APPENDIX G

APPENDIX G

DATA VALIDATION DUSRs

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Data Validation
Environmental Chemistry
Lab and Field Audits
Sampling Plans

December 9, 2004

Ms. Smita Patel
Langan Engineering and Environmental
Services, Inc.
360 West 31st Street, Suite 900
New York, NY 10001

Re: Data Validation Reports
Atlas Park
July 2004 Soil Sampling Event

Dear Ms. Patel:

The data validation summaries and data usability summary reports are attached to this letter for the Altas Park, July 2004 soil sampling event. The data for STL Connecticut, job nos. 207130 and 207141 were mostly acceptable, with issues that are identified in the validation summaries. There were pesticide data in these data packs that were flagged as unusable (R) due to the percent differences for dual column quantitation that were greater than 100%. The data is rejected based solely on the validation guidance criteria. The rejected data may be determined to be acceptable to the user based on additional information that is not contained in the data validation criteria.

I have included a list of data validation qualifiers and acronyms to assist you in interpreting the reports. If you have any questions concerning this report, please contact us at (518) 348-6995. Thank you for the opportunity to assist Langan Engineering and Environmental Services, Inc.

Sincerely,
Alpha Environmental Consultants, Inc.

Donald C. Anné
Senior Chemist

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Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.

R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.

N = Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.

J = Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

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Data Usability Summary Report for
STL Connecticut, Job No. 207130
Soil Samples
Collected July 14-16, 2004

Prepared by: Donald Anné
December 9, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile, base/neutral, PCB, pesticide, herbicide, and metal analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

- Positive volatile results for samples B49(2-4) and B9(1-3) were flagged as "estimated" (J) because one or two surrogate recoveries were above control limits.

- Positive volatile results for acetone were flagged as "estimated" (J) because the %RSD for acetone was above the allowable maximum (30%) for the associated initial calibration.

- Positive volatile results for 2-butanone were flagged as "estimated" (J) because the %D for 2-butanone was above the allowable maximum (30%) for the associated continuing calibration.

- The positive results for some pesticide compounds in the following samples were flagged as "estimated" (J) because the %Ds for dual column quantitation were greater than 25% but less than 70%:
  B10(2-4) B50(3-5) B45(2-4) B46(4-6) B9(1-3)

- The positive results for some pesticide compounds in the following samples were flagged as "unusable" (R) because the %Ds for dual column quantitation were greater than 100%:
  B10(2-4) B7(2-4) B51(2-4) B53(1-4) B45(2-4)
  B46(4-6) B9(1-3)

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- Positive results for some pesticide compounds in samples B51(2-4) and B9(1-3) were flagged as "estimated" (J) because one surrogate was above control limits on one or both columns.

- The PCB aroclor-1260 result for sample B9(1-3) was flagged as an estimate (J) because the %D (52.4%) for dual column quantitation was greater than 25% but was less than 70%.

- All results for antimony and mercury in soil samples were flagged as "estimated" (J) because percent recoveries for spike sample B10(2-4) were below control limits (75-125%).

- Positive results for copper and sodium in soil samples were flagged as "estimated" (J) because the percent recoveries for spike sample B10(2-4) were above control limits (75-125%).

- Positive results for cobalt and manganese in soil samples were flagged as "estimated" (J) because the %Ds for duplicate sample B10(2-4) were above the allowable maximum (35%).

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Connecticut, Job No. 207130
Soil Samples
Collected July 14-16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSDs for acetone (64.8%), 2-butanone (32.7%), 4-methyl-2-pentanone (68.4%), and 2-hexanone (122.0%) were above the allowable maximum (30%) for MSL on 07-08-04. Positive results for these compounds should be considered estimates (J) in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The RRF50s for target compounds were above the allowable minimum (0.050), as required. The %Ds for acetone (27.0%), vinyl acetate (43.1%), 4-methyl-2-pentanone (49.8%), and 2-hexanone (69.6%) were above the allowable maximum (25%) on 07-22-04 (L4978). The %D for 2-butanone (26.9%) was above the allowable maximum (25%) on 07-27-04 (M7927). The %Ds for bromomethane (26.2%) and chloroethane (26.3%) were above the allowable maximum (25%) on 07-28-04 (M7944). Positive results for these compounds should be considered estimates (J) in associated samples.

Blanks: The analyses of method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard retention times were within control limits. One of three internal standard areas (IS3) for samples B7(2-4) and B46(4-6) was outside control limits. Two of three internal standard areas (IS2, IS3) for samples B49(2-4) and B9(1-3) were outside control limits. Results for these samples that are quantitated using internal standards with areas outside control limits should be considered estimates (J).

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Surrogate Recovery: Two of four surrogate recoveries for sample B49(2-4) were above control limits. One of four surrogate recoveries for sample B9(1-3) was above control limits. Positive results for samples B49(2-4) and B9(1-3) should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: Three of 34 relative percent differences were above the allowable maximums and 4 of 68 %Rs (percent recoveries) were outside QC limits for MS/MSD sample B46(4-6). The percent recoveries were within QC limits for the MSB (blank) sample 207130-17MSB. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for QC samples 35723-002, 35969-002, 36095-002, and 36149-002.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Semi-Volatiles Data
for STL Connecticut, Job No. 207130
Soil Samples
Collected July 14-16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSD for 2,4-dinitrophenol (33.6%) was above the allowable maximum (30%) for MSU on 07-26-04. Positive results for 2,4-dinitrophenol should be considered estimates (J) in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The RRF25s for target compounds were above the allowable minimum (0.050), as required. The %Ds for benzoic acid (32.1%), hexachlorocyclopentadiene (45.5%), 2,4-dinitrophenol (43.4%), and 4,6-dinitro-2-methylphenol (29.2%) were above the allowable maximum (25%) on 07-28-04 (P2705). Positive results for these compounds should be considered estimates (J) in associated samples.

Blanks: The analyses of method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: One of three acid extractable surrogate recoveries for samples B45(2-4), B45(5-7), B46(4-6), and B46(6-8) was below control limits, but the recovery was not less than 10%. No action is taken on one surrogate per fraction outside control limits, provided no recovery is below 10%.

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Two surrogates for sample B51(2-4) were diluted beyond detection limits. No action is taken for surrogates diluted beyond detection limits.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data was not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for samples 35529-002 and 35668-002.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Pesticide Data for
STL Connecticut, STL Job No. 207130
Soil Samples
Collected July 14-16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target pesticides as not detected.

Surrogate Recovery: One of two surrogate recoveries for samples B10(2-4) and B53(1-4) was above advisory limits on one column. One of two surrogate recoveries for samples B51(2-4), B45(2-4), B46(4-6), and B9(1-3) were above advisory limits on both columns. Positive results for these samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: MS/MSD data was not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for samples 35469-002 and 35985-002.

Initial Calibration: The %RSDs for target pesticides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for heptachlor epoxide (16.58%), gamma-chlordane (16.48%), alpha-chlordane (16.98%) and endosulfan II (17.21%) were above the allowable maximum (15%) for the RTX-35 column on 07-31-04 (D1330166). Positive results for these compounds should be considered estimates (J) in associated samples.

Endrin and DDT Breakdown Evaluation: The percent breakdowns were below the allowable maximum (20%) for 4,4'-DDT and endrin (20%), as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

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Pesticide Identification Summary for Single Component Analytes: Checked results were within GC quantitation limits. The %Ds for dual column quantitation of pesticides in the following samples were greater than the allowable maximum (25%). Results with %Ds greater than 25% but less than 70% should be considered estimates (J). Results with %Ds greater than 70% but less than 100% should be considered estimated and presumptive evidence of its presence (JN). Results with %Ds greater than 100% should be considered unusable (R):

B10(2-4)	B7(2-4)	B9(1-3)	B50(3-5)
B51(2-4)	B53(1-4)	B45(2-4)	B46(4-6)

Pesticide Identification Summary for Multicomponent Analytes: There were no detectable concentrations of target multi-component pesticides reported in samples contained in this data pack.

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QA/QC Review of PCB Aroclor Data for
STL Connecticut, STL Job No. 207130
Soil Samples
Collected July 14-16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target aroclors as not detected.

Surrogate Recovery: One of two surrogate recoveries for samples B51(2-4), B45(5-7), and B46(6-8) was above advisory limits on one column. One of two surrogate recoveries for samples B45(2-4) and B9(1-3) was above advisory limits on both columns. Positive results for these samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: MS/MSD data was not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for samples 35469-003, 35729-003, and 35979-003.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target aroclors were below the allowable maximum (15%) for both columns, as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Pesticide Identification Summary for Single Component Analytes: Checked surrogates were within GC quantitation limits. The %D for dual column quantitation of aroclor-1260 (52.4%) in sample B9(1-3) was greater than the allowable maximum (25%). Results for aroclors with %Ds greater than 25% but less than 70% should be considered estimates (J).

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QA/QC Review of TAL Metals Data
for STL Connecticut, Job No. 207130
Soil Samples
Collected July 14-16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were analyzed within the SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for TAL metals were within control limits (80-120% for Hg, 90-110% for all other metals).

CRDL Standard: The percent recoveries for TAL metals were within laboratory QC limits (50-150%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, and method blanks reported TAL metals as below the CRDLs, as required.

ICP Interference Check Sample: The percent recoveries for TAL metals were within control limits (80-120%).

