

General Electric Company Pittsfield, Massachusetts

Field Sampling Plan/ Quality Assurance Project Plan

Volume III of III

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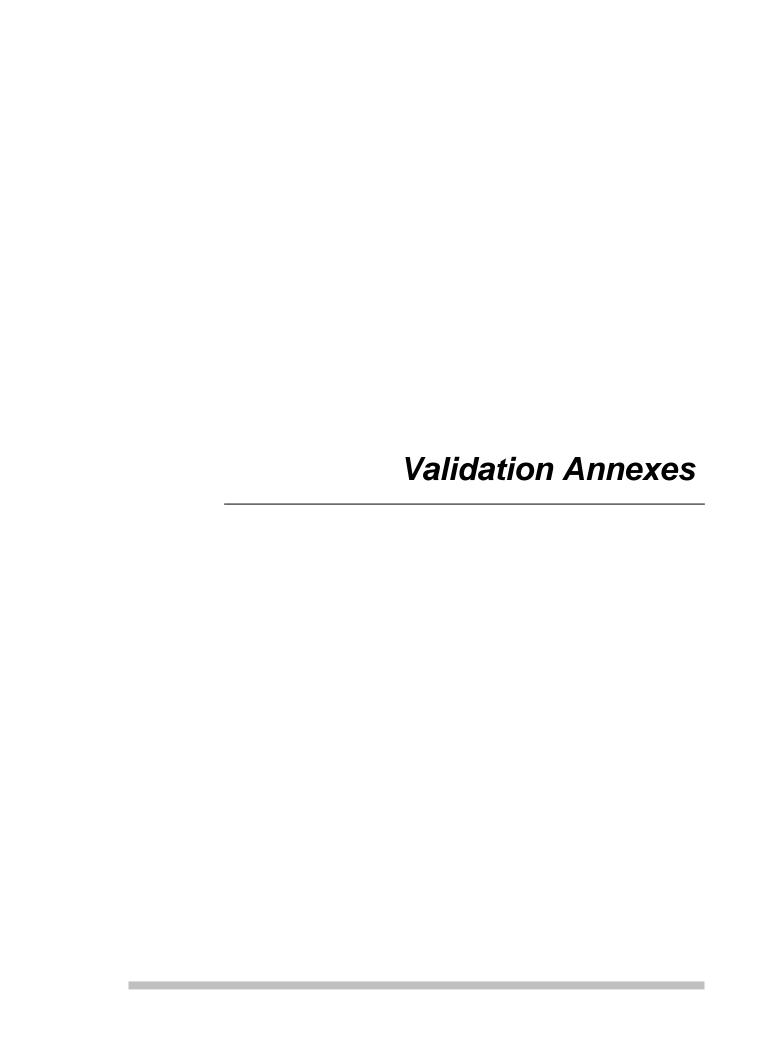
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Validation Annex A

Data Validation Procedures for Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs)

Validation Annex A

Data Validation Procedures for Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs)

I. Introduction

This Standard Operating Procedure (SOP) describes the data validation procedures for a United States Environmental Protection Agency (EPA) Region I tiered review of the data for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) conducted by EPA Methods 8260B and 8270C, respectively. Data review procedures presented in this SOP were developed from the applicable quality control criteria specified in the following documents:

- Region I Tiered Organic and Inorganic Data Validation Guidelines, USEPA Region I, July 1, 1993.
- Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, USEPA Region I, Draft, December 1996.
- CLP Organics Data Review and Preliminary Review, USEPA SOP HW-6, Revision 10, October 1995.
- USEPA Contract Laboratory Program, Statement of Work for the Organics Analysis, Revision OLM0.1.9, July 1993.

II. EPA Region I Tiered Validation Procedures

All VOC and SVOC analytical data will be validated to a Tier I level following the procedures presented in the Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses (July 1996, revised December 1996) and the Region I Tiered Organic and Inorganic Data Validation Guidelines (EPA guidelines). The basic Tier I review consists of a completeness evidence audit to ensure that all laboratory data and documentation are present. Additionally, for projects subject to this FSP/QAPP, the Tier I review will be modified and expanded to include a number of elements of Tier II review, including review of each sample delivery group (SDG) to identify data deficiencies that may potentially result in qualification of the data (e.g., systematic deviations such as low calibration response factors). Based on this modified Tier I review, a subset of the data will be identified for additional Tier II review. If QA/QC deviations are identified during the modified Tier I review, those deviations will be addressed in the Tier II review. Otherwise, a minimum of 25% of the data will be chosen at random to be subjected to a Tier II review, which will consist of the Tier I completeness evidence audit and review of all data package summary forms for identification of QA/QC parameter deviations. The Tier II data review will be used to identify and evaluate systematic QA/QC deficiencies that may affect any or all of the sample data presented in a specific data package. The Tier II data validation also includes an evaluation of field duplicate Relative Percent Difference (RPD) compliance. Additional Tier II review and Tier III (recalculation of sample results) review may also be performed for a larger portion of the data set, if required, to fully resolve data usability limitations identified during the modified Tier I data review and initial Tier II review for 25% of the data chosen at random.

The tiered data validation procedures consisting of modified Tier I review for all data, Tier II review of a minimum of 25% of the data, and additional Tier II and Tier III review, as required, will be used to evaluate compliance of each data set with the project-specific data quality objectives. The procedures presented in the following sections will be used to perform the Tier I, Tier II, and Tier III data validation reviews. Qualification of analytical data will also be performed, if required, as specified in the data validation protocols presented below.

III. Tier I Validation Procedures

Tier I validation of a data package consists of verifying that all raw data and forms are included and complete. An analytical data validation summary spreadsheet (in the form presented in Attachment A-2) is prepared to document the data review. The following steps are taken to complete a Tier I review:

- Step 1 Review the laboratory case narrative. During review, if there are any deviations that warrant a more extensive validation procedure, a Tier II review would be initiated to evaluate potential data use limitations.
- Step 2 Compare the chain-of-custody and the sample traffic reports. If there are any inconsistencies or if they are incomplete, then contact the laboratory for resolution.
- Step 3 Verify that all forms are present and complete. If any of the forms are not in the data package, contact the laboratory for a resubmission.
 - **Note**: If frequent or severe quality control deviations are present on the above-mentioned forms, a more extensive validation procedure may be warranted. Based on the reviewer's judgement, Tier II or Tier III review may be conducted to fully evaluate the usability of the data.
- Step 4 Verify that the following raw data is provided for each sample and associated QA/QC samples in the data package. Contact the laboratory to obtain missing data (if required):
 - Case Narrative
 - Chain-of-Custody Forms
 - Traffic Reports
 - QA Sample Summary Forms
 - Instrument Calibration Summary Forms
 - Instrument Run Logs
 - Sample Preparation Logs
 - Instrument/Method Detection Limits
 - Standards Preparation Logs
 - Supporting (raw) Data
- Step 5 With a blue ink pen, record on the first page of the data package: the validation level, date, and reviewer's initials.

In addition to the steps discussed above, the Tier I review of data packages for projects subject to this FSP/QAPP will be expanded to include some elements of Tier II review, including review of the data packages to identify QA/QC deficiencies that may require qualification of the data.

IV. Tier II Validation Procedures

Tier II validation of a data package consists of the steps mentioned above for a Tier I review, plus review of the data package summary forms for identification of QA/QC deviations. Tier II validation does not include review of the "raw data" or recalculation of sample results. Sample qualification is performed (if required) following EPA Region I Guidelines presented in Section I.

A. Data Qualifiers

All data qualified due to QA/QC deviations will be clearly recorded on the data summary package Form I, or laboratory equivalent, with a blue ink pen. The laboratory qualification is lined out and the reviewer's qualification placed next to it. The date and the initials of the reviewer will also be placed on Form I. Below is a list of qualifiers that may be used.

- J The compound was positively identified, but the associated numerical value is an estimated concentration. This qualifier is used when the data evaluation procedure identifies a deficiency in the data generation process. This qualifier is also used when a compound or analyte is detected at estimated concentrations less than the practical quantitation limit (PQL). (When this qualifier is used in combination with the letter C -- i.e., JC -- that indicates that the sample result is an estimated concentration due to certain QC deficiencies and that a bias-corrected result is available, as discussed further below.)
- U The compound was analyzed for, but was not detected. The sample quantitation limit is presented and adjusted for dilution and (for solid samples only) percent moisture. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL), as presented in Attachment A-1.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual level of quantitation. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL) J, as presented in Attachment A-1.
- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purposes.

B. Holding Times

Criteria

- 1.0 Purgeables: Water samples are preserved to a pH of less than 2 with HCl, H₂SO₄, or solid NaHSO₄, and stored at 4° centigrade. Samples must be analyzed within 14 days. Soil samples are preserved per SW-846 Method 5035 and must be analyzed within 14 days.
- 1.1 Extractables (Includes Base/Neutrals and Acids): Samples (waters or soils) and extracts must be preserved at 4° centigrade. Soil and water samples must be extracted within seven days and the extract must be analyzed within 40 days.

Action

Specific holding times for each analysis and sample type are presented in Table 1 of the FSP/QAPP. The following steps are performed for the validation of data due to holding times:

- Step 1 Establish the holding time by comparing the sampling date on the chain-of-custody with the dates of analysis and/or extraction on Form I, or laboratory equivalent. The chain-of-custody is also reviewed to determine if the samples were properly preserved.
- Step 2 If the holding times are exceeded by less than 24 hours, then no qualification of data is needed.
- Step 3 If the holding times are exceeded by more than 24 hours but less than 14 days, then all positive results are qualified as estimated (J) and the non-detected compounds are qualified as estimated (UJ).
- Step 4 If the holding times are exceeded by more than twice the specified holding time, then all results are qualified as unusable (R).

C. Percent Moisture Content

Criteria

Soil/sediment/solid sample results must be adjusted for percent solids and must have percent solids greater than 30%.

Action

The following steps are performed by reviewing the sample result summary form during the validation of percent solids data:

Verify that the percent solids of soil/sediment/solid samples are greater than 30%.

- a. Soil/sediment/solid sample results with a percent solid of less than 10% are qualified as unusable (R)
- b. Positive and non-detected soil/sediment/solid sample results with percent solid results within the range of greater than 10% to less than 30% are qualified as estimated (J) and unusable (R), respectively.

D. GC/MS Tuning

Criteria

The following criteria must be met at all times:

1.0 <u>Decafluorotriphenylphosphine</u> (DFTPP)

$\underline{m/z}$	Ion Abundance Criteria
51	30.0 - 60.0% of m/z 198
68	less than 2.0% of m/z 69
70	less than 2.0% of m/z 69
127	40.0 - 60.0% of m/z 198
197	less than 1.0% of m/z 198
198	base peak, 100% relative abundance
199	5.0 - 9.0% of m/z 198
275	10.0 - 30.0% of m/z 198
365	greater than 1.0% of m/z 198
441	present, but not less than m/z 443
442	greater than 40.0% of m/z 198
443	17.0 - 23.0% of m/z 442

1.1 Bromofluorobenzene (BFB)

$\underline{m/z}$	Ion Abundance Criteria
50	15.0 - 40.0% of the base peak
75	30.0 - 60.0% of the base peak
95	base peak, 100% relative abundance
96	5.0 - 9.0% of the base peak
173	less than 2.0% of m/z 174
174	greater than 50.0% of the base peak
175	5.0 - 9.0% of m/z 174
176	greater than 95.0%, but <101.0% of m/z 174
177	5.0 - 9.0% of m/z 176

Action

Review Form V, or laboratory equivalent, to determine if a mass calibration is in error. If an error is identified, then all data associated with the evaluated spectra are qualified as unusable (R).

E. Calibration

Criteria

- 1.0 Initial Calibration for VOCs and SVOCs
 - 1.0.1 All average Relative Response Factors (RRFs) for must be greater than or equal to 0.05.
 - 1.0.2 All Percent Relative Standard Deviation (%RSD) values must be less than or equal to 30%.
- 1.1 <u>Continuing Calibration VOCs and SVOCs</u>
 - 1.1.1 All daily RRFs must be greater than or equal to 0.05.
 - 1.1.2 All Percent Difference (%D) values must be less than or equal to 25%.

Action

The following steps are performed by reviewing Forms VI and VII, or laboratory equivalents, during the validation of calibration data:

- Step 1 Verify that all the average RRFs for the initial calibration are greater than 0.05. If the average RRF is not in control, then:
 - a. All positive sample results for that compound are qualified as estimated (J).
 - b. All non-detected sample results for compounds that do not meet their analytical method defined RRF are qualified as unusable (R). Several of the organic compounds exhibit instrument RRFs that are below the USEPA Region I minimum value of 0.05, but meet the analytical method criterion, which does not specify minimum RRFs for these compounds. These compounds will be calibrated for by the laboratory at a higher concentration than the compounds that normally exhibit RRFs greater than the USEPA Region I minimum value of 0.05 in an effort to demonstrate acceptable response. USEPA Region I guidelines state that non-detected compound results associated with a RRFs less than the minimum value of 0.05 are to be rejected. In the case of these select organic compounds, where the RRFs are an inherent problem with the current analytical methodology; the non-detected samples results will be qualified as an estimate (J).
- Step 2 If use of data is critical, the average RRF will be calculated with the elimination of the low or high calibration standard. If the average RRF is in control with the elimination of the low calibration standard, then:
 - a. All non-detected sample results for that compound are adjusted to the lowest calibration standard used to calculate the acceptable average RRF.
 - b. All positive sample results for that compound which are below the lowest calibration standard used to calculate the acceptable average RRF are qualified as estimated (J).

If the average RRF is in control with the elimination of the high calibration standard, then:

- a. All positive sample results for that compound which are above the highest calibration standard used to calculate the acceptable average RRF are qualified as estimated (J).
- Step 3 Verify that all %RSD values for the initial calibration are greater than 30%. If any %RSD is not in control, then all detected and non-detected sample results for that compound are qualified as estimated (J) and (UJ), respectively.

Qualification of VOC/SVOC Compounds Based on Initial Calibration Deviations

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Sample Results	Avg. RRF \geq 0.05 and %RSD \leq 30.0%	Avg. RRF < 0.05 and $%$ RSD $\leq 30.0\%$	Avg. RRF \geq 0.05 and %RSD $>$ 30.0%	Avg. RRF < 0.05 and $\%$ RSD $> 30.0\%$
Detects	-	J	J	J
Non-Detects	-	R or ND(PQL)J	ND(PQL)J	R or ND(PQL)J

- Step 4 Verify that all RRF values for the continuing calibration are greater than 0.05. If any continuing calibration RRF is not in control, then:
 - a. All positive sample results for that compound are qualified as estimated (J).
 - b. All non-detected sample results for are qualified as unusable (R). Several of the organic compounds exhibit instrument RRFs that are below the USEPA Region I minimum value of 0.05, but meet the analytical method criterion, which does not specify minimum RRFs for these compounds. These compounds will be calibrated for by the laboratory at a higher concentration than the compounds that normally exhibit RRFs greater than the USEPA Region I minimum value of 0.05 in an effort to demonstrate acceptable response. USEPA Region I guidelines state that non-detected compound results associated with a RRFs less than the minimum value of 0.05 are to be rejected. In the case of these select organic compounds, where the RRFs are an inherent problem with the current analytical methodology; the non-detected samples results will be qualified as an estimate (J).
- Step 5 Verify that all %D values are greater than 25%. If any %D is not in control, then all detected and non-detected sample results for that compound are qualified as estimated (J) and (UJ), respectively.

Qualification of VOC/SVOC Compounds Based on Continuing Calibration Deviations

Sample Results	Avg. RRF ≥ 0.05 and $\%$ RSD $\leq 25.0\%$	Avg. RRF < 0.05 and $%$ RSD $\leq 25.0%$	Avg. RRF \geq 0.05 and %RSD $>$ 25.0%	Avg. RRF < 0.05 and %RSD > 25.0%
Detects	-	J	J	J
Non-Detects	-	R or ND(PQL)J	ND(PQL)J	R or ND(PQL)J

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F. Blanks

Criteria

- 1.0 No contaminants should be present in the blank(s).
- 1.1 For each matrix and for each 12-hour window, a method blank must be analyzed for volatile analyses.
- 1.2 For each matrix and each extracted batch, a method blank must be analyzed for semi-volatile analyses.

Action

Qualification of sample results due to blank contamination is dependent on the conditions and origin of the blank. No sample results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in the blank for the compounds listed below, or five times the blank amount for all other compounds. No sample results are corrected by subtracting blank values. Specific qualifications of sample data are as follows:

- Step 1 Review Form IV, or laboratory equivalent, within the data package to ensure that criteria III.E.1.1 and III.E.1.2 are in compliance. If they are not, the laboratory will be contacted by the reviewer for a written explanation.
- Step 2 Review Form I, or laboratory equivalent, for all blanks within the data package.
- Step 3 If a compound is found in the blank but not in the sample, then the data are not qualified.
- Step 4 When any compound (other than the five listed below) is detected in the sample and the sample concentration is less than five times the concentration detected in the associated blank, the data are qualified. For the following five compounds, the sample results are qualified if the sample concentration is less than 10 times the concentration detected in the blank.

Common laboratory contaminants:

- a. Methylene chloride
- b. Acetone
- c. Toluene
- d. 2-Butanone
- e. Common phthalate esters

<u>Note</u>: Any difference between the sample analyses and the related blank analyses which involve weights, volumes, or dilution factors, must be taken into account when the 5-times or 10-times criteria are applied.

The following are examples of how qualifications apply to blank data:

a. When the sample result is greater than the PQL but less than the action level (5-times or 10-times) from the blank result, the sample results are qualified as non-detects. As in the example below, the sample result for the 10-times rule is less than 70 (or 10 x 7), and for the 5-times rule the result is less than 35 (or 5 x 7); therefore, they are qualified as described.

Factor	10-times	5-times
Blank Result	7	7
PQL	5	5
Action Level	70	35
Sample Result	60	30
Qualified Sample Result	60 U	30 U

b. When the sample result is less than the PQL and also less than the action level (5-times or 10-times) from the blank result, the sample results are qualified as non-detects by using the PQL as the detection limit. As in the example below, the sample result is less than the PQL in both instances and the sample results are qualified as described.

Factor	10-times	5-times
Blank Result	6	6
PQL	5	5
Action Level	60	25
Sample Result	4 J	4 J
Qualified Sample Result	5 U	5 U

c. When the sample result is greater than the blank action level (5-times or 10-times), the sample results are not qualified. As in the example below, the sample results are greater than the blank action level and the sample results are not qualified.

Factor	10-times	5-times
Blank Result	10	10
PQL	5	5
Action Level	50	50
Sample Result	120	60
Qualified Sample Result	120	60

Step 5 - When excessive amounts of contamination exist (i.e., saturated peaks by GC/MS), all compounds affected are qualified as unusable (R).

<u>Note</u>: As mentioned above, similar consideration is given to Tentatively Identified Compounds (TICs) which are found in both the sample and the associated blank(s).

G. Surrogate Recovery

Criteria

Sample and blank surrogate recoveries for VOCs and SVOCs must be within the control limits listed in Table 5 of the FSP/QAPP.

Action

Qualification of the data due to surrogate recoveries being out of control is based on the evaluation of all data provided in the data package, especially considering the complexity of the effect of sample matrices. These qualifications are completed in the following steps:

- Step 1 Surrogate recoveries tabulated on Form II, or laboratory equivalent, for each fraction are evaluated against the control limits provided in Table 5.
- Step 2 No qualification of the data is needed if less than two surrogates are out of control for the base/neutral or acid fraction, or one in the volatile fraction, or unless any surrogate has a recovery less than 10%.
- Step 3 If at least two surrogates in a base/neutral or acid fraction or one surrogate in the volatile fraction are out of control, the following steps are taken:
 - a. All positive results for that associated fraction with surrogate recoveries above the upper control limit are qualified as estimated (J).
 - b. All positive results for that associated fraction with a surrogate recovery that is less than the lower control limit are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) re-analyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC) and the bias-corrected result will be presented in the "Notes" field of the Analytical Data Validation Summary (Attachment A-2).
 - c. All non-detected results associated with a surrogate recovery that is less than the lower control limit but greater than 10% are qualified as estimated (UJ).
- Step 4 If any surrogate recoveries in a fraction are less than 10%, all non-detected results for that fraction are qualified as unusable (R).
- Step 5 When the blank analysis involves surrogate recoveries out of control, the related sample data are reviewed and qualified in the following manner:
 - a. If the sample data does not contain any surrogate out of control, then the data are not qualified.
 - b. If the sample data does contain a surrogate out of control, then the sample data are qualified as mentioned above in Steps 2 through 4.
 - **Note**: In this special circumstance, the problem is considered to be within the laboratory control and is so noted in the validation report.

Qualification of VOC/SVOC Compounds Based on Surrogate Recovery Deviations

Sample Results	One or more surrogates < 10%	One VOC, two B/N, or two Acid surrogates 10% ≤ %Rec < LL	All VOC, one B/N, or one Acid surrogate LL ≤ %Rec ≤ UL	Avg. RRF < 0.05 and %RSD > 25.0%
Detects	JC	JC	-	J
Non-Detects	R	ND(PQL)J	-	-

- LL- Lower limit of method QC acceptance criteria.
- UL- Upper limit of method QC acceptance criteria.
- H. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Criteria

- 1.0 Spike recoveries must be within the control limits in Table 5 of the FSP/QAPP.
- 1.1 RPD values between MS and MSD recoveries must be within the control limits in Table 5.

Action

If recovery results are not within the control limits, the following steps are taken to qualify the data:

- Step 1 If the recovery results are below the lower control limit presented in Table 5, the positive results for this compound are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the "Notes" field of the Analytical Data Validation Summary.
- Step 2 If the recovery result is less than 10%, the non-detects for that compound in the unspiked sample are qualified as rejected (R). This is the only instance that a non-detect is qualified due to recovery results being out of control.
- Step 3 If any of the RPD values are greater than the limits presented in Table 5, positive results for that compound are qualified as estimated (J) in the unspiked sample.

Qualification of VOC/SVOC Compounds Based on MS/MSD Recovery and MS/MSD RPD Deviations

Sample Results	Recovery < 10%	10% ≤ %Recovery < Lower QC Limit	Lower QC Limit ≤ Recovery ≤ Upper QC Limit	Recovery > Upper QC Limit	RPD > QC Limit
Detects	JC	JC	-	J	J
Non-Detects	R	-	-	-	ND(PQL)J

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I. Field Duplicates

Criteria

- 1.0 For water matrices, each compound with a detectable concentration two times greater than the PQL must have an RPD value that is less than 30%.
- 1.1 For soil matrices, each compound with a detectable concentration two times greater than the PQL must have an RPD value that is less than 50%.

Action

Step 1 - Calculate all RPD values for positive results between the sample and the field duplicate.

- Step 2 If the RPD value is greater than 30% in a water matrix and both sample results are greater than two times the PQL, the result for that compound in both samples is qualified as estimated (J).
- Step 3 If the RPD value is greater than 50% in a soil matrix and both sample results are greater than two times the PQL, the result for that compound in both samples is qualified as estimated (J).
- Step 4 If the both sample results are less than two times the PQL, qualification of the sample data is not required.
- Step 5 If the one sample result is less than two times the PQL and the other is greater than two times the PQL, the result for that compound in both samples is qualified as estimated (J).

Oualification of VOC/SVOC Compounds Based on Field Duplicate RPD Deviations

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RPD	Aqueous > 30% Non-Aqueous > 50%	Aqueous > 30% Non-Aqueous > 50%	Aqueous > 30% Non-Aqueous > 50%
Sample Results	Both duplicate sample concs. ≥ 2 times PQL	$\begin{array}{l} PQL \leq both \ duplicate \ samples \\ concs. < 2 \ times \ PQL \ and \ \geq \\ PQL \end{array}$	One sample conc. ≥ 2 times PQL and other sample conc. < 2 times PQL
Detects	J	-	J
Non-Detects	-	-	-

J. Internal Standards Performance

Criteria

- 1.0 Internal standard (IS) area counts must not vary by more than a factor of two (-50 to +100%) from the associated continuing calibration standard.
- 1.1 The retention time of the internal standard must not vary by more than +/- 30 seconds from the associated continuing calibration standard.

Action

- Step 1 Review the tabulated results for the comparison of the IS areas of the samples and the related continuing calibration standard on Form VIII, or laboratory equivalent. If an IS area is outside the -50 to +100% limits, the positive sample results quantitated using that IS are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) re-analyzing the existing sample; (iii) bias-correcting the sample result to 100%; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC) and the bias-corrected result will be presented in the "Notes" field of the Analytical Data Validation Summary (Attachment A-2).
- Step 2 If the IS areas of a sample and the related continuing calibration standard on Form VIII, or laboratory equivalent, are less than the -50% criteria but greater than -20%, then non-detected sample results are qualified as estimated (UJ) for that sample fraction.
- Step 3 If the IS areas of a sample and the related continuing calibration standard on Form VIII, or laboratory equivalent, are less than -20%, then non-detected sample results are qualified as unusable (R) for that sample fraction.
- Step 4 If the IS areas of a sample and the related continuing calibration standard on Form VIII, or laboratory equivalent, are greater than the 100% criteria, then detected sample results are qualified as estimated (J) for that sample fraction.
- Step 5 Review the tabulated results for comparison of the IS Retention Time (RT) of the samples and the related continuing calibration standard on Form VIII, or laboratory equivalent. If an IS retention time varies by more than 30 seconds, the data are qualified as unusable (R).

