lake Ontario. These ponds, including Long Pond, are an important recreational resource and support wildlife habitat. In recent decades, Long Pond has become hypereutrophic as a result of excess nutrients, mainly phosphorous, transported to the pond by Northrup Creek from sources within the drainage basin. Although the phosphorous loads in Northrup Creek have been reduced through improved sewage treatment, water quality in Long Pond is still influenced by internal loading (phosphorous in unconsolidated lake sediment). Water quality in Long Pond is also influenced by runoff from the drainage basin, residential septic systems, and atmospheric deposition (USGS 1999a).

Land use within the watershed includes agricultural (38.4 percent [%]), forest (30.5%), developed land (24.3%), wetlands (5.8%), and many other land uses (1%) (Cadmus 2010a).

The New York State Department of Environmental Conservation (NYSDEC) Lake Classification and Inventory (LCI) program was initiated in 1982 and is conducted by the NYSDEC staff. Under this program, water samples are collected at the surface and at the deepest point of the lake four to seven times per year and analyzed for pH, acid neutralizing capacity, specific conductance, temperature, oxygen, chlorophyll *a*, nutrients, and plankton. Sampling generally begins in May and ends in October. As part of the LCI program, water quality samples were collected from Long Pond during the summers of 2000, 2003 through 2007, and 2009. Additional phosphorous concentration data were obtained for Long Pond in 1993 and 1994 and 2009. The results from these sampling efforts show eutrophic conditions in Long Pond, with phosphorous concentrations in the water exceeding the state guidance value for phosphorous of

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0.025 milligram per liter (mg/l), which increases the potential for nuisance summertime algae blooms (Cadmus 2010a).

In a study conducted for the U.S. EPA and NYSDEC, Cadmus used a watershed model to estimate the long-term (1990 through 2007) mean annual phosphorous loading to Long Pond. In addition, estimates for internal loading were also calculated. The model indicated that a mean annual load of 28,918.4 pounds per year (lb/yr) of total phosphorous enters Long Pond from a variety of sources within the drainage basin, including septic systems, runoff, and internal loading from lake sediment. Internal loading is estimated to contribute 20,292.8 lb/yr (70.2%) of the mean annual load of total phosphorous to Long Pond (Cadmus 2010a).

With NYSDEC water sampling results exhibiting eutrophic conditions in Long Pond and estimates of internal loading from lake sediment exceeding 70% of the mean annual load of total phosphorous to Long Pond, the NYSDEC requested the assistance of the U.S. EPA in conducting sediment assessment activities in the Long Pond AOS. The purposes of the sediment assessment activities were to (1) determine the depth and thickness of unconsolidated sediment in the Long Pond main and south basins and (2) define the horizontal and vertical distribution of total phosphorous in unconsolidated lake sediment.

1.4 POSSIBLE SOURCES OF CONTAMINATION

Land use around Northrup Creek and Long Pond consists of agricultural, forest, developed, wetlands, and other land uses. Historical activities that may have contributed to phosphorous loading into Northrup Creek and Long Pond include the Village of Spencerport wastewater treatment plant. Improvements to the wastewater treatment plant have reduced the amount of phosphorous loading to Northrup Creek. Water quality in Long Pond is still influenced by internal loading (phosphorous in unconsolidated lake sediment), runoff events from the drainage basin, residential septic systems, and atmospheric deposition. Internal phosphorous loading from lake sediment can be an important component of the phosphorous budget. Excess phosphorous in lake sediment is available for release back into the water column when conditions are favorable for nutrient release. Such conditions can include re-suspension of sediment by wind

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mixing, rough fish activity, and recreational activity (such as boating). Internal loading is estimated to contribute 70.2% of the mean annual load of total phosphorous to Long Pond (USGS 1999a).

1.5 PURPOSE OF STUDY AND PROJECT OBJECTIVE

The overall purposes of the field investigation activities were to (1) determine the depth and thickness of unconsolidated sediment in the Long Pond main and south basins and (2) define the horizontal and vertical distribution of total phosphorous in unconsolidated lake sediment. The primary objective of the field investigation activities for the Long Pond project was to generate phosphorous characterization data for unconsolidated lake sediment as a basis for identifying possible areas of focus for further evaluation and/or remediation at the Site.

1.6 COPC AND TARGET ANALYTE

All sediment samples were analyzed for total phosphorous.

2. FIELD INVESTIGATION ACTIVITIES

Initial field investigation activities were conducted from September 27 through October 2, 2010, and included a bathymetric survey and sub-bottom profile. Follow-on sediment sample collection and sediment characterization occurred in October 2011. The following sections discuss these sediment assessment field investigation activities.

2.1 BATHYMETRIC SURVEY AND SUB-BOTTOM PROFILE

The site reconnaissance procedures used for this sediment assessment are detailed in WESTON's approved QAPP dated August 2011. The overall site reconnaissance visit included a bathymetric survey and sub-bottom profile activities. These activities were completed from September 27 through October 2, 2010. Before the bathymetric survey and sub-bottom profile activities, aerial photographs, topographic maps, and other historical documentation were reviewed.

The bathymetric survey and sub-bottom profile were conducted throughout the Long Pond main

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basin to accurately identify and map the distribution of unconsolidated lake sediment. The bathymetric survey methodology used for the Site included U.S. Army Corps of Engineers recognized hydrographic hardware and software and is based on recognized hydrographic procedures. The bathymetric survey was conducted simultaneously with sub-bottom profiling. *HYPACK* hydrographic software was used to navigate the transect lines, collect depth-position data sets, and compile the data into a database and generate hydrographic survey drawings. The bathymetric survey transects were completed 200 feet apart, with data being collected across the entire Long Pond main basin. The bathymetric survey and sub-bottom profile were performed using survey-grade accuracy (to 1 centimeter) and assigned to a real-world coordinate system (the U.S. State Plane) and elevation datum (NAVD88). The depth of water in the Long Pond south basin was too shallow for implementation of the echo sounder and limited this area to sediment probing activities.

Appendix A presents the bathymetric survey and sub-bottom profile data, including hydrographic survey drawings (contour maps) showing water elevations, elevations of the top of the unconsolidated sediment, and elevation of the bottom of the unconsolidated sediment; a volume estimate of the unconsolidated sediment; and cross-section maps showing water elevations, elevations of the top of the unconsolidated sediment, and elevation of the bottom of the unconsolidated sediment.

Sediment probing was completed in the Long Pond main basin to ground-truth the sub-bottom profiling (sediment thickness) data collected by the echo sounder. Sediment probing was also completed in the Long Pond south basin where the water depth was too shallow for implementation of the echo sounder. Manual sediment probing was conducted using a survey range pole. For the ground-truth locations, the sediment thickness data measured by manual probing were compared to the sediment thickness data measured using the sub-bottom profiling echo sounder. A manual real-time kinematic global positioning system (GPS) was used for vertical and horizontal positioning and the probing pole was used to determine the water depth and sediment thickness.

The bathymetric survey and sub-bottom profile results for the Long Pond main basin are as

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follows: average water depth of approximately 5 feet, maximum water depth of approximately 7.5 feet, average depth to the bottom of the unconsolidated sediment of approximately 11 feet below water surface (bws), and maximum depth to the bottom of the unconsolidated sediment of approximately 16.5 feet bws.

The sediment probing results for the Long Pond south basin are as follows: average water depth of approximately 1 foot, maximum water depth of approximately 1.5 feet, average depth to the bottom of the unconsolidated sediment of approximately 4.5 feet bws, and maximum depth to the bottom of the unconsolidated sediment of approximately 5.5 feet bws.

Results obtained during the site reconnaissance showed that water depth and sediment thickness varied throughout the Long Pond main and south basins. The sediment thickness in the Long Pond main basin averaged approximately 6 feet, with a maximum thickness of approximately 9.5 feet. The sediment thickness in the Long Pond south basin averaged approximately 3 feet, with a maximum thickness of 4.5 feet.

2.2 SEDIMENT SAMPLE COLLECTION

The sediment sample collection procedures are detailed in WESTON's approved QAPP dated August 2011. Sediment samples were collected from October 24 through 28, 2011. The data collected during field investigation activities were used to define the horizontal and vertical distribution of total phosphorous in unconsolidated lake sediment.

The Long Pond project area included the Long Pond main and south basins. The sampling design originally was based on collecting samples from 100 sampling locations within the project area. However, the lack of sediment deposition near the pond shoreline affected the overall number of samples collected.

A total of 199 sediment samples (184 investigative and 15 duplicate samples) were collected from 86 locations. **Table 1** presents the sampling location coordinates and also lists locations where no sediment was present. **Figure 3** shows the Visual Sampling Plan (VSP) sediment sampling locations and lists the coordinates for each sampling location. As discussed above, it

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was originally planned that samples would be collected from 100 locations. Because of poor recovery (little to no sediment deposition), sediment samples were collected from only 86 locations.

Where sediment recovery was adequate, sediment samples were collected from 0 to 1 and 1 to 2 feet below sediment surface (bss) at 86 sampling locations. Sediment samples were collected from 1-foot intervals below 2 feet bss at eight sampling locations. Sediment collected from each sampling depth interval was homogenized, and an aliquot of each sediment sample was submitted for laboratory analysis. Sediment cores were collected from a 20-foot, pontoon boat-mounted vibracore system in the Long Pond main basin or by using a 12-foot inflatable boat in the Long Pond south basin.

A WESTON-procured subcontractor laboratory, Columbia Analytical Services, Inc. (CAS), analyzed the samples for total phosphorous. Section 3 discusses the sample analytical results.

2.3 SEDIMENT CHARACTERIZATION

During the 2011 sediment sampling activities, sediment throughout the Long Pond project area was largely uniform. In general, unconsolidated lake sediment consisted of dark-gray sandy silt with trace organics underlain by brown, partially decayed vegetation (peat). The thickness of the sediment layers was dependent on the water depth and distance from the pond shoreline. The top layer of sandy silt extended to approximately 2 to 28 inches bss in the Long Pond main basin. The underlying layer of brown peat extended to approximately 18 to 48 inches bss in the Long Pond main basin. All sediment cores completed to refusal in the Long Pond main basin indicated a base layer of mottled gray and brown clay with trace organics and some sand. The top layer of sandy silt extended to approximately 14 to 24 inches bss in the Long Pond south basin. The underlying layer of brown peat extended beyond 24 inches bss in the Long Pond south basin. No sediment cores were completed to refusal in the Long Pond south basin.

The minimum water depth encountered during sediment sampling was less than 1 foot, and the maximum water depth was approximately 7.5 feet. The minimum sediment depth encountered during sampling was less than 1 foot, and the maximum sediment depth sampled was 54 inches.

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3. SAMPLE ANALYTICAL RESULTS

This section summarizes analytical results for the field investigation samples collected from October 24 through 28, 2011. **Tables 2, 3, and 4** summarize the analytical results for total phosphorous for samples collected from 0 to 1, 1 to 2, and 2 to 4 ft bss, respectively. **Appendix B** presents the analytical data validation report. **Appendix C** provides a photographic log of Site conditions and characterization activities. A total of 199 sediment samples (184 investigative and 15 duplicate samples) were collected from 86 sampling locations within the Long Pond project area.

Because the purpose of sediment sampling was to define the horizontal and vertical distribution of phosphorous in the unconsolidated lake sediment, the sample results were not compared to a regulatory or project-specific action limit.

Total phosphorous was detected in all 199 sediment samples above the laboratory reporting limits at concentrations ranging from 223 to 3,180 milligrams per kilogram (mg/kg). Total phosphorous was detected in all 95 sediment samples collected from 0 to 1 foot bss at concentrations ranging from 223 to 3,180 mg/kg (**Table 2** and **Figure 4**). The average concentration of total phosphorous in sediment samples collected from 0 to 1 foot bss was 844 mg/kg. Total phosphorous was detected in all 92 sediment samples collected from 1 to 2 feet bss at concentrations ranging from 229 to 1,310 mg/kg (**Table 3** and **Figure 5**). The average concentration of total phosphorous in sediment samples collected from 1 to 2 feet bss was 763 mg/kg. Total phosphorous was detected in all 12 sediment samples collected from below 2 feet bss at concentrations ranging from 472 to 1,050 mg/kg (**Table 4** and **Figure 6**). The average concentration of total phosphorous in sediment samples collected from below 2 feet bss was 716 mg/kg.

4. DATA COMPLETENESS

Data validation summaries were produced for total phosphorous (**Appendix B**). Data received from the subcontracted laboratory (CAS) were run through the Automated Data Review (ADR)

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checker. WESTON completed a 5% full manual data validation for all analyses conducted by CAS. WESTON flagged some sample results as estimated during the validation, but no sample results were considered unusable. All data are considered acceptable for use as qualified. Total phosphorous data were compared to applicable analytical method guidelines, the laboratory standard operating procedures, and guidelines described in the WESTON QAPP dated August 2011.