Spike Sample Recovery: The percent recoveries for antimony (26%), copper (165%), mercury (38%), and sodium (126%) were outside control limits (75-125%) for soil spike sample B10(2-4). Positive results for copper and sodium, and all results for antimony and mercury should be considered estimates (J) in soil samples.

Duplicates: The relative percent differences for cobalt (40.4%) and manganese (70.3%) were above the allowable maximum (35%) for soil duplicate sample B10(2-4). Positive results for cobalt and manganese should be considered estimates in soil samples.

Laboratory Control Sample: The recoveries for TAL metals were within control limits for the soil LCS.

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ICP Serial Dilution: The %Ds for applicable TAL metals were below the allowable maximum (10%) for serial dilution sample B10(2-4), as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solids for samples were above the allowable minimum (50%).

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QA/QC Review of Herbicide Data for
STL Connecticut, STL Job No. 207130
Soil Samples
Collected July 14-16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analysis of the method blank reported target herbicides compounds as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data was not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The relative percent differences were below the allowable maximum and the percent recoveries were within QC limits for LCS/LCSD sample batch 4203132.

Initial Calibration: The %RSDs for target herbicides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for 2,4,5-TP (23.5%) and 2,4,5-T (25.5%) were above the allowable maximum (15%) on 07-23-04 (X0740354.D). Positive results for these compounds should be considered estimates (J) in associated samples.

Herbicide Analytical Sequence: The retention times for DCAA were within control limits for environmental samples.

Herbicide Identification Summary: Checked surrogates were within GC quantitation limits. There were no detectable concentrations of target herbicides reported in samples contained in this data pack.

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Data Usability Summary Report for
STL Connecticut, Job No. 207141
Soil Samples
Collected July 15 and 16, 2004

Prepared by: Donald Anné
December 9, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile, base/neutral, PCB, pesticide, herbicide, and metal analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

- Positive volatile results for samples B49(12-15), B48(2-4), B48(8-10), and DUP-1 were flagged as "estimated" (J) because one or two surrogate recoveries were above control limits.

- Positive semi-volatile results for the following compounds in samples B48(2-4) and DUP-1 were flagged as "estimated" (J) because the relative percent differences were above the allowable maximum(35%) for the field duplicates, sample pair B48(2-4)/DUP-1:
  - naphthalene (100.7%)
  - 2-methylnaphthalene (105.5%)
  - phenanthene (157.1%)
  - fluoranthene (148.7%)
  - pyrene (150.2%)
  - benzo(a)anthracene (141.2%)
  - chrysene (143.9%)
  - benzo(b)fluoranthene (106.3%)
  - benzo(a)pyrene (153.6%)
  - indeno(1,2,3-cd)perylene (152.4%)
  - benzo(g,h,i)perylene (158.8%)

- The results for alpha-BHC and dieldrin in sample B48(2-4) were flagged as "estimated" (J) because the %Ds for dual column quantitation were greater than 25% but less than 70%.

- The result for endosulfan II in sample DUP-1 was flagged as "estimated, presumptive evidence" (JN) because the %D for dual column quantitation was greater than 70% but less than 100%.

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- The positive results for some pesticide compounds in the following samples were flagged as "unusable" (R) because the %Ds for dual column quantitation were greater than 100%:
  B48(2-4) B47(2-4) B59(3-5) DUP-1

- The results for endosulfan II in sample B48(2-4) was flagged as "estimated" (J) because one surrogate was above control limits on both columns.

- The PCB aroclor-1260 result for samples B49(12-15), B48(2-4), and DUP-1 were flagged as estimates (J) because the %Ds for dual column quantitation were greater than 25% but were less than 70%.

- The positive result for aroclor-1260 in sample B48(8-10) was flagged as "estimated" (J) because the percent recovery for one surrogate was above advisory limits on both columns.

- All results for antimony and thallium in soil samples were flagged as "estimated" (J) because percent recoveries for spike sample B59(3-5) were below control limits (75-125%).

- Positive results for chromium and sodium in soil samples were flagged as "estimated" (J) because the percent recoveries for spike sample B59(3-5) were above control limits (75-125%).

- Positive results for the following metals in samples B48(2-4) and DUP-1 were flagged as "estimated" (J) because the relative percent differences for field duplicates, sample pair B48(2-4)/DUP-1 were above the allowable maximum(35%):

barium (151.1%)	copper (101.1%)	mercury (80.4%)
calcium (95.0%)	lead (145.9%)	sodium (80.2%)
chromium (42.1%)	magnesium (39.7%)	zinc (162.3%)

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Connecticut, Job No. 207141
Soil Samples
Collected July 15 and 16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The RRF50s for target compounds were above the allowable minimum (0.050), as required. The %D for 2-butanone (26.9%) was above the allowable maximum (25%) on 07-27-04 (M7927). The %Ds for bromomethane (26.2%) and chloroethane (26.3%) were above the allowable maximum (25%) on 07-28-04 (M7944). Positive results for these compounds should be considered estimates (J) in associated samples.

Blanks: The analyses of method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard retention times were within control limits. One of three internal standard areas (IS3) for the following samples was outside control limits:

B49(12-15) B48(2-4) B48(8-10) B47(2-4) B59(3-5)

Two of three internal standard areas (IS2, IS3) for sample DUP-1 were outside control limits. Results for these samples that are quantitated using internal standards with areas outside control limits should be considered estimates (J).

Surrogate Recovery: Two of four surrogate recoveries for sample DUP-1 were above control limits.

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One of four surrogate recoveries for samples B49(12-15), B48(2-4), and B48(8-10) was above control limits. Positive results for the above samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: One of 34 relative percent differences were above the allowable maximums and 4 of 68 %Rs (percent recoveries) were outside QC limits for MS/MSD sample B59(3-5). The percent recoveries were within QC limits for the MSB (blank) sample 207141-6MSB. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for following QC samples:

35970-002 35969-002 36246-002 36107-002 36149-002

Field Duplicate: The relative percent difference for methylene chloride (37.0%) was above the allowable maximum (35%) for the field duplicates, sample pair B48(2-4)/DUP-1. Results for methylene chloride in samples B48(2-4) and DUP-1 should be considered estimates (J).

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Semi-Volatiles Data
for STL Connecticut, Job No. 207141
Soil Samples
Collected July 15 and 16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSD for benzoic acid (36.5%) was above the allowable maximum (30%) for MSP on 07-22-04. The %RSD for 2,4-dinitrophenol (33.6%) was above the allowable maximum (30%) for MSU on 07-26-04. Positive results for these two compounds should be considered estimates (J) in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The RRF25s for target compounds were above the allowable minimum (0.050), as required. The %D for benzoic acid (31.5%) was above the allowable maximum (25%) on 07-23-04 (P2736). The %D for hexachlorocyclopentadiene (29.3%) was above the allowable maximum (25%) on 07-27-04 (U3575). Positive results for these two compounds should be considered estimates (J) in associated samples.

Blanks: The analyses of method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: One of three acid extractable surrogate recoveries for sample DUP-1 was below control limits, but the recovery was not less than 10%. No action is taken on one surrogate per fraction outside control limits, provided no recovery is below 10%.

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Matrix Spike/Matrix Spike Duplicate: The percent recoveries (%Rs) were within QC limits, but 2 of 11 relative percent differences (RPDs) were above the allowable maximums for MS/MSD sample B47(6-8). One of 11 RPDs was above the allowable maximum and 7 of 22 %Rs were outside control limits for MS/MSD sample B59(3-5). No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for samples 35528-002 and 35529-002.

Field Duplicate: The relative percent differences for following compounds were above the allowable maximum (35%) for the field duplicate sample pair B48(2-4)/DUP-1. Results for these compounds in samples B48(2-4) and DUP-1 should be considered estimates (J):

naphthalene (100.7%)
2-methylnaphthalene (105.5%)
phenanthene (157.1%)
fluoranthene (148.7%)
pyrene (150.2%)
benzo(a)anthracene (141.2%)
chrysene (143.9%)
benzo(b)fluoranthene (106.3%)
benzo(a)pyrene (153.6%)
indeno(1,2,3-cd)perylene (152.4%)
benzo(g,h,i)perylene (158.8%)

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Pesticide Data for
STL Connecticut, STL Job No. 207141
Soil Samples
Collected July 15 and 16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target pesticides as not detected.

Surrogate Recovery: One of two surrogate recoveries for sample B47(2-4) was above advisory limits on one column. One of two surrogate recoveries for samples B48(2-4) and DUP-1 were above advisory limits on both columns. Positive results for these samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: The relative percent differences were below the allowable maximums and the percent recoveries were within control limits for MS/MSD sample B59(3-5).

Laboratory Control Sample: The percent recoveries were within QC limits for samples 35981-002 and 35985-002.

Initial Calibration: The %RSDs for target pesticides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %D for 4,4'-DDT (17.21%) was above the allowable maximum (15%) for the RTX-35 column on 07-27-04 (D1330110). The %Ds for heptachlor epoxide (16.58%), gamma-chlordane (16.48%), alpha-chlordane (16.98%) and endosulfan II (17.21%) were above the allowable maximum (15%) for the RTX-35 column on 07-31-04 (D1330166). Positive results for these compounds should be considered estimates (J) in associated samples.