Qualification of VOC/SVOC Compounds Based on Field Duplicate RPD Deviations

Sample Results	Area Counts < 20% of the associated calibration	20% ≤ Area Counts < LL	$\begin{array}{c} LL \leq Area \ Counts \\ \leq LL \end{array}$	Area Counts > UL
Detects	JC	JC	-	J
Non-Detects	R	ND(PQL)J	-	-

LL- Lower limit of method QC acceptance criteria.

UL- Upper limit of method QC acceptance criteria.

V. Tier III Validation Procedures

Tier III validation of a data package consists of the steps mentioned above for a Tier I and Tier II validation plus review of the "raw data" and recalculation of approximately 10% of the sample results. The confirmation of detected compounds and tentatively identified compounds is also reviewed.

A. Compound Quantitation and Reported Quantitation Limits

Criteria

- 1.0 The quantitation of detected compounds and the adjustment of the PQL for dilutions and percent solids must be recalculated for 10% of the data.
- 1.1 The compound's RRF and sample result quantitation must be calculated based on the IS specified in Tables A-1 and A-2.

Action

If the criteria above have not been followed, the laboratory will be contacted by the reviewer and the laboratory will be responsible for a correction of the quantitation and resubmission of the reported data.

B. Detected Identification

Criteria

- 1.0 Compounds must be within +/- 0.06 Relative Retention Time (RRT) units of the continuing calibration standard RRT.
- 1.1 Mass spectra of the sample compound and of the current reference spectra must match the following criteria:
 - 1.1.1 All ions present in the reference spectra must be at a relative intensity greater than 10% and must be present in the sample spectrum.
 - 1.1.2 The relative intensities of the ions specified above must agree within +/- 20% (absolute) between the reference and sample spectrum (example: for an ion with an abundance of 50% in the reference spectrum, the corresponding sample ion abundance must be between 30% and 70%).
 - 1.1.3 Ions greater than 10% in the sample spectrum but not present in the reference spectrum must be considered and accounted for.
 - 1.1.4 If a compound cannot be verified by all of the above criteria, but in the technical judgment of the mass spectral interpretation specialist the identification is correct, the laboratory will report the identification and continue with the quantitation.

Action

Professional judgment is used for the qualitative criteria for GC/MS analysis of target compounds. If it is determined that the wrong identification was made, all such data are qualified as not detected (U).

C. Tentatively Identified Compounds (TICs)

Criteria

- 1.0 For each sample, the laboratory may conduct a mass spectral search of the NBS library. Report the possible identity of the 10 largest VOC fraction peaks and the 20 largest SVOC fraction peaks which are not surrogate, internal standard, or target compounds, but which have an area/height that is greater than 10% of the size of the nearest internal standard. TIC results, if reported by the laboratory, will be reported for each sample on Organic Analyses Data Sheet (Form I, TIC), or laboratory equivalent.
- 1.1 Requirements for the tentative identification are as follows:
 - 1.1.1 Major ions (greater than 10% relative intensity) in the reference spectrum should be present in the sample spectrum.
 - 1.1.2 Relative intensities of the major ions should agree within +/- 20% between the sample and the reference spectra.
 - 1.1.3 Molecular ions present in the reference spectrum should be present in the sample spectrum.
 - 1.1.4 Ions present in the sample spectrum but not in the reference spectrum should be reviewed for possible background contamination, interference, or coelution of additional TIC or target compounds.
- 1.2 When the above criteria are not met, but in the technical judgement of the data reviewer or the mass spectral interpretation specialist the identification is correct, the data reviewer may report the identification.

Action

The following steps are taken in qualifying the TICs if they are reported by the laboratory:

- Step 1 Review Form I, or laboratory equivalent, to verify that all TIC results are qualified as estimated concentrations (J).
- Step 2 If it is determined that the tentative identification of a compound is not acceptable, the tentative identification is changed to "unknown" or the correct compound identification.
- Step 3 If all of the required peaks are not searched, the laboratory is contacted to complete the library search of that sample.
- Step 4 Any TIC results that are not sufficiently above the level in the blank are not reported.
 - <u>Not</u>e: Dilutions and sample size must be taken into account when comparing the amounts present in the blanks and samples.
- Step 5 When a compound is not found in the blanks but is a suspected artifact of a common laboratory contaminant, the sample result is qualified as unusable (R).

VOCs and SVOCs Revision #: 01 Date: January 8, 2002

- Step 6 In the identification of TICs, professional judgment is used. In case there is more than one reasonable match, the result will be reported as "either compound X or compound Y." If the results lack isomer specificity, the TIC result is changed to a non-specific isomer result (e.g., 1,3,5-trimethyl benzene to trimethyl benzene isomer) or to the class of compound (e.g., 2-methyl-3-ethyl benzene to substituted aromatic).
- Step 7 If a sample's TIC match is poor but other samples from the data package have the same TIC with an acceptable match, that identification information may be used to identify the TIC result.

Table A-1
Volatile Internal Standards with
Corresponding Target Compounds Assigned
for Quantitation

TABLE A-1

VOLATILE INTERNAL STANDARDS WITH CORRESPONDING TARGET COMPOUNDS ASSIGNED FOR QUANTITATION

Option 1: Four Internals

1) Pentafluorobenzene

Acetone
Acetonitrile
Acrolein
Acrylonitrile
Allyl Chloride
Carbon Disulfide
Chloroethane
Chloroform
Chloroprene

Chloroprene
Dichlorodifluoromethane
1,1-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
Isobutyl Alcohol
Methacrylonitrile
Methyl Bromide
Methyl Chloride
Methyl Ethyl Ketone

Propionitrile
1,1,1-Trichloroethane
Trichlorofluoromethane
Vinyl Acetate
Vinyl Chloride

Methyl Iodide Methylene Chloride

2) 1,4-Difluorobenzene

Benzene
Bromodichloromethane
Carbon Tetrachloride
2-Chloroethylvinylether
1,2-Dibromoethane
1,2-Dichloroethane
1,2-Dichloropropane
cis-1,3-Dichloropropene

trans-1,3-Dichloropropene
1,4-Dioxane
Ethyl Methacrylate
Methyl Methacrylate
4-Methyl-2-pentanone
Methylene Bromide

Toluene 1,1,2-Trichloroethane Trichloroethene

3) Chlorobenzene-d₅

Bromoform
Chlorobenzene
Dibromochloromethane
trans-1,4-Dichloro-2-butene
Ethylbenzene
2-Hexanone
Styrene
1,1,1,2-Tetrachloroethane
Tetrachloroethene
Xylene

4) 1,4-Dichlorobenzene-d4

1,2-Dibromo-3-chloropropane 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane

TABLE A-1

VOLATILE INTERNAL STANDARDS WITH CORRESPONDING TARGET COMPOUNDS ASSIGNED FOR QUANTITATION

Option 2: Three Internals

1) Fluorobenzene

Acetone Acetonitrile Acrolein Acrylonitrile Allyl Chloride Benzene

Bromodichloromethane Carbon Disulfide Carbon Tetrachloride

Chloroethane

2-Chloroethylvinylether

Chloroform Chloroprene

Dichlorodifluoromethane

1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene trans-1,2-Dichloroethene 1,2-Dichloropropane cis-1,3-Dichloropropene

Ethylbenzene Isobutyl Alcohol Methacrylonitrile Methyl Bromide Methyl Chloride Methylene Bromide Methylene Chloride Methyl Ethyl Ketone Methyl Iodide Methyl Methacrylate 4-Methyl-2-pentanone Propionitrile 1,1,1-Trichloroethane

Vinyl Acetate Vinyl Chloride

Trichloroethene Trichlorofluoromethane

2) Chlorobenzene-ds

Bromoform Chlorobenzene 1,4-Dioxane Dibromochloromethane 1,2-Dibromoethane trans-1,3-Dichloropropene Ethyl Methacrylate 2-Hexanone Styrene 1,1,1,2-Tetrachloroethane Tetrachloroethene Toluene

3) 1,2-Dichlorobenzene-d4

1,1,2-Trichloroethane

Xylene

trans-1,4-Dichloro-2-butene 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane 1,2-Dibromo-3-chloropropane Table A-2 Semi-Volatile Internal Standards with Corresponding Target Compounds Assigned for Quantitation

SEMIVOLATILE INTERNAL STANDARDS WITH CORRESPONDING TARGET COMPOUNDS ASSIGNED FOR QUANTITATION

1) 1,4-Dichlorobenzene-d4

Aniline

Benzyl Alcohol

bis(2-chloro-1-methylethyl)ether

bis(2-chloroethyl)ether

2-Chlorophenol

m-Cresol

o-Cresol

p-Cresol

m-Dichlorobenzene

o-Dichlorobenzene

p-Dichlorobenzene

Ethyl Methanesulfonate

Hexachloroethane

Methyl methanesulfonate

N-Nitrosodi-n-propylamine

N-Nitrosodiethylamine

N-Nitrosodimethylamine

N-Nitrosomethylethylamine

N-Nitrosomorpholine

N-Nitrosopyrrolidine

Pentachloroethane

Phenol

2-Picoline

Pyridine

o-Toluidine

o,o,o-Triethyl phosphorothioate

2) Naphthalene-d₈

Acetophenone

bis(2-chloroethoxy)methane

p-Chloro-m-cresol

p-Chloroaniline

2,4-Dichlorophenol

2,6-Dichlorophenol

a,a-Dimethylphenethylamine

2,4-Dimethylphenol

Hexachlorobutadiene

Hexachlorophene

Hexachloropropene

Isophorone Isosafrole

2-Methylnaphthalene

Naphthalene

Nitrobenzene

o-Nitrophenol

N-Nitrosodi-n-butylamine

N-Nitrosopiperidine

p-Phenylenediamine

1,2,4-Trichlorobenzene

3) Acenaphthene-d₁₀

Acenaphthene

Acenaphthylene

2-Chloronaphthalene

4-Chlorophenyl-phenylether

Dibenzofuran

Diethyl phthalate

Dimethyl phthalate

m-Dinitrobenzene

2,4-Dinitrophenol

2,4-Dinitrotoluene

2,6-Dinitrotoluene

Fluorene

Hexachlorocyclopentadiene

1,4-Naphthoquinone

1-Naphthylamine

2-Naphthylamine

5-Nitro-o-toluidine

m-Nitroaniline

o-Nitroaniline

p-Nitroaniline

p-Nitrophenol

Pentachlorobenzene

Safrole 1,2,4,5-Tetrachlorobenzene

2,3,4,6-Tetrachlorophenol

2,4,5-Trichlorophenol

2,4,6-Trichlorophenol

4) Phenanthrene-din

4-Aminobiphenyl

Anthracene

4-Bromophenyl phenyl ether

Di-n-butylphthalate

Diallate

O,O-Diethyl-O-2-pyrazinyl phosphorothioate

4,6-Dinitro-o-cresol

Diphenylamine

1,2-Diphenylhydrazine

Fluoranthene

Hexachlorobenzene

4-Nitroquinoline-1-oxide

N-Nitrosodiphenylamine

Pentachloronitrobenzene

Pentachlorophenol

Phenacetin Phenanthrene

Pronamide

sym-Trinitrobenzene

5) Chrysene-d₁₂

2-Acetylaminofluorene

Aramite

Benzidine

Benzo(a)anthracene

bis(2-ethylhexyl)phthalate

Butyl benzyl phthalate

Chlorobenzilate

Chrysene

3,3'-Dichlorobenzidine

p-(Dimethylamino)azobenzene

3,3'-Dimethylbenzidine

Isodrin

Methapyrilene

Pyrene

6) Perylene-d₁₂

Benzo(a)pyrene Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Benzo(k)fluoranthene

Di-n-octylphthalate

Dibenz(a,h)anthracene

7,12-Dimethylbenz(a)anthracene Indeno(1,2,3-cd)pyrene

3-Methylcholanthrene

Attachment A-1
Laboratory Reporting Forms for Volatile and
Semi-Volatile Organic Compounds

VOLATILE	1A E ORGANICS ANALY	SIS DATA SHEET	EPA SAMPLE NO.
Lab Name:		Contract:	
		SAS No.: SDG	No.:
Matrix: (soil/water)	···		
Sample wt/vol:	(g/mL)	Lab File ID:	
Level: (low/med)		Date Received:	
% Moisture: not dec		Date Analyzed:	
GC Column: II	D:(mm)	Dilution Facto	
Soil Extract Volume:	(uL)		olume:(uL)
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	Q

74-87-3	Chloromethane		
/4-83-9	Bromomethane		_
/3-01-4	Vinvl Chlorida		-
/3-00-3	Chloroethane	-	
/5-09-2	Methylana Chlanda		-
0/-04-1	Acetone		-
75-15-0	econCarbon Dieuleide	-	_
/ コープンー4	==== 1 =Dichlementh =		_
\		_	
740-72-0		-	
107-06-2	1.2-Dichloroothans		
/0-23-3	7-Riitanono	-	
71-55-6	1 1 1-meighlanest		
56-23-5	Carbon Tetrachloride		
75-27-4	Bromodichloromethane		1
78-87-5	1,2-Dichloropropane		`
10061-01-5	1,2-Dichioropropane		
79-01-6	cis-1,3-Dichloropropene		
124-48-1	Trichioroethene		
79-00-5	Dibromochloromethane		
71-42-2	1,1,2-Trichloroethane		
71-43-2 10061-02-6	Benzene		
75-25-2-	trans-1,3-Dichloropropene		
	4-Methyl-2-Pentanone		
JJL"/0-0			
12/-18-4	Tetrachloroethene		
/ 7-34-5	1.1.2.2-Tetrachle		
108-90-7	Chlorobenzene		
100-41-4	Ethylbenzene		
100-42-5	Styrene		
1330-20-7	Xylene (total)		
	,/		

1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name:	Contract:_		
	≥ No.: SAS No.:		
Matrix: (soil/water)		ab Sample ID:	
Sample wt/vol:		L = 13 ==	
Level: (low/med)		te Received:	
% Moisture: dec		te Extracted:	
Concentrated Extract Vol		te Analyzed:	
Injection Volume:		lution Factor:	
GPC Cleanup: (Y/N)			
CAS NO CO	CONCENTRY OMPOUND (ug/L or	ATION UNITS: ug/Kg)	Q
108-95-2P	neno1		
111-44-4h	C /7-01 /1		
95-57-82-	-Chlorophenol		
	7-7:	· · ·	
106-46-71	4-Dichlorobenzene		
95-50-11	3-Dichlerabenzene		
95-48-72	Z-Dichioropenzene		
106-44-5	2'-oxybis(1-Chloropropan	e)	 [
UZ_1=04=/==================================	Ni transport		
98-95-3Ni	trobenzene		
78-59-1Is	ophorone	_ _	
00~/3~3~~~~~~~	Without		
1 102-0/-9	1-0:		
120-83-2	s(2-Chloroethoxy) methane	=	
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106-47-84-	Chloroaniline		——
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88-74-42-1	ii taaa i lii aa lene		
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131-11-3Din	metnylphthalate		
; 200-90-8ACE	nanhthulana		
DUD=2U=2======	-Dinitrotaluana		
	[i+rospiling	-	
83-32-9Ace	naphthene		1
, ————————————————————————————————————			

1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

Lab Name:	Contract:
Lab Code: Case No.:	
Matrix: (soil/water)	Lab Sample ID:
Sample wt/vol:(g/mL)	
Level: (low/med)	Date Received:
% Moisture: decanted: (Y/N)	Date Extracted:
Concentrated Extract Volume:	(uL) Date Analyzed:
Injection Volume:(uL)	Dilution Factor:
GPC Cleanup: (Y/N) pH:	
CAS NO COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)Q
51-28-52,4-Dinitrophe	enol
132-64-9Dibenzofuran	
#4#T#4########	
	1-phenylether
100-01-64-Nitroaniline	
101-55-34-Bromophenyl-	phenylether
118-74-1Hexachlorobenz	ene
U/TOUTS###################	
UJ~U_~D~~~~~~Dhama~b~~~	
120-12-7Anthracene	
84-74-2	alate
	42466
129-00-0	
85-68-7	halate
	CODO
117-81-7	V) \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
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! JUTJZTDTTTTTTTHHAN70/3\5:	· · · · · · · · · · · · · · · · · · ·
53-70-3Dibenz(a,h)anth	1) pyrene
191-24-2	racene
191-24-2Benzo(g,h,i)per	ylene

(1) - Cannot be separated from Diphenylamine

VOLATILE ORGANICS ANALYSIS DATA SHEET

Number TICs found: _____

TENTATIVELY IDENTIFI	ED COMPOUNDS
Lab Name:	Contract:
Lab Code: Case No.:	SAS No.: SDG No.:
Matrix: (soil/water)	Lab Sample ID:
Sample wt/vol:(g/mL)	
Level: (low/med)	Date Received:
Moisture: not dec	Date Analyzed:
GC Column: ID:(mm)	Dilution Factor:
Soil Extract Volume:(uL)	Soil Aliquot Volume:(uL)
Number III.G. forma	CONCENTRATION UNITS:

mber TICs found:	(ug/L	or ug/Kg)		
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

TENT	ATIVELY IDENTIFIED COMPOU	INDS
Lab Name:	Contract	:
_ab Code:	Case No.: SAS No.	: SDG No.:
Matrix: (soil/water)		Lab Sample ID:
Sample wt/vol:	(g/mL)	Lab File ID:
Level: (low/med)	——————————————————————————————————————	Date Received:
% Moisture:	decanted: (Y/N)	Date Extracted:
Concentrated Extract	Volume:(uL)	Date Analyzed:
Injection Volume:		Dilution Factor:
GPC Cleanup: (Y/N)	7 4.	

Number TICs found:

CONCENTRATION UNITS: (ug/L or ug/Kg)____

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

Lab Name:		Contract:	*******
Lab Code:	Case No.:	SAS No.:	SDG No.:

	EPA	SMC1	SMC2	SMC3	OTHER	TOT
	SAMPLE NO.	(TOL) #	(BFB) #	(DCE)#		OUT
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SMC1 (TOL) = Toluene-d8 (88-110) SMC2 (BFB) = Bromofluorobenzene (86-115) SMC3 (DCE) = 1,2-Dichloroethane-d4 (76-114)

- # Column to be used to flag recovery values
- * Values outside of contract required QC limits
- D System Monitoring Compound diluted out

page	of	

2C WATER SEMIVOLATILE SURROGATE RECOVERY

Lab	Name:		Contract:	
Lab	Code:	Case No.:	SAS No.:	SDG No.:

	EPA	Sl	S2	S3	S4	S5	56		,	
	SAMPLE NO.	(NBZ) #	(FBP)#	(TPH) #			S6	S7	S8	TOT
	******		\ · ·	(1511)7	(PHL) #		(TBP) #	(2CP)#	(DCB)#	OUT
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QC LIMITS
S1 (NBZ) = Nitrobenzene-d5
                                   (35-114)
S2 (FBP) = 2-Fluorobiphenyl
S3 (TPH) = Terphenyl-d14
                                   (43-116)
                                   (33-141)
S4 (PHL) = Phenol-d5
                                   (10-110)
S5 (2FP) = 2-Fluorophenol
                                   (21-110)
S6 (TBP) = 2,4,6-Tribromophenol
                                   (10-123)
S7 (2CP) = 2-Chlorophenol-d4
                                   (33-110)
                                             (advisory)
S8 (DCB) = 1,2-Dichlorobenzene-d4 (16-110)
                                             (advisory)
```

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[#] Column to be used to flag recovery values

^{*} Values outside of contract required QC limits

D Surrogate diluted out

2B SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:			Contrac	t:			
Lab Code:	Case No.:		SAS No	.:	SD	G No	.:
Level: (low/med)	•			•			
	EPA	SMC1	SMC2	SMC3	OTHER	TOT	l
	SAMPLE NO.	(TOL) #	(BFB)≠	(DCE) #		OUT	
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03 04						_	
05 06							
07 08							
09 10						_	
11 12							
13							
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QC LIMITS

SMC1 (TOL) = Toluene-d8
SMC2 (BFB) = Bromofluorobenzene
SMC3 (DCE) = 1,2-Dichloroethane-d4 (84-138)(59-113)

(70-121)

- # Column to be used to flag recovery values
- * Values outside of contract required QC limits
- D System Monitoring Compound diluted out

page __ of

16

FORM II VOA-2

3/90

2C WATER SEMIVOLATILE SURROGATE RECOVERY

	~ab	Name:			Cont	ract:			
./	Lab	Code:		Case No.: _	SAS	No.:	SDG	No.:	
				•	٠			•	•
				•					

- 1	EPA		Sl	52	S3	S4	S5	1 66	-		
	SAMPLE		(NBZ) #	(FBP)#	(MDR)	(/DITT)	35	S6	S7	S8	TOT
			(NBB) F	(EDF)#				(TBP) #	(2CP) #	(DCB)#	נטס
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QC LIMITS
S1 (NBZ) = Nitrobenzene-d5
                                  (35-114)
S2 (FBP) = 2-Fluorobiphenyl
                                   (43-116)
S3 (TPH) = Terphenyl-d14
                                   (33-141)
S4 (PHL) = Phenol-d5
                                   (10-110)
S5 (2FP) = 2-Fluorophenol
                                   (21-110)
S6 (TBP) = 2,4,6-Tribromophenol
                                   (10-123)
S7 (2CP) = 2-Chlorophenol-d4
                                   (33-110)
                                             (advisory)
S8 (DCB) = 1,2-Dichlorobenzene-d4 (16-110)
                                             (advisory)
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[#] Column to be used to flag recovery values

^{*} Values outside of contract required QC limits D Surrogate diluted out

2D SOIL SEMIVOLATILE SURROGATE RECOVERY

	Name:									,
	Code:		No.: _		SAS No.	:	SDG	No.: _		
•	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP)#	\$3 (TPH)#	S4 (PHL)#	S5 (2FP)#	56 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT
01 02 03										
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06 07										
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	S	(NBZ) =	Nitrob	Anzana	a=		IMITS			
	52 53	(FBP) = (TPH) =	2-Fluor	robiphe nvl-d14	ทบใ	(23-) (30-) (18-)	115)			
	S4 S5	(PHL) = (2FP) = (2FP)	Phenol-	-d5 rophero	1	(24 -) (25 -)	113) 121)			
	<i>ن</i> ج	(TEP) = (2CP) = (DCB) =	2-Ch loi	ronhana	ו הבי	(19-	122)	advisory advisory	?) :)	
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page __ of __

3A WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

: }	Lab	Name:_	·····		Cont	tract:	 	
)	Lab	Code:		Case No.: _	SAS	5 No.: _	 SDG No.:	
	Matr	ix Spi	.ke - EPA	Sample No.:				

COMPOUND 1,1-Dichloroethene	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS REC #	QC. LIMITS REC.
Trichloroethene Benzene Toluene					61-145 71-120 76-127
Chlorobenzene					76-125 75-130

1,1-Dichloroethene				REC.
TrichloroetheneBenzene	·			61-145 71-120
Toluene Chlorobenzene —			13	76-127 76-125 75-130

#	Column	to	be	used	to	flag	recovery	and	RPD	values	with	an	asterisk
---	--------	----	----	------	----	------	----------	-----	-----	--------	------	----	----------

*	Values	outside	of oc	1:-:+-

RPD: Spike Recov	out of outside limits ery: out of outside limits		
COMMENTS:		· .	<i>,</i>

3B SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:		Contract:			
Lab Code: Case	≥ No.:	SAS No.:	SDG No.	: .	
Matrix Spike - EPA Sampl					
			(===,/====,/====,/====,/====,/====,/====,/====,/====,/====,/====,/====,/====,/====		
•					
	SPIKE	SAMPLE	MS	MS	QC.
COMPOUND	(ug/Kg)	CONCENTRATION (ug/Kg)	CONCENTRATION (ug/Kg)	*	LIMIT REC.
1,1-Dichloroethene					
Trichloroethene					59-17
Benzene	-				62-13
roluene	_				66-14
Chlorobenzene _					59-13
					60-13:
COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD \$ \$.REC # RPD #	QC LI	MITS REC.
1,1-Dichloroethene	-				REC.
Trichloroethene				22	59-172
enzene					62-137
oluene	·][21	66-142
hlorobenzene					59-139
				21	
				21	
				I.	60-13:
					60-133
column to be used to fla	ag recovery	and RPD values	with an aster	. isk	60-133
Column to be used to fla	mits		with an aster	. isk	60-133
Column to be used to flavorable of QC line out of out of out	mits		with an aster	isk	60-133

3C WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ab Code: Case atrix Spike - EPA Sample	No.:	SAS No.:	SDG No.	.:	
COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION	, -	LIN
Phenol	WHEELSTON	* ************************************	(ug/L)	REC #	
2-Chlorophenol					
1,4-Dichlorobenzono		-			12-
N-NITTOSO-di-n-prop (1)					27- 36-
-/4/4TITICH IOMONOS					
""CDIOTO-3-methvinhenci					41-
acendon thene					39-
4-Nitrophenol					23-
2,4-Dinitrotoluene					46-
Pentachlorophenol					10-
Pyrene					24-
					9-1
					26-1
COMPOUND henol -Chlorophenol ,4-Dichlorobenzene	ADDED (ug/L)		REC # RPD #	42	REC 12-1:
"NICTOSO-di-nen-on"/1				40	27-1:
/ ~ / * TIFICH!OTODATA - "					36- 9
					1-11
-enaphthene -					9- 9
-Nitrophenol -					3- 9
4-Dinitrotoluene				1 -	6-1 <u>1</u> 0- 8
	 .			, -	4- 9
intachloropheno:	i i				9-10
entachlorophenol					9-10 6-12
intachloropheno:					ローエン
rene				-31 2	
intachloropheno:					

3C WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

3D SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

ab Name:		Contract:	·		
b Code: Case	No.:	SAS No.:	SDG No.	:	
trix Spike - EPA Sample	No.:	Lev	el:(low/med) _		
	SPIKE	SAMPLE	MS	MS	C
COMPOUND	ADDED	CONCENTRATION		*	LIN
	(ug/Kg)	(ug/Kg)	(ug/Kg)	REC #	
Phenol				-	***
2-Chlorophenol					26-
1,4-Dichlorobenzene					25-
N-Nitroso-di-n-prop.(1)					28-
1,2,4-Trichlorobenzene					41-
4-Chloro-3-methylphenol					38-
cenaphthene					26-
-Nitrophenol					31-
2,4-Dinitrotoluene					11-
Pentachlorophenol					28-
yrene					17-
		 .			35-
COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION	MSD t	QC LII	
	(49/119/	(ug/Kg)	REC # RPD #	RPD	REC
henol					
-Chlorophenol_					26-
,4-Dichlorobenzene					25-1
-Nitroso-di-n-prop. (1)					28-1
,2,4-Trichlorobenzene					11-1
-Chloro-3-methylphenol					8-1
cenaphthene					6-1
Nitrophenol					1-1
,4-Dinitrotoluene					:8- :1-1
entachlorophenol				_	7-1
yrene					5-1
				10	
· · · · · · · · · · · · · · · · · · ·				·················	
N-Nitroso-di-n-n-n-1					
N-Nitroso-di-n-propyla	mine				
•					
olumn to be used to flac	TACOVATU	and RPD values	with an aster	isk	
) N-Nitroso-di-n-propyla olumn to be used to flag alues outside of QC limi :out ofout := Recovery:out o	recovery ts			isk	

4A VOLATILE METHOD BLANK SUMMARY

EPA	SAMPLE	NO.	

Lab Name:		C	ontract:	
		No.:		SDG No :
Lab File ID				ole ID:
Date Analyz	ed:			
_	ID:	1 >	· ·	alyzed:
Instrument		(mm)	Heated I	Purge: (Y/N)
THIS	METHOD BLANK A	APPLIES TO THE	FOLLOWING CAMP	ES, MS AND MSD:
			OTHORING SAMPL	ES, MS AND MSD:
	EPA	LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
01	*********			
02				
03				
04		~		
05				
06				
07				
80				
09				
10 11				
12				
13				
14				
15	-			
16				
17				
18				
19				
20				
21 22				
23			`	
24				
25				
26		-		
27				
28				
29!				
30:				
JU: _				
MMENTS:			· · · · · · · · · · · · · · · · · · ·	

ge __ of __

	SEMIVOLAT	4B ILE METHOD BL	ANK SUMMARY	EPA SAMPLE	NO.
Lab Name:		C	ontract:		
Lab Code:	Case 1	No.:	SAS No.:	SDG No.:	
Lab File ID:			Lab Sam		•
Instrument ID:			Date Ex	tracted:	
Matrix: (soil/wa	iter)		Date An	alyzed:	
Level: (low/med)			Time An	alyzed:	
THIS METHO	D BLANK AP	PLIES TO THE	•	PLES, MS AND MSD:	
	EPA PLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	

	EPA	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
				= =====================================
01				
02				
03			·	-
04				
05 06				-
06				
07	<u> </u>			-
80				
09				
10 11 12 13				
TT				·
12				
7.2				
14 15 16 17				
15				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:	

page __ of __

FORM IV SV

3/90.

5A VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

-				
ib Na	me:	Contract:		•
Lab Co	de: Case No.:	SAS No.:	SDG	No.:
Lab Fi	le ID:		Injection Dat	
Instru	ment ID:		Injection Tim	
GC Col	umn: ID:(mm)		ed Purge: (Y/	
m/e	ION ABUNDANCE CRITERIA			* RELATIVE
50 75 95 96 173 174 175 176	8.0 - 40.0% of mass 95 30.0 - 66.0% of mass 95 Base peak, 100% relative abur 5.0 - 9.0% of mass 95 Less than 2.0% of mass 174 50.0 - 120-0% of mass 174 93.0 - 101.0% of mass 174	ndance		ABUNDANCE ()1

2-Value is & mass 176 THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS,

EPA SAMPLE NO.	LAB SAMPLE ID	LAB	DATE	TIME
		FILE ID	ANALYZED	ANALYZ
l_ · · ·				****
i.				
	-w·			
			i.	
			· .	

2	_	
2	of	
	O1	

177

5.0 - 9.0% of mass 176_

1-Value is & mass 174

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Na	me:	Contract:		
Lab Co	de: Case No.:	SAS No.:	SDG N	io.:
Lab Fi	le ID:	DFTPP	Injection Date	:
Instru	ment ID:	DFTPP	Injection Time	:
m/e				RELATIVE ABUNDANCE
51 68 69 70 127 197 198 199 275 365 441 442 443	30.0 - 80.0% of mass 198 Less than 2.0% of mass 69 Mass 69 relative abundance Less than 2.0% of mass 69 25.0 - 75.0% of mass 198 Less than 1.0% of mass 198 Base Peak, 100% relative abu 5.0 to 9.0% of mass 198 10.0 - 30.0% of mass 198 Greater than 0.75% of mass 1 Present, but less than mass 40.0 - 110.0% of mass 198 15.0 - 24.0% of mass 442	ndance		()2
·	1-Value is & mass 69		-110.1110	

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA . SAMPLE NO.	LAB	LAB	DATE	TIME
SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED

-				
			<u> </u>	
				
				
				
			·	
				
! <u>.</u>				
	i i			
-				

page of

6A VOLATILE ORGANICS INITIAL CALIBRATION DATA

ab Name:		Contra	act:				
Lab Code: Case No	.:	_ SAS 1	No.:		- SDG No.:		
Instrument ID:	Calibrat:	ion Date	e(s):			`	
Heated Purge: (Y/N)					-		
GC Column: ID:	(mm)						_
LAB FILE ID: RRF10 RRF50 = RRF10	=		RRF2	0 =			· '1
RRF50 = RRF10	0=		RRF2	00=			
COMPOUND	RRF10		RRF50	RRF100	RRF200	RRF	* RSD
Chloromethane	======						KSD
: STOMOMOTASA							
Vinyl Chloride							
Curolostvaus -							1
Methylene Chloride							
Acetone	-						
Carbon Disulfide	-						
1,1-Dichloroethene	*						
1,1-Dichloroethane	*				.		*
1,2-Dichloroethene (total)_Chloroform							
1 2-Dighters	*						
1,2-Dichloroethane	*				—— -	 .	<u> </u>
1,1,1-Trichloroethane							 ;
Carbon Tetrachloride	*						
Bromodichloromethane							
1,2-Dichloropropane	·ï						—— <u> </u>
cis-1,3-Dichloropropene	·!	,					
Trichloroethene	-[!
Dibromochloromethane	Ţ .					-	 *
1,1,2-Trichloroethane		-				-	*
Benzene	<u>,</u> —— -						*
trans-1,3-Dichloropropene	*		 -				*
SIOMOIOLM	*	 -	-	_			*
-Methyl-2-Pentanone	-						*
2-Hexanone	-						
retrachloroethene				·	-		
1,1,2,2-Tetrachloroethane	*						*
Chlorobenzene	*					-	*
Sthylbenzene	*						*
tyrene	·						
Ylene total,						—— -	 :
					;	:_	
cluene-as	=====, =	===== =	===== =	===== =	==== ==	=======================================	"
romofluorobenzene ;		_		i	:		=
,2-Dichloroethane-d4	·						
Compounds with required mini	DIE DOF					_	
.ll other compounds must mee	t a mini	and max	ımum kR	SD value	es.	I	 ! .

FORM VI VOA

6B SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:		Contr	act:				
Lab Code: Case No.:		SAS	No.:		DG No.:		
						•	
	librati						
LAB FILE ID: RRF20 :							
RRF80 = RRF120		*****	RRF5			_	
							1 .
COMPOUND	RRF20	RRF50	RRF80	1	RRF160	RRF	RSD
Phenol		Example		* =====		-	
bis(2-Chloroethyl)ether			-	-			-
2-Chlorophenol			•	-			-
1,3-Dichlorobenzene			-	-			-
1,4-Dichlorobenzene	7			·			
1,2-Dichlorobenzene *			·	-			·
2-Methylphenol *				-			-
2,2'-oxybis(1-Chloropropane)				-	 .		·
(4-Metnylpheno) i				·	-		
N-Nitroso-di-n-propylamine_*					i -		
nexacnloroethane					·		
Nitropenzene *							
					<u> </u>		
2-Nitrophenol *							
2,4-Dimethylphenol *							<u> </u>
bis (2-Chloroethoxy) methane +							
2,4-Dichlorophenol							
1,2,4-Trichlorobenzene *							
Naphthalene +							
4-Chloroaniline							
Hexachlorobutadiene							
4-Chloro-3-methylphenol *							
2-Methylnaphthalene +							
Hexachlorocyclopentadiene							
2,4,6-Trichlorophenol **							
2,4,5-Trichlorophenol *							
2-Chloronaphthalene +							
2-Nitroaniline	·			.			 *
Dimethylphthalate	·				———I]
Acenaphthylene +							
2,6-Dinitrotoluene *	·						 *
3-Nitroaniline	I·						*
cenaphthene *					_		
2,4-Dinitrophenol				I.			*
	 -					i	
lpenzofuran **	 ; -	 !	:	:			
:,4-Dinitrotoluene *				-	I -	——— j .	T.

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

ab Name:		Contra	act;				
Lab Code: Case No.	•	SAS 1	 No.:		DG No.:		
Instrument ID: Ca	alibrat	ion Date					Maga.
		•			-		_
Ca	librati	ion Time	es:				
					•	·	W-
LAB FILE ID: RRF20	=		2225				•
RRF80 = RRF120			_ RRF50				1
			_ RRF16	U=			
COMPONE			T	T	T		
COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	*
Diethylphthalate	SECTION	-	-	******		T.C.C.	RSD
A-Chlorenhamos				1			
Fluorene	*						
4-Nitroaniline	* 						
4,6-Dinitro-2-methylphonel							
N-Nitrosodiphenylamine (1)							
4-promophenvl-phenvlether	<u> </u>						
nexachiorobenzene							;
Pentachlorophenol							
Phenanthrene							
Anthracene							*
Carbazole							*
Di-n-butylphthalate							
/luoranthene							
Pyrene	,						*
Butylbenzylphthalate							*
3,3'-Dichlorobenzidine							
Benzo(a) anthracene Chrysene					-		
bis/2-F+hv1hamily-bh					-		
bis(2-Ethylhexyl)phthalate						-	
Benzo (b) fluoranthene *				-			
Benzo (k) fluoranthene *							
Benzo (a) pyrene *							
Indeno(1,2,3-cd) pyrene							— <u> </u>
Dipenz(a,h)anthracene							
Benzo(g,h,i)perylene *	.	-					*
							*
Nitrobenzene-d5	1	1					
2-Fluorobiphenyl			-				*
Cerphenyl-d14		-					*
henol-d5			 -				*
+Fluorophenol*			_	-		_	*
.4 f-Tribromopnenol			<u> </u>				· .
7-01-01-01-01-01-01-01-01-01-01-01-01-01-	:	·:-	!-				
,2-Dichlorobenzene-d4 *				 -	i		•
Cappor be senses of							 *
Compounds with arrated from Di	phenyla	mine				_	

^{*} Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

7A VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	Contract:	
Lab Code:	Case No.: SAS No.:	SDG No.:
Instrument ID:	Calibration Date:	Time:
Lab File ID:	Init. Calib. Date(s):	
Heated Purge: (Y/N)	Init. Calib. Times:	
GC Column:	_ ID:(mm)	

COMPOUND	RRF	RRF50	MIN RRF	₹D	MAX %D
Chloromethane					
Bromomethane		-	0.100		
Vinyl Chloride		-	0.100		25.0
Chloroethane -		-	0.100		25.0
Methylene Chloride		-			
Acetone		-			
Carbon Disulfide		-			
1,1-Dichloroethene		-	0 100		
1,1-Dichloroethane		·	0.100		25.0
1,2-Dichloroethene (total)			0.200		25.0
Chloroform			0.200		
1,2-Dichloroethane					25.0
2-Butanone			0.100		25.0
1,1,1-Trichloroethane			0 100		
Carbon Tetrachloride			0.100		25.0
Bromodichloromethane			0.100		25.0
1,2-Dichloropropane			0.200		25.0
cis-1,3-Dichloropropene			0 200		
Trichloroethene			0.200		25.0
Dibromochloromethane			0.300		25.0
1,1,2-Trichloroethane			0.100		25.0
Benzene			0.500		25.0
trans-1,3-Dichloropropene			0.100		25.0
PLOMOIOLW			0.100		25.0
4-Methyl-2-Pentanone			0.100		25.0
2-Hexanone			-		
Tetrachloroethene			200		_ 1
1,1,2,2-Tetrachloroethane			5.500		25.0
Toluene			0.400		5.0
Chlorobenzene			5.500		5.0
Ethylbenzene			0.100		5.0
Styrene			300		5.0
Xylene (total)			300		5.c
	=====	====:		12	5.0
Toluene-d8	i		: :	===== ; =	=== :
Bromofluorobenzene			200	_	
1,2-Dichloroethane-d4			'·200 <u>-</u>	2	5.0
		 -			
All other compounds must meet	a min	imum RRF	of 0.	010	

7B SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	Contract:		
Lab Code:	Case No.: SAS No.:	SDG No.:	•
Instrument ID:	Calibration Date:	Time:	
Lab File ID:	Init. Calib. Date(s):		
	Init. Calib. Times:		

COMPOUND	RRF	RRF50	MIN RRF	≵ D	MAX %D
Phenol				*****	-
bis(2-Chloroethyl)ether		-	0.800		25.0
2-Chlorophenol	ļ 	-	0.700		25.0
1,3-Dichlorobenzene			0.800		25.0
1,4-Dichlorobenzene			0.600		25.0
1,2-Dichlorobenzene			0.500		25.0
2-Methylphenol	Ĭ 		0.400		25.0
2,2'-oxybis(1-Chloropropane)			0.700		25.0
4-Methylphenol		·			
N-Nitroso-di-n-propylamine_			0.600		25.0
Hexachloroethane			0.500		25.0
Nitrobenzene			0.300		25.0
Isophorone			0.200		25.0
2-Nitrophenol			0.400		25.0
2,4-Dimethylphenol			0.100		25.0
bis(2-Chloroethoxy)methane			0.200		25.0
2,4-Dichlorophenol			0.300		25.0
1,2,4-Trichlorobenzene			0.200		25.0
Naphthalene			0.200		25.0
4-Chloroaniline			0.700		25.0
Hexachlorobutadiene			1.		- 1
4-Chloro-3-methylphenol					İ
2-Methylnaphthalene			0.200		25.0
Hexachlorocyclopentadiene			0.400		25.0
2,4,6-Trichlorophenol			12		
2,4,5-Trichlorophenol			0.200		25.0
2-Chloronaphthalene			0.200		25.0
2-Nitroaniline		(0.800	2	25.σ
Dimethylphthalate			_		1
Acenaphthylene					1
2,6-Dinitrotoluene			1.300	2	25.0
3-Nitroaniline			0.200		5.0
Acenaphthene	,		1_		i
2,4-Dinitrophenol			0.800	2	5.0
-Nitrophenol					1.
Dipensofuran				i	į
2,4-Dinitrotoluene). 200 ^{! —}		5.0
-,4-DIMITTOTOIUENE	.		200		5.0

7C SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	Contract:	
Lab Code:	Case No.: SAS No.: SDG No.:	
Instrument ID:	Calibration Date: Time:	
Lab File ID:	Init. Calib. Date(s):	
	Init. Calib. Times:	

COMPOUND	RRF	RRF50	MIN	≵ D	MAX
Diethylphthalate		******		******	-
4-Chlorophenyl-phenylether				1	_
riuorene			0.400		25.0
4-Nitroaniline			0.900		25.0
4,6-Dinitro-2-methylphonel			1		_1
N-Nitrosodiphenviamine /1)					
4-promophenvl-phenvlether			.		
nexachiorobenzene			0.100		25.0
Pentachlorophenol			0.100		25.0
Phenanthrene		· ·	0.050		25.0
Anthracene			0.700		25.0
Carbazole			0.700		25.0
Di-n-butylphthalate					
Fluoranthene]
Pyrene			0.600		25.0
Butylbenzylphthalate			0.600		25.0
13,3'-Dichlorobenzidine	-		İ		
Benzo(a) anthracene					
Chrysene	-		0.800		25.0
bis(2-Ethylhexyl)phthalate	-		0.700		25.0
DT_II_OCTATOUTUS JAFO			1.		İ
Benzo(b) fluoranthene			1.		1
Benzo(k) fluoranthene			0.700		25.0
Benzo(a) pyrene			0.700		25.0
Indeno(1,2,3-cd) pyrene			0.700		25.0
Dipenz(a,h)anthracene	 -		0.500		25.0
Benzo(g,h,i)perylene			0.400		25.0
		(500		25.0
Nitrobenzene-d5		10	200		
2-Fluorobiphenyl -			700		25.0
Terphenyl-d14			500		25.0
Phenol-d5			800		25.0
2-Fluorophenol -			600		25.0
2,4,6-Tribsomophenol			- 000	——	25.0
2-Chlorophenol-d4		<u> </u>	.800 -	!.	
l.1-1ichlorozenzene-d4			.436		25.0
1) Cannot be separated from Di			-	i *	ان والدو

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

8A VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	Contract:
Lab Code: Case No.:	SAS No.: SDG No.:
Lab File ID (Standard):	Date Analyzed:
Instrument ID:	
	Time Analyzed:
ID:(mm)	Heated Purge: (Y/N)
IS1 (BCM)	IS2(DFB) IS3(CBZ)
AREA # RT #	AREA # RT # AREA # RT
12 HOUR STD	
UPPER LIMIT	
LOWER LIMIT	
EPA SAMPLE	
NO.	
01	
02	
03	
04	
06	
07	
08	
10	
11	
12	
14	
15	·
16	
18	
19	
20	
IS1 (BCM) = Bromochloromethane	
IS2 (DFB) = 1,4-Difluorobenzene IS3 (CBZ) = Chlorobenzene-d5	
AREA UPPER LIMIT = +100% of inter	'nal standard area
RT UPPER LIMIT = -0.50 minutes of RT LOWER LIMIT = -0.50 minutes of	
<pre># Column used to flag values outs * Values outside of QC limits:</pre>	ide QC limits with an asterisk.
ge of	•

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab	Name:		 Conti	ract:_			
Lab	Code:	Case No.: _	 SAS	No.:	T	SDG No.:	.
Lab	File ID (Standa	rd):	 		Date	Analyzed:	٠
Inst	rument ID:				Time	Analyzed:	

1	IS1(DCB)		IS2 (NPT)	1	IS3 (ANT)	
i	AREA #	RT #		RT #		1
		-	ALLA F	K1	AREA F	
12 HOUR STD						EE:A:A
UPPER LIMIT			· 		.	
LOWER LIMIT						
EPA SAMPLE NO.						-
-			********			
· .						
						
			· · · · · · · · · · · · · · · · · · ·			
		-				
-						
-						
						
					· · · · · · · · · · · · · · · · · · ·	
•			-		······································	

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area AREA LOWER LIMIT = - 50% of internal standard area

TT TTPEF LIMIT = -0.50 minutes of internal standard RT RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk. * Values outside of QC limits.

hage __ of __

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	SEMI	VOLATILE IN	TERNAL S	STANDARD AR	EA AND R	T SUMMARY	•
Lab N	lame:		•	Contract:_			
	ode:						
	ile ID (Stand						
	ument ID:					alyzed:	
		IS4 (PHN) AREA #	RT #	l APFA	fi Dm J	IS6(PRY) AREA	#l
	12 HOUR STD UPPER LIMIT LOWER LIMIT						
	EPA SAMPLE NO.	.		1	•		
01 02 03 04							
05 06 07				·			
08 09 10 11							
12 13 14							
15 16 17							
18 19 20							

IS4 (PHN) = Phenanthrene-d10 IS5 (CRY) = Chrysene-d12 IS6 (PRY) = Perylene-d12

AFEA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

age _ of _

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Attachment A-2 Analytical Data Validation Summary Table

TABLE 1

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

ANALYTICAL DATA VALIDATION SUMMARY (Results are presented in parts per million, ppm)

Sample Deliver						The second second second second	N . M. Cara				
Group No.	Sample ID	Date Collected	Matrix	Validățion Level	Qualification		QAroc Paradur	H. HERTON	300000000000000000000000000000000000000	1	
'CBı					- Caminesion	Compound,	Taries ONGC PARAMETER	. Válue	Control Limits	Usalified Result	Notes
700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	N-						Francis India
700001	EXAMPLE-SS-1 (0.5 · 1)	1/1/97	Soil	Tier II	No No	<u> </u>				r ———	T
700001	EXAMPLE-SS-2 (0 - 0.5)	1/1/97	Soil	Tier II				1	 		
700001	EXAMPLE-SS-2 (0.5 - 1)	1/1/97	Soil	Tier II	No	<u> </u>					
700001	EXAMPLE-SS-3 (0 - 0.5)	1/1/97	Soil	Tier II	No						
700001	EXAMPLE-SS-3 (0.5 - 1)	1/1/97	Soil	Tier II	No			1			
700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No						
700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No	<u> </u>		1			
700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil		No			 	 		
700002	EXAMPLE-SS-6 (0 5 - 1)	1/1/97	Soil	Tier I	No						
700002	EXAMPLE-SS-DUP-1	1/1/97	Soil	Tier I	No						
letals		1/1/9/	2011	Tier I	No			 			
700001	EXAMPLE-SS-1 (0 - 0 5)	1/1/97						·	<u> </u>		Duplicate of EXAMPLE-SS-5 (0.5
700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	Yes	Copper	Matrix Spike %R	54.0%	75% to 125%	Filmus esti	T
OC:	Jan. 1.11 EE-03-1 (0.3 - 1)	1/1/9/	Soil	Tier II	Yes	Copper	Matrix Spike %R	54.0%	75% to 125%	ND(5.62) J	
801047	EXAMPLE-SS-1 (0 - 0.5)							34.07	737410 123%	ND(5.62) J	
001047	EXAMPLE-SS-1 (0.5-1)	1/1/97	Soil	Tier II	No		<u> </u>				
VOCs	CXVM1.FE-22-1 (0.2 - 1)	1/1/97	Soil	Tier II	No						
700001	15 V 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4										
700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	Yes	2,6-Dinitrophenol	CCAL %D				
Manni	EXAMPLE-SS-I (0 5 - 1)	1/1/97	Soil	Tier II		2,6-Dinitrophenol	CCAL %D	59.0%	<25%	ND(3.6) J	
CDDvPCDFi				Ī		Pentachrolophenol	CCAL %D	85.3%	<25%	ND(3.6) J	
CONNI	r						CCAL ND	52.3%	<25%	ND(3.6) J	
(688)	EXAMPLE-SS-1 (0 - 0 5)	1/1/97	Soil	Tier II	Yes	1,2,3,4,7,8-HxCDF					
	1	, ,	ł				Internal Standard %R	188.0%	25% to 150%	0.00013 J	
	1	1	- 1	Į.			Internal Standard %R	186.7%	25% to 150%	0.000066 3	
		<u>L</u>	- 1	ł		Total HxCDF	Result exceeded calibration range			0.00058 J	
(MMM)	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II			Result exceeded calibration range			0.0021 J	
•	į	1 1			1		Internal Standard %R	221.1%	25% to 150%	0.000020 J	
	ŀ	1 1	- 1	i i			Internal Standard %R	235.2%	25% to 150%	0.00022 J	
	1	i i	- 1				Internal Standard %R	422.3%	25% to 150%	0.0000038 J	
		1 1		1			Internal Standard %R	365.2%	25% to 150%	0.0000020 J	
		1 1					Internal Standard %R	332.0%	25% to 150%	0.0000041 J	
anide		<u> </u>		L	L	1,2,3,4,6,7,8-HpCDF	Internal Standard %R	222.6%	25% to 150%	0.0000111	
1047	EXAMPLE-SS-I (0 - 0.5)	1/1/97	Soil	711						0000117	
	EXAMPLE-SS-1 (0 5 - 1)	1/1/97	Soil	Tier II	No						
lfide		1/1/3/	3011	Tier II	No						
	EXAMPLE-SS-1 (0 - 0.5)	1 1/1/22 1							L		
	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No	1					
	CAAME CE-33-1 (U.3 - 1)	1/1/97	Soil	Tier II	No						

V2	lidation	Annex	P
Val	IIUaliOII	AIIIIEX	D

Data Validation Procedures for Analyses of Polychlorinated Biphenyls (PCBs)/ Pesticides and Herbicides in Solid and Liquid Matrices

Validation Annex B

Data Validation Procedures for Analyses of Polychlorinated Biphenyls (PCBs)/Pesticides, and Herbicides in Solid and Liquid Matrices

I. Introduction

This Standard Operating Procedure (SOP) describes the data validation procedures for a United States Environmental Protection Agency (EPA) Region I tiered review of the data for polychlorinated biphenyls (PCBs), pesticides, and herbicides analyzed by EPA Methods 8082, 8081A, and 8151A, respectively. Data review procedures presented in this SOP were developed from the applicable quality control criteria specified in the following documents:

- Region I Tiered Organic and Inorganic Data Validation Guidelines, USEPA Region I, July 1, 1993.
- Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, USEPA Region I, Draft, December 1996.
- CLP Organics Data Review and Preliminary Review, USEPA SOP HW-6, Revision 10, October 1995.
- USEPA Contract Laboratory Program, Statement of Work for the Organics Analysis, Revision OLM0.1.9, July 1993.

This SOP will be utilized in the validation of analytical results from solid and liquid samples (e.g., soil, sediment, water, biota). A separate SOP for the validation of PCB data resulting from ambient air samples is provided in Validation Annex F.

II. EPA Region I Tiered Validation Procedures

All analytical data on PCBs, pesticides, and herbicides will be validated to a Tier I level following the procedures presented in the Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses (July 1996, revised December 1996) and the Region I Tiered Organic and Inorganic Data Validation Guidelines (USEPA guidelines). The basic Tier I review consists of a completeness evidence audit to ensure that all laboratory data and documentation are present. Additionally, for projects subject to this FSP/QAPP, the Tier I review will be modified and expanded to include a number of elements of Tier II review, including review of each sample delivery group (SDG) to identify data deficiencies that may potentially result in qualification of the data (e.g., systematic deviations such as low calibration response factors.) Based on this modified Tier I review, a subset of the data will be identified for additional Tier II review. If QA/QC deviations are identified during the modified Tier I review, those deviations will be addressed in the Tier II review. Otherwise, a minimum of 25% of the data will be chosen at random to be subjected to a Tier II review, which will consist of the Tier I completeness evidence audit and review of all data package summary forms for identification of QA/QC parameter deviations. The Tier II data review will be used to identify and evaluate systematic QA/QC deficiencies that may affect any or all of the sample data presented in a specific data package. The Tier II data validation also includes an evaluation of field duplicate Relative Percent Difference (RPD) compliance. Additional Tier II review and Tier III (recalculation of sample results) review may also be performed for a larger portion of the data set, if required, to fully resolve data usability limitations identified during the modified Tier I data review and initial Tier II review for a minimum of 25% of the data chosen at random.

The tiered data validation procedures consisting of modified Tier I review for all data, Tier II review of 25% of the data, and additional Tier II and Tier III review, as required, will be used to evaluate compliance of each data set with the project-specific data quality objectives. The procedures presented in the following sections will be used to perform the Tier I, Tier II, and Tier III data validation reviews. Qualification of analytical data will also be performed, if required, as specified in the data validation protocols presented below.

III. Tier I Validation Procedures

Tier I validation of a data package consists of verifying that all raw data and forms are included and complete. An analytical data validation summary spreadsheet (in the form presented in Attachment B-2) is prepared to document the data review. The following steps are taken to complete a Tier I review:

- Step 1 Review the laboratory case narrative. During review, if there are any deviations that warrant a more extensive validation procedure, a Tier II review would be initiated to evaluate potential data use limitations.
- Step 2 Compare the chain-of-custody and the sample traffic reports. If there are any inconsistencies or if they are incomplete, then contact the laboratory for resolution.
- Step 3 Verify that all forms are present and complete. If any of the forms are not in the data package, contact the laboratory for a resubmission.

Note: If frequent or severe quality control deviations are present on the above-mentioned forms, a more extensive validation procedure may be warranted. Based on the reviewer's judgement, Tier II or Tier III review may be conducted to fully evaluate the usability of the data.

- Step 4 Verify that the following raw data is provided for each sample and associated QA/QC samples in the data package. Contact the laboratory to obtain missing data (if required):
 - Case Narrative
 - Chain-of-Custody Forms
 - Traffic Reports
 - QA Sample Summary Forms
 - Instrument Calibration Summary Forms
 - Instrument Run Logs
 - Sample Preparation Logs
 - Instrument/Method Detection Limits
 - Standards Preparation Logs
 - Supporting (raw) Data
- Step 5 With a blue ink pen, record on the first page of the data package: the validation level, date, and reviewer's initials.

In addition to the steps discussed above, the Tier I review of data packages for projects subject to this FSP/QAPP will be expanded to include some elements of Tier II review, including review of the data packages to identify QA/QC deficiencies that may require qualification of the data.

IV. Tier II Validation Procedures

Tier II validation of a data package consists of the steps mentioned above for a Tier I review, plus review of the data package summary forms for identification of QA/QC deviations. Tier II validation does not include review of the "raw data" or recalculation of sample results. Sample qualification is performed (if required) following EPA Region I Guidelines presented in Section I.

A. Data Qualifiers

All data qualified due to QA/QC deviations will be clearly recorded on the data summary package Form I, or laboratory equivalent, with a blue ink pen. The laboratory qualification is lined out and the reviewer's qualification placed next to it. The date and the initials of the reviewer will also be placed on Form I. Below is a list of qualifiers that may be used.

- J The compound was positively identified, but the associated numerical value is an estimated concentration. This qualifier is used when the data evaluation procedure identifies a deficiency in the data generation process. This qualifier is also used when a compound or analyte is detected at estimated concentrations less than the practical quantitation limit (PQL). (When this qualifier is used in combination with the letter C -- i.e., JC -- that indicates that the sample result is an estimated concentration due to certain QC deficiencies and that a bias-corrected result is available, as discussed further below.)
- U The compound was analyzed for, but was not detected. The sample quantitation limit is presented and adjusted for dilution and (for solid samples only) percent moisture. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL), as presented in Attachment B-1.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual level of quantitation. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL) J, as presented in Attachment B-1.
- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purposes.

B. Holding Times

Criteria

Samples (waters or soils) and extracts must be preserved at 4° centigrade. Soil and water samples must be extracted within seven days and extracts must be analyzed within 40 days.

Action

Specific holding times for each analysis and sample type are presented in Table 1 of the FSP/QAPP. The following steps are performed for the validation of data due to holding times:

- Step 1 Establish the holding time by comparing the sampling date on the chain-of-custody with the dates of analysis and/or extraction on Form I, or laboratory equivalent. The chain-of-custody is also reviewed to determine if the samples were properly preserved.
- Step 2 If the holding times are exceeded by less than 24 hours, then no qualification of data is needed.
- Step 3 If the holding times are exceeded by more than 24 hours but less than 14 days, then all positive results are qualified as estimated (J) and the non-detected compounds are qualified as estimated (UJ).
- Step 4 If the holding times are exceeded by more than twice the specified holding time, then all results are qualified as unusable (R).

C. Percent Moisture Content

Criteria

Soil/sediment/solid sample results must be adjusted for percent solids and must have percent solids greater than 30%.

Action

The following steps are performed by reviewing the sample result summary form during the validation of percent solids data:

Verify that the percent solids of soil/sediment/solid samples are greater than 30%.

- a. Positive and non-detected soil/sediment/solid sample results with a percent solid of less than 10% are qualified as estimated (J) and unusable (R), respectively.
- b. Positive and non-detected soil/sediment/solid sample results with percent solid results within the range of greater than 10% to less than 30% are qualified as estimated (J).

Oualification of PCBs/Pesticides/Herbicides Compounds Based on Percent Solids Deviations

Sample Results	Percent Solids > 10.0% and <30.0%	Percent Solids < 10.0%
Detects	J	J
Non-Detects	J	R

D. Pesticides and PCBs Instrument Performance

Criteria

- 1.0 The laboratory must report retention time window data on the pesticide/PCBs Standards Summary (Form X Pest-1 or Form X Pest-2), or laboratory equivalent, for each GC column used to analyze samples. Compounds must be within these retention time windows.
- 1.1 The total percent breakdown for neither DDT nor endrin may exceed 20%. The percent breakdown is the amount of decomposition that endrin and 4,4'-DDT undergo when analyzed by the chromatograph.
- 1.2 The retention time of DCB and TCMX in each analysis of PCBs must be compared to the retention time of the DCB and TCMX in Evaluation Standard Mix A. The Percent Difference (%D) must not exceed 0.3% for narrow-bore capillary columns, and 1.5% if wide-bore capillary columns are used.

Action

Review Form V, or laboratory equivalent, to determine if a mass calibration is in error. If an error is identified, then all data associated with the evaluated spectra are qualified as unusable (R).

- 2.0 If any compound is outside the retention time window listed on Form X Pest-1, Form X Pest-2, or laboratory equivalent, a Tier III validation is warranted.
- 2.1 DDT and Endrin degradation deviations are qualified in the following manner:
 - Step 1 Review DDT breakdown data presented on Form X Pest-1, or laboratory equivalent, to determine if it is greater than 20%. Beginning with the sample following the last in-control standard qualify the data in the following manner:
 - a. All positive results for DDT are qualified as estimated (J).
 - b. If DDT was not detected but DDD and DDE are positive, the quantitation limit for DDT is qualified as unusable (R).
 - c. All positive results for DDD and/or DDE are qualified as estimated (J).
 - Step 2 Review endrin breakdown data presented on Form X Pest-1, or laboratory equivalent, to determine if it is greater than 20%. Beginning with the sample following the last in-control standard and qualify the data in the following manner:
 - a. All positive results for endrin are qualified as estimated (J).
 - b. If endrin was not detected but endrin aldehyde and endrin ketone are positive, the quantitation limit for DDT is qualified as unusable (R).
 - c. All positive results for endrin ketone are qualified as estimated (J).

- 2.2 Review the retention time %D presented on Form X Pest-1, or laboratory equivalent. The following steps outline the qualification of data for retention time shifts of DCB and TCMX:
 - Step 1 If the retention time shift for DCB and TCMX is greater than 0.3% for a narrow-bore capillary column, or 1.5% for a wide-bore capillary column, the data are qualified as unusable (R).
 - Step 2 If DCB and TCMX are absent, then the retention time shift cannot be evaluated (i.e., if they are diluted out due to high concentration of a target compound or matrix interference). No qualification of the data is required.

E. Calibration

Criteria

1.0 Initial Calibration for Pesticides

The Percent Relative Standard Deviation (%RSD) of calibration factors for aldrin, endrin, DDT, and dibutylchlorendate must not be greater than 10%. When toxaphene is identified, a three-point calibration is required for quantification. If the calibration factor %RSD for DDT or toxaphene is greater than 10%, calibration curves must be used for the quantitation of DDT, DDE, DDD, or toxaphene.

<u>Note</u>: The %RSD linearity check is required only for columns that are used for quantitation of sample and surrogate results. Columns used only to provide qualitative verification are not required to meet this criterion.

1.1 Initial Calibration PCBs and Herbicides

The %RSD for each PCB or herbicide standard must not be greater than 20%.

- 1.2 Analytical Sequence
 - 1.2.1 Primary Analysis

At the beginning of each 72-hour period, all standards must be analyzed.

- 1.2.2 Confirmation Analysis
- 1.2.3 Evaluation Standard Mix A, B, and C are required for the curve.
- 1.2.4 Only the standards containing the compounds to be confirmed are required. These standards must be repeated after every five samples.
- 1.2.5 Evaluation Mix B is required after every 10 samples.

1.3 Continuing Calibration

The calibration factor for each standard must be within 15% of the standard at the beginning of the analytical sequence on quantitation columns (20% on the confirmation columns).

Action

The following steps are performed during the validation of data due to calibration deviations:

- Step 1 Verify that the criterion for the initial calibration linearity have been met by reviewing Form VI Pest-2 and Form VI Pest-3 or laboratory equivalents. If the criteria in sections III.C.1.1 and III.C.1.2 are not met, then all associated positive results are qualified as estimated (J).
- Step 2 Verify by reviewing Form VII Pest-1 and Form VII Pest-2, or laboratory equivalents, that the %D between calibration factors is not greater than 15% for the compound(s) being quantitated (20% for compound(s) being confirmed). If the %D is greater than this criterion, then all associated positive results are qualified as estimated (J).

Qualification of PCBs/Pesticides/Herbicides Compounds Based on Initial Calibration Deviations

Sample Results	Initial Calibration %RSD > 20.0%	Continuing Calibration %D > 15%	
Detects	J	J	
Non-Detects	-	-	

F. Blanks

Criteria

- 1.0 No contaminants should be present in the blank(s).
- 1.1 For each matrix and each extracted batch, a method blank must be analyzed.

Action

Qualification of sample results due to blank contamination is dependent on the conditions and origin of the blank. No positive sample results are reported unless the concentration of the compound in the sample exceeds five times the amount in the blank. No sample results are corrected by subtracting blank values. Specific qualifications of sample data are as follows:

- Step 1 Review Form IV, or laboratory equivalent, within the data package to ensure that criteria III.D.1.2 is in compliance. If they are not, the laboratory will be contacted by the reviewer for a written explanation.
- Step 2 Review Form I for all blanks within the data package.
- Step 3 When any compound is detected in the sample and the sample concentration is less than five times the concentration detected in the associated blank, the data are qualified as non-detect (U).

Step 4 - If a compound is found in the blank but not in the sample, then the data are not qualified.

<u>Note</u>: Any difference between the sample analyses and the related blank analyses which involve weights, volumes, or dilution factors, must be taken into account when the 5-times criteria is applied.

The following are examples of how qualifications apply to blank data:

Example 1 (Step 3): When the sample result is greater than the PQL but less than the action level, the sample results are qualified as non-detects. As in the example below, the sample result is less than the blank action level (or 5 x 1); therefore, the sample result is qualified as non-detect.

Factor	5-times
Blank Result	1.0
PQL	0.5
Action Level	5.0
Sample Result	4.0
Qualified Sample Result	4.0 U

Example 2 (Step 4): When the sample result is greater than the blank action level, the sample result is not qualified. As in the example below, the sample result is greater than the blank actin level and the sample result is not qualified.

Factor	5-times
Blank Result	1.0
PQL	0.5
Action Level	5.0
Sample Result	6.0
Qualified Sample Result	6.0

Step 5 - When excessive amounts of contamination exist (i.e., saturated peaks by ECD), all compounds affected are qualified as unusable (R).

G. Surrogate Recovery

Criteria

Sample and blank surrogate recoveries (TCMX and DCB for PCB/pesticides, or 2,4-DB and DCAA for herbicides) must be within the control limits listed in Table 5 of the FSP/OAPP.

Action

Qualification of the data due to surrogate recoveries being out of control is based on the evaluation of all data provided in the data package, especially considering the complexity of the effect of sample matrices. These qualifications are completed in the following steps:

Step 1 - Surrogate recoveries tabulated on Form II, or laboratory equivalent, for each fraction are evaluated against the control limits provided in Table 5 of the FSP/QAPP.

Note: Steps 2 through 5 apply to pesticides and PCBs only.

- Step 2 If both TCMX and DCB recoveries are less than the lower control limit, all positive results are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the "Notes" field of the Analytical Data Validation Summary (Attachment B-2).
- Step 3 If both TCMX and DCB recoveries are less than the lower control limit but greater than 10%, all non-detected results are qualified as estimated (UJ).
- Step 4 In both TCMX or DCB recoveries are less than 10%, the non-detected results are qualified as unusable (R).
- Step 5 If both TCMX and DCB recoveries are greater than the upper control limit, all positive results are qualified as estimated (J).
- Step 6 If the surrogate for herbicide analysis recovery is less than the lower limit, all positive results are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) re-analyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC) and the bias-corrected result will be presented in the "Notes" field of the Analytical Data Validation Summary (Attachment B-2).
- Step 7 If the surrogate for herbicide analysis recovery is less than the lower limit and greater than 10%, all non-detected results are qualified as estimated (UJ).
- Step 8 In the case where the herbicide surrogate is less than 10%, the data are qualified as unusable (R).
- Step 9 If the herbicide surrogate recovery is greater than the upper control limit all positive results are qualified as estimated (J).

Qualification of Compounds Based on Surrogate Recovery Deviations

Sample Results	Recovery < 10%	10% ≤ %Recovery < LL	Lower QC Limit ≤ Recovery ≤ UL	Recovery > UL
Detects	JC	JC	-	J
Non-Detects	R	ND()J	-	-

- LL- Lower limit of method QC acceptance criteria.
- UL- Upper limit of method QC acceptance criteria.

H. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Criteria

- 1.0 Spike recoveries must be within the control limits in Table 5 of the FSP/QAPP.
- 1.1 The RPD values between MS and MSD recoveries must be within the control limits specified in Table 5.

Action

If recovery results are not within the control limits, the following steps are taken to qualify the data:

- Step 1 If the recovery results are greater than the lower control limits presented in Table 5, the positive results for the compound are qualified as estimated (J)
- Step 2 If the recovery result is less than the lower control limit presented in Table 5, the positive results for the compound are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) re-analyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the "Notes" field of the Analytical Data Validation Summary.
- Step 3 If the recovery result is less than 10%, the non-detects for that compound in the unspiked sample are qualified as rejected (R). This is the only instance that a non-detect is qualified due to recovery results being out of control.
- Step 4 If any of the RPD values are greater than the limits presented in Table 5, positive results for that compound are qualified as estimated (J) in the unspiked sample.

Qualification of Compounds Based on MS/MSD Recovery and MS/MSD RPD Deviations

Sample Results	Recovery < 10%	10% ≤ %Recovery < Lower QC Limit	Lower QC Limit ≤ Recovery ≤ Upper QC Limit	Recovery > Upper QC Limit	RPD > QC Limit
Detects	JC	JC	-	J	J
Non-Detects	R	-	-	-	-

I. Field Duplicates

Criteria

- 1.0 For water matrices, each compound with a detectable concentration two times greater than the PQL must have an RPD value that is less than 30%.
- 1.1 For soil matrices, each compound with a detectable concentration two times greater than the PQL must have an RPD value that is less than 50%.

Action

Step 1 - Calculate all RPD values for positive results between the sample and the field duplicate.

- Step 2 If the RPD value is greater than 30% in a water matrix and both sample results are greater than two times the PQL, the result for that compound in both samples is qualified as estimated (J).
- Step 3 If the RPD value is greater than 50% in a soil matrix and both sample results are greater than two times the PQL, the result for that compound in both samples is qualified as estimated (J).
- Step 4 If the both sample results are less than two times the PQL, qualification of the sample data is not required.
- Step 5 If the one sample result is less than two times the PQL and the other is greater than two times the PQL, the result for that compound in both samples is qualified as estimated (J).

V. Tier III Validation Procedures

Tier III validation of a data package consists of the steps mentioned above for a Tier I and Tier II validation plus review of the "raw data" and recalculation of approximately 10% of the sample results. The compound identification, instrument performance, quantitation, and detection limits are also evaluated.

A. Compound Quantitation and Reported Quantitation Limits

Criteria

The quantitation of detected compounds and the adjustment of the PQL for dilutions and percent solids, must be recalculated for 10% of the data.

Action

Step 1 - If the criteria above have not been followed, the laboratory will be contacted by the reviewer and the laboratory will be responsible for a correction of the quantitation and resubmission of the reported data.

- Step 2 Quantitation limits affected by large, off-scale peaks are qualified as unusable (R).
- Step 3 If the interference is on-scale, the quantitation limit is qualified as estimated (J).

B. Instrument Performance

Criteria

The laboratory must report retention time window data on the pesticide/PCBs standards summary (Form X Pest-1 or Form X Pest-2) or laboratory equivalent for each GC column used to analyze samples. Compounds must be within these retention time windows.

Action

Retention time windows are used in qualitative identification. If the sample results are not within the retention time windows, the following steps are taken to evaluate the data:

- Step 1 The chromatogram is reviewed to see if there are any peaks within an expanded window surrounding the expected retention time window of the compound of interest.
- Step 2 If there are no peaks present either within or close to the retention time window of the out of control targeted compound, then there is no qualification of the data. Non-detected results are considered valid.
- Step 3 If there are peaks present above or close to the PQL and either within or close to the retention time window of the out of control targeted compound, all positive data are qualified as unusable (R).

C. Compound Identification

Criteria

Reported compounds must be within calculated retention time windows for both chromatographic columns.

Action

The following steps are taken during the compound identification:

- Step 1 When the qualitative criteria for two-column confirmation are not met, all reported positive detects are reported as non-detects. The reviewer uses professional judgment and the following steps to report the appropriate quantitation limit:
 - a. If the misidentified peak was sufficiently outside the target compound retention time window, then the PQL is reported.
 - b. If the misidentified peak poses an interference with potential detection of a target peak, the reported value is qualified as the estimated (J) quantitation limit.

- Step 2 When PCBs or multi-peak pesticides exhibit marginal pattern-matching quality, the reviewer's professional judgment is used to confirm whether the differences are credited to environmental "weathering." If the presence of a PCB/multi-peak pesticide is strongly suggested, results are reported as being present.
- Step 3 When an observed pattern closely matches more than one Aroclor, professional judgment is used to decide whether the neighboring Aroclor is a better match, or if multiple Aroclors are present.