The data validation consisted of completing the GLNPO Quality Assurance/Quality Control (QA/QC) checklist and preparing a data narrative summary report for each chemical parameter, which included the following completeness and usability components:

- Summary of data review
- Minor problems (as applicable)
  - Holding times
  - Method blanks
  - Matrix spike/matrix spike duplicates
  - Surrogates
  - Calibration
  - Laboratory control samples
  - Laboratory duplicates
  - Field duplicate results
- Data quality indicator review
  - Sensitivity
  - Precision
  - Accuracy
  - Completeness

Based on the data validation and data usability assessment, all data are considered suitable for project decisions per the QAPP. All the data validation summaries will be submitted to GLNPO under separate cover along with all of the WESTON Data Validation Summaries for inclusion into GLNPO's GLSED.

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5. SUMMARY AND CONCLUSIONS

During the sediment investigation, a total of 199 sediment samples (including field duplicate samples) were collected from 86 sampling locations in the Long Pond project area. Where sediment recovery was adequate, sediment samples were collected from 0 to 1 and 1 to 2 feet bss at 86 sampling locations. Sediment samples were collected from 1-foot intervals below 2 feet bss at eight of the 86 sampling locations.

All sediment samples were analyzed for total phosphorous. Total phosphorous was detected in all 199 sediment samples above the laboratory reporting limits at concentrations ranging from 223 to 3,180 mg/kg. Total phosphorous was detected in all 95 sediment samples collected from 0 to 1 foot bss at concentrations ranging from 223 to 3,180 mg/kg. Total phosphorous was detected in all 92 sediment samples collected from 1 to 2 feet bss at concentrations ranging from 229 to 1,310 mg/kg. Total phosphorous was detected in all 12 sediment samples collected from below 2 feet bss at concentrations ranging from 472 to 1,050 mg/kg.

Horizontal and vertical distribution of total phosphorous in the unconsolidated lake sediment, as indicated by the concentrations of total phosphorous for all sampled sediment depth intervals, appears to coincide with water (basin) depth and sediment thickness. As the basin depth increases, sediment thickness increases, and phosphorous concentrations increase at all sampled sediment depth intervals. Furthermore, vertical distribution of total phosphorous in the unconsolidated lake sediment, as indicated by the average concentration of total phosphorous for each of the sampled sediment depth intervals, appears to be consistent throughout the Long Pond main and south basins. Average concentrations of total phosphorous are highest in the shallow (0 to 1 foot) interval and decrease as the sampled sediment depth interval increases (deepens).

While the horizontal and vertical distribution of total phosphorous in unconsolidated lake sediment has been defined by this assessment, further information is required to determine how the concentrations of total phosphorous in the unconsolidated lake sediment affect the phosphorous concentrations in the water column. Potential remediation activities will need to focus on how to control internal loading caused by the re-suspension of unconsolidated lake

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sediment, in order to maintain phosphorous concentrations in the water column below the state guidance value of 0.025 mg/l. Recommendations regarding potential remediation activities and focus areas cannot be made until a target concentration for total phosphorous in unconsolidated lake sediment, at which it is likely that re-suspension of the unconsolidated lake sediment would result in phosphorous concentrations in the water column exceeding the state guidance value, has been defined.

6. REFERENCES

United States Geological Survey (USGS). 1999a. "Phosphorous Loads Entering Long Pond, A Small Embayment of Lake Ontario near Rochester, New York." Fact Sheet FS-128-99. October 1999.

The Cadmus Group, Inc. (Cadmus). 2010a. "Total Maximum Daily Loads (TMDLs) for Phosphorus in Buck, Long, and Cranberry Ponds Monroe County, New York." Prepared for the United States Environmental Protection Agency and the New York State Department of Environmental Conservation. February 2010.

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TABLES

Table 1
Sampling Location Coordinates
Long Pond Sediment Analysis
Greece, Monroe County, New York

Final Location ID	Field Sample ID	VSP Location ID	X Coordinate	Y Coordinate	Reason No Sample Collected
Main Basin					
LP01	LP01-01-102411-01	VSP-1-1	1383849.087	1197763.911	
	LP01-12-102411-01				
LP02	LP02-01-102411-01	VSP-1-2	1383116.814	1198186.689	
	LP02-12-102411-01				
	LP02-12-102411-02				
LP03	LP03-01-102411-01	VSP-1-3	1383604.996	1198186.689	
	LP03-12-102411-01				
LP04	LP04-01-102411-01	VSP-1-4	1384093.178	1198186.689	
	LP04-12-102411-01				
LP05	LP05-01-102411-01	VSP-1-5	1382384.54	1198609.467	
	LP05-12-102411-01				
LP06	LP06-01-102411-01	VSP-1-6	1382872.722	1198609.467	
	LP06-12-102411-01				
LP07	LP07-01-102411-01	VSP-1-7	1383360.905	1198609.467	
	LP07-12-102411-01				
LP08	LP08-01-102811-01	VSP-1-8	1383849.087	1198609.467	
	LP08-12-102811-01				
	LP08-23-102811-01				
LP09	LP09-01-102411-01	VSP-1-9	1384337.269	1198609.467	
	LP09-12-102411-01				
LP10	NA	VSP-1-10	1384825.451	1198609.467	Refusal on rock debris
LP11	NA	VSP-1-11	1381652.267	1199032.245	Refusal on rock debris
LP12	LP12-01-102411-01	VSP-1-12	1382140.449	1199032.245	
	LP12-12-102411-01				
LP13	LP13-01-102811-01	VSP-1-13	1382628.631	1199032.245	
	LP13-12-102811-01				
	LP13-23-102811-01				
	LP13-34-102811-01				
LP14	LP14-01-102411-01	VSP-1-14	1383116.814	1199032.245	
	LP14-12-102411-01				
LP15	LP15-01-102711-01	VSP-1-15	1383604.996	1199032.245	
	LP15-01-102711-02				
	LP15-12-102711-01				
LP16	LP16-01-102511-01	VSP-1-16	1384093.178	1199032.245	
	LP16-12-102511-01				
LP17	LP17-01-102711-01	VSP-1-17	1384581.36	1199032.245	
	LP17-12-102711-01				
	LP17-12-102711-02				
LP18	LP18-01-102511-01	VSP-1-18	1385069.542	1199032.245	
	LP18-12-102511-01				

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Table 1
Sampling Location Coordinates
Long Pond Sediment Analysis
Greece, Monroe County, New York

Final Location ID	Field Sample ID	VSP Location ID	X Coordinate	Y Coordinate	Reason No Sample Collected
LP19	LP19-01-102511-01	VSP-1-19	1385557.724	1199032.245	
	LP19-01-102511-02				
	LP19-12-102511-01				
LP20	LP20-01-102511-01	VSP-1-20	1386045.906	1199032.245	
	LP20-12-102511-01				
LP21	LP21-01-102411-01	VSP-1-21	1381896.358	1199455.024	
	LP21-01-102411-02				
	LP21-12-102411-01				
LP22	LP22-01-102411-01	VSP-1-22	1382384.54	1199455.024	
	LP22-12-102411-01				
LP23	LP23-01-102411-01	VSP-1-23	1382872.722	1199455.024	
	LP23-12-102411-01				
LP24	LP24-01-102711-01	VSP-1-24	1383360.905	1199455.024	
	LP24-12-102711-01				
	LP24-12-102711-02				
LP25	LP25-01-102811-01	VSP-1-25	1383849.087	1199455.024	
	LP25-12-102811-01				
	LP25-23-102811-01				
	LP25-34-102811-01				
LP26	LP26-01-102511-01	VSP-1-26	1384337.269	1199455.024	
	LP26-12-102511-01				
	LP26-12-102511-02				
LP27	LP27-01-102711-01	VSP-1-27	1384825.451	1199455.024	
	LP27-12-102711-01				
LP28	LP28-01-102611-01	VSP-1-28	1385313.633	1199455.024	
	LP28-12-102611-01				
LP29	LP29-01-102711-01	VSP-1-29	1385801.815	1199455.024	
	LP29-01-102711-02				
	LP29-12-102711-01				
LP30	LP30-01-102611-01	VSP-1-30	1386289.997	1199455.024	
	LP30-12-102611-01				
LP31	LP31-01-102611-01	VSP-1-31	1386778.179	1199455.024	
	LP31-12-102611-01				
LP32	NA	VSP-1-32	1387266.361	1199455.024	Refusal on rock debris
LP33	LP33-01-102411-01	VSP-1-33	1382140.449	1199877.802	
	LP33-12-102411-01				
LP34	LP34-01-102811-01	VSP-1-34	1382628.631	1199877.802	
	LP34-12-102811-01				
LP35	LP35-01-102511-01	VSP-1-35	1383116.814	1199877.802	
	LP35-12-102511-01				
LP36	LP36-01-102711-01	VSP-1-36	1383604.996	1199877.802	
	LP36-12-102711-01				

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Table 1
Sampling Location Coordinates
Long Pond Sediment Analysis
Greece, Monroe County, New York

Final Location ID	Field Sample ID	VSP Location ID	X Coordinate	Y Coordinate	Reason No Sample Collected
LP37	LP37-01-102711-01	VSP-1-37	1384093.178	1199877.802	
	LP37-12-102711-01				
LP38	LP38-01-102511-01	VSP-1-38	1384581.36	1199877.802	
	LP38-12-102511-01				
LP39	LP39-01-102811-01	VSP-1-39	1385069.542	1199877.802	
	LP39-12-102811-01				
	LP39-23-102811-01				
	LP39-34-102811-01				
LP40	LP40-01-102611-01	VSP-1-40	1385557.724	1199877.802	
	LP40-12-102611-01				
LP41	LP41-01-102711-01	VSP-1-41	1386045.906	1199877.802	
	LP41-01-102711-02				
	LP41-12-102711-01				
LP42	LP42-01-102611-01	VSP-1-42	1386534.088	1199877.802	
	LP42-12-102611-01				
LP43	LP43-01-102811-01	VSP-1-43	1387022.27	1199877.802	
	LP43-12-102811-01				
LP44	LP44-01-102611-01	VSP-1-44	1387510.452	1199877.802	
	LP44-12-102611-01				
LP45	NA	VSP-1-45	1387998.634	1199877.802	Refusal on rock debris
LP46	NA	VSP-1-46	1382384.54	1200300.58	Refusal on rock debris
LP47	LP47-01-102411-01	VSP-1-47	1382872.722	1200300.58	
	LP47-01-102411-02				
	LP47-12-102411-01				
LP48	LP48-01-102711-01	VSP-1-48	1383360.905	1200300.58	
	LP48-12-102711-01				
LP49	LP49-01-102811-01	VSP-1-49	1383849.087	1200300.58	
	LP49-12-102811-01				
	LP49-23-102811-01				
LP50	LP50-01-012511-02	VSP-1-50	1384337.269	1200300.58	
	LP50-01-102511-01				
	LP50-12-102511-01				
LP51	LP51-01-102711-01	VSP-1-51	1384825.451	1200300.58	
	LP51-12-102711-01				
	LP51-12-102711-02				
LP52	LP52-01-102611-01	VSP-1-52	1385313.633	1200300.58	
	LP52-12-102611-01				
LP53	LP53-01-102611-01	VSP-1-53	1385801.815	1200300.58	
	LP53-12-102611-01				
	LP53-12-102611-02				

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Table 1
Sampling Location Coordinates
Long Pond Sediment Analysis
Greece, Monroe County, New York

Final Location ID	Field Sample ID	VSP Location ID	X Coordinate	Y Coordinate	Reason No Sample Collected
LP54	LP54-01-102811-01	VSP-1-54	1386289.997	1200300.58	
	LP54-12-102811-01				
	LP54-23-102811-01				
LP55	LP55-01-102611-01	VSP-1-55	1386778.179	1200300.58	
	LP55-01-102611-02				
	LP55-12-102611-01				
LP56	LP56-01-102811-01	VSP-1-56	1387266.361	1200300.58	
	LP56-12-102811-01				
LP57	LP57-01-102611-01	VSP-1-57	1387754.543	1200300.58	
	LP57-01-102611-02				
	LP57-12-102611-01				
LP58	LP58-01-102811-01	VSP-1-58	1388242.726	1200300.58	
	LP58-12-102811-01				
LP59	LP59-01-102511-01	VSP-1-59	1388730.908	1200300.58	
	LP59-12-102511-01				
LP60	NA	VSP-1-60	1389219.09	1200300.58	Refusal on rock debris
LP61	NA	VSP-1-61	1383116.814	1200723.358	Refusal on rock debris
LP62	LP62-01-102411-01	VSP-1-62	1383604.996	1200723.358	
	LP62-12-102411-01				
LP63	LP63-01-102411-01	VSP-1-63	1384093.178	1200723.358	
	LP63-12-102411-01				
LP64	LP64-01-102711-01	VSP-1-64	1384581.36	1200723.358	
	LP64-12-102711-01				
LP65	LP65-01-102511-01	VSP-1-65	1385069.542	1200723.358	
	LP65-12-102511-01				
LP66	LP66-01-102611-01	VSP-1-66	1385557.724	1200723.358	
	LP66-12-102611-01				
LP67	LP67-01-102611-01	VSP-1-67	1386045.906	1200723.358	
	LP67-12-102611-01				
LP68	LP68-01-102811-01	VSP-1-68	1386534.088	1200723.358	
	LP68-12-102811-01				
LP69	LP69-01-102611-01	VSP-1-69	1387022.27	1200723.358	
	LP69-12-102611-01				
LP70	LP70-01-102811-01	VSP-1-70	1387510.452	1200723.358	
	LP70-12-102811-01				
	LP70-23-102811-01				
LP71	LP71-01-102511-01	VSP-1-71	1387998.634	1200723.358	
	LP71-12-102511-01				
LP72	LP72-01-102611-01	VSP-1-72	1388486.817	1200723.358	
	LP72-12-102611-01				
LP73	LP73-01-102511-01	VSP-1-73	1388974.999	1200723.358	
	LP73-12-102511-01				