Endrin and DDT Breakdown Evaluation: The percent breakdowns were below the allowable maximum (20%) for 4,4'-DDT and endrin (20%), as required.

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Field Duplicate: The relative percent difference for delta-BHC (60.0%), heptachlor epoxide (142.9%), endosulfan II (83.9%), and endosulfan sulfate (112.1%) were above the allowable maximum (35%) for the field duplicates, sample pair B48(2-4)/DUP-1. Results for these pesticides in samples B48(2-4) and DUP-1 should be considered estimates (J).

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Pesticide Identification Summary for Single Component Analytes: Checked results were within GC quantitation limits. The %Ds for dual column quantitation of pesticides in the following samples were greater than the allowable maximum (25%). Results with %Ds greater than 25% but less than 70% should be considered estimates (J). Results with %Ds greater than 70% but less than 100% should be considered estimated and presumptive evidence of its presence (JN). Results with %Ds greater than 100% should be considered unusable (R):

B48(2-4) B47(2-4) B59(3-5) DUP-1

Pesticide Identification Summary for Multicomponent Analytes: There were no detectable concentrations of target multi-component pesticides reported in samples contained in this data pack.

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QA/QC Review of PCB Aroclor Data for
STL Connecticut, STL Job No. 207141
Soil Samples
Collected July 15 and 16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target aroclors as not detected.

Surrogate Recovery: One of two surrogate recoveries for samples B48(2-4) and B48(8-10) was above advisory limits on both columns. Positive results for these samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: The relative percent difference was below the allowable maximum and the percent recoveries were within QC limits for MS/MSD sampleB59(6-8).

Laboratory Control Sample: The percent recoveries were within QC limits for sample 35729-003.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target aroclors were below the allowable maximum (15%) for both columns, as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Field Duplicate: The relative percent difference for aroclor-1260 was below the allowable maximum (35%) for field duplicates, sample pair B48(2-4)/DUP-1, as required.

Pesticide Identification Summary for Single Component Analytes: Checked surrogates were within GC quantitation limits. The %Ds for dual column quantitation of aroclor-1260 in samples B49(12-15) (33.0%), B48(2-4) (41.0%), and DUP-1 (42.4%) were greater than the allowable maximum (25%). Results for aroclors with %Ds greater than 25% but less than 70% should be considered estimates (J).

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QA/QC Review of TAL Metals Data
for STL Connecticut, Job No. 207141
Soil Samples
Collected July 15 and 16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were analyzed within the SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for TAL metals were within control limits (80-120% for Hg, 90-110% for all other metals).

CRDL Standard: The percent recoveries for TAL metals were within laboratory QC limits (50-150%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, and method blanks reported TAL metals as below the CRDLs, as required.

ICP Interference Check Sample: The percent recoveries for TAL metals were within control limits (80-120%).

Spike Sample Recovery: The percent recoveries for antimony (39%), chromium (184%), sodium (139%), and thallium (65%) were outside control limits (75-125%) for soil spike sample B59(3-5). Positive results for chromium and sodium, and all results for antimony and thallium should be considered estimates (J) in soil samples.

Duplicates: The relative percent differences for applicable TAL metals were below the allowable maximum (35%) for soil duplicate sample B59(3-5), as required.

Field Duplicate: The relative percent differences for following compounds were above the allowable maximum (35%) for field duplicates, sample pair B48(2-4)/DUP-1. Results for these compounds in samples B48(2-4) and DUP-1 should be considered estimates (J):

barium (151.1%)	copper (101.1%)	mercury (80.4%)
calcium (95.0%)	lead (145.9%)	sodium (80.2%)
chromium (42.1%)	magnesium (39.7%)	zinc (162.3%)

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Laboratory Control Sample: The recoveries for TAL metals were within control limits for the soil LCS.

ICP Serial Dilution: The %Ds for applicable TAL metals were below the allowable maximum (10%) for serial dilution sample B59(3-5), as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solids for samples were above the allowable minimum (50%).

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QA/QC Review of Herbicide Data for
STL Connecticut, STL Job No. 207141
Soil Samples
Collected July 15 and 16, 2004

Prepared by: Donald Anné
December 9, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analysis of the method blank reported target herbicides compounds as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data was not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The relative percent differences were below the allowable maximum and the percent recoveries were within QC limits for LCS/LCSD sample batch 4203132.

Initial Calibration: The %RSDs for target herbicides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for 2,4,5-TP (23.5%) and 2,4,5-T (25.5%) were above the allowable maximum (15%) on 07-23-04 (X0740354.D). Positive results for these compounds should be considered estimates (J) in associated samples.

Herbicide Analytical Sequence: The retention times for DCAA were within control limits for environmental samples.

Field Duplicates: Both analyses for the field duplicates, soil sample pair B48(2-4)/DUP-1, reported target herbicides as not detected.

Herbicide Identification Summary: Checked surrogates were within GC quantitation limits. There were no detectable concentrations of target herbicides reported in samples contained in this data pack.

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December 15, 2004

Ms. Smita Patel
Langan Engineering and Environmental
Services, Inc.
360 West 31st Street, Suite 900
New York, NY 10001

Re: Data Validation Reports
Atlas Park
July-August 2004 Soil Sampling Events

Dear Ms. Patel:

The data validation summaries and data usability summary reports are attached to this letter for the Altas Park, July-August 2004 soil sampling events. The data for STL Connecticut, job nos. 207193, 207211, 207240, and 207272, were mostly acceptable with issues that are identified in the validation summaries. There were pesticide data in data packs 207193 and 207240 that were flagged as unusable (R) due to the percent differences for dual column quantitation that were greater than 100%. The data is rejected based solely on the validation guidance criteria. The rejected data may be determined to be acceptable to the user based on additional information that is not contained in the data validation criteria.

I have included a list of data validation qualifiers and acronyms to assist you in interpreting the reports. If you have any questions concerning this report, please contact us at (518) 348-6995. Thank you for the opportunity to assist Langan Engineering and Environmental Services, Inc.

Sincerely,
Alpha Environmental Consultants, Inc.

Donald C. Anné

Donald C. Anné
Senior Chemist

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Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.

R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.

N = Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.

J = Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

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Data Usability Summary Report for
STL Connecticut, Job No. 207193
Soil Samples
Collected July 19-22, 2004

Prepared by: Donald Anné
December 15, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile, base/neutral, PCB, pesticide, herbicide, and metal analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The semi-volatile results for the following compounds in all samples were flagged as "estimated" (J) because the percent recoveries were below QC limits in LCS 35974-002:
  1,2-dichlorobenzene — 1,3-dichlorobenzene
  1,4-dichlorobenzene — hexachloroethane

- The semi-volatile result for benzo(b)fluoranthene in sample B57(0-5) was flagged as "estimated" (J) because the %D for benzo(b)fluoranthene was above the allowable maximum in the associated continuing calibration standard.

- The positive results for some pesticide compounds in samples B16(1-3), B38(1-3), and B58(0-5) were flagged as "estimated" (J) because the %Ds for dual column quantitation were greater than 25% but less than 70%.

- The result for endosulfan II in sample B57(0-5) was flagged as "estimated, presumptive evidence" (JN) because the %D for dual column quantitation was greater than 70% but less than 100%.

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- The positive results for some pesticide compounds in the following samples were flagged as "unusable" (R) because the %Ds for dual column quantitation were greater than 100%:
  B16(1-3) B38(1-3) B57(0-5) B58(0-5)

- All results for antimony and vanadium in soil samples were flagged as "estimated" (J) because percent recoveries for spike sample 207191-2 were below control limits (75-125%).

- Positive results for potassium in soil samples were flagged as "estimated" (J) because the percent recovery for spike sample 207191-2 was below control limits (75-125%) and was less than 10%.

- Positive results for calcium and sodium in soil samples were flagged as "estimated" (J) because the RPDs for duplicate sample 207191-2 were above the allowable maximum (35%).

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Connecticut, Job No. 207193
Soil Samples
Collected July 19-22, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The RRF50s for target compounds were above the allowable minimum (0.050), as required. The %D for 2-hexanone (27.0%) was above the allowable maximum (25%) on 07-31-04 (M7997). Positive results for 2-hexanone should be considered estimates (J) in associated samples.

Blanks: The analysis of the method blank reported target compounds as not detected.

Internal Standard Area Summary: The internal standard retention times were within control limits. One of three internal standard areas (IS3) for samples B57(0-5), B58(0-5), and B58(18-21) was outside control limits. Results for these samples that are quantitated using internal standard IS3 should be considered estimates (J).

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: Percent recoveries were within QC limits for QC sample 36151-002.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Semi-Volatiles Data
for STL Connecticut, Job No. 207193
Soil Samples
Collected July 19-22, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The RRF25s for target compounds were above the allowable minimum (0.050), as required. The %Ds for benzoic acid (51.3%) and benzo(b)fluoranthene (27.6%) were above the allowable maximum (25%) on 08-01-04 (P2788). Positive results for these two compounds should be considered estimates (J) in associated samples.