Attachment B-1 Laboratory Reporting Forms for Pesticides and Polychlorinated Biphenyls

1D PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: Contra	act:
Lab Code: Case No.: SAS N	
Matrix: (soil/water)	Lab Sample ID:
Sample wt/vol:(g/mL)	Lab File ID:
% Moisture: decanted: (Y/N)	Date Received:
Extraction: (SepF/Cont/Sonc)	Date Extracted:
Concentrated Extract Volume:(uL)	Date Analyzed:
Injection Volume:(uL)	Dilution Factor:
GPC Cleanup: (Y/N) pH:	Sulfur Cleanup: (Y/N)
CAS NO. COMPOUND (ug)	CENTRATION UNITS: /L or ug/Kg)Q
319-84-6alpha-BHC	
319-85-7beta-BHC	
319-86-8delta-BHC	
58-89-9gamma-BHC (Lindane)	
76-44-8Heptachlor	
309-00-2Aldrin	
1024-57-3Hentachlor oravida	
1 JUJ JU U TEREFELLINGDSH (TAN 1	
72-55-9	
72-20-8Endrin	
33213-65-9Endosulfan II	·
1 77=5/=0	
1031-07-8Endosulfan sulfate	
50-29-34,4'-DDT	
72-43-5	
72-43-5Methoxychlor 53494-70-5Endrin ketone	
7421-26-2	
7421-36-3Endrin aldehyde	
5103-71-9alpha-Chlordane	
5103-74-2gamma-Chlordane	
8001-35-2Toxaphene	
12674-11-2Aroclor-1016	
11104-28-2Aroclor-1221	
11141-16-5Aroclor-1232	
53469-21-9Aroclor-1242	
12672-29-6Aroclor-1248	
11097-69-1Aroclor-1254	
11096-82-5Aroclor-1260	
1200	

WATER PESTICIDE SURROGATE RECOVERY

n dau.	ame:			Cc	ontract:		
Lab C	ode:	Case	No.: _	s	AS No.:	_ SDG No.:	
GC Co	lumn(1):		ID:	(mm)	GC Column(2):		ID:(mm)

EPA		TCX	1	TCX	2	DCB	7	DCB	2	OTHER	l omitte	
SAMPLE	NO.	*REC	#	%REC	#	*REC	3	*REC	2 21			
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ADVISORY

QC LIMITS

TCX = Tetrachloro-m-xylene DCB = Decachlorobiphenyl

(60-150)

(60-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

page _	_ of		
•		FORM II PEST-1	3/90

2F SOIL PESTICIDE SURROGATE RECOVERY

Lab Name:		Contract:	
Lab Code:	Case No.:	SAS No.:	SDG No.:
GC Column(1):	ID:(mr	n) GC Column(2):	ID:(mm)

	EPA		TCX	1	TCX	2	DCB	1	DCP (0000		
	SAMPLE	NO.	&REC	₹.	*REC	ž			DCB			TOT
	-			<i>-</i>	*KEC	*	*REC	#	REC :	E (1)	(2)	OUT
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ADVISORY

QC LIMITS

TCX = Tetrachloro-m-xylene DCB = Decachlorobiphenyl

(60-150)

(60-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

rage	of	

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Code:	Case No :	_ Contract:			
		SAS No.:	SDG No.	:	
Matrix Spike - EPA	Sample No.:				•
•					
				•	
	SPIKE	SAMPLE	MS	MS	Q
COMPOUND	ADDED	CONCENTRATION		*	LIM
	(ug/L)	(ug/L)	(ug/L)	REC #	RE
gamma-BHC (Lindan	e)				
Heptachlor					56-
Aldrin Dieldrin					40-
Endrin					40- 52-
~··~ -	ı				
4.4'-DDT		_			156-
4,4'-DDT_					
4,4'-DDT_					56-1 38-1
4,4'-DDT_					
4,4'-DDT	SPIKE	MSD	MSD		
	ADDED	MSD CONCENTRATION	MSD t	OC LI	38-1
4,4'-DDTCOMPOUND			* *	QC LI	MITS
COMPOUND	ADDED (ug/L)	CONCENTRATION (ug/L)	* *	QC LI	MITS
COMPOUND gamma-BHC (Lindane Heptachlor	ADDED (ug/L)	CONCENTRATION (ug/L)	*	RPD	MITS REC
COMPOUND Jamma-BHC (Lindane Heptachlor	ADDED (ug/L)	CONCENTRATION (ug/L)	*	RPD 15	MITS REC
COMPOUND Jamma-BHC (Lindane Meptachlor Aldrin Dieldrin	ADDED (ug/L)	CONCENTRATION (ug/L)	*	15 20	MITS REC 56-1:
COMPOUND gamma-BHC (Lindane Heptachlor Aldrin Dieldrin Endrin	ADDED (ug/L)	CONCENTRATION (ug/L)	*	15 20 22	MITS REC 56-1 40-1 40-1
COMPOUND gamma-BHC (Lindane Heptachlor Aldrin Dieldrin	ADDED (ug/L)	CONCENTRATION (ug/L)	*	15 20 22 18	MITS REC 56-1 40-1 52-1
COMPOUND gamma-BHC (Lindane Heptachlor Aldrin Dieldrin Endrin	ADDED (ug/L)	CONCENTRATION (ug/L)	*	15 20 22 18 21	MITS REC 56-1: 40-1: 52-1: 56-1:
COMPOUND gamma-BHC (Lindane Heptachlor Aldrin Dieldrin Endrin	ADDED (ug/L)	CONCENTRATION (ug/L)	REC # RPD #	15 20 22 18 21 27	MITS REC 56-1: 40-1: 52-1: 56-1: 38-1:
COMPOUND gamma-BHC (Lindane Heptachlor Aldrin Dieldrin Endrin	ADDED (ug/L)	CONCENTRATION (ug/L)	REC # RPD #	15 20 22 18 21 27	MITS REC 56-1: 40-1: 52-1: 56-1: 38-1:
COMPOUND gamma-BHC (Lindane Reptachlor Aldrin Dieldrin Endrin E,4'-DDT	ADDED (ug/L)	CONCENTRATION (ug/L)	REC # RPD #	15 20 22 18 21 27	MITS REC 56-1: 40-1: 52-1: 56-1: 38-1:
COMPOUND gamma-BHC (Lindane Heptachlor Aldrin Dieldrin Endrin	ADDED (ug/L)	CONCENTRATION (ug/L)	REC # RPD #	15 20 22 18 21 27	MITS REC 56-1: 40-1: 52-1: 56-1: 38-1:

COMMENTS:

3F SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Tab Name:		· ——			
Lab Code: Case	No.:	SAS No.:	SDG No		
Matrix Spike - EPA Sampl					
COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS REC #	QC. LIMITS REC.
gamma-BHC (Lindane) Heptachlor					46-127
Aldrin Dieldrin Endrin					35-130 34-132
4,4'-DDT					31-134 42-139 23-134
_					
COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD t REC # RPD #	QC LI RPD	MITS REC.
gamma-BHC (Lindane)	ADDED	CONCENTRATION (ug/Kg)	2 2	RPD 50	REC. 46-127
gamma-BHC (Lindane) Heptachlor Aldrin Dieldrin	ADDED	CONCENTRATION (ug/Kg)	REC # RPD #	50 31 43	REC. 46-127 35-130 34-132
gamma-BHC (Lindane) Heptachlor Aldrin	ADDED	CONCENTRATION (ug/Kg)	REC # RPD #	50 31 43 38 45	REC. 46-127 35-130 34-132 31-134 42-139
gamma-BHC (Lindane) Heptachlor Aldrin Dieldrin Endrin 4,4'-DDT	ADDED (ug/Kg)	CONCENTRATION (ug/Kg)	REC # RPD #	50 31 43 38 45 50	REC. 46-127 35-130 34-132 31-134
gamma-BHC (Lindane) Heptachlor Aldrin Dieldrin Endrin 4,4'-DDT Column to be used to fla	ADDED (ug/Kg)	CONCENTRATION (ug/Kg)	REC # RPD #	50 31 43 38 45 50	REC. 46-127 35-130 34-132 31-134 42-139
gamma-BHC (Lindane) Heptachlor Aldrin Dieldrin Endrin	ADDED (ug/Kg)	CONCENTRATION (ug/Kg)	REC # RPD #	50 31 43 38 45 50	REC. 46-127 35-130 34-132 31-134 42-139

4C PESTICIDE METHOD BI	LANK SUMMARY
Lab Name:	Contract:
Lab Code: Case No.:	SAS No.:SDG No.:
Lab Sample ID:	Lab File ID:
Matrix: (soil/water)	Extraction: (SepF/Cont/Sonc)
Sulfur Cleanup: (Y/N)	Date Extracted:
Date Analyzed (1):	Date Analyzed (2):
Time Analyzed (1):	Time Analyzed (2):
Instrument ID (1):	Instrument ID (2):
GC Column (1): ID:(1	mm) GC Column (2): ID: (mm)
	TO THE FOLLOWING SAMPLES, MS AND MSD:
EPA	DATE DATE ANALYZED 1 ANALYZED 2
03	

	EPA SAMPLE NO.	LAB	DATE	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED 1	ANALYZED 2
01				
02				
02				
		·		
04				
05 06				
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25			-	
26			-	

COMMENTS:	

FORM IV PEST

3/90

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name:	Contract:	
Lab Code:	Case No.: SAS No.: SDG No.:	
Instrument ID:	Level (x low): low mid high	
GC Column:	ID:(mm) Date(s) Analyzed:	

COMPOUND	RT OF STANDARDS			MEAN		RT WINDOW		
	======	MID	HIGH	RT	FROM	TO		
alpha-BHC						= =====		
beta-BHC			·	·	-			
delta-BHC			•		-	-		
gamma-BHC (Lindane)			·	l	-			
Heptachlor					.			
Aldrin			·			.		
Heptachlor epoxide					.			
Endosulfan I				l ———				
Dieldrin					l <i>-</i>			
4,4'-DDE		 				,		
Endrin		 						
Endosulfan II								
4,4'-DDD								
Endosulfan sulfate								
4,4'-DDT					l			
Methoxychlor								
Endrin ketone								
Endrin aldehyde								
alpha-Chlordane								
gamma-Chlordane								
Tetrachloro-m-xylene								
Decachlorobiphenyl								
*******- -								

^{*} Surrogate retention times are measured from Standard Mix A analyses.

Retention time windows are \pm 0.05 minutes for all compounds that elute before Heptachlor epoxide, \pm 0.07 minutes for all other compounds, except \pm 0.10 minutes for Decachlorobiphenyl.

6E PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name:	Contract:	
Lab Code:	Case No.: SAS No.: SDG No.:	
Instrument ID:	Level (x low): low mid high	-
GC Column:	ID:(mm) Date(s) Analyzed:	

COMPOUND	CALIBRATION FACTORS					
COMPOUND	LOW	MID	HIGH	MEAN	*RSI	
alpha-BHC				= =====================================	= ====	
beta-BHC	· · · · · · · · · · · · · · · · · · ·	-		_	_	
delta-BHC			-			
gamma-BHC (Lindane)		-	-	_	_	
Heptachlor		-	-			
Aldrin		-	-			
Heptachlor epoxide		-				
Endosulfan I		-				
Dieldrin		-				
4,4'-DDE						
Endrin					-	
Endosulfan II						
4,4'-DDD					-	
Endosulfan sulfate						
4,4'-DDT						
					·	
Methoxychlor						
Endrin ketone						
Endrin aldehyde					 	
alpha-Chlordane						
yamma-Chlordane						
			=======================================			
Tetrachloro-m-xylene		ĺ]			
Decachlorobiphenyl						
					l	

^{*} Surrogate calibration factors are measured from Standard Mix A analyses.

RSD must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 20.0% but less than or equal to 30.0%.

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name:		Contract:	
Lab Code:	Case No.:	SAS No.:	SDG No.:
Instrument ID:		Date(s) Analyzed:	
GC Column:	(mm)	_	

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WI		CALIBRATIO
Toxaphene		====	KT	FROM	TO	FACTOR
Toxabueue	-	*1		<u> </u>	·;	
		*2 *3				
		4		.		
Aroclor 1016		5_				
,		*1 *2				
•		*3				
		4				
Aroclor 1221		 5-				
		*2				
]	*3				
roclor 1232		4				
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		*2 -				
		4 -	-			
roclor 1242	- .	_5_			-	
		*1 -				
		*3	-		-	
		4			-	
roclor 1248	- -	-5- -				
		*2				
•	1	*3			· -	
		5 -	-			_
oclor 1254		*1 ⁻			-	
		*2 *3				
	1	4 -				
oclor 1260	. -	_5_				
2000		*1				
		*3			_	
		4			 -	
	1 1	5				

^{*} Denotes required peaks

6G PESTICIDE ANALYTE RESOLUTION SUMMARY

Lab Name:		Contract:_		
Lab Code:	Case No.:	_ SAS No.:	SDO	; No.:
	: ID:			
EPA Sample No	. (Standard 1):	Lab Samp	ple ID (1):	
Date Analyzed	(1):	Time Ana	alyzed (1):	
	ANALYTE	RT	RESOLUTION (%)	
01 02				
03				
05				
06 07				
08				
GC Column (2):	ID:(I	m) Instrume	nt TD (2).	
EPA Sample No.	(Standard 2):	Lab Sampl	le TD (2).	
Date Analyzed	(2):		lyzed (2): _	
·			.y zeu (2)	<u> </u>
=	ANALYTE	RT	RESOLUTION (%)	•
01 _				
03				~
04 05				
06				
07				
08				
· · · · · · · · · · · · · · · · · · ·				
Fedolution A	f +1/0 adda			

Resolution of two adjacent peaks must be calculated as a percentage of the neight of the smaller peak, and must be greater than or equal to 60.00.

7D PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name:		Cont	ract:			
Lab Code: Case No.	•	_ SAS	No.:	SI	OG No.:	
GC Column:ID:	(mm)	Init.	Calib.	Date(s):_		
EPA Sample No. (PIBLK):			Dat	e Analyze	ed :	
Lab Sample ID (PIBLK):				e Analyze		
EPA Sample No. (PEM):		•		e Analyze		
Lab Sample ID (PEM):	· ·			- e Analyze		
PEM COMPOUND alpha-BHC beta-BHC gamma-BHC (Lindane) Endrin 4,4'-DDT Methoxychlor		FROM		CALC AMOUNT (ng)	(ng)	RPD
combined % breakdown (1):		Er	ndrin %	breakdown	(1):	

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 25.0%
4,4'-DDT breakdown must be less than or equal to 20.0%
Endrin breakdown must be less than or equal to 20.0%
Combined breakdown must be less than or equal to 30.0%

7E PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name:		Cont	ract:			
Lab Code: Case N	·	SAS	No.:	S	DG No.: _	
GC Column: ID:	(mm) Init.	Calib.	Date(s):		
EPA Sample No.(PIBLK):				te Analyze		
Lab Sample ID (PIBLK):	<u> </u>			me Analyze		
EPA Sample No.(INDA):				te Analyze		
Lab Sample ID (INDA):		-		ne Analyze		
INDIVIDUAL MIX A		ו ממ		-		
COMPOUND	RT	FROM_	1	CALC AMOUNT (ng)		RPD
gamma-BHC (Lindane)			-	·		
gamma-BHC (Lindane) Heptachlor	_		·	·		
Lndosulran T	_			 		
Dietarin	•	ļ	·			
Endrin	-					
4,4'-DDD	_		·			
4,4'-DDT						
Methoxychlor	-		 			.
Tetrachloro-m-xylene Decachlorobiphenyl	_					
Decachlorobipheny1						
	_					
				analyzed		
ab Sample ID (INDB):		•	Time	Analyzed	:	
INDIVIDUAL MIX B		RT W	INDOW	CALC	NOM	,
COMPOUND	RT	FROM	TO	AMOUNT (ng)	AMOUNT (ng)	RPD
beta-BHC						
delta-BHC	-					
Aldrin	-					
Heptachlor epoxide	-					
4,4'-DDE	·					
Endosulfan II				 .		
Endosulfan sulfate	· -					
Endrin ketone				 .		
Endrin aldehyde						
alpha-Chlordane			·			!
curma-Chlordane	· -	!	!-			!
Tetrachioro-m-xylene		—— i	i-		·	
Decachlorobiphenyl						
	·					

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

PESTICIDE ANALYTICAL SEQUENCE

ab Name:		Contract	:: ::		
	Case No.:	•			
	ID:(m			_	
nstrument ID:		,	,		
	SEQUENCE OF PERF	OPMANCE EVAT	IIAMTAN MTVM	TOPO DIL	
SA	MPLES, AND STAND	ARDS IS GIVE	N BELOW:	URES, BLAN	KS,
MEAN S	URROGATE RT FROM DCB:	INITIAL CAL	IBRATION		
EPA SAMPLE	NO. SAMPLE ID	DATE	- TIME	TCX RT #	DCB
01		-	=======================================		RT
02					
04		-			
05			-		
07					
08					
10					
12					
13					
15 16					
17					
18					
20					
22					
23					
25					
26					
28					
30					
31					
-		!	1_		
TCX = Tetra	achloro-m-xylene	QC LIM: (± 0.05 M)			
DCB = Deca	chlorobiphenyl	(± 0.10 M	INUTES)		
# Column us					

age __ of __

9A PESTICIDE FLORISIL CARTRIDGE CHECK

Lab Name:		Contract:			
Lab Code:	Case No.:	SAS No.:	SDG No.:		
Florisil Cartridge	Lot Number:	Date of An		:	
GC Column(1):	ID:	(mm) GC Column(2)		ID:	- (mm)

COMPOUND	SPIKE ADDED (ng)	SPIKE RECOVERED (ng)	% REC #	QC LIMITS
alpha-BHC			=====	
gamma-BHC (Lindane)				80-120
Heptachlor	_			80-120
Endosulfan I				80-120
Dieldrin	_			80-120
Endrin	-			80-120
4,4'-DDD_				80-120
4,4'-DDT				80-120
Methoxychlor	-			80-120
Tetrachloro-m-xylene	-	———— .		80-120
Decachlorobiphenyl	-			80-120
	-	<u> </u>		80-120
Column	_ / .			<u> </u>

[#] Column to be used to flag recovery with an asterisk.
* Values outside of QC limits.

THIS CARTRIDGE LOT APPLIES TO THE FOLLOWING SAMPLES, BLANKS, MS, AND MSD:

					OWNET	ES, BLANKS	š,
	EPA SAMPLE	NO.	LAB SAMPLE ID	DA' ANALY	re ZED 1	DATE ANALYZED	2
01 02		.					=
03				-			
04							-
06			· ·	-			_
07 08				_			-
09		-		-			-
10		_			-		-
12			·	-			1
13 -		_			-		
15		-		-			
16 -		/					
							2
20 -		— —					i
21		_					
22		_			-		
		_					

≥ ___ of

9B PESTICIDE GPC CALIBRATION

Lab Name:		Contract:	
Lab Code:	Case No.:	SAS No.:	SDG No.:
GPC Column:	·· ·	Calibration Date:	
GC Column(1):	ID:	(mm) GC Column(2): _	ID:(mm)
	T	SPIKE SPIKE	00 1

	SPIKE	45555		
COMPOUND	ADDED (ng)	SPIKE RECOVERED (ng)	% REC #	QC. LIMITS REC.
gamma-BHC (Lindane)		33200000000000000000000000000000000000	=====	80-110
Heptachlor Aldrin				80-110
Dieldrin				80-110 80-110
Endrin 4,4'-DDT				80-110
				80-110

[#] Column to be used to flag recovery values with an asterisk
* Values outside of QC limits

THIS GPC CALIBRATION APPLIES TO THE FOLLOWING SAMPLES, BLANKS, MS AND MSD:

EPA	LAB	DATE	D100
SAMPLE NO.	SAMPLE ID	1	DATE
*******		ANALYZED 1	ANALYZED 2
		_	
		_	
		-	
			-
			
· · · · · · · · · · · · · · · · · · ·			·····
i		: 	
		-	

age	of .
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10A PESTICIDE IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA	SAMPLE	NO
		INC.

Lab Name:		`C	ontract:			
Lab Code: Case	≥ No.:	\$	SAS No.:		SDG No.:	
ab Sample ID :			Date(s) Anal	yzed:	
nstrument ID (1):			Instru	ment I) (2):	
C Column(1):	ID:	(mm)	GC Col	umn(2):	TD	•
		<u> </u>				
ANALYTE	COL	RT	FROM	ł .	CONCENTRATION	T
		26222		=====		=====
	¹ .					
	2	·				
-	_ 1	- -				
•	2					
	_ ¹ -					
•	2 -					
	_ 1					
	2					
	-					
<u> </u>	_ 1 _	.				
	2 _	 .				
	1					
	_ _ _	-	-			
	_ 1 _					
	2					
·	!					·
	- ¹ -	-		 -		İ
	2 _					

PESTICIDE IDENTIFICATION SUMMARY FOR MULTICOMPONENT ANALYTES

FOR MULTICOMPONE	INT ANALYTES
Lab Name:	Contract:
Lab Code: Case No.:	SAS No.: SDG No.:
Lab Sample ID :	Date(s) Analyzed:
Instrument ID (1):	Instrument ID (2):

EPA SAMPLE NO.

GC Column(1):		II	D:	_(mm)	GC Column(2):	ID:	(2
ANALYTE	PEAK	RT	RT FROM	WINDOW TO	CONCENTRATIO	MEAN N CONCENTRATION	1 &D
COLUMN 1	1 2 3 4 5						=====
COLUMN 2	1 2 3 4 5						=====
COLUMN 1	3 4 5						
COLUMN 2							
COLUMN 1	1					~	
COLUMN 2	1 2 3 4 5						

At least 3 peaks are required for identification of multicomponent analytes page __ of __

Attachment B-2 Analytical Data Validation Summary

TÀBLE I

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

ANALYTICAL DATA VALIDATION SUMMARY (Results are presented in parts per million, ppm)

Sample Delivery			1								
Group No.	Sample 1D	Date Collected	Madda	Validation Level	Qualification		The state of the s			T	
PCB ₈			1 matrix	# TARIUMUS LEVEL	. Qualification	Compound	QA/QC Parameter,	Value	Control Limits	Qualified Result	
9700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II						Aarounen WORK	Notes
9700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No			1	T	T	
9700001	EXAMPLE-SS-2 (0 - 0.5)	1/1/97	Soil	Tier II	No				 		
9700001	EXAMPLE-SS-2 (0.5 - 1)	1/1/97	Soil	Tier II	No			1	 	 	
9700001	EXAMPLE-SS-3 (0 - 0.5)	1/1/97	Soil	Tier II	No			1	 	 	
9700001	EXAMPLE-SS-3 (0.5 - 1)	1/1/97	Soil	Tier II	No				 		
9700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No						
9700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No			1	 	 	
9700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier I	No			1	 	 	
9700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier I	No				 		
9700002	EXAMPLE-SS-DUP-I	1/1/97	Soil	Tier I	No			1			
Metals			3011	i let i	No			1			D. F
9700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil		· · · · · · · · · · · · · · · · · · ·					ļ	Duplicate of EXAMPLE-SS-5 (0 5 - 1)
9700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	Yes	Copper	Matrix Spike %R	54.0%	75% to 125%	NEWS CO. 1	
VOC:		1/1/2/	2011	Tier II	Yes	Copper	Matrix Spike %R	54.0%	75% to 125%	ND(5 62) J ND(5 62) J	
9801047	EXAMPLE-SS-I (0 - 0.5)	1/1/97						1	157010 12374	ND(3.62) J	
9801047	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No						
SVOC:	1	1/1/9/	Soil	Tier II	No			 			
	EXAMPLE-SS-1 (0 - 0.5)	1/1/97									
9700001	EXAMPLE-SS-1 (0.5 - 1)		Soil	Tier II	Yes	2,6-Dinitrophenol	CCAL %D	59.0%	-20%		
	EX. (0.3 - 1)	1/1/97	Soil	Tier II	Yes	2,6-Dinitrophenol	CCAL %D	85.3%	<25% <25%	ND(3.6) J	
PCDDy/PCDFs						Pentachrolophenol	CCAL %D	52.3%	<25%	ND(3.6) J	
	EXAMPLE-SS-1 (0 - 0.5)	1 1855					A	32.376	<23%	ND(3.6) J	
	CAMPLE-55-1 (0 - 0.3)	1/1/97	Soil	Tier II	Yes	1,2,3,4,7,8-HxCDF	Internal Standard %R	188,0%	2001 . 10001		
			i	Í		1,2,3,6,7,8-HxCDF	Internal Standard %R	186.7%	25% to 150%	0.00013 J	
		1	!	ļ		Total TCDF	Result exceeded calibration range	180,7%	25% to 150%	0.000066 J	<u> </u>
700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/22				Total HxCDF	Result exceeded calibration range			0.00058 J	
	CAMMI CE-93-1 (0.3 - 1)	1/1/97	Soil	Tier II	Yes	1,2,3,4,6,7,8-HpCDD	Internal Standard %R	221.1%		0.0021 J	
		1	I	1			Internal Standard %R		25% to 150%	0.000020 J	
j		i I		i	ſ		Internal Standard %R	235.2% 422.3%	25% to 150%	0.00022 J	
		1	i	į			Internal Standard %R		25% to 150%	0.0000038 J	
							Internal Standard %R	365.2%	25% to 150%	0.0000020 J	
yanide		<u> </u>					Internal Standard %R	332.0%	25% to 150%	0.0000041 J	
	EVAMPLE CO. 100 . 0.00	T :					Caminata Veli	222.6%	25% to 150%	0.0000113	
801047	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier li	No						
ulfide	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No						
		-					<u> </u>				
	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No						
801047	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No					1	

Validation Annex C

Data Validation Procedures for Inorganic Analytes

Validation Annex C

Data Validation Procedures for Inorganic Analytes

I. Introduction

This Standard Operating Procedure (SOP) describes the data validation procedures for a United States Environmental Protection Agency (EPA) Region I tiered review of the data for inorganic analytes by EPA Methods 5000, 6000, and 9000 series. Data review procedures presented in this SOP were developed from the applicable quality control criteria specified in the following documents:

- Region I Tiered Organic and Inorganic Data Validation Guidelines, USEPA Region I, July 1, 1993.
- Region I Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, USEPA Region I, June 13, 1988 (Modified February 1989).
- Evaluation of Metals Data for the Contract Laboratory Program, USEPA SOP HW-2, Revision 11, January 1992.
- USEPA Contract Laboratory Program, Statement of Work for the Inorganics Analysis, Revision OLM0.1.9, July 1993.

II. EPA Region I Tiered Validation Procedures

All inorganic analytical data will be validated to a Tier I level following the procedures presented in the Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses (July 1996, revised December 1996) and the Region I Tiered Organic and Inorganic Data Validation Guidelines (USEPA guidelines). The basic Tier I review consists of a completeness evidence audit to ensure that all laboratory data and documentation are present. Additionally, for projects subject to this FSP/QAPP, the Tier I review will be modified and expanded to include a number of elements of Tier II review, including review of each sample delivery group (SDG) to identify data deficiencies that may potentially result in qualification of the data (e.g., systematic deviations such as low calibration response factors.) Based on this modified Tier I review, a subset of the data will be identified for additional Tier II review. If OA/OC deviations are identified during the modified Tier I review, those deviations will be addressed in the Tier II review. Otherwise, a minimum of 25% of the data will be chosen at random to be subjected to a Tier II review, which will consist of the Tier I completeness evidence audit and review of all data package summary forms for identification of QA/QC parameter deviations. The Tier II data review will be used to identify and evaluate systematic QA/QC deficiencies that may affect any or all of the sample data presented in a specific data package. The Tier II data validation also includes an evaluation of field duplicate Relative Percent Difference (RPD) compliance. Additional Tier II review and Tier III (recalculation of sample results) review may also be performed for a larger portion of the data set, if required, to fully resolve data usability limitations identified during the modified Tier I data review and initial Tier II review for 25% of the data chosen at random.

The tiered data validation procedures consisting of modified Tier I review for all data, Tier II review of a minimum of 25% of the data, and additional Tier II and Tier III review, as required, will be used to evaluate compliance of each data set with the project-specific data quality objectives. The procedures presented in the following sections will be used to perform the Tier I, Tier II, and Tier III data validation reviews. Qualification of analytical data will also be performed, if required, as specified in the data validation protocols presented below.

III. Tier I Validation Procedures

Tier I validation of a data package consists of verifying that all raw data and forms are included and complete. A data validation summary spreadsheet (in the form presented in Attachment C-1) is prepared to document the data review. The following steps are taken to complete a Tier I validation:

- Step 1 Review the laboratory case narrative. During review, if there are any deviations that warrant a more extensive validation procedure, a Tier II review would be initiated to evaluate potential data use limitations.
- Step 2 Compare the chain-of-custody and the sample traffic reports. If there are any inconsistencies or if they are incomplete, then contact the laboratory for resolution.
- Step 3 Verify that all forms presented are present and complete. If any of the required forms are not in the data package, contact the laboratory for a resubmission.
 - **Note**: If frequent or severe quality control deviations are present on the above-mentioned forms, a more extensive validation procedure may be warranted. Based on the reviewer's judgement, Tier II or Tier III review may be conducted to fully evaluate the usability of the data.
- Step 4 Verify that the following raw data is provided for each sample and associated QA/QC samples in the data package. Contact the laboratory to obtain missing data (if required):
 - Case Narrative
 - Chain-of-Custody Forms
 - Traffic Reports
 - QA Sample Summary Forms
 - Instrument Calibration Summary Forms
 - Instrument Run Logs
 - Sample Preparation Logs
 - Instrument/Method Detection Limits
 - Standards Preparation Logs
 - Supporting (raw) Data
- Step 5 With a blue ink pen, record on the first page of the data package: the validation level, date, and reviewer's initials.

In addition to the steps discussed above, the Tier I review of data packages for projects subject to this FSP/QAPP will be expanded to include some elements of Tier II review, including review of the data packages to identify QA/QC deficiencies that may require qualification of the data.

IV. Tier II Validation Procedures

Tier II validation of a data package consists of the steps mentioned above for a Tier I review, plus review of the data package summary forms for identification of QA/QC deviations. Tier II validation does not include review of the "raw data" or recalculation of sample results. Sample qualification is performed (if required) following EPA Region I Guidelines presented in Section I.

A. Data Qualifiers

All data qualified due to QA/QC deviations will be clearly recorded on the data summary package Form I, or laboratory equivalent, with a blue ink pen. The laboratory qualification is lined out and the reviewer's qualification placed next to it. The date and the initials of the reviewer will also be placed on Form I. Below is a list of qualifiers that may be used.

- The compound was positively identified, but the associated numerical value is an estimated concentration. This qualifier is used when the data evaluation procedure identifies a deficiency in the data generation process. This qualifier is also used when a compound or analyte is detected at estimated concentrations less than the practical quantitation limit (PQL). (When this qualifier is used in combination with the letter C -- i.e., JC -- that indicates that the sample result is an estimated concentration due to certain QC deficiencies and that a bias-corrected result is available, as discussed further below.)