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Table 1
Sampling Location Coordinates
Long Pond Sediment Analysis
Greece, Monroe County, New York

Final Location ID	Field Sample ID	VSP Location ID	X Coordinate	Y Coordinate	Reason No Sample Collected
LP74	NA	VSP-1-74	1389463.181	1200723.358	Refusal on rock debris
LP75	LP75-01-102411-01	VSP-1-75	1385313.633	1201146.136	
	LP75-12-102411-01				
LP76	NA	VSP-1-76	1385801.815	1201146.136	Refusal on rock debris
LP77	LP77-01-102611-01	VSP-1-77	1386289.997	1201146.136	
	LP77-12-102611-01				
LP78	LP78-01-102811-01	VSP-1-78	1386778.179	1201146.136	
	LP78-12-102811-01				
LP79	LP79-01-102511-01	VSP-1-79	1387266.361	1201146.136	
	LP79-12-102511-01				
LP80	LP80-01-102511-01	VSP-1-80	1387754.543	1201146.136	
	LP80-12-102511-01				
LP81	LP81-01-102611-01	VSP-1-81	1388242.726	1201146.136	
	LP81-12-102611-01				
LP82	LP82-01-102511-01	VSP-1-82	1388730.908	1201146.136	
	LP82-12-102511-01				
LP83	NA	VSP-1-83	1389219.09	1201146.136	Refusal on rock debris
LP84	LP84-01-102811-01	VSP-1-84	1386534.088	1201568.914	
	LP84-12-102811-01				
LP85	LP85-01-102511-01	VSP-1-85	1387022.27	1201568.914	
	LP85-12-102511-01				
LP86	LP86-01-102811-01	VSP-1-86	1387510.452	1201568.914	
	LP86-12-102811-01				
	LP86-23-102811-01				
	LP86-34-102811-01				
LP87	LP87-01-102511-01	VSP-1-87	1387998.634	1201568.914	
	LP87-12-102511-01				
LP88	LP88-01-102811-01	VSP-1-88	1388486.817	1201568.914	
	LP88-12-102811-01				
LP89	NA	VSP-1-89	1386778.179	1201991.692	Refusal on rock debris
LP90	LP90-01-102511-01	VSP-1-90	1387266.361	1201991.692	
	LP90-12-102511-01				
LP91	LP91-01-102511-01	VSP-1-91	1387754.543	1201991.692	
	LP91-12-102511-01				
LP92	NA	VSP-1-92	1388242.726	1201991.692	Refusal on rock debris
LP93	LP93-01-102511-01	VSP-1-93	1387510.452	1202414.47	
	LP93-12-102511-01				
LP94	NA	VSP-1-94	1387998.634	1202414.47	Refusal on rock debris

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Table 1
Sampling Location Coordinates
Long Pond Sediment Analysis
Greece, Monroe County, New York

Final Location ID	Field Sample ID	VSP Location ID	X Coordinate	Y Coordinate	Reason No Sample Collected
South Basin					
LP95	LP95-01-102711-01	VSP-2-1	1381616.235	1197931.259	
	LP95-12-102711-01				
LP96	LP96-01-102711-01	VSP-2-2	1382592.599	1197931.259	
	LP96-12-102711-01				
LP97	LP97-01-102711-01	VSP-2-3	1380883.961	1198354.037	
	LP97-12-102711-01				
LP98	LP98-01-102711-01	VSP-2-4	1381372.144	1198354.037	
	LP98-12-102711-01				
LP99	NA	VSP-2-5	1381860.326	1198354.037	Sediment core lost twice
LP100	LP100-01-102711-01	VSP-2-6	1381128.053	1198776.815	
	LP100-12-102811-01				

Notes:
ID = Identification
LP = Long Pond
NA = Not applicable; no sample collected
VSP = Visual Sampling Plan

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Table 2
Summary of Total Phosphorous Sediment Sample Results (0 to 1 ft)
Long Pond Sediment Analysis
Greece, Monroe County, New York

Location ID	Field Sample ID	Collection Device	Analytical Method Sampling Date	6010C Result (mg/kg)
Main Basin				
LP01	LP01-01-102411-01	Vibracore	10/24/2011	223 N*
LP02	LP02-01-102411-01	Vibracore	10/24/2011	818 N*
LP03	LP03-01-102411-01	Vibracore	10/24/2011	880
LP04	LP04-01-102411-01	Vibracore	10/24/2011	876 N*
LP05	LP05-01-102411-01	Vibracore	10/24/2011	716 N*
LP06	LP06-01-102411-01	Vibracore	10/24/2011	738
LP07	LP07-01-102411-01	Vibracore	10/24/2011	866 N*
LP08	LP08-01-102811-01	Vibracore	10/28/2011	862
LP09	LP09-01-102411-01	Vibracore	10/24/2011	724 N*
LP12	LP12-01-102411-01	Vibracore	10/24/2011	637 N*
LP13	LP13-01-102811-01	Vibracore	10/28/2011	583
LP14	LP14-01-102411-01	Vibracore	10/24/2011	830 N*
LP15	LP15-01-102711-01	Vibracore	10/27/2011	933
	LP15-01-102711-02	Vibracore	10/27/2011	905
LP16	LP16-01-102511-01	Vibracore	10/25/2011	850
LP17	LP17-01-102711-01	Vibracore	10/27/2011	914
LP18	LP18-01-102511-01	Vibracore	10/25/2011	794
LP19	LP19-01-102511-01	Vibracore	10/25/2011	245
	LP19-01-102511-02	Vibracore	10/25/2011	269
LP20	LP20-01-102511-01	Vibracore	10/25/2011	354
LP21	LP21-01-102411-01	Vibracore	10/24/2011	685 N*
	LP21-01-102411-02	Vibracore	10/24/2011	663 N*
LP22	LP22-01-102411-01	Vibracore	10/24/2011	776
LP23	LP23-01-102411-01	Vibracore	10/24/2011	822
LP24	LP24-01-102711-01	Vibracore	10/27/2011	864
LP25	LP25-01-102811-01	Vibracore	10/28/2011	834
LP26	LP26-01-102511-01	Vibracore	10/25/2011	3180
LP27	LP27-01-102711-01	Vibracore	10/27/2011	963
LP28	LP28-01-102611-01	Vibracore	10/26/2011	931
LP29	LP29-01-102711-01	Vibracore	10/27/2011	919
	LP29-01-102711-02	Vibracore	10/27/2011	920
LP30	LP30-01-102611-01	Vibracore	10/26/2011	913
LP31	LP31-01-102611-01	Vibracore	10/26/2011	826
LP33	LP33-01-102411-01	Vibracore	10/24/2011	486
LP34	LP34-01-102811-01	Vibracore	10/28/2011	915
LP35	LP35-01-102511-01	Vibracore	10/25/2011	886
LP36	LP36-01-102711-01	Vibracore	10/27/2011	967
LP37	LP37-01-102711-01	Vibracore	10/27/2011	970
LP38	LP38-01-102511-01	Vibracore	10/25/2011	961
LP39	LP39-01-102811-01	Vibracore	10/28/2011	938
LP40	LP40-01-102611-01	Vibracore	10/26/2011	997
LP41	LP41-01-102711-01	Vibracore	10/27/2011	937
	LP41-01-102711-02	Vibracore	10/27/2011	1000
LP42	LP42-01-102611-01	Vibracore	10/26/2011	1110
LP43	LP43-01-102811-01	Vibracore	10/28/2011	940
LP44	LP44-01-102611-01	Vibracore	10/26/2011	741
LP47	LP47-01-102411-01	Vibracore	10/24/2011	657
	LP47-01-102411-02	Vibracore	10/24/2011	686
LP48	LP48-01-102711-01	Vibracore	10/27/2011	884
LP49	LP49-01-102811-01	Vibracore	10/28/2011	985
LP50	LP50-01-012511-02	Vibracore	10/25/2011	987
	LP50-01-102511-01	Vibracore	10/25/2011	991
LP51	LP51-01-102711-01	Vibracore	10/27/2011	980
LP52	LP52-01-102611-01	Vibracore	10/26/2011	998

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Table 2
Summary of Total Phosphorous Sediment Sample Results (0 to 1 ft)
Long Pond Sediment Analysis
Greece, Monroe County, New York

Location ID	Field Sample ID	Collection Device	Analytical Method Sampling Date	6010C Result (mg/kg)
LP53	LP53-01-102611-01	Vibracore	10/26/2011	1060
LP54	LP54-01-102811-01	Vibracore	10/28/2011	996
LP55	LP55-01-102611-01	Vibracore	10/26/2011	917
	LP55-01-102611-02	Vibracore	10/26/2011	992
LP56	LP56-01-102811-01	Vibracore	10/28/2011	978
LP57	LP57-01-102611-01	Vibracore	10/26/2011	858
	LP57-01-102611-02	Vibracore	10/26/2011	863
LP58	LP58-01-102811-01	Vibracore	10/28/2011	770
LP59	LP59-01-102511-01	Vibracore	10/25/2011	451
LP62	LP62-01-102411-01	Vibracore	10/24/2011	777
LP63	LP63-01-102411-01	Vibracore	10/24/2011	825
LP64	LP64-01-102711-01	Vibracore	10/27/2011	933
LP65	LP65-01-102511-01	Vibracore	10/25/2011	925
LP66	LP66-01-102611-01	Vibracore	10/26/2011	968
LP67	LP67-01-102611-01	Vibracore	10/26/2011	953
LP68	LP68-01-102811-01	Vibracore	10/28/2011	908
LP69	LP69-01-102611-01	Vibracore	10/26/2011	997
LP70	LP70-01-102811-01	Vibracore	10/28/2011	989
LP71	LP71-01-102511-01	Vibracore	10/25/2011	853
LP72	LP72-01-102611-01	Vibracore	10/26/2011	724
LP73	LP73-01-102511-01	Vibracore	10/25/2011	255
LP75	LP75-01-102411-01	Vibracore	10/24/2011	692
LP77	LP77-01-102611-01	Vibracore	10/26/2011	837
LP78	LP78-01-102811-01	Vibracore	10/28/2011	932
LP79	LP79-01-102511-01	Vibracore	10/25/2011	915
LP80	LP80-01-102511-01	Vibracore	10/25/2011	903
LP81	LP81-01-102611-01	Vibracore	10/26/2011	816
LP82	LP82-01-10251-01	Vibracore	10/25/2011	354
LP84	LP84-01-102811-01	Vibracore	10/28/2011	570
LP85	LP85-01-102511-01	Vibracore	10/25/2011	907
LP86	LP86-01-102811-01	Vibracore	10/28/2011	946
LP87	LP87-01-102511-01	Vibracore	10/25/2011	849
LP88	LP88-01-102811-01	Vibracore	10/28/2011	618
LP90	LP90-01-102511-01	Vibracore	10/25/2011	906
LP91	LP91-01-102511-01	Vibracore	10/25/2011	897
LP93	LP93-01-102511-01	Vibracore	10/25/2011	512
South Basin				
LP95	LP95-01-102711-01	Hand Core	10/27/2011	900
LP96	LP96-01-102711-01	Hand Core	10/27/2011	917
LP97	LP97-01-102711-01	Hand Core	10/27/2011	781
LP98	LP98-01-102711-01	Hand Core	10/27/2011	674
LP100	LP100-01-102711-01	Hand Core	10/27/2011	1020

Notes:
* = Result is an outlier
bss = Below sediment surface
ft = Foot
ID = Identification
LP = Long Pond
mg/kg = Milligram per kilogram
N = Matrix spike sample recovery not within control limits

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Table 3
Summary of Total Phosphorous Sediment Sample Results (1 to 2 ft)
Long Pond Sediment Analysis
Greece, Monroe County, New York