Blanks: The analysis of the method blank reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: One of three acid extractable surrogate recoveries for samples B57(0-5) and B58(0-5) was below control limits, but the recovery was greater than 10%. No action is taken on one surrogate per fraction outside control limits, provided no recovery is below 10%.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

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Laboratory Control Sample: The percent recoveries for the following compounds were below QC limits for sample 35974-002. All results for these compounds should be considered estimates (J) in soil samples:

1,2-dichlorobenzene	1,3-dichlorobenzene
1,4-dichlorobenzene	hexachloroethane

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Pesticide Data for
STL Connecticut, STL Job No. 207193
Soil Samples
Collected July 19-22, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target pesticides as not detected.

Surrogate Recovery: One of two surrogate recoveries for sample B16(1-3) was above advisory limits on one column. One of two surrogate recoveries for samples B38(1-3), B57(0-5), and B58(0-5) were above advisory limits on both columns. Positive results for these samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recovery for heptachlor was below QC limits for sample 36114-002. All results for heptachlor should be considered estimates (J).

Initial Calibration: The %RSDs for target pesticides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target pesticides were below the allowable maximum (15%) for both columns, as required.

Endrin and DDT Breakdown Evaluation: The percent breakdowns were below the allowable maximum (20%) for 4,4'-DDT and endrin (20%), as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

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Pesticide Identification Summary for Single Component Analytes: Checked results were within GC quantitation limits. The %Ds for dual column quantitation of pesticides in the following samples were greater than the allowable maximum (25%). Results with %Ds greater than 25% but less than 70% should be considered estimates (J). Results with %Ds greater than 70% but less than 100% should be considered estimated and presumptive evidence of its presence (JN). Results with %Ds greater than 100% should be considered unusable (R):

B16(1-3) B38(1-3) B57(0-5) B58(0-5)

Pesticide Identification Summary for Multicomponent Analytes: There were no detectable concentrations of target multi-component pesticides reported in samples contained in this data pack.

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QA/QC Review of PCB Aroclor Data for
STL Connecticut, STL Job No. 207193
Soil Samples
Collected July 19-22, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target aroclors as not detected.

Surrogate Recovery: One of two surrogate recoveries for samples B58(0-5) and B58(18-21) was above advisory limits on one column. Positive results for these samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for LCS samples 36023-002 and 36114-003.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target aroclors were below the allowable maximum (15%) for both columns, as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Pesticide Identification Summary for Single Component Analytes: Checked surrogates were within GC quantitation limits. The analyses of samples in this data pack reported target aroclors as not detected.

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QA/QC Review of TAL Metals Data
for STL Connecticut, Job No. 207193
Soil Samples
Collected July 19-22, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were analyzed within the SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for TAL metals were within control limits (80-120% for Hg, 90-110% for all other metals).

CRDL Standard: The percent recoveries for TAL metals were within laboratory QC limits (50-150%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, and method blanks reported TAL metals as below the CRDLs, as required.

ICP Interference Check Sample: The percent recoveries for TAL metals were within control limits (80-120%).

Spike Sample Recovery: The percent recoveries for antimony (24%), potassium (0%), and vanadium (72%) were outside control limits (75-125%) for soil spike sample 207191-2. Positive results for potassium, and all results for antimony and vanadium should be considered estimates (J) in soil samples. Negative results for potassium should be considered unusable (R) in soil samples.

Duplicates: The relative percent differences for calcium (37.5%) and sodium (45.1%) were above the allowable maximum (35%) for soil duplicate sample 207191-2. Positive results for calcium and sodium should be considered estimates in soil samples.

Laboratory Control Sample: The recoveries for TAL metals were within control limits for the soil LCS.

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ICP Serial Dilution: The %Ds for applicable TAL metals were below the allowable maximum (10%) for serial dilution sample B58(18-21), as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solids for samples were above the allowable minimum (50%).

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QA/QC Review of Herbicide Data for
STL Connecticut, STL Job No. 207193
Soil Samples
Collected July 19-22, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analysis of the method blank reported target herbicides compounds as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The relative percent differences were below the allowable maximum and the percent recoveries were within QC limits for LSC/LSCD sample batch 4209575.

Initial Calibration: The %RSDs for target herbicides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for 2,4,5-TP (23.3%) and 2,4,5-T (27.8%) were above the allowable maximum (15%) on 07-23-04 (W0740354.D). The %D for 2,4-D (18.7%) was above the allowable maximum (15%) on 07-29-04 (W0740443.D). Positive results for these compounds should be considered estimates (J) in associated samples.

Herbicide Analytical Sequence: The retention times for DCAA were within control limits for environmental samples.

Herbicide Identification Summary: Checked surrogates were within GC quantitation limits. There were no detectable concentrations of target herbicides reported in samples contained in this data pack.

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Data Usability Summary Report for
STL Connecticut, Job No. 207211
Soil Sample B16(55-57)
Collected July 27, 2004

Prepared by: Donald Anné
December 15, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile, base/neutral, PCB, and metal analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The data are acceptable with some minor issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The volatile result for acetone in sample B16(55-57) was flagged as "not detected" (U) because the level in the sample was not significantly greater (greater than 10 times) than the method blank level.

- Results for antimony, mercury, and potassium in sample B16(55-57) were flagged as "estimated" (J) because percent recoveries for spike sample B16(55-57) were below control limits (75-125%).

- Positive results for copper and sodium in sample B16(55-57) were flagged as "estimated" (J) because the percent recoveries for spike sample B16(55-57) were above control limits (75-125%).

All data are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Connecticut, Job No. 207211
Soil Sample B16(55-57)
Collected July 27, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: The sample was analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSD for acetone (33.0%) was above the allowable maximum (30%) for MSN on 07-29-04. Positive results for acetone should be considered estimates (J) in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The RRF50s for target compounds were above the allowable minimum (0.050), as required. The %D for acetone (28.1%) was above the allowable maximum (25%) on 08-03-04 (N4939). Positive results for acetone should be considered estimates (J) in associated samples.

Blanks: Method blank 36238-001contained a trace of acetone (2.85 ug/kg). Results for acetone that are less than ten times the method blank level should be reported as not detected (U) in associated samples.

Internal Standard Area Summary: The internal standard retention areas and times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences were below the allowable maximums, but 2 of 68 %Rs (percent recoveries) were outside QC limits for MS/MSD sample B16(55-57). No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

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The percent recoveries for trichloroethene and bromoform were above QC limits for the MSB (blank) sample 207211-1MSB. Positive results for trichloroethene and bromoform should be considered estimates (J) in soil samples.

Laboratory Control Sample: The percent recovery for trichloroethene was above QC limits for QC sample 36238-002. Positive results for trichloroethene should be considered estimates (J) in soil samples.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Semi-Volatiles Data
for STL Connecticut, Job No. 207211
Soil Sample B16(55-57)
Collected July 27, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Sample B16(55-57) was extracted and analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The RRF25s for target compounds were above the allowable minimum (0.050), as required. The %D for 2,4-dinitrophenol (28.8%) was above the allowable maximum (25%) on 08-04-04 (S0804CCC.D). Positive results for 2,4-dinitrophenol should be considered estimates (J) in associated samples.

Blanks: The analysis of the method blank reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries for sample B16(55-57) were within control limits.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences were below the allowable maximums and the percent recoveries were within control limits for the lab MS/MSD.

Laboratory Control Sample: The percent recoveries were within QC limits for batch 4215047.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of PCB Aroclor Data for
STL Connecticut, STL Job No. 207211
Soil Sample B16(55-57)
Collected July 27, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: The sample was extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target aroclors as not detected.

Surrogate Recovery: The surrogate recoveries were within advisory limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences were below the allowable maximum and the percent recoveries were within QC limits for MS/MSD sample B16(55-57).

Laboratory Control Sample: The percent recoveries were within QC limits for sample 36300-003.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target aroclors were below the allowable maximum (15%) for both columns, as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Pesticide Identification Summary for Single Component Analytes: Checked surrogates were within GC quantitation limits. The analysis of the sample in this data pack reported target aroclors as not detected.

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QA/QC Review of TAL Metals Data
for STL Connecticut, Job No. 207211
Soil Sample B16(55-57)
Collected July 27, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Sample B16(55-57) was analyzed within the SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for TAL metals were within control limits (80-120% for Hg, 90-110% for all other metals).

CRDL Standard: The percent recoveries for TAL metals were within laboratory QC limits (50-150%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, and method blanks reported TAL metals as below the CRDLs, as required.

ICP Interference Check Sample: The percent recoveries for TAL metals were within control limits (80-120%).

Spike Sample Recovery: The percent recoveries for antimony (71%), copper (177%), mercury (39%), potassium (65%), and sodium (126%) were outside control limits (75-125%) for soil spike sample B16(55-57). Positive results for copper and sodium, and all results for antimony, mercury, and potassium should be considered estimates (J) in soil samples.

Duplicates: The relative percent differences for applicabe TAL metals were below the allowable maximum (35%) for soil duplicate sample B16(55-57), as required.

Laboratory Control Sample: The recoveries for TAL metals were within control limits for the soil LCS.

ICP Serial Dilution: The %Ds for applicable TAL metals were below the allowable maximum (10%) for serial dilution sample B16(55-57), as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solid for sample B16(55-57) was above the allowable minimum (50%).

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Data Usability Summary Report for
STL Connecticut, Job No. 207240
Soil Samples
Collected July 28- August 2, 2004

Prepared by: Donald Anné
December 15, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile, base/neutral, PCB, pesticide, herbicide, and metal analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The volatile results for acetone in samples B-58(73-75) and B-20(52-24), and the methylene chloride results in samples B-20(1-5) and B-20(7-9) were flagged as "not detected" (U) because the levels reported in the samples were not significantly greater (greater than 10 times) than the associated method blank level.