- U The compound was analyzed for, but was not detected. The sample quantitation limit is presented and adjusted for dilution and (for solid samples only) percent moisture. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL), as presented in Attachment C-1.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual level of quantitation. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL) J, as presented in Attachment C-1.
- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purposes.

B. Holding Times

Criteria

The holding times presented in Table 1 of the FSP/QAPP for the inorganic analysis must not be exceeded.

Action

The following steps are performed to review holding times for Tier II validation:

- Step 1 Establish the holding time by comparing the sampling date on the chain-of-custody with the dates of analysis and/or digestion on Form I. The chain-of-custody is also reviewed to determine if the samples were properly preserved.
- Step 2 If the holding times are exceeded by less than 24 hours, no qualification of data is needed.
- Step 3 If the holding times are exceeded by more than 24 hours but less than 14 days, all positive results are qualified as estimated (J) and the non-detected compounds are qualified as estimated (UJ).
- Step 4 If the holding times are exceeded by more than twice the specified holding time, all associated results are qualified as unusable (R).

Inorganic Analytes Revision #: 01 Date: December 27, 2001

C. Percent Moisture Content

Criteria

Soil/sediment/solid sample results must be adjusted for percent solids and must have percent solids greater than 30%.

Action

The following steps are performed by reviewing the sample result summary form during the validation of percent solids data:

Verify that the percent solids of soil/sediment/solid samples are greater than 30%.

- a. Soil/sediment/solid sample results with a percent solid of less than 10% are qualified as unusable (R)
- b. Positive and non-detected soil/sediment/solid sample results with percent solid results within the range of greater than 10% to less than 30% are qualified as estimated (J) and unusable (R), respectively.

D. Calibration

Criteria

- 1.0 Instruments must be calibrated daily and each time the instrument is set up for analysis.
- 1.1 Initial Calibration ICP

A blank and at least one standard must be used in establishing the analytical curve.

1.2 Initial Calibration Atomic Absorption Analysis

A blank and at least three standards must be used in establishing the analytical curve.

1.3 Initial Calibration-Mercury

A blank and at least four standards must be used in establishing the analytical curve.

- 1.4 Initial Calibration-Cyanide
 - 1.4.1 A blank and at least three standards must be used in establishing the analytical curve.
 - 1.4.2 At least one mid-point standard must be distilled before analysis.
- 1.5 Initial and Continuing Calibration Verification (ICV and CCV)
 - 1.5.1 A certified standard must be used for the initial Calibration Verification (ICV) and must be analyzed for each wavelength used for analysis.

- 1.5.2 All percent recoveries of the ICVs and CCVs for all the analytes must be within 90 to 110%, except for mercury and cyanide.
- 1.5.3 All percent recoveries of all the ICVs and CCVs for mercury must be within 80 to 120%.
- 1.5.4 All percent recoveries of all the ICVs and CCVs for cyanide must be within 85 to 115%.
- 1.5.5 A CCV must be analyzed every 10 samples or every 2 hours, whichever is more frequent.
- 1.5.6 To verify linearity near the contract required detection limit (CRDL) for ICP analysis, a standard with a concentration that is two times the CRDL or two times the IDL (whichever is greater) must be analyzed. The recoveries for the CRDL standards must be within the limits of 80 to 120%.

Action

The following steps are performed to review inorganic calibration for Tier II validation:

- Step 1 Verify that the instrument was calibrated daily and every time it was set up by reviewing Form XIV, or laboratory equivalent. Also, verify that the correct number of standards were used for the initial calibration for each analyte reported. If any of these are not completed by the laboratory, the data are qualified as unusable (R).
- Step 2 Verify that a mid-range standard was distilled by reviewing Form XIII, or laboratory equivalent. If a mid-range standard for cyanide was not distilled or did not meet the 85 to 115% criteria, all positive and non-detected results are qualified as estimated (J) and (UJ), respectively.
- Step 3 Review Form II (Part 1), or laboratory equivalent, for the identification of the source of the ICV and CCV. If they are not from different sources, all positive and non-detected results are qualified as estimated (J) and (UJ), respectively.
- Step 4 ICV and CCV percent recovery Form II (Part 1), or laboratory equivalent, are reviewed against the above mentioned criteria. If the ICV or CCV percent recoveries are outside the acceptance criteria, the following steps are taken to qualify the data:
 - a. If the ICV and CCV percent recoveries are not within the control limits but are within the ranges of 75-89%, or 111-125% (CN, 70-84% or 116-130%; Hg, 65-79% or 121-135%), all results greater than the IDL are qualified as estimated (J).
 - b. If the ICV and CCV percent recoveries are not within the control limits but are within the ranges of 111-125 % (CN, 116-130%; Hg, (121-135%), all non-detected results are not qualified.
 - c. If the ICV and CCV percent recovery are not within the control limits, but are within the ranges of 75 to 89% (CN, 70 to 84%; Hg, 65 to 79%), all non-detected results are qualified as estimated (UJ).
 - d. If the ICV and CCV percent recoveries are not within the control limit ranges of 75 to 89% (CN, 70 to 84%; Hg, 65 to 79%), all non-detected results are qualified as unusable (R).

- Step 5 Form XIV, or laboratory equivalent, is reviewed to verify that the CCVs were analyzed in the required intervals. If they were not analyzed at the required intervals, all positive and non-detected results are qualified as estimated (J) and (UJ), respectively.
- Step 6 Form II (Part 2), or laboratory equivalent, is reviewed to verify that the CRDL standards are within the required control limits of +/-20% of the true value. If the CRDL standard for ICP is not within +/-20% of the true value, positive results less than 3 times the CRDL and non-detects are qualified as estimated (J) and (UJ), respectively.

E. Blanks

Criteria

- 1.0 No contaminants should be present in the blank(s).
- 1.1 For each matrix, for every 20 samples digested, or for each batch digested, a preparation blank must be analyzed.
- 1.2 A calibration blank must be analyzed after every 10 samples or every 2 hours, whichever is more frequent.

Action

Qualification of sample results due to blank contamination is dependent on the conditions and origin of the blank. No positive sample results are reported unless the concentration of the compound in the sample exceeds five times the amount in the blank. No sample results are corrected by subtracting blank values. Specific qualifications of sample data are as follows:

- Step 1 Review Form III, or laboratory equivalent, for all blanks within the data package.
- Step 2 If a blank result if greater than two times the negative IDL, all non-detects are qualified as estimated (UJ).
- Step 3 If an analyte is found in the blank but not in the sample, then the data are not qualified.
- Step 4 When an analyte is detected in the sample and the sample concentration is less than five times the concentration detected in the associated blank, the data are qualified as non-detected (U).
- Step 5 When a positive result is greater than the action level, the result is not qualified.
 - **Note**: Any difference between the sample analyses and the related blank analyses which involve weights, volumes, or dilution factors, must be taken into account when the 5-times criteria is applied.

The following are examples of how qualifications apply to blank data:

<u>Example 1 (Step 4)</u>: When the sample result is less than the IDL but greater than the action level, positive results less than the action level are qualified as non-detect.

Factor	5-times
Blank Result	7
PQL	5
Action Level	35
Sample Result	22
Qualified Sample Result	22 U

<u>Example 2 (Step 5)</u>: When the sample result is greater than the IDL and the action level, no qualification is used.

Factor	5-times
Blank Result	10
PQL	8
Action Level	50
Sample Result	70
Qualified Sample Result	70

F. ICP Interference Check Sample (ICS)

Criteria

- 1.0 The ICS must be analyzed at the beginning and the end of each sample analysis run or a minimum of twice per 8-hour working shift, whichever is more frequent.
- 1.1 The percent recovery for the ICS solution AB must be within the control limits of +/- 20% of the true value.

Note: Interferant Element Concentration Used for ICP Interference Check Sample

Element	Concentration (mg/L)
Al	500
Ca	500
Fe	200
Mg	500

Action

The following steps are performed to review the ICS for Tier II validation:

Step 1 - Review Form XIV, or laboratory equivalent, to ensure the ICS is analyzed at the proper frequency. If the ICS is not analyzed at the correct frequency, detect and non-detected sample results are qualified as estimated (J) and (UJ), respectively.

- Step 2 Verify on the ICS recovery Form IV, or laboratory equivalent, that the percent recovery results for the ICS solution AB are within the control limits of 80 to 120%. Also review Form I for concentrations of As, Ca, Mg, and Fe to confirm that they are a minimum of 50% of their respective levels in the ICS. The following steps are taken in reviewing the data:
 - a. If the ICS recovery for an element is greater than 120% and the reported sample results are non-detect, no qualification of the data is needed.
 - b. If the ICS recovery for an element is greater than 120% and the reported sample results are greater than the IDL, the affected data are qualified as an estimate (J).
 - c. If the ICS recovery for an element is between 50 and 79% and the reported results are greater than the IDL, the affected data are qualified as an estimate (J).
 - d. If the ICS recovery for an element is between 50 and 79% and the reported results are non-detected, the affected data are qualified as an estimate (UJ).
 - e. If the ICS recovery for an element is less than 50%, the sample results are qualified as unusable (R).
- Step 3 When sample results greater than the IDL are reported for elements which are not present in the ICS solution, there is the possibility of false positives. Sample results greater than two times the IDL with levels of interferents that are 50% or more of the levels found in the ICS solution are qualified as estimated (J).
- Step 4 When negative sample results with an absolute value greater than two times the IDL are reported for elements which are not present in the ICS solution, there is the possibility of false negatives. When the levels of interferents for these samples are 50% or more of the levels found in the ICS solution, the sample results are qualified as estimated (UJ).
- G. Matrix Spike (MS) Sample Analysis

Criteria

- 1.0 Samples identified as field blanks cannot be used for spiked sample analysis.
- 1.1 Spike recoveries must be within the control limits of 75 to 125%. However, the control limits do not apply when the sample concentration surpasses the spike concentration by a factor of four or more.
- 1.2 If the MS recovery does not meet criteria, a post-digestion spike is required and reported on Form 5B, or laboratory equivalent, for ICP, Flame, Mercury, and Cyanide. Post-digestion spikes are also required for all furnace analyses, but recoveries are reported on the raw data and are reviewed in a Tier III evaluation.

Action

The following steps are performed to review inorganic MS analysis for Tier II validation:

- Step 1 MS recoveries are reviewed on Form V (Part 1), or laboratory equivalent. If they are out of the control limits of 75 to 125% the following steps are taken:
 - a. When the spike recovery is greater than 125% and the reported sample results are non-detected, no qualification of data is needed.
 - b. When the spike recovery is greater than 125% and the reported sample results are greater than the IDL, the data are qualified as estimated (J).
 - c. When the spike recovery is less than 75% and the reported sample results are greater than the IDL, detected results are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC) and the bias-corrected result will be presented in the "Notes" field of the Analytical Data Validation Summary (Attachment C-2).
 - d. If the spike recovery is within the range of 30 to 74% and the sample results are non-detected, the data are qualified as estimated (UJ).
 - e. If the spike recovery is less than 30% and the sample results are non-detected, the data are qualified as unusable (R).

H. Duplicate Sample Analysis

<u>Criteria</u>

- 1.0 Samples identified as field blanks cannot be used for duplicate sample analysis.
- 1.1 Control limit of \leq 20% for waters and \leq 35% for soils for the RPD are used for sample results greater than five times the PQL as presented in Table 5 of the FSP/QAPP.
- 1.2 Control limit of \leq the PQL for waters and \leq 2 times the PQL for soils are used for sample values less than five times the PQL, including when only one sample value is greater than five times the PQL or when one sample is above the IDL and one is non-detected.
- 1.3 Duplicate sample analysis must be prepared and analyzed for every 20 samples, for every batch digested, or for every matrix, which ever is more frequent.

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Action

Verify on Form V (Part 2), or laboratory equivalent, that the RPD for the duplicate samples analysis is within the above mentioned criteria. If duplicate analysis results are outside the appropriate control windows, all sample results greater than the IDL for that analyte and the same matrix are qualified as estimated (J).

I. Field Duplicates

Criteria

- 1.0 For sample values greater than 5 times the PQL, control limits for the RPD for water matrices is \leq 30% and \leq 50% for soils matrices.
- 1.1 For sample values less than 5 times the PQL, the control limits of ≤ 2 times the PQL for waters and ≤ 4 times the PQL for soils will be used.

Action

Step 1 - Calculate all the RPD values for positive results between the sample and the field duplicate.

$$\label{eq:calculation:approx} Sample \ Result - Field \ Duplicate \\ Calculation: \ RPD = ----- x \ 100 \\ (Sample \ Result + Field \ Duplicate)/2$$

- Step 2 If duplicate analysis results are outside the appropriate control limits, all sample results greater than the IDL for that analyte and the same matrix are qualified as estimated (J).
- J. Laboratory Control Sample Analysis (LCS)

Criteria

- 1.0 Aqueous LCS results must fall within the control limits of 80 to 120%. For validation of the data the +/-20% limit will also apply to both antimony and silver.
- 1.1 Solid LCS results must fall within the control limits established by the laboratory as presented on Form VII or the laboratory equivalent.
- 1.2 LCS must be prepared and analyzed for every 20 samples, for every batch digested, or for every matrix, whichever is more frequent.

Action

- 2.0 The following steps are taken to evaluate the aqueous LCS:
 - Step 1 Review the Form VII or the laboratory equivalent for any analyte that is outside the control limits of 80 to 120%.
 - Step 2 If the LCS recovery for any analyte is greater than 120%, results greater than the IDL are qualified as estimated (J).

- Step 3 If the LCS recovery for any analyte is less than the lower control limit of 80%, sample results greater than the IDL are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the notes field of the data validation summary table.
- Step 4 If the sample results are non-detects and the LCS recovery is greater than 120%, no qualification of the data is performed.
- Step 5 If the sample results are non-detected and the LCS recoveries are within the control limits of 50 to 79%, the data are qualified as estimated (UJ).
- Step 6 If the LCS recoveries for any analyte are less than 50%, the data for that analyte are qualified as unusable (R).
- 2.1 The following steps are taken to evaluate the soil LCS:
 - Step 1 Review the Form VII, or laboratory equivalent, to identify any analyte that is outside the control limits established by the laboratory.
 - Step 2 If any solid LCS recoveries for any analyte are greater than the upper control limit established by the laboratory, all results greater than the IDL are qualified as estimated (J).
 - Step 3 If any solid LCS recoveries for any analyte are less than the lower laboratory established control limits, sample results greater than the IDL are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC) and the bias-corrected result will be presented in the "Notes" field of the Analytical Data Validation Summary (Attachment C-2).
 - Step 4 If the LCS results are greater than the upper control limits and the sample results are non-detected, no qualification of the data is needed.
 - Step 5 If the LCS results are less than the lower control limits and the sample results are nondetected, the data are qualified as estimated (UJ).

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K. ICP Serial Dilution Analysis

Criteria

- 1.0 If the analyte concentration is sufficiently high (concentration in the original sample is at a minimum a factor of 50 times the IDL) the laboratory is required to report the results of a five-fold dilution. Results that do not agree within 10% of the original results are qualified with an "E" by the laboratory. For the purposes of validation the criterion is 15%.
- 1.1 A serial dilution is required for each matrix analyzed.
- 1.2 If the sample used for the serial dilution had to be diluted for any elements to bring the result within the linear range of the instrument, another five-fold dilution is required for the evaluation of matrix interferences for that specific element.

Action

The following steps are performed to review ICP serial dilution for Tier II validation:

- Step 1 Review the ICP serial dilution results on Form IX or the laboratory equivalent. If the percent difference between the results is greater than 15% and the serial dilution results are greater than the initial sample results, the detected and non-detected results are qualified as estimated (J) and (UJ), respectively.
- Step 2 If there is evidence of a negative interference, all positive sample results are qualified as estimated (J).

L. Detection Limits

Criteria

- 1.1 IDLs must be less than the PQL for all analytes.
- 1.2 ICP or other methods may be used that do not have IDLs that are less than the PQLs only if all the sample results are greater than 5 times the IDL for that instrument.
- 1.3 IDLs must be multiplied by the dilution factors and preparation factors before being reported on Form I, or laboratory equivalent.

Action

The following steps are taken when verifying detection limits for Tier II validation:

- Step 1 On the Form I, or laboratory equivalent, correct any sample results that are not reported to the IDL or do not use the correct dilution/preparation factors.
- Step 2 Any positive or non-detected results for As, Tl, Se, or Pb analyzed by ICP that are not greater than 5 times the IDL are qualified as estimated (J).

V. Tier III Validation Procedures

Tier III validation of a data package consists of the steps mentioned above for a Tier I and Tier II validation plus review of the "raw data" and recalculation of approximately 10% of the sample results. Furnace atomic absorption analysis and calibration raw data are also reviewed.

A. Calibration

Criteria

- 1.0 The initial calibration for atomic absorption analysis must contain three standards, one of which must be at the POL.
- 1.1 The correlation coefficient must be greater than or equal to 0.995 for the calibration of atomic absorption, mercury, and cyanide or other photometric determinations.

Action

The following steps are taken when verifying inorganic calibration for Tier III validation:

- Step 1 Review the calibration raw data and Form XIII, or laboratory equivalent, to confirm that the curve for the analysis did include a standard at the PQL. If there is not a standard at the PQL, all positive sample results up to two times the PQL and non-detected results are qualified as estimated (J) and (UJ), respectively.
- Step 2 Evaluate the raw data of atomic absorption, mercury, and cyanide or other photometric determination and calculate the correlation coefficient. If the correlation coefficient is less than 0.995, then all results greater than the IDL and non-detects are qualified as estimated (J) and (UJ), respectively.

B. Furnace Atomic Absorption

Criteria

- 1.0 For sample concentrations greater than the PQL, duplicate injections must agree within +/- 20% RSD, or Coefficient of Variation (CV), otherwise the sample must be reanalyzed once (two additional injections).
- 1.1 Spike recoveries must be within the control limits of 85 to 115%.
- 1.2 If the post-digestion spike recovery is not within the control limits of 85 to 115% and the sample absorbance is greater than 50% of the spike absorbance, the Method of Standard Additions is required. The sample must be spiked at 50, 100, and 150% of the sample absorbance.

Action

The following steps are taken when reviewing the Furnace Atomic Absorption data:

- Step 1 Review the duplicate injection values for RSD or CV. If they are outside the required criteria specified in Section IV.A.1.0 and the sample was not reanalyzed once as required, all positive results are qualified as estimated (J).
- Step 2 Review the spike recoveries. If they are outside the required criteria mentioned in section IV.A.1.1, all positive results are qualified as estimated (J).
- Step 3 Review the sample absorbance of the post-digestion spike and if the spike absorbance is greater than 50% the data are qualified as follows:
 - a. If the furnace post-digestion spike recovery is not within 85 to 115% and the sample result is greater than the IDL, then the data are qualified as estimated (J).
 - b. If the sample result is non-detected and the furnace post-digestion spike recovery is greater than 10% but less than 85%, then the data are qualified as estimated (UJ).
 - c. If the furnace post-digestion spike recovery is less than 10%, then positive and non-detected results are qualified as unusable (R).
- Step 4 If the Method of Standard Additions (MSA) is required, but was not performed, then the positive sample results are qualified as estimated (J).
- Step 5 If any samples analyzed by MSA were not spiked at the correct levels, then the positive sample results are qualified as estimated (J).
- Step 6 If the MSA correlation coefficient is less than 0.995, then the positive sample results are qualified as estimated (J).

C. Sample Result Verification

Criteria

The quantitation of the analytes and the adjustment of the PQL for dilution and percent solids, must be recalculated for 10% of the data.

Action

If the criteria above have not been followed, then the laboratory will be contacted by the reviewer and the laboratory will be responsible for resolving any discrepancies and resubmission of results, if needed.

Attachment C-1 Laboratory Reporting Forms for Inorganic Analytes

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

	Name:		Contract:					
Ьаρ	Code:	Case No.:	SAS No.:	SDG No.:				
SOW	No.:	,	,					
		EPA Sample No.	Lab Sample	ID.				
				 				
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				- -				
				<u>-</u>				
	•			<u>-</u> -				
	- -			- -				
	-			•				
	- -			· ·				
Were	ICP inter Yes/No _	relement corrections applied	1?					
Were	res/No	round corrections applied?						
	If yes-we applicati	re raw data generated before on of background correction	ce is?	Yes/No				
Comme	ents:							
han nardc	the conditory data reen author	this data package is in cothe contract, both technications detailed above. Relepackage and in the computer ized by the Laboratory Manefollowing signature.	Ily and for compase of the data	oleteness, for other contained in this				
Signat	ture:	N	ame:					
nte:		Т	itle:					

COVER PAGE - IN

1 INORGANIC ANALYSIS DATA SHEET

Vame:			Co	ntr	act:		
Lab Code:			: SAS				SDG No.:
Matrix (so	oil/water):			L	ab Sai	mple	ID:
Level (low/med):		Date Receive					
Solids:							
	Concentrat	ion Units	(ug/L or mg/kg	dr	y weig	ght)	:
	CAS No.	Analyte	Concentration	С	Q	М	
	7429-90-5	Aluminum_		<u> - </u> :		- -	
	7440-38-2	Antimony_ Arsenic		- -		-	
	7440-39-3	Barium		- -	***************************************	-	
	7440-41-7	Beryllium					
	7440-43-9						
•	7440-70-2	Calcium_					-
	7440-47-3 7440-48-4	Cohola Cohola		_ -		_	•
	7440-50-8	Copper		_ -		-	
	7439-89-6	Trop		_ _		-	
1	7439-92-1			- -		-	
. /	7439-95-4	Magnesium		- -		-	
•	7439-96-5	Manganese		- -		·	
	7439-97-6	Mercury		- -	······································		
	7440-02-0			- -			
İ	7440-09-7	Potassium		_ _			