Location ID	Field Sample ID	Collection Device	Analytical Method Sampling Date	6010C Result (mg/kg)
Main Basin				
LP01	LP01-12-102411-01	Vibracore	10/24/2011	376 N*
LP02	LP02-12-102411-01	Vibracore	10/24/2011	739 N*
	LP02-12-102411-02	Vibracore	10/24/2011	697 N*
LP03	LP03-12-102411-01	Vibracore	10/24/2011	833
LP04	LP04-12-102411-01	Vibracore	10/24/2011	701 N*
LP05	LP05-12-102411-01	Vibracore	10/24/2011	725 N*
LP06	LP06-12-102411-01	Vibracore	10/24/2011	516
LP07	LP07-12-102411-01	Vibracore	10/24/2011	768 J
LP08	LP08-12-102811-01	Vibracore	10/28/2011	706
LP09	LP09-12-102411-01	Vibracore	10/24/2011	275 N*
LP12	LP12-12-102411-01	Vibracore	10/24/2011	703 N*
LP13	LP13-12-102811-01	Vibracore	10/28/2011	744
LP14	LP14-12-102411-01	Vibracore	10/24/2011	735 N*
LP15	LP15-12-102711-01	Vibracore	10/27/2011	768
LP16	LP16-12-102511-01	Vibracore	10/25/2011	720
LP17	LP17-12-102711-01	Vibracore	10/27/2011	917
	LP17-12-102711-02	Vibracore	10/27/2011	830
LP18	LP18-12-102511-01	Vibracore	10/25/2011	442
LP19	LP19-12-102511-01	Vibracore	10/25/2011	265
LP20	LP20-12-102511-01	Vibracore	10/25/2011	591
LP21	LP21-12-102411-01	Vibracore	10/24/2011	356 N*
LP22	LP22-12-102411-01	Vibracore	10/24/2011	533
LP23	LP23-12-102411-01	Vibracore	10/24/2011	486
LP24	LP24-12-102711-01	Vibracore	10/27/2011	894
	LP24-12-102711-02	Vibracore	10/27/2011	947
LP25	LP25-12-102811-01	Vibracore	10/28/2011	836
LP26	LP26-12-102511-01	Vibracore	10/25/2011	854
	LP26-12-102511-02	Vibracore	10/25/2011	805
LP27	LP27-12-102711-01	Vibracore	10/27/2011	986
LP28	LP28-12-102611-01	Vibracore	10/26/2011	915
LP29	LP29-12-102711-01	Vibracore	10/27/2011	847
LP30	LP30-12-102611-01	Vibracore	10/26/2011	867
LP31	LP31-12-102611-01	Vibracore	10/26/2011	396
LP33	LP33-12-102411-01	Vibracore	10/24/2011	655
LP34	LP34-12-102811-01	Vibracore	10/28/2011	664
LP35	LP35-12-102511-01	Vibracore	10/25/2011	902
LP36	LP36-12-102711-01	Vibracore	10/27/2011	1020
LP37	LP37-12-102711-01	Vibracore	10/27/2011	909
LP38	LP38-12-102511-01	Vibracore	10/25/2011	972
LP39	LP39-12-102811-01	Vibracore	10/28/2011	970
LP40	LP40-12-102611-01	Vibracore	10/26/2011	994
LP41	LP41-12-102711-01	Vibracore	10/27/2011	971
LP42	LP42-12-102611-01	Vibracore	10/26/2011	920
LP43	LP43-12-102811-01	Vibracore	10/28/2011	559
LP44	LP44-12-102611-01	Vibracore	10/26/2011	276
LP47	LP47-12-102411-01	Vibracore	10/24/2011	514
LP48	LP48-12-102711-01	Vibracore	10/27/2011	735
LP49	LP49-12-102811-01	Vibracore	10/28/2011	766

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Table 3
Summary of Total Phosphorous Sediment Sample Results (1 to 2 ft)
Long Pond Sediment Analysis
Greece, Monroe County, New York

Location ID	Field Sample ID	Collection Device	Analytical Method Sampling Date	6010C Result (mg/kg)
LP50	LP50-12-102511-01	Vibracore	10/25/2011	912
LP51	LP51-12-102711-01	Vibracore	10/27/2011	1030
	LP51-12-102711-02	Vibracore	10/27/2011	1010
LP52	LP52-12-102611-01	Vibracore	10/26/2011	1040
LP53	LP53-12-102611-01	Vibracore	10/26/2011	1010
	LP53-12-102611-02	Vibracore	10/26/2011	1310
LP54	LP54-12-102811-01	Vibracore	10/28/2011	999
LP55	LP55-12-102611-01	Vibracore	10/26/2011	914
LP56	LP56-12-102811-01	Vibracore	10/28/2011	810
LP57	LP57-12-102611-01	Vibracore	10/26/2011	749
LP58	LP58-12-102811-01	Vibracore	10/28/2011	611
LP59	LP59-12-102511-01	Vibracore	10/25/2011	504
LP62	LP62-12-102411-01	Vibracore	10/24/2011	760
LP63	LP63-12-102411-01	Vibracore	10/24/2011	873
LP64	LP64-12-102711-01	Vibracore	10/27/2011	945
LP65	LP65-12-102511-01	Vibracore	10/25/2011	961
LP66	LP66-12-102611-01	Vibracore	10/26/2011	980
LP67	LP67-12-102611-01	Vibracore	10/26/2011	1290
LP68	LP68-12-102811-01	Vibracore	10/28/2011	998
LP69	LP69-12-102611-01	Vibracore	10/26/2011	943
LP70	LP70-12-102811-01	Vibracore	10/28/2011	986
LP71	LP71-12-102511-01	Vibracore	10/25/2011	846
LP72	LP72-12-102611-01	Vibracore	10/26/2011	488
LP73	LP73-12-102511-01	Vibracore	10/25/2011	229
LP75	LP75-12-102411-01	Vibracore	10/24/2011	378
LP77	LP77-12-102611-01	Vibracore	10/26/2011	792
LP78	LP78-12-102811-01	Vibracore	10/28/2011	900
LP79	LP79-12-102511-01	Vibracore	10/25/2011	949
LP80	LP80-12-102511-01	Vibracore	10/25/2011	941
LP81	LP81-12-102611-01	Vibracore	10/26/2011	781
LP82	LP82-12-102511-01	Vibracore	10/25/2011	306
LP84	LP84-12-102811-01	Vibracore	10/28/2011	382
LP85	LP85-12-102511-01	Vibracore	10/25/2011	924
LP86	LP86-12-102811-01	Vibracore	10/28/2011	920
LP87	LP87-12-102511-01	Vibracore	10/25/2011	879
LP88	LP88-12-102811-01	Vibracore	10/28/2011	284
LP90	LP90-12-102511-01	Vibracore	10/25/2011	821
LP91	LP91-12-102511-01	Vibracore	10/25/2011	902
LP93	LP93-12-102511-01	Vibracore	10/25/2011	665
South Basin				
LP95	LP95-12-102711-01	Hand Core	10/27/2011	616
LP96	LP96-12-102711-01	Hand Core	10/27/2011	616
LP97	LP97-12-102711-01	Hand Core	10/27/2011	738
LP98	LP98-12-102711-01	Hand Core	10/27/2011	767
LP100	LP100-12-102811-01	Hand Core	10/27/2011	923

Notes:

* = Result is an outlier
bss = Below sediment surface
ft = Foot
ID = Identification
J = Analyte positively identified; associated numerical value is approximate concentration of analyte in sample
LP = Long Pond
mg/kg = Milligram per kilogram
N = Matrix spike sample recovery not within control limits

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Table 4
Summary of Total Phosphorous Sediment Sample Results (2 to 4 ft)
Long Pond Sediment Analysis
Greece, Monroe County, New York

Location ID	Field Sample ID	Sampling Depth (ft bss)	Sample Collection	Analytical Method / Sampling Date	6010C / Result (mg/kg)
Main Basin					
LP08	LP08-23-102811-01	2 to 3	Vibracore	10/28/2011	642
LP13	LP13-23-102811-01	2 to 3	Vibracore	10/28/2011	636
	LP13-34-102811-01	3 to 4	Vibracore	10/28/2011	569
LP25	LP25-23-102811-01	2 to 3	Vibracore	10/28/2011	540
	LP25-34-102811-01	3 to 4	Vibracore	10/28/2011	472
LP39	LP39-23-102811-01	2 to 3	Vibracore	10/28/2011	801
	LP39-34-102811-01	3 to 4	Vibracore	10/28/2011	881
LP49	LP49-23-102811-01	2 to 3	Vibracore	10/28/2011	570
LP54	LP54-23-102811-01	2 to 3	Vibracore	10/28/2011	1050
LP70	LP70-23-102811-01	2 to 3	Vibracore	10/28/2011	766
LP86	LP86-23-102811-01	2 to 3	Vibracore	10/28/2011	938
	LP86-34-102811-01	3 to 4	Vibracore	10/28/2011	723

Notes:
bss = Below sediment surface
ft = Foot
ID = Identification
LP = Long Pond
mg/kg = Milligram per kilogram

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FIGURES

Figure 1
Site Location Map
Long Pond Sediment Analysis
Greece, Monroe County, New York

Legend

Long Pond Basins

0 1 Miles

N

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U.S. EPA REGION V
Contract No.: EP-S5-06-04
TDD: S05-0008-1004-036
DCN: 1029-2A-BBZO

Prepared By:
WESTON SOLUTIONS
6779 Engle Road
Suite I
Middleburg Heights, Ohio 44130

Figure 2
Site Features Map
Long Pond Sediment Analysis
Greece, Monroe County, New York

Main Basin			Main Basin		
X Coordinate	Y Coordinate	Sample Location	X Coordinate	Y Coordinate	Sample Location
1383849.087	1197763.911	VSP-1-1	1385313.633	1200300.58	VSP-1-52
1383116.814	1198186.689	VSP-1-2	1385801.815	1200300.58	VSP-1-53
1383604.996	1198186.689	VSP-1-3	1386289.997	1200300.58	VSP-1-54
1384093.178	1198186.689	VSP-1-4	1386778.179	1200300.58	VSP-1-55
1382384.54	1198609.467	VSP-1-5	1387266.361	1200300.58	VSP-1-56
1382872.722	1198609.467	VSP-1-6	1387754.543	1200300.58	VSP-1-57
1383360.905	1198609.467	VSP-1-7	1388242.726	1200300.58	VSP-1-58
1383849.087	1198609.467	VSP-1-8	1388730.908	1200300.58	VSP-1-59
1384337.269	1198609.467	VSP-1-9	1389219.09	1200300.58	VSP-1-60
1384825.451	1198609.467	VSP-1-10	1383116.814	1200723.358	VSP-1-61
1381652.267	1199032.245	VSP-1-11	1383604.996	1200723.358	VSP-1-62
1382140.449	1199032.245	VSP-1-12	1384093.178	1200723.358	VSP-1-63
1382628.631	1199032.245	VSP-1-13	1384581.36	1200723.358	VSP-1-64
1383116.814	1199032.245	VSP-1-14	1385069.542	1200723.358	VSP-1-65
1383604.996	1199032.245	VSP-1-15	1385557.724	1200723.358	VSP-1-66
1384093.178	1199032.245	VSP-1-16	1386045.906	1200723.358	VSP-1-67
1384581.36	1199032.245	VSP-1-17	1386534.088	1200723.358	VSP-1-68
1385069.542	1199032.245	VSP-1-18	1387022.27	1200723.358	VSP-1-69
1385557.724	1199032.245	VSP-1-19	1387510.452	1200723.358	VSP-1-70
1386045.906	1199032.245	VSP-1-20	1387998.634	1200723.358	VSP-1-71
1381896.358	1199455.024	VSP-1-21	1388486.817	1200723.358	VSP-1-72
1382384.54	1199455.024	VSP-1-22	1388974.999	1200723.358	VSP-1-73
1382872.722	1199455.024	VSP-1-23	1389463.181	1200723.358	VSP-1-74
1383360.905	1199455.024	VSP-1-24	1385313.633	1201146.136	VSP-1-75
1383849.087	1199455.024	VSP-1-25	1385801.815	1201146.136	VSP-1-76
1384337.269	1199455.024	VSP-1-26	1386289.997	1201146.136	VSP-1-77
1384825.451	1199455.024	VSP-1-27	1386778.179	1201146.136	VSP-1-78
1385313.633	1199455.024	VSP-1-28	1387266.361	1201146.136	VSP-1-79
1385801.815	1199455.024	VSP-1-29	1387754.543	1201146.136	VSP-1-80
1386289.997	1199455.024	VSP-1-30	1388242.726	1201146.136	VSP-1-81
1386778.179	1199455.024	VSP-1-31	1388730.908	1201146.136	VSP-1-82
1387266.361	1199455.024	VSP-1-32	1389219.09	1201146.136	VSP-1-83
1382140.449	1199877.802	VSP-1-33	1386534.088	1201568.914	VSP-1-84
1382628.631	1199877.802	VSP-1-34	1387022.27	1201568.914	VSP-1-85
1383116.814	1199877.802	VSP-1-35	1387510.452	1201568.914	VSP-1-86
1383604.996	1199877.802	VSP-1-36	1387998.634	1201568.914	VSP-1-87
1384093.178	1199877.802	VSP-1-37	1388486.817	1201568.914	VSP-1-88
1384581.36	1199877.802	VSP-1-38	1386778.179	1201991.692	VSP-1-89
1385069.542	1199877.802	VSP-1-39	1387266.361	1201991.692	VSP-1-90
1385557.724	1199877.802	VSP-1-40	1387754.543	1201991.692	VSP-1-91
1386045.906	1199877.802	VSP-1-41	1388242.726	1201991.692	VSP-1-92
1386534.088	1199877.802	VSP-1-42	1387510.452	1202414.47	VSP-1-93
1387022.27	1199877.802	VSP-1-43	1387998.634	1202414.47	VSP-1-94
1387510.452	1199877.802	VSP-1-44	South Basin		
1387998.634	1199877.802	VSP-1-45	1381616.235	1197931.259	VSP-2-1
1382384.54	1200300.58	VSP-1-46	1382592.599	1197931.259	VSP-2-2
1382872.722	1200300.58	VSP-1-47	1380883.961	1198354.037	VSP-2-3
1383360.905	1200300.58	VSP-1-48	1381372.144	1198354.037	VSP-2-4
1383849.087	1200300.58	VSP-1-49	1381860.326	1198354.037	VSP-2-5
1384337.269	1200300.58	VSP-1-50	1381128.053	1198776.815	VSP-2-6
1384825.451	1200300.58	VSP-1-51			