- The semi-volatile results for the following compounds in sample B-58(73-75) were flagged as "estimated" (J) because the percent recoveries were below QC limits in LCS 36444-002:
  1,2-dichlorobenzene 1,3-dichlorobenzene 2,4-dinitrophenol
  1,4-dichlorobenzene hexachloroethane

- The pecticide results for sample B-20(1-5)RE were flagged as "estimated" (J) because the sample was re-extracted outside SW-846 holding times.

- The results for alpha-BHC, gamma-BHC, heptachlor, and aldrin in sample B-20(1-5) were flagged as "estimated" (J) because the %Rs were below QC limits for the associated LCS 36300-002 .

- The result for alpha-chlordane in sample B-20(1-5)RE was flagged as "unusable" (R) because the %D for dual column quantitation was greater than 100%.

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- The result for PCB aroclor-1260 in sample B-20(7-9) was flagged as "estimateD" (J) because the %Ds for dual column quantitation were greater than 25% but were less than 70%.

- All results for antimony in soil samples were flagged as "estimated" (J) because percent recoveries for spike samples 207200-2 and 207226-1 were below control limits (75-125%).

- The result for copper in sample B-58(73-75) was flagged as "estimated" (J) because the percent recovery for spike sample 207226-1 was below control limits (75-125%).

- Positive results for calcium in soil samples B-20(1-5), B-20(7-9), and B-20(52-24) were flagged as "estimated" (J) because the RPD for duplicate sample 207200-2 was above the allowable maximum (35%).

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Connecticut, Job No. 207240
Soil Samples
Collected July 28-August 2, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSD for acetone (33.0%) was above the allowable maximum (30%) for MSN on 07-29-04. Positive results for acetone should be considered estimates in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The RRF50s for target compounds were above the allowable minimum (0.050), as required. The %D for acetone (28.1%) was above the allowable maximum (25%) on 08-03-04 (N4939). The %D for acetone (25.7%) was above the allowable maximum (25%) on 08-05-04 (N4978). Positive results for acetone should be considered estimates (J) in associated samples.

Blanks: Method blank 36374-001 contained traces of acetone (2.81 ug/kg) and methylene chloride (2.59 ug/kg). Method blank 36238-001 contained a trace of acetone (2.85 ug/kg). The results for acetone and methylene chloride that are less than ten times the associated method blank should be reported as not detected (U) in soil samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

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Laboratory Control Sample: The percent recoveries were within QC limits for QC sample 36374-002. The percent recovery for trichloroethene was above QC limits for QC sample s6238-002. Positive results for trichloroethene should be considered estimates (J) in associated samples.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Semi-Volatiles Data
for STL Connecticut, Job No. 207240
Soil Samples
Collected July 28-August 2, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The RRF25s for target compounds were above the allowable minimum (0.050), as required. The %Ds for 4-chloroaniline (26.8%) and 3-nitroaniline (31.6%) were above the allowable maximum (25%) on 08-09-04 (P2952). Positive results for these two compounds should be considered estimates (J) in associated samples.

Blanks: The analyses of the method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

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Laboratory Control Sample: The percent recoveries for the following compounds were below QC limits for sample 36444-002. All results for these compounds should be considered estimates (J) in soil samples:

1,2-dichlorobenzene	1,3-dichlorobenzene	2,4-dinitrophenol
1,4-dichlorobenzene	hexachloroethane	

The percent recovery for 4-chloroaniline was above QC limits for sample 36170-002. Positive results for 4-chloroaniline should be considered estimates (J).

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Pesticide Data for
STL Connecticut, STL Job No. 207240
Soil Sample B-20(1-5)
Collected July 28, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Sample B-20(1-5) was re-extracted outside SW-846 holding times. Results for B-20(1-5)RE should be considered estimates (J).

Blanks: The analyses of the instrument and method blanks reported target pesticides as not detected.

Surrogate Recovery: The surrogate recoveries for sample B-20(1-5) were within advisory limits on both columns for the initial and re-extracted analyses.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for sample 36915-002. The percent recoveries for alpha-BHC, gamma-BHC, heptachlor, and aldrin were below QC limits for sample 36300-002. Results for these pesticides should be considered estimates (J) in associated samples.

Initial Calibration: The %RSDs for target pesticides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for 4,4'-DDT (26.53%) and methoxychlor (18.67%) were above the allowable maximum (15%) for the DB-1701 column on 08-07-04 (C5313036). The %D for 4,4'-DDT (21.97%) was above the allowable maximum (15%) for the RTX-35 column on 08-07-04 (C5313036). Results for these compounds should be considered estimates (J) in associated samples.

Endrin and DDT Breakdown Evaluation: The percent breakdowns were below the allowable maximum (20%) for 4,4'-DDT and endrin (20%), as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

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Pesticide Identification Summary for Single Component Analytes: Checked results were within GC quantitation limits. The %Ds for dual column quantitation of pesticides in sample B-20(1-5)RE were greater than the allowable maximum (25%). Results with %Ds greater than 25% but less than 70% should be considered estimates (J). Results with %Ds greater than 70% but less than 100% should be considered estimated and presumptive evidence of its presence (JN). Results with %Ds greater than 100% should be considered unusable (R).

Pesticide Identification Summary for Multicomponent Analytes: There were no detectable concentrations of target multi-component pesticides reported in samples contained in this data pack.

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QA/QC Review of PCB Aroclor Data for STL Connecticut, STL Job No. 207240 Soil Samples Collected July 28-August 2, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target aroclors as not detected.

Surrogate Recovery: The surrogate recoveries were within advisory limits on both columns for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for sample 36300-003.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target aroclors were below the allowable maximum (15%) for both columns, as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Pesticide Identification Summary for Single Component Analytes: Checked surrogates were within GC quantitation limits. The %D for dual column quantitation of aroclor-1260 in sample B-20(7-9) (37.0%) was greater than the allowable maximum (25%). Results for aroclors with %Ds greater than 25% but less than 70% should be considered estimates (J).

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QA/QC Review of TAL Metals Data
for STL Connecticut, Job No. 207240
Soil Samples
Collected July 28-August 2, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Samples were analyzed within the SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for TAL metals were within control limits (80-120% for Hg, 90-110% for all other metals).

CRDL Standard: The percent recoveries for TAL metals were within laboratory QC limits (50-150%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, and method blanks reported TAL metals as below the CRDLs, as required.

ICP Interference Check Sample: The percent recoveries for TAL metals were within control limits (80-120%).

Spike Sample Recovery: The percent recovery (%R) for antimony (38%) was below control limits (75-125%) for soil spike sample 207200-2. The %Rs for antimony (31%) and copper (57%) were below control limits (75-125%) for soil spike sample 207226-1. All results for antimony and copper should be considered estimates (J) in soil samples.

Duplicates: The relative percent difference (RPD) for calcium (70.8%) was above the allowable maximum (35%) for soil duplicate sample 207200-2. The RPD for copper (44.6%) was above the allowable maximum (35%) for soil duplicate sample 207226-1. Positive results for calcium and copper should be considered estimates in associated soil samples.

Laboratory Control Sample: The recoveries for TAL metals were within control limits for the soil LCSs.

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ICP Serial Dilution: The %Ds for applicable TAL metals were below the allowable maximum (10%) for serial dilution sample B-58(73-75), as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solids for samples were above the allowable minimum (50%).

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QA/QC Review of Herbicide Data for
STL Connecticut, STL Job No. 207240
Soil Sample B-20(1-5)
Collected July 28, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: The sample was extracted and analyzed within SW-846 holding times.

Blanks: The analysis of the method blank reported target herbicides compounds as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences were below the allowable maximum and the percent recoveries were within QC limits for MS/MSD sample B-20(1-5).

Laboratory Control Sample: The percent recoveries were within QC limits for sample batch 4218600.

Initial Calibration: The %RSDs for target herbicides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for 2,4,5-TP (22.7%) and 2,4,5-T (27.3%) were above the allowable maximum (15%) on 08-04-04 (W0840011.D). The %D for 2,4,5-T (19.0%) was above the allowable maximum (15%) on 08-12-04 (W0840060.D). Positive results for these compounds should be considered estimates (J) in associated samples.

Herbicide Analytical Sequence: The retention times for DCAA were within control limits for environmental samples.

Herbicide Identification Summary: Checked surrogates were within GC quantitation limits. There were no detectable concentrations of target herbicides reported in sample B-20(1-5).

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Data Usability Summary Report for
STL Connecticut, Job No. 207272
Soil Sample B10(19-23)
Collected July 14, 2004

Prepared by: Donald Anné
December 15, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile and base/neutral analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The data are acceptable with some minor issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The volatile results for sample B10(19-23) were flagged as "estimated" (J) because the sample was analyzed outside SW-846 holding times.
- The semi-volatile results for sample B10(19-23) were flagged as "estimated" (J) because the sample was extracted outside SW-846 holding times.

All are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Connecticut, Job No. 207272
Soil Sample B10(19-23)
Collected July 14, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Sample B10(19-23) was analyzed outside SW-846 holding times. Results for sample B10(19-23) should be considered estimates (J).