	7782-49-2 7440-22-4	Selenium_		_ _			•
	7440-22-4			_ _			
	7440-28-0	Thallium		-			
İ	7440-62-2	Vanadium_		- -	····	_	
	7440-66-6	Zinc		- -			
		Cyanide		- -			
lor Befor	e:	Clarit	y Before:				Texture:
lor After	•	Clarit	y After:				Artifacts:
mments:							
					**	·····	

EPA SAMPLE NO.

2A INITIAL AND CONTINUING CALIBRATION VERIFICATION

					-				
Lab Name:		· · · · · · · · · · · · · · · · · · ·			ontract:				
Lab Code:		Case No.	:	. S	AS No.: _			SDG No.	:
Initial Ca	libratio	n Source:		· · · · · · · · · · · · · · · · · · ·					
Continuing	Calibra	tion Sour	ce:						
			Concent	ration	Units: ug	g/L			
Analyte Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt		al Calibr Found		True	Continuir	rg Calil	Found	%R(1)	M
Dopper									

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Nickel_Potassium
Selenium_Silver_Sodium_Thallium_Vanadium_

Zinc_ Cyanide

2B CRDL STANDARD FOR AA AND ICP

Lab	Name:		Contract:	
Lab	Code:	Case No.:	SAS No.:	SDG No.:
AA (CRDL Standard Source	e:		
ICP	CRDL Standard Source	ce:		

Concentration Units: ug/L

CRDL S	Standard f	or AA	CRDL Standard for ICP					
True	Found	%R	True		%R			
		· 		1	- ,	,	- , -	
					-	-	- -	
		<u> </u>	l ———		_		- -	
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			CRDL Standard for AA True Found %R	In	Initial	Initial	Initial Final	

Control Limits: no limits have been established by EPA at this time

3 BLANKS

Lab Name:		Contract:	<u>.</u>
Lab Code:	Case No.:	SAS No.:	SDG No.:
Preparation Blank	Matrix (soil/water):		
Preparation Blank	Concentration Units	(ug/L or mg/kg) ·	

			· · · · · · · · · · · · · · · · · · ·							
Analyte	Initial Calib. Blank (ug/L)	С		ti E	nuing Calib lank (ug/L) 2	r C	С	Prepa- ration Blank	С	M
Aluminum Antimony Arsenic Barium Indiam Indiam Chromium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium										
Zinc Cyanide		-		_		-	=			

ICP INTERFERENCE CHECK SAMPLE

Lab	Name:		Contract:	
Lab	Code:	Case No.:	SAS No.:	SDG No.:
ICP	ID Number:		ICS Source:	

Concentration Units: ug/L

	γ		, , , , , , , , , , , , , , , , , , , ,						
Analyte	Tol. A	rue Sol. AB	In Sol. A	itial Fou Sol. AB	ınd %R	Final Found Sol. Sol. A AB %1			
Aluminum_					1	-		· I ——	
Antimony_									
Arsenic									
Barium			l						
Beryllium Cadmium									
Calcium_]	
romium									
ilt									
/per Iron									
Lead									
Magnesium									
Manganese								l	
Mercury									
Nickel -									
otassium									
Selenium									
Silver					<u> </u>				
Sodium -									
Challium									
Vanadium	 -								
inc									
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5A

		SPIKI	5A E SAMPLE REC	OVERY		EPA S	SAMPLE	
Name:			Contr					
	ab Code: Case No.:			•				
Matrix (so						(low/me		
Solids f	or Sampl	e:						
	Conce	ntration Units (ug/L or mg/k	g dry we	eight):			
Analyte	Control Limit %R	Spiked Sample Result (SSR)	Sample C Result (S	SR) C Ac	Spike Ided (SA)	%R	QM	
Aluminum_ Antimony_ Arsenic_ Barium_ Beryllium Cadmium_ Calcium_ Thromium_ alt_ per Iron_ Lead_ Magnesium Manganese Mercury_ Nickel_ Potassium Selenium_ Silver_ Godium_								
hallium_ anadium								

	Di	6 UPLICATES	EPA SAMPLE NO.
Name:		Contract:	
Lab Code:	Case No.:	SAS No.:	SDG No.:
Matrix (soil/water):			Level (low/med):
% Solids for Sample: _		% Solids fo	or Duplicate:
. Concentration	n Units (ug/L o	r mg/kg dry weight): _	<u> </u>

1				J weigh		<u> </u>		-
Analyte	Control Limit	Sample (S)	С	Duplicate	(D) C	RPD	Q	M
Aluminum	<u> </u>						_	_
Antimony			- -				_	_
Arsenic			- -				-	-
Barium			- -				-	-
Beryllium			- -				-	-
Cadmium_			- -			<u> </u>	-	–
Calcium_			- -				-	-
Chromium_			- -				-	-
Cobalt			- -				1-1	-
per			- -	•			-	-
/_cn			_ _		-		1-1	_
Lead			_ _		-		-	
Magnesium			_ _		-		-	_
Manganese			_ _				-	-
Mercury Nickel			_ _				1-1	
Potassium			-1-11				1-1	_
Selenium			- -				1-1	_
Silver			- -				-	
Sodium			- -				-	
Challium			-				1-1	_
Vanadium			- _				-	
Zinc	-		-1-11				1_1	
yanide			- -		_		_ .	
-, -, -, -,	-		- -					
			.1_11		1 1		I <u>-</u> I.	_

7 LABORATORY CONTROL SAMPLE

Name:		Contract:	
Lab Code:	Case No.:	SAS No.:	_ SDG No.:
Solid LCS Source:			
Aqueous LCS Source:			

	Aqueous (ug/L)				S	ld (mg/kg)	/kg)		
Analyte	True	Found	%R	True	Found	С	Li	.mits	%F
Aluminum			1			1-		1	<u> </u>
Antimony						-		-	-
Arsenic						_			-
Barium						-	·	-	-
Beryllium						-			-
Cadmium -						-	·····		-
Calcium						-			-
Chromium						-		-	-
Cobalt						-		.	-
Copper		····				-		·	-
on						-		ļ 	-
1						-			-
gnesium		·······	-			-			-
Manganese_			-			-			-
Mercury		•	-			-			-
Nickel -			-			-			-
Potassium			-			-			-
Selenium -			-			-			-
Silver			-			-			-
Sodium			-			-1			-
Challium			-			-			-
/anadium			-			-			.
Zinc			-			-1			.
yanide	 - -		-			_			
.,						_			

8 STANDARD ADDITION RESULTS

.)	Name:		Contract:		
Lab	Code:	 Case No.:	SAS No.: _	 EDG No.:	

				Con	centrat	ion Ur	nits: ug	g/L			
EPA Sample No.	An	0 ADD ABS	1 A)	DD ABS	2 A CON	ADD ABS	3 Z CON	ADD ABS	Final Conc.	r	Q
											- - - -
											- - - -
											_

9
ICP SERIAL DILUTIONS

	TOI BEKI	AL DIPOLIONS	
Name:		Contract:	
Lab Code:	Case No.:	SAS No.:	SDG No.:
Matrix (s	oil/water):	Level	(low/med):

Concentration Units: ug/L

1						
Analyte	Initial Sample Result (I) C	Serial Dilution Result (S)	С	% Differ- ence	Q	М
Aluminum			-1-		-	
Antimony_			- -		-	
Arsenic			- -		-	
Barium			[]		1-	
Beryllium			-		-	
CadmiumCalcium					-	
Chromium						
Cobalt			1_1			
Copper			1-1		_	
Iron			1-1		_	
Lead			-		1-1	
Magnesium			-		-	
Manganese			-		$\left - \right $	
Mercury			-		1-1	—
Nickel			-		1-1	
Potassium			-		-	1
Selenium_ Silver			-		-	
Sodium Sodium				•	-	
Thallium						
/anadium			_			
Zinc			_		 _ .	
	[_		_ .	
	'				_ .	_ 1

EPA SAMPLE NO.

10 INSTRUMENT DETECTION LIMITS (QUARTERLY)

Name:		Contra	ct:	
Lab Code:Ca	se No.: _	SAS No.:	SDG No.:	
ICP ID Number:		Date:		
Flame AA ID Number	:			
Furnace AA ID Numb	er:	• · · · · · · · · · · · · · · · · · · ·		
	1	T		
	1		1	i

	Analyte	Wave- length (nm)	Back- ground	CRDL (ug/L)	IDL (ug/L)	м
	Aluminum_ Antimony_ Arsenic			200 60 10		
	Barium Beryllium Cadmium			5 5		_
	Calcium Chromium_ Cobalt			5000 10 50		_
	Copper Iron Lead			25 100		
	Magnesium Manganese Mercury			5000 15		
	Nickel Potassium			0.2 40 5000		
	Selenium_ Silver Sodium			<u>5</u> 		_
	Thallium_ Vanadium_ Zinc			10 50 20		
	Cyanide			10		

Comments:		
-		

11A ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Code:	(Case No.:		Contract: SAS No.: Date:		SDG No.:
Analyte	Wave- length (nm)	Al	nterelement Ca	Correction Fe	Factors Mg	for:
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium halt ir Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc						
omments:						

11B ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

O 31-		a. a		-
Case No.	:	SAS No.:		SDG No.:
	_	Date:		
ve- ngth	Interelement	Correction	Factors	for:
nm)		***		
		1	1	
				
				·
				
1 1				
	ve- ngth nm)	ve- ngth nm)	ve- ngth nm) Interelement Correction	ve- ngth nm) Interelement Correction Factors

12 ICP LINEAR RANGES (QUARTERLY)

			•	
Lab Name:		··········	Contract:	· .
Lab Code:	Case No.:	_ '	SAS No.:	_ SDG No.:
CP ID Number:		ĵ	Date:	
	Analyte Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc	Integ. Time (Sec.)	Concentration (ug/L)	M

13 PREPARATION LOG

Name:		Contract:	
Lab Code:	Case No.:	SAS No.:	SDG No.:
Method:			

1			
EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)

14 ANALYSIS RUN LOG

Name	:		···	-					•		C	oni	tra	aci	t:												
Lab Code	•		Case	N	٥.:						Si	AS	No	ာ.	: _					- s	DG	N	ο.	:			
Instrume	nt ID Numl	ber: _					_					etl												•		******	
Start Date:											Εı	nd	Da	ate	∋:					_							
EPA													Ar	nal	Lyt	es											
Sample No.	D/F	Time	% R		A S	AS	B A	B E	C D	C A	C R	C 0			P B	M G	M N	H G	N I	K	S E	A G	N A	T	V	Z N	C
				- -	- -	-	- -	_	- -	_	_		_	_	_		_	_	_	_	_	- -	_ _	_ _	_	_	_
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Attachment C-2 Analytical Data Validation Summary

TABLE 1

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

ANALYTICAL DATA VALIDATION SUMMARY (Results are presented in parts per million, ppm)

Group No. PCBs	Sample ID	Date Collected	Matrix	Validation Level	. Oualification	Compound	The Control of the Co		11. ss	1	
700001	Tauran and Tauran and				· Carriegion	Compound	QL/QC Parameter	Válue	Control Limit	Qualified Resul	
700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No					. Commen Westill	Notes
700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No				T	T	
700001	EXAMPLE-SS-2 (0 - 0.5)	1/1/97	Soil	Tier II	No		•		 	 	
	EXAMPLE-SS-2 (0.5 - 1)	1/1/97	Soil	Tier II					 	 	
700001	EXAMPLE-SS-3 (0 - 0.5)	1/1/97	Soil	Tier II	No No				 	ļ	
700001	EXAMPLE-SS-3 (0.5 - 1)	1/1/97	Soil	Tier II				+	 	ļ	
700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No						
700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No			+		ļ <u>-</u>	
700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier I	No			 	 		
700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier !	No			 	 		
700002	EXAMPLE-SS-DUP-I	1/1/97	Soil	Tier !	No						
letals			3011	J let J	No			 			
700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil						L	<u> </u>	Duplicate of EXAMPLE-SS-5 (0.5 - I
700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	Yes	Copper	Matrix Spike %R	64.004			
OC1		.,.,,,	3011	Tier II	Yes	Copper	Matrix Spike %R	54.0% 54.0%	75% to 125%	ND(5.62) J	
801047	EXAMPLE-SS-1 (0 - 0.5)	1/1/97						34.0%	75% to 125%	ND(5.62) J	
801047	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No						
VOC:	35 (4.5 1)	1/1/9/	Soil	Tier II	No						
700001	EXAMPLE-SS-I (0 - 0.5)										
700001	EXAMPLE-SS-1 (0 5 - 1)	1/1/97	Soil	Tier II	Yes	2,6-Dinitrophenol	CCAL %D				
	CXXIIII CE-33-1 (0 3 - 1)	1/1/97	Soil	Tier II			CCAL %D	59.0%	<25%	ND(3.6) J	
CDDs/PCDFs							CCAL %D	85.3%	<25%	ND(3.6) J	
00001	EVANDE SE					теления	CCAL %D	52.3%	<25%	ND(3.6) J	
00001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier !!	Yes	1,2,3,4,7,8-HxCDF				()	I
	1		- 1				Internal Standard %R	188.0%	25% to 150%	0.00013 J	
	1	- 1	- 1	1			Internal Standard %R	186.7%	25% to 150%	0.000753	
00001			ı				Result exceeded calibration range			0.000,065 J	
00001	EXAMPLE-SS-1 (0 5 - 1)	1/1/97	Soil	Tier II		TOTAL FIXEDE	Result exceeded calibration range			0.0038 J	
	1	ļ	· · · I	*****		1,2,3,4,6,7,8-HpCDD	nternal Standard %R	221.1%	25% to 150%		
	i i	ł	ł			OCDD	nternal Standard %R	235.2%	25% to 150%	0.000020 J	
			- 1			1,2,3,4,7,8-HxCDF	nternal Standard %R	422.3%	25% to 150%	0.00022 J	
	1	l		1		1,2,3,6,7,8-HxCDF	nternal Standard %R	365.2%		0.0000038 J	
		I	- 1	1		2,3,4,6,7,8-HxCDF	nternal Standard %R	332.0%	25% to 150% 25% to 150%	0.0000020 J	
nide						,2,3,4,6,7,8-HpCDF		222.6%		0.0000041 J	
1047	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil					222.074	25% to 150%	0.0000113	
1047	EXAMPLE-SS-1 (0.5 - 1)			Tier II	No						
lide		11131	Soil	Tier II	No						
1047	EXAMPLE-SS-1 (0 - 0.5)	1722							T		
1047	EXAMPLE-SS-1 (0.5 - 1)		Soil	Tier II	No						
	Investigat (0.5 - 1)	1/1/97	Soil	Tier II	No						

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Data Validation Procedures for Polychlorinated Dibenzo-p-Dioxins (PCDDs)/ Polychlorinated Dibenzofurans (PCDFs)

Dioxins/Furans Revision #: 01 Date: December 27, 2001

Validation Annex D

Data Validation Procedures for Polychlorinated Dibenzo-p-Dioxins (PCDDs)/Polychlorinated Dibenzofurans (PCDFs)

I. Introduction

This standard operating procedure (SOP) describes the data validation procedures for an EPA Region I tiered review of the data for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzo-furans (PCDFs) analyzed by EPA Method 8280 or 8290. Data review procedures presented in this SOP are from the applicable quality control criteria specified in the following documents:

- Region I Tiered Organic and Inorganic Data Validation Guidelines, EPA Region I, July 1, 1993.
- The Analysis of Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans by High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS), EPA Method 8290.
- National Functional Guidelines for Dioxin/Furans Data Validation, Draft Revision DFLM01.1, January, 1996
- EPA Contract Laboratory Program, Statement of Work for the Analysis of PCDDs/PCDFs, Revision DFLM01.1, September 1991

II. EPA Region I Tiered Validation Procedures

All PCDD/PCDF analytical data will be validated to a Tier I level following the procedures presented in the Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses (July 1996, revised December 1996) and the Region I Tiered Organic and Inorganic Data Validation Guidelines (EPA guidelines). The basic Tier I review consists of a completeness evidence audit to ensure that all laboratory data and documentation are present. Additionally, for projects subject to this QAPP, the Tier I review will be modified and expanded to include a number of elements of Tier II review, including review of each sample delivery group (SDG) to identify data deficiencies that may potentially result in qualification of the data (e.g., systematic deviations such as low calibration response factors.) Based on this modified Tier I review, a subset of the data will be identified for additional Tier II review. If QA/QC deviations are identified during the modified Tier I review, those deviations will be addressed in the Tier II review. Otherwise, a minimum of 25% of the data will be chosen at random to be subjected to a Tier II review, which will consist of the Tier I completeness evidence audit and review of all data package summary forms for identification of QA/QC parameter deviations. The Tier II data review will be used to identify and evaluate systematic OA/OC deficiencies that may affect any or all of the sample data presented in a specific data package. The Tier II data validation also includes an evaluation of field duplicate Relative Percent Difference (RPD) compliance. Additional Tier II review and Tier III (recalculation of sample results) review may also be performed for a larger portion of the data set, if required, to fully resolve data usability limitations identified during the modified Tier I data review and initial Tier II review for 25% of the data chosen at random.

The tiered data validation procedures consisting of modified Tier I review for all data, Tier II review of 25% of the data, and additional Tier II and Tier III review, as required, will be used to evaluate compliance of each data set with the project-specific data quality objectives. The procedures presented in the following sections will be used to perform the Tier I, Tier II, and Tier III data validation reviews. Qualification of analytical data will also be performed, if required, as specified in the data validation protocols presented below.

III. Tier I Validation Procedures

Tier I validation of a data package consists of verifying that all raw data and forms are included and complete. A data validation summary spreadsheet (in the form presented in Attachment D-1) is prepared to document the data review. The following steps are taken to complete a Tier I validation:

- Step 1 Review the laboratory case narrative. During review of the case narrative, if any deviations warrant a more extensive validation procedure, a Tier II review would be initiated to evaluate potential data use limitations.
- Step 2 Compare the chain-of-custody and the sample traffic reports. If there are any inconsistencies or if they are incomplete, then contact the laboratory for resolution.
- Step 3 Verify that all forms are present and complete. If any of the forms are not in the data package contact the laboratory for a resubmission.
- <u>Note</u>: If frequent or severe quality control deviations are present on the above-mentioned forms, a more extensive validation procedure may be warranted. Based on the reviewer's judgement, Tier II or Tier III review may be warranted to fully evaluate the usability of the data.
- Step 4 Verify that the following raw data is provided for each sample and associated QA/QC samples in the data package. Contact the laboratory to obtain missing data:
 - Case Narrative
 - Chain-of-Custody Forms
 - Traffic Reports
 - QA Sample Summary Forms
 - Instrument Calibration Summary Forms
 - Instrument Run Logs
 - Sample Preparation Logs
 - Instrument/Method Detection Limits
 - Standards Preparation Logs
 - Supporting (raw) Data
- Step 5 With a blue ink pen, record on the first page of the data package: the validation level, date, and reviewer's initials.

In addition to these steps, as discussed above, the Tier I review of data packages for projects subject to this QAPP will be expanded to include some elements of Tier II review, including review of the data packages to identify QA/QC deficiencies that may require qualification of the data.

IV. Tier II Validation Procedures

Tier II validation of a data package consists of the steps mentioned above for a Tier I review plus review of the data package for identification of QA/QC deviations. Tier II validation does not include review of the "raw data" or recalculation of sample results. Sample qualification is performed (if required) following EPA Guidelines.

A. Data Qualifiers

All data qualified due to QA/QC deviations will be clearly marked on a copy of Form I's, or laboratory equivalent, with a blue ink pen. The laboratory qualification is lined out and the reviewer's qualification placed next to it. The date and the initials of the reviewer will also be placed on Form I. Below is a list of qualifiers to be used.

- J The compound or analyte was positively identified, but the associated numerical value is an estimated concentration. This qualifier is used when the data evaluation procedure identifies a deficiency in the data generation process. This qualifier is also used when a compound or analyte is detected at estimated concentrations less than the practical quantitation limit (PQL). (When this qualifier is used in combination with the letter C -- i.e., JC -- that indicates that the sample result is an estimated concentration due to certain QC deficiencies and that a bias-corrected result is available, as discussed further below.)
- U The compound or analyte was analyzed for, but was not detected. The sample quantitation limit is presented and adjusted for dilution and (for solid samples only) percent moisture. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL) as presented in Attachment D-1.
- UJ The compound or analyte was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual level of quantitation. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(POL) J as presented in Attachment D-1.
- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purposes.
- B The compound or analyte was positively identified in the sample as well as in the associated blank sample. The detected sample concentration may be due in part or whole to contamination that occurred during sample handling and preparation.

B. Holding Times

Criteria

Samples (waters or soils) and extracts must be preserved at 4° centigrade. Specific holding times for each analysis and sample type are presented in Table 8-2 of the QAPP.

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Action

The following steps are performed for the validation of data due to holding times:

- Step 1 Establish the holding time by comparing the sampling date on the chain-of-custody form with the dates of analysis and/or extraction on Form I. The chain-of-custody form is also reviewed to determine if the samples were properly preserved.
- Step 2 If the holding times are exceeded by less than 24 hours, then no qualification of data is needed.
- Step 3 If the holding times are exceeded by more than 24 hours but less than 14 days, all detected results are qualified as estimated (J) and the non-detected compounds are qualified as estimated (UJ).
- Step 4 If the holding times are exceeded by more than twice the specified holding time, then all the results are qualified as unusable (R).

C. Percent Moisture Content

Criteria

Soil/sediment/solid sample results must be adjusted for percent solids, and must have percent solids greater than 30%.

Action

The following steps are performed by reviewing the sample result summary form during the validation of percent solids data:

Verify that the percent solids of soil/sediment/solid samples are greater than 30%.

- a. Soil/sediment/solid sample results with a percent solids of less than 10% are qualified as unusable (R).
- b. Detected and non-detected soil/sediment/solid sample results with percent solids within the range of greater than 10% to less than 30% are qualified as estimated (J) and unusable (R), respectively.

D. Window Defining Mix (WDM)

Criteria

The WDM must be analyzed at the following frequency:

- 1.0 Before an initial calibration on each instrument and GC column used for analysis.
- 1.1 Each time adjustments or instrument maintenance activities are performed that may affect retention times.
- 1.2 Any time retention times of either the ¹³C₁₂-1234-TCDD or ¹³C₁₂-123789-HxCDD recovery standards in any analysis vary by more than 10 seconds from its retention time in the most recent continuing calibration standard.

Action

The following steps are performed to review WDM for Tier II validation:

- Step 1 Review Form V PCDD-3, or laboratory equivalent, and verify the WDM was analyzed at the correct frequency.
- Step 2 If the WDM was not analyzed at the mandated frequency, yet the calibration standards meet the specifications, the data are not qualified. If the initial and continuing calibration meet the specified criteria, it is assumed that this deviation has not affected the data.

E. Chromatographic Resolution

Criteria

The resolution criteria must be evaluated using measurements made on the Selected Ion Current Profile (SICP) for the appropriate ions for each isomer.

- 1.0 For analyses on a DB-5 (or equivalent) GC column, the chromatographic resolution is evaluated by the analysis of the CC3 standard during both the initial and the continuing calibration procedures.
- 1.1 The isomers ${}^{13}C_{12}$ -2378-TCDD and ${}^{13}C_{12}$ -1234-TCDD chromatographic peak separation must be resolved with a valley less than or equal to 25%.
- 1.2 The isomers 123478-HxCDD and 123678-HxCDD chromatographic peak separation must be resolved with a valley less than or equal to 50%.
- 1.3 For analyses on an SP-2331 (or equivalent) GC column, the chromatographic resolution is evaluated before the analysis of any calibration standards by the analysis of a commercially available standard.
- 1.4 The isomers 1478-TCDD and 2378-TCDD chromatographic peak separation must be resolved with a valley less than or equal to 25%.
- 1.5 The isomers 2378-TCDD and (1237/1238)-TCDD chromatographic peak separation must be resolved with a valley less than or equal to 25%.

Action

The following steps are performed in evaluating chromatographic resolution for Tier II validation:

- Step 1 Review Form V PCDD-2, or laboratory equivalent, to verify that the percent valley criterion has been met.
- Step 2 If the resolution criteria for TCDD are not met, all positive results for Tetras, Pentas, and Hexas (both dioxin and furan) are qualified as estimated (J). No qualification is needed for non-detected results.
- Step 3 If the resolution criteria for HxCDD are not met, all positive results for Hexas (both dioxin and furan) are qualified as estimated (J). No qualification is needed for non-detected results.

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F. GC/MS Initial Calibration

Criteria

- 1.0 Before any sample analysis is conducted, a five-point calibration must be performed.
- 1.1 All PCDD/PCDF peaks, including the labeled internal and recovery standards, in all solutions must meet the +/- 15% theoretical abundance ratio criteria, listed on Form VI PCDD-2, or laboratory equivalent.
- 1.2 The percent Relative Standard deviation (%RSD) calculated from the five Relative Response Factors (RRFs) for the unlabeled and labeled PCDDs/PCDFs must not be greater than 15%.

Action

The following steps are performed in evaluating the initial calibration for Tier II validation:

- Step 1 Review Form VI PCDD-1 and Form VI PCDD-2, or laboratory equivalents, to verify that the initial calibration criteria mentioned above has been satisfied.
- Step 2 If there was no five-point calibration preceding sample analysis, then all the results are rejected (R)
- Step 3 Review Form VI PCDD-2, or laboratory equivalent, to determine if any labeled or unlabeled isomer is outside the ion abundance ratio, theoretical window.
 - a. If the ion ratio falls between 16 and 20%, all non-detected results associated with that initial calibration are qualified as estimated (UJ).
 - b. If the ion ratio is greater than +/- 20%, all non-detected results associated with that initial calibration are qualified as unusable (R).
- Step 4 Review Form VI PCDD-1, or laboratory equivalent, to determine if the %RSD criterion has not been met:
 - a. If the %RSD is greater than 20%, but less than 30%, detected and non-detected sample results are qualified as estimated (J) and (UJ), respectively.
 - b. If the %RSD is greater than 30%, detected and non-detected results are rejected (R).

G. GC/MS Continuing Calibration

Criteria