Legend

- Proposed Sampling Locations
- Sampling Area

0 800 Feet

N

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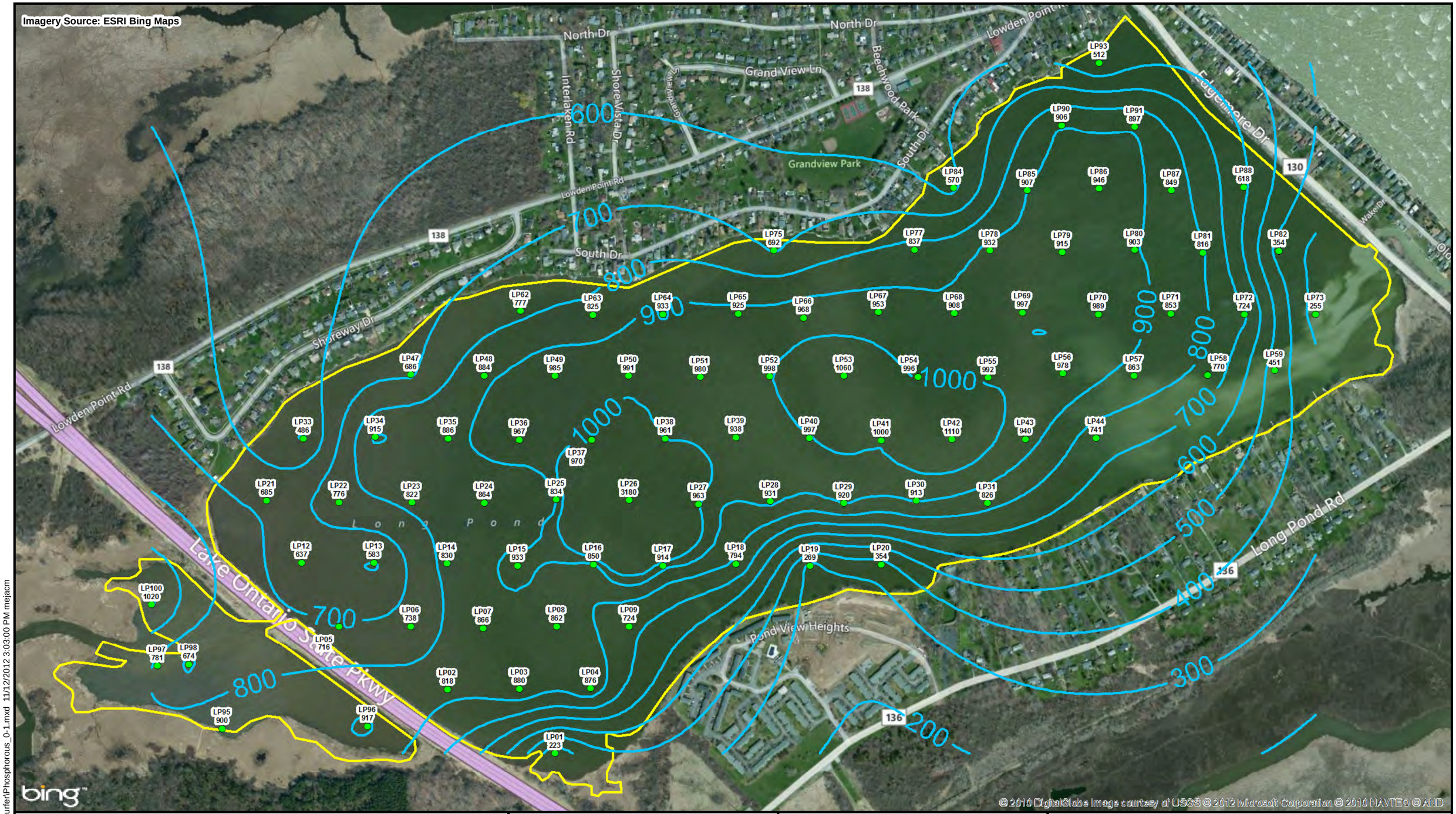
Figure 3
VSP Sampling Location Map
Long Pond Sediment Analysis
Greece, Monroe County, New York



Legend

- Sampling Locations
- Phosphorous
- Sampling Area

0 600 Feet

N

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Figure 4
Phosphorous Isoconcentration Map - 0 to 1 ft
Long Pond Sediment Analysis
Greece, Monroe County, New York

FILE: D:\Long_Pond\Surfer\Phosphorous_0-1.mxd 11/12/2012 3:03:00 PM mejacm

Imagery Source: ESRI Bing Maps

Legend

- Sampling Locations
- Phosphorous
- Sampling Area

0 600 Feet

N

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Figure 5
Phosphorous Isoconcentration Map - 1 to 2 ft
Long Pond Sediment Analysis
Greece, Monroe County, New York

FILE: D:\Long_Pond\Surfer\Phosphorous_1-2.mxd 11/12/2012 3:23:11 PM mejacm

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Imagery Source: ESRI Bing Maps

North Dr
Interlaken Rd
Shore Vista Dr
Grandview Ln
Grand View Ln
Beechwood Park
South Dr
Lowden Point Rd
Edgemere Dr
Wake Dr
Grandview Park
138
130
Shoreway Dr
LP86
938
LP70
766
LP49
570
LP54
1050
LP39
881
LP25
540
LP13
636
LP08
642
600
700
800
900
1000
L o n g P o n d
Lake Ontario State Pkwy
Pond View Heights
Long Pond Rd
136
bing
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Legend

- Sampling Location
- Phosphorous
- Sampling Area

0 600 Feet

N

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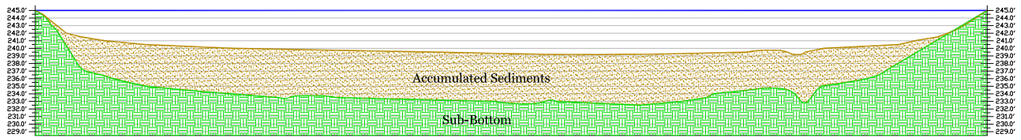
Figure 6
Phosphorous Isoconcentration Map - 2 to 4 ft
Long Pond Sediment Analysis
Greece, Monroe County, New York

FILE: D:\Long_Pond\Surfer\Phosphorous_2-4.mxd 11/12/2012 3:54:49 PM mejacm

APPENDIX A
BATHYMETRIC SURVEY

Cross Sectional View 'A'



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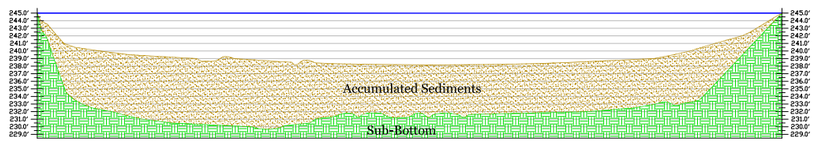
1:25 vertical exaggeration

Cross Sectional View 'B'



Scale
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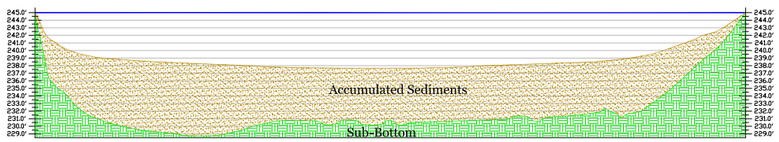
1:25 vertical exaggeration

Cross Sectional View 'C'



Scale
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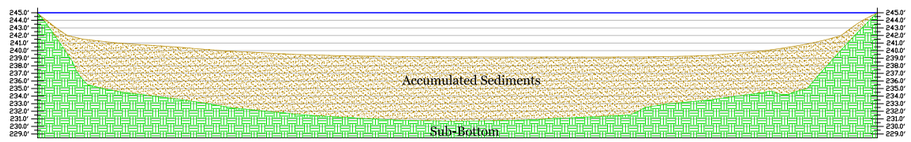
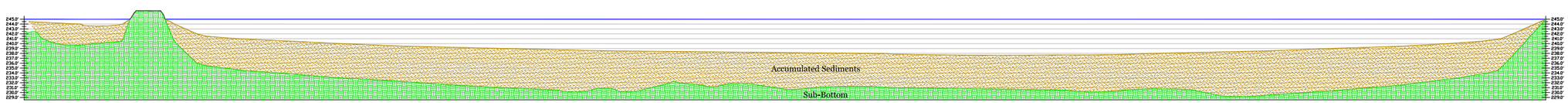
1:25 vertical exaggeration

Cross Sectional View 'D'



Scale
1"=500' horizontal scale
1:25 vertical exaggeration

Cross Sectional View 'E'



Scale
1"=600' horizontal scale
1:25 vertical exaggeration

0 1/2" 1"

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CROSS SECTIONAL VIEWS OF BOTTOM AND SUB-BOTTOM OF LONG POND, MONROE COUNTY GREECE, NEW YORK

NOTES:

DRAWN BY: MJC
DATE: 20Dec10
JOB NO: XXX

DRAFT

FIGURE
1
OF 1

File: F:/Hydrography/Weston/Long Pond/CAD Files/Cross Sections/20Dec10 Plot B.dwg

Hydrographic Survey of Accumulated Sediments of Long Pond Rochester, New York.

1382000X 1384000X 1386000X 1388000X 1390000X

1202000Y 1200000Y 1198000Y

>= 245.00
244.50 - 244.99
244.00 - 244.49
243.50 - 243.99
243.00 - 243.49
242.50 - 242.99
242.00 - 242.49
241.50 - 241.99
241.00 - 241.49
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229.50 - 229.99
229.00 - 229.49
228.50 - 228.99
228.00 - 228.49
227.50 - 227.99
227.00 - 227.49
226.50 - 226.99
226.00 - 226.49
225.50 - 225.99
225.00 - 225.49
< 225.00

A B C D E

N

Feet 0 500 1000 2000 3000 Feet

Hydrographic Survey Contours of Accumulated Sediments of Long Pond Rochester, New York.

1382000X 1384000X 1386000X 1388000X 1390000X

1202000Y

1200000Y

1198000Y

N

A B C D E

A B C D E

Feet 0 500 1000 2000 3000 Feet

Hydrographic Survey of Sub-Bottom of Long Pond Rochester, New York.

1382000X 1384000X 1386000X 1388000X 1390000X

1202000Y

1200000Y

1198000Y

>= 245.00
244.50 - 244.99
244.00 - 244.49
243.50 - 243.99
243.00 - 243.49
242.50 - 242.99
242.00 - 242.49
241.50 - 241.99
241.00 - 241.49
240.50 - 240.99
240.00 - 240.49
239.50 - 239.99
239.00 - 239.49
238.50 - 238.99
238.00 - 238.49
237.50 - 237.99
237.00 - 237.49
236.50 - 236.99
236.00 - 236.49
235.50 - 235.99
235.00 - 235.49
234.50 - 234.99
234.00 - 234.49
233.50 - 233.99
233.00 - 233.49
232.50 - 232.99
232.00 - 232.49
231.50 - 231.99
231.00 - 231.49
230.50 - 230.99
230.00 - 230.49
229.50 - 229.99
229.00 - 229.49
228.50 - 228.99
228.00 - 228.49
227.50 - 227.99
227.00 - 227.49
226.50 - 226.99
226.00 - 226.49
225.50 - 225.99
225.00 - 225.49
< 225.00

A B C D E

N

Feet 0 500 1000 2000 3000 Feet

Hydrographic Survey Contours of Sub-Bottom of Long Pond Rochester, New York.