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSD for acetone (33.0%) was above the allowable maximum (30%) for MSN on 07-29-04. Positive results for acetone should be considered estimates (J) in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The RRF50s for target compounds were above the allowable minimum (0.050), as required. The %Ds for acetone (26.9%) and 2-butanone (28.1%) were above the allowable maximum (25%) on 08-03-04 (N4921). Positive results for these two compounds should be considered estimates (J) in associated samples.

Blanks: Method blank 36161-001contained a trace of acetone (2.71 ug/kg). Results for acetone that are less than ten times the method blank level shuold be reported as not detected (U) in associated samples.

Internal Standard Area Summary: The internal standard retention areas and times were within control limits.

Surrogate Recovery: One of four surrogate recoveries for sample B10(19-23) was above control limits. Positive results for B10(19-23) should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

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Laboratory Control Sample: The percent recoveries for chloromethane, vinyl chloride, toluene, and 1,1-dichloroethane were below QC limits for QC sample 36161-002. Results for these compounds should be considered estimates (J) in soil samples.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Semi-Volatiles Data
for STL Connecticut, Job No. 207272
Soil Sample B10(19-23)
Collected July 14, 2004

Prepared by: Donald Anné
December 15, 2004

Holding Times: Sample B10(19-23) was extracted outside SW-846 holding times. Results for sample B10(19-23) should be considered estimates.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The RRF25s for target compounds were above the allowable minimum (0.050) and the %Ds were below the allowable maximum (25%), as required.

Blanks: The analysis of the method blank reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries for sample B10(19-23) were within control limits.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recovery for 2,4-dinitrophenol was below QC limits for sample 36232-002. Results for 2,4-dinitrophenol should be considered estimates (J).

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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December 17, 2004

Ms. Smita Patel
Langan Engineering and Environmental
Services, Inc.
360 West 31st Street, Suite 900
New York, NY 10001

Re: Data Validation Reports
Atlas Park
August 2004 Soil and Ground Water Sampling Events
July 2004 Air Sampling Event

Dear Ms. Patel:

The data validation summaries and data usability summary reports are attached to this letter for the Altas Park, July 2004 air sampling and August 2004 soil and ground water sampling events. The data for STL Connecticut, job nos. 207346 and 207417 and STL Burlington SDG: 101373, were mostly acceptable with issues that are identified in the validation summaries. There were pesticide data in data packs 207346 and 207417 that were flagged as unusable (R) due to the percent differences for dual column quantitation that were greater than 100%. The data is rejected based solely on the validation guidance criteria. The rejected data may be determined to be acceptable to the user based on additional information that is not contained in the data validation criteria.

I have included a list of data validation qualifiers and acronyms to assist you in interpreting the reports. If you have any questions concerning this report, please contact us at (518) 348-6995. Thank you for the opportunity to assist Langan Engineering and Environmental Services, Inc.

Sincerely,
Alpha Environmental Consultants, Inc.

Donald C. Anné

Donald C. Anné
Senior Chemist

DCA:dca

attchment

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Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.

R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.

N = Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.

J = Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

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Data Usability Summary Report for
STL Burlington, SDG: 101373
Air Samples
Collected July 13-16, 2004

Prepared by: Donald Anné
December 17, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile analyses.

The overall performances of the analyses are acceptable. STL Burlington did fulfill the requirements of the analytical methods.

The data are acceptable with one minor issue that is identified in the accompanying data validation reviews. The were no data flagged in this SDG.

All data are usable in this SDG. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Burlington, SDG: 101373
Air Samples
Collected July 13-16, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Method TO-15 does not state holding times, samples were analyzed between 20-23 days after collection.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRF10s for target compounds were above the allowable minimum (0.010) and the %Ds were below the allowable maximum (30%), as required.

Blanks: The analyses of the method blanks reported target volatiles as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Laboratory Control Sample: The relative percent differences were below the allowabe maximum (40%), but the percent recoveries for 1,2,4-trichlorobenzene were above QC limits for LCS/LCSD H7LCS. The relative percent differences were below the allowabe maximum (40%), but the percent recoveries for 1,2,4-trichlorobenzene were above QC limits for LCS/LCSD H8LCS. Positive results for 1,2,4-trichlorobenzene should be considered estimates (J) in associated samples.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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Data Usability Summary Report for
STL Connecticut, Job No. 207346
Soil Samples
Collected August 6-12, 2004

Prepared by: Donald Anné
December 17, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile, base/neutral, PCB, pesticide, herbicide, and metal analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The volatile results for acetone in soil samples were flagged as "not detected" (U) because the level in the sample was not significantly greater (greater than 10 times) than either the associated method and/or field blank levels.

- Positive volatile results for sample B-55(0.5-4.5) were flagged as "estimated" (J) because two surrogate recoveries were above control limits.

- The semi-volatile results for the following compounds in samples B-55(0.5-4.5) and B-55(5-12) were flagged as "estimated" (J) because the percent recoveries were below QC limits in LCS 36975-002:

1,3-dichlorobenzene	1,4-dichlorobenzene	2-methylnaphthalene
carbazole	fluoranthene	

- The positive results for some pesticides in samples B6(2-4) and B-55(0.5-2.5) were flagged as "estimated" (J) because the %Ds for dual column quantitation were greater than 25% but less than 70%.

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- All results for nickel and zinc in samples B-57(68-70), DUP080604, B6(2-4), and B6(59-61) were flagged as "estimated" (J) because percent recoveries for spike sample 207349-1 were below control limits (75-125%).

- All results for barium, chromium, and vanadium in samples B-55(0.5-4.5) and B-55(5-12) were flagged as "estimated" (J) because percent recoveries for spike sample 207348-3 were below control limits (75-125%).

- All results for antimony in soil samples were flagged as "estimated" (J) because percent recoveries for spike samples 207348-3 and 207349-1 were below control limits (75-125%).

- All results for the following metals in samples FB081004 and FB081204 were flagged as "estimated" (J) because percent recoveries for spike sample FB081004 were below control limits (75-125%):

aluminum	barium	beryllium	chromium	cobalt	copper
lead	nickel	manganese	silver	vanadium	zinc

- Positive results for sodium in soil samples were flagged as "estimated" (J) because the percent recoveries for spike samples 207348-3 and 207349-1 were above control limits (75-125%).

- Positive results for copper and potassium in samples B-57(68-70), DUP080604, B6(2-4), and B6(59-61) were flagged as "estimated" (J) because the percent recoveries for spike sample 207349-1 were outside control limits (75-125%).

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Connecticut, Job No. 207346
Soil Samples
Collected August 6-12, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSD for bromomethane (47.1%) was above the allowable maximum (30%) for MSL on 08-10-04. The %RSD for acetone (33.0%) was above the allowable maximum (30%) for MSN on 07-29-04. Positive results for these two compounds should be considered estimates (J) in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The RRF50s for target compounds were above the allowable minimum (0.050), as required. The %D for trichloroethene (28.9%) was above the allowable maximum (25%) on 08-17-04 (L5472). The %D for chloroethane (26.3%) was above the allowable maximum (25%) on 08-13-04 (N5163). Positive results for these compounds should be considered estimates (J) in associated samples.

Blanks: Method blank 36882-001 contained a trace of chloroform (0.77 ug/kg). Method blank 36909-001 contained traces of acetone (2.91 ug/kg) and chloroform (0.61 ug/kg). Field blank FB081004 contained a trace of acetone (5 ug/L). Field blank FB081204 contained a trace of acetone (2 ug/L). Results for acetone that are less than ten times the highest associated blank level should be reported as not detected (U) in samples. Results for chloroform that are less than five times the highest associated blank level should be reported as not detected (U) in samples.

Internal Standard Area Summary: The internal standard retention times were within control limits.

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Three of three internal standard areas (IS1, IS2, IS3) for sample B-55(0.5-4.5) were outside control limits. Results for sample B-55(0.5-4.5) that are quantitated using internal standards IS1, IS2, and IS3 should be considered estimates (J).

Surrogate Recovery: Two of four surrogate recoveries for sample B-55(0.5-4.5) were above control limits. Positive results for sample B-55(0.5-4.5) should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for QC samples 36882-002, 36909-002, and 36911-002.

Field Duplicate: The analyses for field duplicates, sample pair B57(68-70)/DUP080604, reported target compounds as either not detected or below the reporting limits.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Semi-Volatiles Data
for STL Connecticut, Job No. 207346
Soil Samples
Collected August 6-12, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The RRF25s for target compounds were above the allowable minimum (0.050), as required. The %Ds for benzoic acid (29.9%) and 4-nitrophenol (25.5%) were above the allowable maximum (25%) on 08-16-04 (P3099). The %D for benzoic acid (47.3%) was above the allowable maximum (25%) on 08-19-04 (P3167). Positive results for these two compounds should be considered estimates (J) in associated samples.

Blanks: The analyses of method and field blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Field Duplicate: The analyses for field duplicates, sample pair B57(68-70)/DUP080604 reported target compounds as either not detected or below the reporting limits.

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Laboratory Control Sample: The percent recoveries were within QC limits for samples 35786-002 and 36870-002. The percent recoveries for the following compounds were below QC limits for sample 36975-002. All results for these compounds should be considered estimates (J) in associated soil samples:

1,3-dichlorobenzene	1,4-dichlorobenzene	2-methylnaphthalene
carbazole	fluoranthene	

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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QA/QC Review of Pesticide Data for
STL Connecticut, STL Job No. 207346
Soil Samples
Collected August 9-12, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument, method, and field blanks reported target pesticides as not detected.

Surrogate Recovery: One of two surrogate recoveries for samples B6(2-4) and B-55(0.5-2.5) was above advisory limits on one column. Positive results for these samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: The relative percent differences were below the allowable maximums and the percent recoveries were within control limits for MS/MSD sample B59(3-5).

Laboratory Control Sample: The percent recoveries were within QC limits for samples 36842-002, 36915-002, and 36958-002.

Initial Calibration: The %RSDs for target pesticides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target pesticides in associated calibrations were below the allowable maximum (15%) for both columns, as required.

Endrin and DDT Breakdown Evaluation: The percent breakdowns were below the allowable maximum (20%) for 4,4'-DDT and endrin (20%), as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

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Pesticide Identification Summary for Single Component Analytes: Checked results were within GC quantitation limits. The %Ds for dual column quantitation of pesticides in samples B6(2-4), FB081004, and B-55(0.5-2.5) were greater than the allowable maximum (25%). Results with %Ds greater than 25% but less than 70% should be considered estimates (J). Results with %Ds greater than 70% but less than 100% should be considered estimated and presumptive evidence of its presence (JN). Results with %Ds greater than 100% should be considered unusable (R).

Pesticide Identification Summary for Multicomponent Analytes: There were no detectable concentrations of target multi-component pesticides reported in samples contained in this data pack.

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QA/QC Review of PCB Aroclor Data for
STL Connecticut, STL Job No. 207346
Soil Samples
Collected August 6-12, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target aroclors as not detected.

Surrogate Recovery: One of two surrogate recoveries for samples B48(2-4) and B48(8-10) was above advisory limits on both columns. Positive results for these samples should be considered estimates (J).

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for sample 35729-003.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target aroclors were below the allowable maximum (15%) for both columns, as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Field Duplicate: The analyses for field duplicates, sample pair B-57(68-70)/DUP080604 reported target aroclors as not detected.

Pesticide Identification Summary for Single Component Analytes: Checked surrogates were within GC quantitation limits. The %Ds for dual column quantitation of aroclor-1260 in samples B49(12-15) (33.0%), B48(2-4) (41.0%), and DUP-1 (42.4%) were greater than the allowable maximum (25%). Results for aroclors with %Ds greater than 25% but less than 70% should be considered estimates (J).

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QA/QC Review of TAL Metals Data
for STL Connecticut, Job No. 207346
Soil Samples
Collected August 6-12, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were analyzed within the SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for potassium were below control limits (90-110%) for calibration check samples on 08-16-04. Results for potassium should be considered estimates (J) in associated samples.

CRDL Standard: The percent recoveries for TAL metals were within laboratory QC limits (50-150%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, method, and field blanks reported TAL metals as below the CRDLs, as required.

ICP Interference Check Sample: The percent recovery for selenium was below control limits (80-120%) on 08-16-04. The percent recoveries for thallium were below control limits (80-120%) on 08-20-04. Results for selenium and thallium should be considered estimates (J) in associated soil samples.

Spike Sample Recovery: The percent recoveries for antimony (18%), copper (5%), nickel (65%), potassium (127%), sodium (163%), and zinc (65%) were outside control limits (75-125%) for soil spike sample 207349-1. Positive results for copper, potassium, and sodium, and all results for antimony, nickel, and zinc should be considered estimates (J) in soil samples. Negative results for copper should be considered unusable (R) in soil samples.

The percent recoveries for antimony (17%), barium (12%), chromium (61%), sodium (131%), and vanadium (74%) were outside control limits (75-125%) for soil spike sample 207348-3. Positive results for sodium, and all results for antimony, barium, chromium, and vanadium should be considered estimates (J) in soil samples.

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The percent recoveries for following metals were below control limits (75-125%) for aqueous spike sample FB081004. Results for these metals should be considered estimates in aqueous samples:

aluminum (65%)	barium (68%)	beryllium (74%)	chromium (72%)
cobalt (72%)	copper (69%)	lead (69%)	nickel (71%)
manganese (70%)	silver (68%)	vanadium (70%)	zinc (73%)

Duplicates: The relative percent differences for applicable TAL metals were below the allowable maximums (35% for soil, 20% for aqueous) for soil duplicate samples 207349-1 and 207348-3 ,and aqueous duplicate sample FB081004, as required.

Field Duplicate: The relative percent differences were below the allowable maximum (35%) for field duplicates, sample pair B-57(68-70)/DUP080604.

Laboratory Control Sample: The recoveries for TAL metals were within control limits for the soil LCS.

ICP Serial Dilution: The %Ds for applicable TAL metals were below the allowable maximum (10%) for serial dilution sample B6(59-61), as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solids for samples were above the allowable minimum (50%).

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QA/QC Review of Herbicide Data for
STL Connecticut, STL Job No. 207346
Soil Samples
Collected August 9-12, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the method and field blanks reported target herbicides compounds as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: The percent recoveries were within QC limits, but two of three relative percent differences were above the allowable maximum for MS/MSD sample B-55(0.5-2.5). No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The relative percent differences were below the allowable maximum and the percent recoveries were within QC limits for LCS/LCSD sample batch 4230488. The percent recoveries were within QC limits for LCS sample batch 4232207.

Initial Calibration: The %RSDs for target herbicides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for 2,4,5-TP (24.9%), 2,4,5-T (32.8%), and 2,4-D (18.3%) were above the allowable maximum (15%) on 08-19-04 (B0840242.D). Positive results for these compounds should be considered estimates (J) in associated samples.

Herbicide Analytical Sequence: The retention times for DCAA were within control limits for environmental samples.

Herbicide Identification Summary: Checked surrogates were within GC quantitation limits. There were no detectable concentrations of target herbicides reported in samples contained in this data pack.

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Data Usability Summary Report for
STL Connecticut, Job No. 207417
Ground Water Samples
Collected August 20-25, 2004

Prepared by: Donald Anné
December 17, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile, base/neutral, PCB, pesticide, herbicide, and metal analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The volatile results for acetone in all samples except GW57 were flagged as "not detected" (U) because the levels in the samples were not significantly greater (greater than 10 times) than the associated method blank level.

- The volatile result for toluene in sample FB082304 was flagged as "not detected" (U) because the level in the sample was not significantly greater (greater than 5 times) than the associated method blank level.

- The result for acetone in sample GW57 was flagged as estimated (J) because the result was quantitated using data that were extrapolated beyond the highest calibration standard and flagged "A" by the laboratory.

- The positive results for delta-BHC and alpha-chlordane in sample GW6 were flagged as "unusable" (R) because the %Ds for dual column quantitation were greater than 100%.

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Volatiles Data
for STL Connecticut, Job No. 207417
Ground Water Samples
Collected August 20-25, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSD for bromomethane (31.6%) was above the allowable maximum (30%) for MSL on 08-31-04. Positive results for bromomethane should be considered estimates (J) in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8260B.

The RRF50s for target compounds were above the allowable minimum (0.050) and the %Ds were below the allowable maximum (25%), as required.

Blanks: Method blank 37566-001 contained traces of acetone (4.46 ug/L) and toluene (0.69 ug/L). Results for acetone that are less than ten times the highest associated blank level should be reported as not detected (U) in samples. Results for toluene that are less than five times the highest associated blank level should be reported as not detected (U) in samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

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Laboratory Control Sample: The percent recoveries for chloromethane and vinyl chloride were above QC limits for sample 37566-002. Positive results for chloromethane and vinyl chloride should be considered estimates (J).

Field Duplicate: The relative percent differences were below the allowable maximum (35%) for field duplicates, sample pair GW38/DUP082004, as required.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

The acetone result for sample GW57 was quantitated by extrapolating data above the highest calibration standard and marked 'A' by the laboratory. The result for acetone in sample GW57 should be considered an estimate (J).

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QA/QC Review of Semi-Volatiles Data for STL Connecticut, Job No. 207417 Ground Water Samples Collected August 20-25, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The average RRFs for target compounds were above the allowable minimum (0.050), as required. The %RSD for 2,4-dinitrophenol (31.3%) was above the allowable maximum (30%) for MSU on 08-26-04. Positive results for 2,4-dinitrophenol should be considered estimates (J) in associated samples.

Continuing Calibration: The SPCCs and CCCs were within control limits for method 8270C.

The RRF25s for target compounds were above the allowable minimum (0.050), as required. The %Ds for n-nitrosodimethylamine (30.1%) and 2,2'oxybis(1-chloropropane) (35.1%) was above the allowable maximum (25%) on 08-30-04 (R4205). Positive results for these two compounds should be considered estimates (J) in associated samples.

Blanks: The analyses of method and field blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

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Field Duplicate: The analyses for field duplicates, sample pair GW38/DUP082004, reported target compounds as not detected.

Laboratory Control Sample: The percent recoveries were within QC limits for samples 37253-002 and 37376-002.

Compound ID: Checked surrogates were within GC quantitation limits. The analyses for samples in this data pack reported target semi-volatiles as not detected.