1382000X 1384000X 1386000X 1388000X 1390000X

1202000Y

1200000Y

1198000Y

>= 245.00
244.50 - 244.99
244.00 - 244.49
243.50 - 243.99
243.00 - 243.49
242.50 - 242.99
242.00 - 242.49
241.50 - 241.99
241.00 - 241.49
240.50 - 240.99
240.00 - 240.49
239.50 - 239.99
239.00 - 239.49
238.50 - 238.99
238.00 - 238.49
237.50 - 237.99
237.00 - 237.49
236.50 - 236.99
236.00 - 236.49
235.50 - 235.99
235.00 - 235.49
234.50 - 234.99
234.00 - 234.49
233.50 - 233.99
233.00 - 233.49
232.50 - 232.99
232.00 - 232.49
231.50 - 231.99
231.00 - 231.49
230.50 - 230.99
230.00 - 230.49
229.50 - 229.99
229.00 - 229.49
228.50 - 228.99
228.00 - 228.49
227.50 - 227.99
227.00 - 227.49
226.50 - 226.99
226.00 - 226.49
225.50 - 225.99
225.00 - 225.49
< 225.00

N

A B C D E

Feet 0 500 1000 2000 3000 Feet

APPENDIX B
ANALYTICAL DATA VALIDATION REPORT

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, Il. 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

August 3, 2012

Mr. Michael Shaw
Great Lakes National Program Office
United States Environmental Protection Agency, Region 2
290 Broadway
New York, NY 10007-1866

Re: Data Review of Total Phosphorus Analysis
For Sediment Samples Collected on October 24-28, 2011
Long Pond Sediment Analysis
Greece, Monroe County, New York
DCN: 1029-2F-AUDN

Dear Mr. Shaw:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on October 24-28, 2011, for the Great Lakes National Program Office (GLNPO) Long Pond Sediment Analysis Site. This data review is for total phosphorus analysis of 199 sediment samples that include 15 field duplicate samples that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan, Long Pond Sediment Analysis" dated May 2011, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Inorganic Data Review as applicable to the method used for analysis. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following six work orders:

- K1110390
- K1110445
- K1110496
- K1110536
- K1110582
- K1110589

The samples were analyzed for total phosphorus using U.S. EPA SW-846 Method 6010C. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for review by the software program, checked for completeness, and validated.

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Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for each work order. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF TOTAL PHOSPHORUS DATA REVIEW

The holding times, calibration standards, calibration blanks, serial dilutions, laboratory control samples (LCS), method blanks, and serial dilutions were all within the QC limits. All sample results were based on a dry weight for the phosphorus analyses.

Through data validation and use of the ADR program, a couple of minor problems with the quality control indicators were discovered. In work order K1110390, one laboratory duplicate was outside the QC limit for relative percent difference (RPD). The associated parent sample results for copper and lead were flagged as estimated. In addition, one matrix spike (MS) sample in work order K1110390 and two MS samples in work order K K1110589 were outside QC limits. One sample result required qualification and the other two did not. A more detailed description is provided below under Minor Problems.

The QAPP stated that 15 field duplicates would be collected. There were exactly 15 field duplicate samples collected. The RPDs for the field duplicates collected were within the QC limit of 50 RPD or less. Table 2 summarizes the field duplicate results.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

Laboratory Duplicates. CAS analyzed a total of 15 laboratory duplicates with all the work orders included in this data summary report. Precision requirements were 150 RPD for phosphorus. All RPD values were within this QC limit except for one laboratory duplicate. For the laboratory duplicate sample associated with sample LP07-12-102411-01, the phosphorus RPD is 20.6 percent. The phosphorus result in sample LP07-12-102411-01 was flagged “J” as estimated for this discrepancy. This issue appears to be sample-specific as the RPD value for the other laboratory duplicates were acceptable. Data usability is not affected.

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Matrix Spike Samples. CAS analyzed a total of 15 MS samples with all the work orders included in this data summary report. Three of the 15 MS samples were outside the QC limits.

In work order K1110390, the spike of sample LP07-12-102411-01 had an elevated recovery of 145 percent which is above the QC limit. The associated spiked sample, LP07-12-102411-01, was flagged "J" as estimated due to matrix interference.

In work order K1110589, two MS samples had low recoveries. However, the spike amount was more than four times lower than the sample concentration in each instance and no qualification was required in accordance with data validation guidance.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the attachments.

Sensitivity. Target reporting limit for phosphorus as stated in the QAPP was 6 milligrams per kilogram (mg/kg). This was not always met. However, there were phosphorus detection in all samples above the reporting limit and data usability is not affected.

Precision. Field precision was evaluated by evaluating the mean RPDs for the field duplicate results. For the field duplicates, the average RPD is 6 percent which is below the QC limit stated in the QAPP. Field precision was evaluated and found to be acceptable. Table 3 summarizes the field precision results.

Laboratory precision was determined by evaluating the RPD values for the laboratory duplicate samples. Table 3 summarizes the mean RPD for laboratory duplicates. The laboratory precision was acceptable for phosphorus based on the mean RPD of 5 percent which is within QAPP-stated QC limits.

Accuracy. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for MS and LCS results. The LCS and MS recoveries were within the QC limits for all samples. Table 3 summarizes the accuracy estimates for this project. The mean MS recovery is 94 percent and the mean LCS recovery is 102 percent. Laboratory accuracy was acceptable. Based on the mean recoveries for both the LCSs and MSs, there appears to be no bias associated with the phosphorus analyses.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All sample results were received and are usable.

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In summary, there were some minor problems with QC failures as discussed above that required some results to be flagged. The ADR Summary Report in Attachment B indicates which sample results were flagged during data validation and the reason for the qualification. The laboratory data qualifiers applied are also indicated on the ADR Summary Report in Attachment B. Attachment C provides data qualifier definitions for those qualifiers applied during data validation and by the laboratory.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

TJ McFarland
WESTON START Project Manager

Attachments:

Tables
A - QA/QC Analysis Checklists for Phosphorus
B – ADR Summary Report for Phosphorus
C – Data Qualifier Definitions

cc: project file

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TABLES

TABLE 1 SAMPLES INCLUDED IN DATA REVIEW			
Sample ID	**Lab ID**	**Date Collected**	**Comment**
LP01-01-102411-01	K1110390-001	10/24/2011	
LP01-12-102411-01	K1110390-002	10/24/2011	
LP02-01-102411-01	K1110390-003	10/24/2011	
LP02-12-102411-01	K1110390-004	10/24/2011	
LP02-12-102411-02	K1110390-005	10/24/2011	Field duplicate of LP02-12-102411-01
LP04-01-102411-01	K1110390-006	10/24/2011	
LP04-12-102411-01	K1110390-007	10/24/2011	
LP05-01-102411-01	K1110390-008	10/24/2011	
LP05-12-102411-01	K1110390-009	10/24/2011	
LP07-01-102411-01	K1110390-010	10/24/2011	
LP07-12-102411-01	K1110390-011	10/24/2011	
LP09-01-102411-01	K1110390-012	10/24/2011	
LP09-12-102411-01	K1110390-013	10/24/2011	
LP12-01-102411-01	K1110390-014	10/24/2011	
LP12-12-102411-01	K1110390-015	10/24/2011	
LP14-01-102411-01	K1110390-016	10/24/2011	
LP14-12-102411-01	K1110390-017	10/24/2011	
LP21-01-102411-01	K1110390-018	10/24/2011	
LP21-01-102411-02	K1110390-019	10/24/2011	Field duplicate of LP21-01-102411-01
LP21-12-102411-01	K1110390-020	10/24/2011	
LP23-01-102411-01	K1110390-021	10/24/2011	
LP23-01-102411-01	K1110390-022	10/24/2011	
LP33-01-102411-01	K1110390-023	10/24/2011	
LP33-12-102411-01	K1110390-024	10/24/2011	
LP47-01-102411-01	K1110390-025	10/24/2011	
LP47-01-102411-02	K1110390-026	10/24/2011	Field duplicate of LP47-01-102411-01
LP47-12-102411-01	K1110390-027	10/24/2011	
LP62-01-102411-01	K1110390-028	10/24/2011	
LP62-12-102411-01	K1110390-029	10/24/2011	
LP03-01-102411-01	K1110445-001	10/24/2011	
LP03-12-102411-01	K1110445-002	10/24/2011	
LP06-01-102411-01	K1110445-003	10/24/2011	
LP06-12-102411-01	K1110445-004	10/24/2011	
LP16-01-102511-01	K1110445-005	10/25/2011	
LP16-12-102511-01	K1110445-006	10/25/2011	
LP18-01-102511-01	K1110445-007	10/25/2011	
LP18-12-102511-01	K1110445-008	10/25/2011	
LP19-01-102511-01	K1110445-009	10/25/2011	
LP19-01-102511-02	K1110445-010	10/25/2011	Field duplicate of LP19-01-102511-01
LP19-12-102511-01	K1110445-011	10/25/2011	

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
LP20-01-102511-01	K1110445-012	10/25/2011	
LP20-12-102511-01	K1110445-013	10/25/2011	
LP22-01-102411-01	K1110445-014	10/24/2011	
LP22-12-102411-01	K1110445-015	10/24/2011	
LP26-01-102511-01	K1110445-016	10/25/2011	
LP26-12-102511-01	K1110445-017	10/25/2011	
LP26-12-102511-02	K1110445-018	10/25/2011	Field duplicate of LP26-12-102511-01
LP35-01-102511-01	K1110445-019	10/25/2011	
LP35-12-102511-01	K1110445-020	10/25/2011	
LP38-01-102511-01	K1110445-021	10/25/2011	
LP38-12-102511-01	K1110445-022	10/25/2011	
LP50-01-102511-01	K1110445-023	10/25/2011	
LP50-01-102511-02	K1110445-024	10/25/2011	Field duplicate of LP50-01-102511-01
LP50-12-102511-01	K1110445-025	10/25/2011	
LP63-01-102411-01	K1110445-026	10/24/2011	
LP63-12-102411-01	K1110445-027	10/24/2011	
LP65-01-102511-01	K1110445-028	10/25/2011	
LP65-12-102511-01	K1110445-029	10/25/2011	
LP75-01-102411-01	K1110445-030	10/24/2011	
LP75-12-102411-01	K1110445-031	10/24/2011	
LP28-01-102611-01	K1110496-001	10/26/2011	
LP28-12-102611-01	K1110496-002	10/26/2011	
LP30-01-102611-01	K1110496-003	10/26/2011	
LP30-12-102611-01	K1110496-004	10/26/2011	
LP31-01-102611-01	K1110496-005	10/26/2011	
LP31-12-102611-01	K1110496-006	10/26/2011	
LP40-01-102611-01	K1110496-007	10/26/2011	
LP40-12-102611-01	K1110496-008	10/26/2011	
LP42-01-102611-01	K1110496-009	10/26/2011	
LP42-12-102611-01	K1110496-010	10/26/2011	
LP44-01-102611-01	K1110496-011	10/26/2011	
LP44-12-102611-01	K1110496-012	10/26/2011	
LP53-01-102611-01	K1110496-013	10/26/2011	
LP53-12-102611-01	K1110496-014	10/26/2011	
LP53-12-102611-02	K1110496-015	10/26/2011	Field duplicate of LP53-12-102611-01
LP55-01-102611-01	K1110496-016	10/26/2011	
LP55-01-102611-02	K1110496-017	10/26/2011	Field duplicate of LP55-01-102611-01

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
LP57-01-102611-01	K1110496-018	10/26/2011	
LP57-01-102611-02	K1110496-019	10/26/2011	Field duplicate of LP57-01-102611-01
LP57-12-102611-01	K1110496-020	10/26/2011	
LP59-01-102511-01	K1110496-021	10/25/2011	
LP59-12-102511-01	K1110496-022	10/25/2011	
LP67-01-102611-01	K1110496-023	10/26/2011	
LP67-12-102611-01	K1110496-024	10/26/2011	
LP71-01-102511-01	K1110496-025	10/25/2011	
LP71-12-102511-01	K1110496-026	10/25/2011	
LP73-01-102511-01	K1110496-027	10/25/2011	
LP73-12-102511-01	K1110496-028	10/25/2011	
LP77-01-102611-01	K1110496-029	10/26/2011	
LP77-12-102611-01	K1110496-030	10/26/2011	
LP79-01-102511-01	K1110496-031	10/25/2011	
LP79-12-102511-01	K1110496-032	10/25/2011	
LP80-01-102511-01	K1110496-033	10/25/2011	
LP80-12-102511-01	K1110496-034	10/25/2011	
LP82-01-102511-01	K1110496-035	10/25/2011	
LP82-12-102511-01	K1110496-036	10/25/2011	
LP85-01-102511-01	K1110496-037	10/25/2011	
LP85-12-102511-01	K1110496-038	10/25/2011	
LP87-01-102511-01	K1110496-039	10/25/2011	
LP87-12-102511-01	K1110496-040	10/25/2011	
LP90-01-102511-01	K1110496-041	10/25/2011	
LP90-12-102511-01	K1110496-042	10/25/2011	
LP91-01-102511-01	K1110496-043	10/25/2011	
LP91-12-102511-01	K1110496-044	10/25/2011	
LP93-01-102511-01	K1110496-045	10/25/2011	
LP93-12-102511-01	K1110496-046	10/25/2011	
LP55-12-102611-01	K1110496-047	10/26/2011	
LP15-01-102711-01	K1110536-001	10/27/2011	
LP15-01-102711-02	K1110536-002	10/27/2011	Field duplicate of LP15-01-102711-01
LP15-12-102711-01	K1110536-003	10/27/2011	
LP17-01-102711-01	K1110536-004	10/27/2011	
LP17-12-102711-01	K1110536-005	10/27/2011	
LP17-12-102711-02	K1110536-006	10/27/2011	Field duplicate of LP17-12-102711-01
LP24-01-102711-01	K1110536-007	10/27/2011	

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
LP24-12-102711-01	K1110536-008	10/27/2011	
LP24-12-102711-02	K1110536-009	10/27/2011	Field duplicate of LP24-12-102711-01
LP27-01-102711-01	K1110536-010	10/27/2011	
LP27-12-102711-01	K1110536-011	10/27/2011	
LP36-01-102711-01	K1110536-012	10/27/2011	
LP36-12-102711-01	K1110536-013	10/27/2011	
LP37-01-102711-01	K1110536-014	10/27/2011	
LP37-12-102711-01	K1110536-015	10/27/2011	
LP48-01-102711-01	K1110536-016	10/27/2011	
LP48-12-102711-01	K1110536-017	10/27/2011	
LP52-01-102611-01	K1110536-018	10/26/2011	
LP52-12-102611-01	K1110536-019	10/26/2011	
LP66-01-102611-01	K1110536-020	10/26/2011	
LP66-12-102611-01	K1110536-021	10/26/2011	
LP69-01-102611-01	K1110536-022	10/26/2011	
LP69-12-102611-01	K1110536-023	10/26/2011	
LP72-01-102611-01	K1110536-024	10/26/2011	
LP72-12-102611-01	K1110536-025	10/26/2011	
LP81-01-102611-01	K1110536-026	10/26/2011	
LP81-12-102611-01	K1110536-027	10/26/2011	
LP95-01-102711-01	K1110536-028	10/27/2011	
LP95-12-102711-01	K1110536-029	10/27/2011	
LP08-01-102811-01	K1110582-001	10/28/2011	
LP08-12-102811-01	K1110582-002	10/28/2011	
LP08-23-102811-01	K1110582-003	10/28/2011	
LP13-01-102811-01	K1110582-004	10/28/2011	
LP13-12-102811-01	K1110582-005	10/28/2011	
LP13-23-102811-01	K1110582-006	10/28/2011	
LP13-34-102811-01	K1110582-007	10/28/2011	
LP25-01-102811-01	K1110582-008	10/28/2011	
LP25-12-102811-01	K1110582-009	10/28/2011	
LP25-23-102811-01	K1110582-010	10/28/2011	
LP25-34-102811-01	K1110582-011	10/28/2011	
LP29-01-102711-01	K1110582-012	10/27/2011	
LP29-01-102711-02	K1110582-013	10/27/2011	Field duplicate of LP29-01-102711-01
LP29-12-102711-01	K1110582-014	10/27/2011	
LP34-01-102811-01	K1110582-015	10/28/2011	

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
LP34-12-102811-01	K1110582-016	10/28/2011	
LP39-01-102811-01	K1110582-017	10/28/2011	
LP39-12-102811-01	K1110582-018	10/28/2011	
LP39-23-102811-01	K1110582-019	10/28/2011	
LP39-34-102811-01	K1110582-020	10/28/2011	
LP41-01-102711-01	K1110582-021	10/27/2011	
LP41-01-102711-02	K1110582-022	10/27/2011	Field duplicate of LP41-01-102711-01
LP41-12-102711-01	K1110582-023	10/27/2011	
LP51-01-102711-01	K1110582-024	10/27/2011	
LP51-12-102711-01	K1110582-025	10/27/2011	
LP51-12-102711-02	K1110582-026	10/27/2011	Field duplicate of LP51-12-102711-01
LP54-01-102811-01	K1110582-027	10/28/2011	
LP54-12-102811-01	K1110582-028	10/28/2011	
LP54-23-102811-01	K1110582-029	10/28/2011	
LP64-01-102711-01	K1110582-030	10/27/2011	
LP64-12-102711-01	K1110582-031	10/27/2011	
LP100-01-102711-01	K1110589-001	10/27/2011	
LP100-12-102711-01	K1110589-002	10/27/2011	
LP43-01-102811-01	K1110589-003	10/28/2011	
LP43-12-102811-01	K1110589-004	10/28/2011	
LP49-01-102811-01	K1110589-005	10/28/2011	
LP49-12-102811-01	K1110589-006	10/28/2011	
LP49-23-102811-01	K1110589-007	10/28/2011	
LP56-01-102811-01	K1110589-008	10/28/2011	
LP56-12-102811-01	K1110589-009	10/28/2011	
LP58-01-102811-01	K1110589-010	10/28/2011	
LP58-12-102811-01	K1110589-011	10/28/2011	
LP68-01-102811-01	K1110589-012	10/28/2011	
LP68-12-102811-01	K1110589-013	10/28/2011	
LP70-01-102811-01	K1110589-014	10/28/2011	
LP70-12-102811-01	K1110589-015	10/28/2011	
LP70-23-102811-01	K1110589-016	10/28/2011	
LP78-01-102811-01	K1110589-017	10/28/2011	
LP78-12-102811-01	K1110589-018	10/28/2011	
LP84-01-102811-01	K1110589-019	10/28/2011	
LP84-12-102811-01	K1110589-020	10/28/2011	
LP86-01-102811-01	K1110589-021	10/28/2011	

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
LP86-12-102811-01	K1110589-022	10/28/2011	
LP86-23-102811-01	K1110589-023	10/28/2011	
LP86-34-102811-01	K1110589-024	10/28/2011	
LP88-01-102811-01	K1110589-025	10/28/2011	
LP88-12-102811-01	K1110589-026	10/28/2011	
LP96-01-102711-01	K1110589-027	10/27/2011	
LP96-12-102711-01	K1110589-028	10/27/2011	
LP97-01-102711-01	K1110589-029	10/27/2011	
LP97-12-102711-01	K1110589-030	10/27/2011	
LP98-01-102711-01	K1110589-031	10/27/2011	
LP98-12-102711-01	K1110589-032	10/27/2011	

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TABLE 2
FIELD DUPLICATE RESULTS

Analyte	Sample: LP02-12-102411-01 Sample Result (%)	Duplicate Result (%)	RPD	Sample: LP21-01-102411-01 Sample Result (%)	Duplicate Result (%)	RPD
Phosphorus	739	697	6	685	663	3
Analyte	**Sample: LP47-01-102411-01 Sample Result (%)**	**Duplicate Result (%)**	**RPD**	**Sample: LP19-01-102511-01 Sample Result (mg/kg)**	**Duplicate Result (mg/kg)**	**RPD**
Phosphorus	657	686	4	245	269	9
Analyte	**Sample: LP26-12-102511-01 Sample Result (%)**	**Duplicate Result (%)**	**RPD**	**Sample: LP50-01-102511-01 Sample Result (mg/kg)**	**Duplicate Result (mg/kg)**	**RPD**
Phosphorus	854	805	6	987	991	0
Analyte	**Sample: LP53-12-102611-01 Sample Result (%)**	**Duplicate Result (%)**	**RPD**	**Sample: LP55-01-102611-01 Sample Result (mg/kg)**	**Duplicate Result (mg/kg)**	**RPD**
Phosphorus	1010	1310	26	917	992	8
Analyte	**Sample: LP57-01-102611-01 Sample Result (%)**	**Duplicate Result (%)**	**RPD**	**Sample: LP15-01-102711-01 Sample Result (mg/kg)**	**Duplicate Result (mg/kg)**	**RPD**
Phosphorus	858	863	1	933	905	3
Analyte	**Sample: LP17-12-102711-01 Sample Result (%)**	**Duplicate Result (%)**	**RPD**	**Sample: LP24-12-102711-01 Sample Result (mg/kg)**	**Duplicate Result (mg/kg)**	**RPD**
Phosphorus	917	830	10	894	947	6
Analyte	**Sample: LP29-01-102711-01 Sample Result (%)**	**Duplicate Result (%)**	**RPD**	**Sample: LP41-01-102711-01 Sample Result (mg/kg)**	**Duplicate Result (mg/kg)**	**RPD**
Phosphorus	919	920	0	937	1000	7

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TABLE 2
FIELD DUPLICATE RESULTS

	Sample: LP51-12-102711-01					
Analyte	**Sample Result (%)**	**Duplicate Result (%)**	**RPD**	**Sample Result (mg/kg)**	**Duplicate Result (mg/kg)**	**RPD**
Phosphorus	1030	1010	2			

Notes:
RPD – Relative Percent Difference

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TABLE 3
QUANTITATIVE DATA ASSESSMENT

	Field Precision	Analytical Precision	Analytical Accuracy/Bias	
Parameter	**Field Duplicate RPD (%) (n=15)**	**Laboratory Duplicate RPD (%) (n=15)**	**Mean MS Recovery (%) (n=15)**	**Mean LCS Recovery (%)(n=14)**
Phosphorus	6	5	94	102

Notes:

LCS – Laboratory Control Sample
MS – Matrix Spike
NA – Not Applicable (both results were non-detect for silver)
RPD – Relative Percent Difference

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ATTACHMENT A

QA/QC ANALYSIS CHECKLISTS FOR PHOSPHORUS

PHOSPHORUS BY
U.S. EPA SW-846 METHOD 6010C

CAS Work Order #: K1110390

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Long Pond Sediment Analysis
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 3, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _X_	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes		
No	X	(EXPLAIN)

The project quantitation limit stated in the QAPP was 6 milligrams per kilogram (mg/kg). This was not always met. However, there were phosphorus detection in all samples above the reporting limit and data usability is not affected.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

Phosphorus was not detected in the method blanks above the reporting limit.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110390

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards are not applicable to phosphorus analysis.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There were 3 matrix spike (MS) samples associated with this work order. One of the spiked samples had an elevated recovery above the QC limit at 145 percent recovery. The associated spiked sample, LP07-12-102411-01, was flagged "J" as estimated due to matrix interference.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110390

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recovery met the QAPP QC limits for the AVS and SEM analyses.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The initial and continuing calibration verification standards were within QC limits.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Continuing calibration blanks contained no detections above the reporting limits.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110390

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Serial dilution is not applicable to the AVS method.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

Three laboratory duplicates were analyzed with this work order. One of the three was outside the QC limit of 15 RPD. Specifically, the laboratory duplicate of sample LP07-12-102411-01 had an RPD of 20.6 percent. The phosphorus result in sample LP07-12-102411-01 was flagged "J" as estimated.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110390

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

The data are acceptable for use as qualified.

PHOSPHORUS BY
U.S. EPA SW-846 METHOD 6010C

CAS Work Order #: K1110445

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Long Pond Sediment Analysis
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 3, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _X_	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes		
No	X	(EXPLAIN)

The project quantitation limit stated in the QAPP was 6 milligrams per kilogram (mg/kg). This was not always met. However, there were phosphorus detection in all samples above the reporting limit and data usability is not affected.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

Phosphorus was not detected in the method blanks above the reporting limit.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110445

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards are not applicable to phosphorus analysis.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110445

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recovery met the QAPP QC limits for the AVS and SEM analyses.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The initial and continuing calibration verification standards were within QC limits.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Continuing calibration blanks contained no detections above the reporting limits.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110445

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Serial dilution is not applicable to the AVS method.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110445

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

The data are acceptable for use as qualified.

PHOSPHORUS BY
U.S. EPA SW-846 METHOD 6010C

CAS Work Order #: K1110496

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Long Pond Sediment Analysis
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 3, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _X_	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes		
No	X	(EXPLAIN)

The project quantitation limit stated in the QAPP was 6 milligrams per kilogram (mg/kg). This was not always met. However, there were phosphorus detection in all samples above the reporting limit and data usability is not affected.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

Phosphorus was not detected in the method blanks above the reporting limit.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110496

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards are not applicable to phosphorus analysis.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110496

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recovery met the QAPP QC limits for the AVS and SEM analyses.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The initial and continuing calibration verification standards were within QC limits.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Continuing calibration blanks contained no detections above the reporting limits.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110496

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Serial dilution is not applicable to the AVS method.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110496

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

The data are acceptable for use as qualified.