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QA/QC Review of Pesticide Data for
STL Connecticut, STL Job No. 207417
Ground Water Samples
Collected August 20-25, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument, method, and field blanks reported target pesticides as not detected.

Surrogate Recovery: The surrogate recoveries were within advisory limits on both columns for environmental samples.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences were below the allowable maximums and the percent recoveries were within control limits for MS/MSD sample B59(3-5).

Laboratory Control Sample: The percent recoveries were within QC limits for samples 37281-002 and 37390-002.

Initial Calibration: The %RSDs for target pesticides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target pesticides in associated calibrations were below the allowable maximum (15%) for both columns, as required.

Endrin and DDT Breakdown Evaluation: The percent breakdowns were below the allowable maximum (20%) for 4,4'-DDT and endrin (20%), as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Field Duplicate: The analyses for field duplicates, sample pair GW38/DUP082004, reported target pesticides as not detected.

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Pesticide Identification Summary for Single Component Analytes: Checked results were within GC quantitation limits. The %Ds for dual column quantitation of pesticides in sample GW6 were greater than the allowable maximum (25%). Results with %Ds greater than 25% but less than 70% should be considered estimates (J). Results with %Ds greater than 70% but less than 100% should be considered estimated and presumptive evidence of its presence (JN). Results with %Ds greater than 100% should be considered unusable (R).

Pesticide Identification Summary for Multicomponent Analytes: There were no detectable concentrations of target multi-component pesticides reported in samples contained in this data pack.

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QA/QC Review of PCB Aroclor Data for
STL Connecticut, STL Job No. 207417
Ground Water Samples
Collected August 20-25, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analyses of the instrument and method blanks reported target aroclors as not detected.

Surrogate Recovery: The surrogate recoveries were within advisory limits on both columns for environmental samples.

Matrix Spike/Matrix Spike Duplicate: MS/MSD data were not provided in this data pack. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample: The percent recoveries were within QC limits for samples 37281-003 and 37390-003.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for target aroclors were below the allowable maximum (15%) for both columns, as required.

Pesticide Analytical Sequence: The retention times for TCX and DCB were within control limits for both columns.

Field Duplicate: The analyses for field duplicates, sample pair GW38/DUP082004, reported target aroclors as not detected.

Pesticide Identification Summary for Single Component Analytes: Checked surrogates were within GC quantitation limits. The analyses of samples in this data pack reported target aroclors as not detected.

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QA/QC Review of TAL Metals Data for STL Connecticut, Job No. 207417 Ground Water Samples Collected August 20-25, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were analyzed within the SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for TAL metals were within control limits (80-120% for Hg, 90-110% for all other metals).

CRDL Standard: The percent recoveries for TAL metals were within laboratory QC limits (50-150%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, and method blanks reported TAL metals as below the CRDLs, as required.

ICP Interference Check Sample: The percent recoveries for thallium were below control limits (80-120%). No action is taken because the levels of interfering metals in the environmental samples are much lower than those in the check sample.

Spike Sample Recovery: The percent recoveries for applicable TAL metals were within control limits (75-125%) for aqueous spike sample GW58.

Duplicates: The relative percent differences for applicable TAL metals were below the allowable maximum (20%) for aqueous duplicate sample W58, as required.

Field Duplicate: The relative percent differences for applicable TAL metals were below the allowable maximum (20%) for field duplicates, sample pair GW38/DUP082004.

Laboratory Control Sample: The percent recoveries for TAL metals were within control limits (80-120%) for the aqueous LCSs.

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ICP Serial Dilution: The %Ds for applicable TAL metals were below the allowable maximum (10%) for serial dilution sample GW58, as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

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QA/QC Review of Herbicide Data for
STL Connecticut, STL Job No. 207417
Ground Water Samples
Collected August 20-25, 2004

Prepared by: Donald Anné
December 17, 2004

Holding Times: Samples were extracted and analyzed within SW-846 holding times.

Blanks: The analysis of the method blank reported target herbicides compounds as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for environmental samples.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences were below the allowable maximum and the percent recoveries were within QC limits for MS/MSD sample GW57.

Laboratory Control Sample: The percent recoveries were within QC limits for LCS sample batch 4240315.

Initial Calibration: The %RSDs for target herbicides were below the allowable maximum (20%) for primary and confirmation columns, as required.

Continuing Calibration: The %Ds for 2,4,5-TP (23.1%) and 2,4,5-T (18.4%) were above the allowable maximum (15%) on 09-02-04 (b0940053.D). The %D for 2,4,5-TP (18.5%) was above the allowable maximum (15%) on 09-03-04 (b0940069.D). Positive results for these compounds should be considered estimates (J) in associated samples.

Herbicide Analytical Sequence: The retention times for DCAA were within control limits for environmental samples.

Field Duplicates: Both analyses for the field duplicates, soil sample pair GW38/DUP082004, reported target herbicides as not detected.

Herbicide Identification Summary: Checked surrogates were within GC quantitation limits. There were no detectable concentrations of target herbicides reported in samples contained in this data pack.

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Data Usability Summary Report for
STL Connecticut, Job No. 207130
Soil Samples
Collected July 14-16, 2004

Prepared by: Donald Anné
December 9, 2004

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data packs contained the results of volatile, base/neutral, PCB, pesticide, herbicide, and metal analyses.

The overall performances of the analyses are acceptable. STL Connecticut did fulfill the requirements of the analytical methods.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

- Positive volatile results for samples B49(2-4) and B9(1-3) were flagged as "estimated" (J) because one or two surrogate recoveries were above control limits.

- Positive volatile results for acetone were flagged as "estimated" (J) because the %RSD for acetone was above the allowable maximum (30%) for the associated initial calibration.

- Positive volatile results for 2-butanone were flagged as "estimated" (J) because the %D for 2-butanone was above the allowable maximum (30%) for the associated continuing calibration.

- The positive results for some pesticide compounds in the following samples were flagged as "estimated" (J) because the %Ds for dual column quantitation were greater than 25% but less than 70%:
  B10(2-4) B50(3-5) B45(2-4) B46(4-6) B9(1-3)

- The positive results for some pesticide compounds in the following samples were flagged as "unusable" (R) because the %Ds for dual column quantitation were greater than 100%:
  B10(2-4) B7(2-4) B51(2-4) B53(1-4) B45(2-4)
  B46(4-6) B9(1-3)

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B-16 / MW-16 MONITORING WELL SAMPLING FORM
LOW FLOW FIELD MEASUREMENTS

Project: Atlas Park
Initial Water Level (ft): 56.45
Desired Purge Rate (L/min): 0.1 - 0.4

Site Location: Glendale, NY
Pump Intake Depth (ft): ~ 5' from bottom
Desired Compressor Pressure (psi): N/A

Date: 8/23/2004
Well No: B16 / MW16
Purge Volume (gal):

TIME	pH *	TEMP. °C	COND.* ms/cm	Dis. O2 * mg/L	ORP mV	Turbidity NTUs	DTW ft	PURGE RATE L/min	NOTES
12:10	6.87	19.63	1.19	3.63	133	72.9	56.44	0.4	
12:15	6.88	20.95	1.20	3.32	123	43.2	56.45	0.4	
12:20	6.88	20.76	1.18	3.36	116	132	56.44	0.4	
12:25	6.88	19.94	1.15	3.27	112	36.6	56.43	0.4	
12:30	6.89	21.26	1.16	3.13	108	34.5	56.44	0.4	
12:35	6.90	22.10	1.19	3.25	106	32.7	56.44	0.4	
Stabilization	+/- 0.1 for pH		+/- 3%	+/- 10%	+/- 10 mV	+/- 10%			

*=Stabilization is achieved after all parameters have stabilized for three successive readings.

B-16 / MW - 16 MONITORING WELL DEVELOPMENT FORM

Project: Atlas Park
Initial Water Level (ft): 69.4
Desired Purge Rate (L/min): 0.1 - 0.4

Site Location: Glendale, NY
Pump Intake Depth (ft): ~5' from Bottom
Desired Compressor Pressure (psi): N/A

Date: 8/9/2004
Well No: B-16 / MW-16
Purge Volume (gal):

TIME	pH *	TEMP. C	COND.* ms/cm	Dis. O2 * ppm	ORP mV	Turbidity NTUs	DTW ft	PURGE RATE L/min	NOTES
13:35	6.77	17.60	0.655	3.74	130	220.0	69.60	0.4	
13:40	6.71	17.40	0.659	3.64	126	224.0	69.50	0.4	
13:45	6.75	17.41	0.655	3.60	128	220.0	69.50	0.4	
13:50	6.75	17.40	0.652	3.62	127	195.0	69.50	0.4	
13:55	6.74	17.42	0.649	3.63	126	100.0	69.50	0.4	
14:00	6.74	17.40	0.652	3.63	126	52.0	69.50	0.4	
14:05	6.75	17.40	0.653	3.64	127	50.0	69.50	0.4	
14:10	6.74	17.41	0.652	3.63	126	50.0	69.50	0.4	
14:15	6.75	17.41	0.652	3.63	126	28.0	69.50	0.4	
14:20	6.75	17.40	0.652	3.64	126	25.0	69.50	0.4	
Stabilization	+/- 0.1 for pH		+/- 3%	+/- 10%	+/- 10 mV	+/- 10%			

*=Stabilization is achieved after all parameters have stabilized for three successive readings.