PHOSPHORUS BY
U.S. EPA SW-846 METHOD 6010C

CAS Work Order #: K1110536

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Long Pond Sediment Analysis
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 3, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _X_	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes		
No	X	(EXPLAIN)

The project quantitation limit stated in the QAPP was 6 milligrams per kilogram (mg/kg). This was not always met. However, there were phosphorus detection in all samples above the reporting limit and data usability is not affected.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

Phosphorus was not detected in the method blanks above the reporting limit.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110536

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards are not applicable to phosphorus analysis.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110536

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recovery met the QAPP QC limits for the AVS and SEM analyses.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The initial and continuing calibration verification standards were within QC limits.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Continuing calibration blanks contained no detections above the reporting limits.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110536

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Serial dilution is not applicable to the AVS method.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110536

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

The data are acceptable for use as qualified.

PHOSPHORUS BY
U.S. EPA SW-846 METHOD 6010C

CAS Work Order #: K1110582

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Long Pond Sediment Analysis
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 3, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _X_	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes		
No	X	(EXPLAIN)

The project quantitation limit stated in the QAPP was 6 milligrams per kilogram (mg/kg). This was not always met. However, there were phosphorus detection in all samples above the reporting limit and data usability is not affected.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

Phosphorus was not detected in the method blanks above the reporting limit.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110582

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards are not applicable to phosphorus analysis.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110582

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recovery met the QAPP QC limits for the AVS and SEM analyses.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The initial and continuing calibration verification standards were within QC limits.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Continuing calibration blanks contained no detections above the reporting limits.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110582

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Serial dilution is not applicable to the AVS method.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110582

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

The data are acceptable for use as qualified.

PHOSPHORUS BY
U.S. EPA SW-846 METHOD 6010C

CAS Work Order #: K1110589

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Long Pond Sediment Analysis
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 3, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _X_	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes		
No	X	(EXPLAIN)

The project quantitation limit stated in the QAPP was 6 milligrams per kilogram (mg/kg). This was not always met. However, there were phosphorus detection in all samples above the reporting limit and data usability is not affected.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

Phosphorus was not detected in the method blanks above the reporting limit.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110589

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards are not applicable to phosphorus analysis.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There were 2 matrix spike (MS) samples associated with this work order. Both MS samples had low recoveries. However, the spike amount was more than four times lower than the sample concentration and no qualification was required.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110589

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recovery met the QAPP QC limits for the AVS and SEM analyses.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The initial and continuing calibration verification standards were within QC limits.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Continuing calibration blanks contained no detections above the reporting limits.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110589

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Serial dilution is not applicable to the AVS method.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

Phosphorus Checklist
Long Pond Sediment Analysis
Columbia Analytical Services
Laboratory Work Order #: K1110589

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

The data are acceptable for use as qualified.

ATTACHMENT B

ADR SUMMARY REPORT FOR PHOSPHORUS

Sample Qualification Report (All Analytes)

Client Sample ID : LP01-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-001

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	223		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP01-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-002

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	376		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP02-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-003

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	818		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP02-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-004

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	739		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP02-12-102411-02 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-005

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	697		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP04-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-006

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	876		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP04-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-007

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	701		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP05-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-008

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	716		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP05-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-009

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	725		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP07-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-010

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	866		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP07-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-011

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C						**Dilution: 2.0**														
Phosphorus	768		mg/Kg	N*	YES	**J**					J	J								

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP09-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-012

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	724		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP09-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-013

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	275		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP12-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-014

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	637		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP12-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-015

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	703		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP14-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-016

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	830		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP14-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-017

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	735		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP21-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-018

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	685		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP21-01-102411-02 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-019

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	663		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP21-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-020

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	356		mg/Kg	N*	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP23-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-021

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	822		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP23-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-022

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	486		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP33-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-023

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	486		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP33-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-024

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	655		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP47-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-025

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	657		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP47-01-102411-02 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-026

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	686		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP47-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-027

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	514		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP62-01-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-028

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	777		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP62-12-102411-01 **Lab Report Batch :** K1110390 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110390-029

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	760		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP03-01-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-001

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	880		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP03-12-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-002

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	833		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP06-01-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-003

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	738		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP06-12-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-004

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	516		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP16-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-005

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	850		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP16-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-006

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	720		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP18-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-007

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	794		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP18-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-008

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	442		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP19-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-009

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	245		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP19-01-102511-02 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-010

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	269		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP19-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-011

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	265		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP20-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-012

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	354		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP20-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-013

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	591		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP22-01-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-014

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	776		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP22-12-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-015

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	533		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP26-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-016

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	3180		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP26-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-017

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	854		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP26-12-102511-02 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-018

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	805		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP35-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-019

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	886		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP35-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-020

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	902		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP38-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-021

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	961		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP38-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-022

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	972		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP50-01-012511-02 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-024

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	987		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP50-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-023

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	991		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP50-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-025

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	912		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP63-01-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-026

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	825		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP63-12-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-027

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	873		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP65-01-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-028

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	925		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP65-12-102511-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-029

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	961		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP75-01-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-030

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	692		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP75-12-102411-01 **Lab Report Batch :** K1110445 **Lab ID :** CAS_K

Sample Date : 10/24/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110445-031

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	378		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP28-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-001

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	931		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP28-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-002

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	915		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP30-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-003

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	913		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP30-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-004

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	867		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP31-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-005

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	826		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP31-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-006

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	396		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP40-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-007

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	997		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP40-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-008

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	994		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP42-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-009

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1110		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP42-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-010

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	920		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP44-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-011

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	741		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP44-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-012

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	276		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP53-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-013

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1060		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP53-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-014

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1010		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP53-12-102611-02 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-015

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1310		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP55-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-016

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	917		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP55-01-102611-02 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-017

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	992		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP55-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-047

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	914		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP57-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-018

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	858		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP57-01-102611-02 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-019

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	863		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP57-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-020

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	749		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP59-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-021

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	451		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP59-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-022

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	504		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP67-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-023

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	953		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP67-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-024

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1290		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP71-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-025

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	853		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP71-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-026

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	846		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP73-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-027

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	255		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP73-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-028

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	229		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP77-01-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-029

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	837		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP77-12-102611-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-030

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	792		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP79-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-031

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	915		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP79-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-032

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	949		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP80-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-033

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	903		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP80-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-034

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	941		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP82-01-10251-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-035

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	354		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP82-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-036

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	306		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP85-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-037

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	907		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP85-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-038

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	924		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP87-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-039

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	849		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP87-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-040

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	879		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP90-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-041

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	906		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP90-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-042

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	821		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP91-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-043

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	897		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP91-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-044

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	902		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP93-01-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-045

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	512		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP93-12-102511-01 **Lab Report Batch :** K1110496 **Lab ID :** CAS_K

Sample Date : 10/25/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110496-046

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	665		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP15-01-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-001

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	933		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP15-01-102711-02 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-002

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	905		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP15-12-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-003

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	768		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP17-01-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-004

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	914		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP17-12-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-005

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	917		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP17-12-102711-02 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-006

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	830		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP24-01-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-007

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	864		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP24-12-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-008

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	894		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP24-12-102711-02 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-009

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	947		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP27-01-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-010

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	963		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP27-12-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-011

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	986		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP36-01-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-012

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	967		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP36-12-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-013

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1020		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP37-01-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-014

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	970		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP37-12-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-015

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	909		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP48-01-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-016

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	884		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP48-12-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-017

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	735		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP52-01-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-018

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	998		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP52-12-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-019

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1040		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP66-01-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-020

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	968		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP66-12-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-021

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	980		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP69-01-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-022

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	997		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP69-12-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-023

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	943		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP72-01-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-024

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	724		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP72-12-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-025

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	488		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP81-01-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-026

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	816		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP81-12-102611-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/26/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-027

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	781		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP95-01-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-028

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	900		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP95-12-102711-01 **Lab Report Batch :** K1110536 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110536-029

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	616		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP08-01-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-001

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	862		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP08-12-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-002

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	706		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP08-23-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-003

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	642		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP13-01-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-004

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	583		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP13-12-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-005

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	744		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP13-23-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-006

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	636		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP13-34-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-007

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	569		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP25-01-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-008

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	834		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP25-12-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-009

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	836		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP25-23-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-010

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	540		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP25-34-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-011

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	472		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP29-01-102711-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-012

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	919		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP29-01-102711-02 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-013

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	920		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP29-12-102711-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-014

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	847		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP34-01-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-015

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	915		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP34-12-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-016

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	664		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP39-01-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-017

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	938		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP39-12-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-018

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	970		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP39-23-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-019

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	801		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP39-34-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-020

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	881		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP41-01-102711-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-021

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	937		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP41-01-102711-02 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-022

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1000		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP41-12-102711-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-023

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	971		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP51-01-102711-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-024

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	980		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP51-12-102711-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-025

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1030		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP51-12-102711-02 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-026

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1010		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP54-01-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-027

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	996		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP54-12-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-028

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	999		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP54-23-102811-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-029

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1050		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP64-01-102711-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-030

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	933		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP64-12-102711-01 **Lab Report Batch :** K1110582 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110582-031

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	945		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP100-01-102711-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-001

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	1020		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP100-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-002

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	923		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP43-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-003

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	940		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP43-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-004

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	559		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP49-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-005

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	985		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP49-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-006

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	766		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP49-23-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-007

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	570		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP56-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-008

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	978		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP56-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-009

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	810		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP58-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-010

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	770		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP58-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-011

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	611		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP68-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-012

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	908		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP68-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-013

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	998		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP70-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-014

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	989		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP70-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-015

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	986		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP70-23-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-016

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	766		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP78-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-017

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	932		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP78-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-018

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	900		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP84-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-019

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	570		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP84-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-020

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	382		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP86-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-021

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	946		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP86-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-022

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	920		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP86-23-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-023

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	938		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP86-34-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-024

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	723		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP88-01-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-025

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	618		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP88-12-102811-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/28/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-026

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	284		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP96-01-102711-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-027

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	917		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP96-12-102711-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-028

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	616		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP97-01-102711-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-029

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	781		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP97-12-102711-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-030

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	738		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP98-01-102711-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-031

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	674		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : LP98-12-102711-01 **Lab Report Batch :** K1110589 **Lab ID :** CAS_K

Sample Date : 10/27/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1110589-032

Reviewed By / Date : LG 1/25/2012 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C					**Dilution: 2.0**															
Phosphorus	767		mg/Kg		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

* - The result is an outlier.

N - The matrix spike sample recovery is not within control limits.

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

APPENDIX C
PHOTOGRAPHIC LOG

Site: Long Pond Sediment Analysis
Photograph No.: 1 **Date:** 9/21/10
Direction: Southeast **Photographer:** TJ McFarland
Subject: Boat launch and sediment core processing area on Long Pond main basin

Site: Long Pond Sediment Analysis
Photograph No.: 2 **Date:** 9/21/10
Direction: Southeast **Photographer:** TJ McFarland
Subject: Culvert connecting Long Pond main basin and south basin under Lake Ontario State Parkway

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Site: Long Pond Sediment Analysis
Photograph No.: 3 **Date:** 9/21/10
Direction: Southwest **Photographer:** TJ McFarland
Subject: Long Pond south basin

Site: Long Pond Sediment Analysis
Photograph No.: 4 **Date:** 9/21/10
Direction: Northeast **Photographer:** TJ McFarland
Subject: Long Pond main basin

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Site: Long Pond Sediment Analysis
Photograph No.: 5 **Date:** 9/21/10
Direction: Northeast **Photographer:** TJ McFarland
Subject: Canal connecting Long Pond main basin and Lake Ontario

Site: Long Pond Sediment Analysis
Photograph No.: 6 **Date:** 9/29/10
Direction: East **Photographer:** TJ McFarland
Subject: GPS station at boat launch

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Site: Long Pond Sediment Analysis
Photograph No.: 7 **Date:** 9/29/10
Direction: Not Applicable (NA) **Photographer:** TJ McFarland
Subject: Affiliated Researchers boat used to conduct bathymetric survey and sub-bottom profile

Site: Long Pond Sediment Analysis
Photograph No.: 8 **Date:** 9/29/10
Direction: Southwest **Photographer:** TJ McFarland
Subject: Affiliated Researchers testing equipment and software for bathymetric survey and sub-bottom profile

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Site: Long Pond Sediment Analysis
Photograph No.: 9 **Date:** 10/24/11
Direction: West **Photographer:** TJ McFarland
Subject: Affiliated Researchers collecting sediment core using the vibracore sampler

Site: Long Pond Sediment Analysis
Photograph No.: 10 **Date:** 10/24/11
Direction: Northeast **Photographer:** TJ McFarland
Subject: Sediment core processing area

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Site: Long Pond Sediment Analysis
Photograph No.: 11 **Date:** 10/24/11
Direction: West **Photographer:** TJ McFarland
Subject: Boat launch and sediment core processing area

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