- 1.0 The continuing calibration standard should be analyzed at the beginning of each 12-hour period.
- 1.1 All PCDD/PCDF peaks, including the labeled internal and recovery standards, in all solutions must meet the +/- 15% theoretical abundance ratio criteria, listed on Form VII PCDD-1, or laboratory equivalent.

1.2 The measured RRF of each analyte and internal standard in the continuing calibration standard must be within +/- 30% of the mean RRF from the initial calibration.

Action

The following steps are performed in evaluating the initial calibration for Tier II validation:

- Step 1 Review Form VII PCDD-1 and Form VII PCDD-2, or laboratory equivalents, to verify that the continuing calibration criteria mentioned above has been satisfied.
- Step 2 Verify that continuing calibrations were analyzed at the required frequency by reviewing Form V PCDD-3, or laboratory equivalent.
- Step 3 If any analyte(s) failed the ion abundance ratio for the continuing calibration standard, all non-detected results are qualified as rejected (R) and all detected results are qualified as estimated (J).
- Step 4 Review Form VII PCDD-1, or laboratory equivalent, to determine if the percent difference (%D) criterion has not been met.
 - a. If the %D is between 30 and 50%, detected and non-detected sample results are qualified as estimated (J) and (UJ), respectively.
 - b. If the %D is greater than 50%, all detected and non-detected results are qualified as rejected (R).

H. Method Blank Analysis

Criteria

- 1.0 No contaminants should be present in the blank(s).
- 1.1 A method blank must be analyzed for each GC/MS system used to analyze that specific group or set of samples.
- 1.2 Internal standard recovery must be between 25 to 150%.

Action

The following steps are performed in evaluating the method blank analysis for Tier II validation:

- Step 1 Review Forms I and IV PCDD or laboratory equivalent and verify that blanks were analyzed at the appropriate frequency described above and that the blanks were free of contamination.
- Step 2 If a target compound is found in the blank, but not in the sample, no qualification of the data is performed.
- Step 3 Any compound that is detected in the sample (except OCDD and OCDF) and in the related method blank, is qualified with a "B" if the sample concentration is less than the five times the blank concentration. OCDD and OCDF are qualified with a "B" when the sample result is less than 10 times the blank concentration.

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- Step 4 When the blank analysis involves internal standard recoveries out of control, the related sample data are reviewed and qualified in the following manner:
 - a. If the sample data do not contain any internal standards out of control, then the data are not qualified.
 - b. If the sample data contain internal standards out of control, then all detected and non-detected sample results for compounds quantitated using that internal standard are qualified as estimated (J) and (UJ), respectively.

I. Matrix Spike Analysis

Criteria

- 1.0 For each SDG, the laboratory must prepare a spiked sample for each matrix and concentration level that occur in the SDG.
- 1.1 The recovery of each spiked analyte must be between 50-150%.

Action

The following steps are performed in evaluating the matrix spike analysis for Tier II validation:

- Step 1 Review the extraction log and Form V PCDD-3, or laboratory equivalent, verify that matrix spike analysis was analyzed at the appropriate frequency described above. If the frequency was not in compliance, the laboratory will be contacted for a written explanation.
- Step 2 Evaluate Form III PCDD-1, or laboratory equivalent, if the recovery results are not within the control limits, the following steps are taken to qualify the data:
 - a. If the recovery results are greater than the upper control limit, the detected results for that class of compounds in the unspiked sample are qualified as estimated (J).
 - b. If the recovery results are below the lower control limit presented in Table 5, the detected results for this compound are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the notes field of the data validation summary table.
 - c. If the recovery is less than 25%, but greater than 10%, the non-detects for that class of compound in the unspiked sample are qualified as estimated (UJ)
 - d. If the recovery result is less than 10%, the non-detects for that class of compound in the unspiked sample are qualified as rejected (R).

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J. Duplicate Analysis

Criteria

- 1.0 For each SDG, the laboratory must prepare a duplicate sample for each matrix in the SDG.
- 1.1 The RPD of any detected analyte must be less than or equal to 50%.

<u>Action</u>

The following steps are performed in evaluating the duplicate analysis for Tier II validation:

- Step 1 Review the extraction log and Form V PCDD-3, or laboratory equivalent, verify that duplicate analyses were extracted and analyzed at the appropriate frequency as described above. If the frequency was not in compliance, the laboratory will be contacted for a written explanation.
- Step 2 Evaluate Form IV PCDD-1, or laboratory equivalent, if RPD results are greater than 50%. Qualify all positive sample results for that compound in the SDG as estimated (J).
- K. Internal Standard (IS) and Cleanup Standard Recoveries

Criteria

The percent recovery of any IS in the original sample, prior to any dilutions, must be within 25 to 150%. When the percent recovery is not within these control limits, re-extraction and re-analysis of the affected sample is required.

Action

The following steps are performed in evaluating the IS and cleanup standard recoveries analysis for Tier II validation:

- Step 1 Review the extraction log and Form I, or laboratory equivalent, verify that the IS recoveries are within the control limits of 25 to 150%.
- Step 2 If internal standard and/or cleanup standard recoveries are outside the control limits and reanalysis was not completed, the laboratory will be contacted for a written explanation.
- Step 3 If an IS recovery is greater than 150%, then all detected results associated with that internal standard are qualified as estimated (J).
- Step 4 If an internal standard recovery is less than 25%, the detected sample results quantitated using that IS are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the notes field of the data validation summary table.

- Step 5 If an internal standard recovery is less than 25%, non-detected sample results associated with that internal standard are qualified as estimated (UJ).
- Step 6 If an internal standard recovery is less than 10%, all non-detected sample results associated with that internal standard are qualified as unusable (R).

L. Sample Dilutions

Criteria

A dilution is required when the concentration of any PCDD/PCDF is greater than the calibration range.

Action

Review Form I PCDD-1, or laboratory equivalent, to determine if any of the sample results are greater than the calibration range, the sample results are qualified as estimated (J).

V. Tier III Validation Procedures

Tier III validation of a data package consists of the steps mentioned above for a Tier I and Tier II validation plus review of the "raw data" and recalculation of approximately 10% of the sample results. The Instrument Sensitivity, Initial and Continuing Calibration, Compound identification, Toxicity Equivalency Factor, Column Confirmation, Sample Dilution, Sample Reanalysis, Estimated Detection Limits, Estimated Maximum Possible Concentration, are also reviewed.

A. Instrument Sensitivity

Criteria

The CC1 solution analyzed at the end of the twelve-hour period must meet the following criteria:

- 1.0 The absolute retention time of the recovery standards, 13C12-1234-TCDD and 13C12-123678-HxCDD, must not change more than 10 seconds between the initial CC3 analysis and the analysis of the CC1 at the end of the sequence.
- 1.1 All the analytes in the CC1 solution must meet the ion abundance ratio criteria listed below:

Table BB-1

Analyte	Selected Ions	Theoretical Ion Abundance	Control Limits
TCDD	320/322	0.77	0.65 - 0.89
PeCDD	356/358	1.55	1.24 -1.86
HxCDD	390/392	1.24	1.05 - 1.43
HpCDD	424/426	1.04	0.88 - 1.20
OCDD	458/460	0.89	0.76 - 1.02
TCDF	304/306	0.77	0.65 - 0.89

Analyte	Selected Ions	Theoretical Ion Abundance	Control Limits
PeCDF	340/342	1.55	1.24 - 1.86
HxCDF	374/376	1.24	1.05 - 1.43
HpCDF	408/410	1.04	0.88 - 1.20
OCDF	442/444	0.89	0.76 - 1.02
Internal Standards			
¹³ C ₁₂ -1234-TCDD	332/334	0.77	0.65 - 0.89
₁₃ C ₁₂ -123678-HxCDD	402/404	1.24	1.05 - 1.43
¹³ C ₁₂ -OCDD	470/472	0.89	0.76 - 1.01
¹³ C ₁₂ -2378-TCDF	316/318	0.77	0.65 - 0.89
¹³ C ₁₂ -1234678-HpCDF	420/422	1.04	0.88 - 1.20
Recovery Standards			
¹³ C ₁₂ -1234-TCDD	332/334	0.77	0.65 - 0.89
¹³ C ₁₂ -123789-HxCDD	402/404	1.24	1.05 - 1.43

1.2 The CC1 solution signal to noise (S/N) ratio of the chromatogram shall be greater than 2.5 for the unlabeled PCDD/PCDF and greater than 10.0 for the labeled internal and recovery standards. The percent recovery of the internal standards should be within the control limits of 25 to 150%.

Action

The following steps are performed in evaluating the instrument sensitivity for Tier III validation:

- Step 1 Compare the retention time (RT) of the recovery standards from the chromatographs and quantitation reports of CC3 and CC1. If the RT changes more than +/- 10 seconds, samples analyzed since the last acceptable CC3 standard will be re-analyzed, if the sample has not been destroyed. If the sample has been destroyed, the sample results are qualified as rejected (R).
- Step 2 If the standard's ion abundance ratios are not within the control limits presented in Table BB-1, then all non-detected sample results since the last acceptable CC3 are qualified as rejected (R).
- Step 3 If the S/N is less than 2.5 for the two quantitation ions, then all non-detected sample results analyzed since the last acceptable CC1 are qualified as rejected (R).

B. GC/MS Initial Calibration

Criteria

1.0 All calibration solution retention times for each isomer must fall within the appropriate retention time windows established by the window defining mix. The absolute retention time of the recovery standards, ¹³C₁₂-1234-TCDD and ¹³C₁₂-123678-HxCDD, must not change more than 10 seconds between the initial CC3 analysis and the analysis of the CC1 at the end of the sequence.

1.1 All calibration solution S/N ratios must be greater than 2.5 for the unlabeled PCDD/PCDF ions, and greater than 10 for the internal standard and recovery standard ions.

Action

The following steps are completed when evaluating the initial calibration by reviewing the raw data for each standard for Tier III validation:

- Step 1 If the recovery standards drift more than +/-10 seconds from the initial CC3 analysis, all detected and non-detected sample results are qualified as rejected (R).
- Step 2 If the quantitation ions and the confirmation ion do not maximize within +/-2 seconds for the labeled and unlabeled standards, non-detected sample results are qualified as rejected (R).
- Step 3 For instrument sensitivity evaluation, follow the steps in Section IV.A.

C. GC/MS Continuing Calibration

Criteria

- 1.0 Retention times of each isomer must fall within the appropriate retention time windows established by the window defining mix. The absolute retention time of the recovery standards, $^{13}C_{12}$ -1234-TCDD and $^{13}C_{12}$ -123678-HxCDD, must not change by more than 10 seconds between the initial CC3 analysis and the analysis of the CC1 at the end of the sequence.
- 1.1 For the CC3 calibration solution the S/N ratio must be greater than 2.5 for the unlabeled PCDD/PCDF ions, and greater than 10 for the internal standard and recovery standard ions.
- 1.2 The percent recovery of the internal standards should be within 25 to 150%.

Action

The following steps are done in evaluating the continuing calibration by reviewing all the raw data of the CC3 standard for Tier III validation:

- Step 1 If the recovery standards drift by more than +/-10 seconds from the CC3 analysis, all detected and non-detected sample results are qualified as rejected (R).
- Step 2 If the quantitation ions and the confirmation ion do not maximize within +/-2 seconds for the labeled and unlabeled standards, non-detected sample results are qualified as rejected (R).
- Step 3 For instrument sensitivity evaluation, follow the steps in Section IV.A.
- Step 4 If the percent recovery of the internal standards are not within the control limits of 25 to 150%, all detected and non-detected sample results are qualified as estimated (J) and (UJ), respectively.

D. Identification Criteria

Criteria

- 1.0 The absolute Retention Times (RTs) of the recovery standards must not shift by more than +/- 10 seconds from their retention times in the continuing calibration standard.
- 1.1 The absolute RT at the maximum peak height of the 2378-substituted isomer must be within -1 to +3 seconds of the RT of the corresponding labeled internal or recovery standard.
- 1.2 The relative retention time (RRT) of the 2378-substituted isomer must be within 0.05 RRT units of the RRT established during the continuing calibration.
- 1.3 The retention time of non-2378-substituted compounds (tetra hepta), must be within the RT windows established by the window defining mix for the corresponding homologue, +/- 10 seconds.
- 1.4 The two quantitation ions and the confirmation ion for the analytes detected must maximize concurrently (+/- 2 seconds). This also is a requirement for the internal standards and recovery standards.
- 1.5. The sample peak areas for quantitation ions must meet the +/- 15% theoretical abundance ratio criteria listed in Table BB-1.
- 1.6 The integrated ion current for each analyte must be at least 2.5 times background noise and the detector must not be saturated. The internal standard ions must be at least 10 times the background noise and must not have saturated the detector. The percent recovery of the internal standards should be within 25 to 150%.

Action

The following steps are taken in evaluating the identification of the compounds by reviewing all the sample raw data for Tier III validation:

- Step 1 If the retention time criteria is not met and a detected result has been reported, then the result is lined out and a non-detected result will be recorded.
- Step 2 If the quantitation ions and confirmation ion do not maximize within +/- 2 seconds, then the result is lined out and a non-detected result will be recorded.
- Step 3 If the quantitation ions do not meet the signal-to-noise criteria, then the result is lined out and a non-detected result will be recorded.
- Step 4 If the ion abundance criteria are not met, but the abundances are within the \pm -15% to 25% ion ratio window, the sample results are qualified as estimated (J). Any sample result with an ion abundance greater than \pm -25% is qualified as rejected (R).

E. Toxicity Equivalency Factor (TEF) and Second Column Confirmation

Criteria

- 1.0 For each 2378-substituted isomer positively identified in the sample, the TEF from Form I PCDD-2 is multiplied by the concentration to give the TEF-adjusted concentration.
- 1.1 When the TEF is greater than 0.7 ppb in soil/sediment or 7 ppt in water, secondary column confirmation is required.

Action

The following steps are taken in evaluating the TEF and second Column Confirmation by reviewing Form I PCDD-2, Form II PCDD-3, or laboratory equivalent, and sample raw data for Tier III validation:

- Step 1 Review approximately 10% of the TEF calculations. If any discrepancies in the calculations are found, then the laboratory will be contacted and the sample results will be resubmitted.
- Step 2 Verify that secondary column confirmation has been performed when needed. If it has not been done, the laboratory will be contacted to conduct the secondary column confirmation if the sample has not been destroyed.

F. Sample Dilution

Criteria

- 1.0 When a sample is diluted, the sample results are quantified using the internal standard if the recovery is greater than or equal to 10%.
- 1.1 When a sample is diluted, the sample results are quantified using the recovery standards for target compounds associated with the internal standard, if the recovery is less than 10%.

Action

The following steps are taken in evaluating the sample dilution raw data for Tier III validation:

Step 1 - Review the diluted sample data. If the recovery of the internal standard is less than 10% but all the other internal standard criteria are met, then the sample results are recalculated using the internal standards.

G. Sample Re-analysis

Criteria

- 1.0 If any internal standard or the cleanup standard is outside the control limits of 25 to 150%, then reextraction and re-analysis are required.
- 1.1 In instances where the internal standards and cleanup standard are not present with at least a 10:1 S/N ratio at their respective m/z, then re-extraction and re-analysis are required.

1.2 Samples with positive results that are associated with a contaminated method blank and any samples that contain peaks that do not meet all qualitative identification criteria related to the method blank should be re-extracted and re-analyzed.

Action

The following steps are taken in evaluating the sample re-analysis raw data for Tier III validation:

- Step 1 If sample re-analysis is required by the criteria above, the original sample analysis and re-analysis will be compared and the best analysis will be reported.
- H. Estimated Detection Limit (EDL) and Estimated Maximum Possible Concentration (EMPC)

Criteria

For each non-detected sample result, an EDL is calculated. The EMPC is a value applied to a sample when the S/N ratio is at least 2.5 for both quantitation ions, but ion abundance criteria are not met. Approximately 10% of these sample results will be recalculated.

Action

If the EDL and EMPC are calculated incorrectly, the laboratory will be contacted and the laboratory will be responsible for resubmission of the reported sample results.

Attachment D-1
Laboratory Reporting Forms for
Polychlorinated Dibenzo-p-Dioxins (PCDDs)/
Polychlorinated Dibenzofurans (PCDFs)

1DFA PCDD/PCDF SAMPLE DATA SUMMARY

Injection Volume: ___ (uL) % Solids: ___ Date Analyzed: ____

GC Column: _____ ID: ____(mm) Dilution Factor: _____

INTERNAL

STANDARD

13C-OCDD

13C-2378-TCDF

13C-2378-TCDD

37C1-2378-TCDD

13C-123678-HxCDD

13C-1234678-HpCDF

PCDD	1DFA /PCDF SAMPLE DATA SUMMARY	EPA SAMPLE NO.
Lab Name:	Contract	:
Lab Code:	Case No.: SAS No.	: SDG No.:
Matrix: (Soil/	Water/Waste/Ash)	Lab Sample ID:
Sample wt/vol:	(g/mL)	Lab File ID:
Water Sample Prep.:	(Sepf/Cont)	Date Received:
Concentrated Extract	Volume:(uL)	Date Extracted:

	CO	NCENTR	ATION UN	ITS: (ng/L or	ug/Kg)	
ANALYTE	SELECTED IONS	PEAK RT	ION RATIO #	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322					
2378-TCDF	304/306				<u>.</u>	
12378-PeCDF	340/342					
12378-PeCDD	356/358					
23478-PeCDF	340/342					
123478-HxCDF	374/376		<u> </u>			
123678-HxCDF	374/376					
123478-HxCDD	390/392					
123678-HxCDD	390/392					
123789-HxCDD	390/392					
234678-HxCDF	374/376			<u></u>		
123789-HxCDF	374/376					
1234678-HpCDF	408/410					
1234678-HpCDD	424/426					
1234789-HpCDF	408/410					
OCDD	458/460					
OCDF	442/444					
						· · · · · · · · · · · · · · · · · · ·

NOTE: Concentrations, EMPCs, and EDLs are calculated on a wet weight basis.

ION

NA

RATIO # LIMITS

ION RATIO

0.65-0.89

0.65-0.89

1.05-1.43

0.88 - 1.20

0.76-1.01

NA

ક

RECOVERY

25-150

25-150

25-150

25-150

25-150

25-150

REC # LIMITS

SELECTED

IONS

316/318

332/334

402/404

420/422

470/472

328/NA

FORM T PCDD-1

PEAK

RT

10/00

[#] Column to be used to flag values outside QC limits

1DFB PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA	SAMPLE	NO.

Lab Name):		Contract:			
Lab Code	: Ca	ase No.:	SAS No.:	SDG	No.:	
Matrix:	(Soil/V	later/Waste/Ash) Lab	Sample ID:		
		(g/mL)				_
Water Sa	mple Prep.:	(Sepf/Cor	ıt) Date	e Received:		_
		olume: (uI				
		(uL) % Solids:				
		ID:(m				
			'ION UNITS: (n			
	ANALYTE	CONCENTRA	TION TEF	TEF-1	ADJUSTED NTRATION	
	2378-TCDD 2378-TCDF 12378-PeCDF 12378-PeCDD 23478-PeCDF 123478-HxCDF 123478-HxCDD 123678-HxCDD 123678-HxCDD 123789-HxCDD 123789-HxCDF 123789-HxCDF 1234678-HpCDF 1234678-HpCDF 1234678-HpCDF 1234789-HpCDF 0CDD 0CDF		x 1.0 x 0.1 x 0.05 x 0.5 x 0.5 x 0.1 x 0.1 x 0.1 x 0.1 x 0.1 x 0.1 x 0.1 x 0.01 x 0.01 x 0.01 x 0.001 x 0.001 x 0.001			

NOTE: Do not include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

•					• •	
PCDD/PCDF	1DFC SECOND COLUMN	CONFIRMAT	ION SUMMARY	EPA	SAMPLE NO.	
Lab Name:		Contra	act:		,	
Lab Code:	Case No.:	SAS N	lo.:	SDG No.:		
Matrix: (Soi	il/Water/Waste/	\sh)	Lab Sampl	e ID:	,	
Sample wt/vol:	(g/mL)		Lab File	ID:		
Nater Sample Prep.:	(Sepf	(Cont)	Date Rece	ived:		
Concentrated Extrac						
njection Volume: _	(uL) % Soli	.ds:	Date Anal	yzed:		
C Column:	ID:	_(mm)	Dilution :	Factor:		
•	CONCENT	RATION UN	ITS: (ng/L o	r ug/Kg)		
ANALYTE	SELECTED PEAK IONS RT	ION RATIO #	CONCENTRATIO	ои д	EMPC/EDL	
2378-TCDD	320/322					•••
2378-TCDF	304/306					-
12378-PeCDF	340/342	_				•

320/322			•		
					· - · · · · · · · · · · · · · · · · · ·
		·			
					
					
	ļ	·			
	ļ	I			
					
776/444	 				
	320/322 304/306 340/342 356/358 340/342 374/376 374/376 390/392 390/392 390/392 374/376 408/410 424/426 408/410 458/460 442/444	304/306 340/342 356/358 340/342 374/376 374/376 390/392 390/392 390/392 390/392 374/376 408/410 424/426 408/410 458/460	304/306 340/342 356/358 340/342 374/376 374/376 390/392 390/392 390/392 374/376 408/410 424/426 408/410 458/460	304/306 340/342 356/358 340/342 374/376 374/376 390/392 390/392 390/392 374/376 408/410 424/426 408/410 458/460	304/306 340/342 356/358 340/342 374/376 374/376 390/392 390/392 390/392 374/376 408/410 424/426 408/410 458/460

NOTE: Concentrations, EMPCs, and EDLs are calculated on a wet weight basis.

INTERNAL STANDARD	SELECTED	PEAK RT	ION RATIO #	ION RATIO	% REC #	RECOVERY LIMITS
13C-2378-TCDF 13C-2378-TCDD 13C-123678-HxCDD 13C-1234678-HpCDF 13C-OCDD 37C1-2378-TCDD	316/318 332/334 402/404 420/422 470/472 328/NA		NA NA	0.65-0.89 0.65-0.89 1.05-1.43 0.88-1.20 0.76-1.01 NA		25-150 25-150 25-150 25-150 25-150 25-150

f Column to be used to flag values outside QC limits

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

PCDD/PCDF TOTAL ROMODOGUE CONCE	MIRATION SOFTART
Lab Name:	Contract:
Lab Code: Case No.:	SAS No.: SDG No.:
Matrix: (Soil/Water/Waste/Ash)	Lab Sample ID:
Sample wt/vol:(g/mL)	Lab File ID:
Water Sample Prep.: (Sepf/Con	t) Date Received:
Concentrated Extract Volume: (uL) Date Extracted:
Injection Volume: (uL) % Solids:	Date Analyzed:
GC Column: ID:(m	· ,
CONCENTRAT	ION UNITS: (ng/L or ug/Kg)

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD_				
Total PeCDD				
Total HxCDD_				
Total HpCDD	-	-		
FURANS				
Total TCDF				
Total PeCDF_				
Total HxCDF		-		
Total HpCDF				-
	l			

NOTE: Concentrations, EMPCs, and EDLs are calculated on a wet weight basis. The total congener concentrations do not affect the TEF calculations.

EPA SAMPLE NO.

3DFA PCDD/PCDF SPIKED SAMPLE SUMMARY

			* • •	
Lab	Name:		Contract:	
Lab	Code:	Case No.:	SAS No.:	SDG No.:
Mat	rix: (Soil	l/Water/Waste/As	sh)	
		CONCENTI	RATION UNITS: (ng/L	or ug/Kg)
	ANALYTE	ADDED SAM	KED PLE SAMPLE TRATION CONCENTRATION	
•	2378-TCDD 2378-TCDF 12378-PeCDF 12378-PeCDD 123678-HxCDF 123678-HxCDD 1234678-HpCDF 1234678-HpCDD OCDD			50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150

EPA SAMPLE NO.

50-150

If an analyte is not detected in the unspiked sample, enter 0 (zero) as the "SAMPLE CONCENTRATION."

[#] Column to be used to flag values outside QC limits.

QC limits are advisory.

GODD/PCDF DUPLICATE SAMPLE SUMMARY

		,			
Lab	Name:		Contract:		
Lab	Code:	Case No.:	SAS No.:	_ SDG	No.:
Mati	rix: _	(Soil/Water/Waste/A	sh)		· · · · · · · · · · · · · · · · · · ·

SAMPLE DUPLICATE QC

CONCENTRATION UNITS: (ng/L or ug/Kg)

ANALYTE	CONCENTRATION CONCENTRATION	RPD #	LIMITS
2378-TCDD 2378-TCDF 12378-PeCDF 12378-PeCDF 123478-PeCDF 123478-HxCDF 123478-HxCDF 123478-HxCDD 123678-HxCDD 123789-HxCDD 234678-HxCDD 123789-HxCDF	CONCENTRATION CONCENTRATION	RPD #	50 50 50 50 50 50 50 50 50 50
1234678-HpCDF 1234678-HpCDD 1234789-HpCDF OCDD OCDF			50 50 50 50 50

If an analyte is not detected in either analysis, enter 0 (zero) as the concentration.

Column to be used to flag values outside QC limits.

QC limits are advisory

EPA SAMPLE NO.

PCDD/PCDF METHOD BLANK SUMMARY

EPA	SAMPLE	No.

Lab Name:		Contract:	
Lab Code:	Case No.:	SAS No.:	SDG No.:
Matrix: (Soil	L/Water/Waste/Ash)	Lab Sample	ID:
Sample wt/vol:	(g/mL)	Lab File	ID:
Water Sample Prep.:	(Sepf/Cont) Date Extr	acted:
		Date Anal	yzed:
·			

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, SPIKES, AND DUPLICATES:

EPA	LAB	LAB	DATE
SAMPLE NO.	SAMPLE ID	L'ILE ID	ANALYZED
		=	= =========
	·		
		-	
		- <u></u>	·
		-	
		-	
-			
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		·	
-			
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-			
	· · · · · · · · · · · · · · · · · · ·		

5DFA PCDD/PCDF WINDOW DEFINING MIX SUMMARY

TCDD_

TCDF_

PeCDD_

PeCDF_

HxCDD_

HXCDF

HpCDD_

HpCDF_

Lab Name:		Contract:		
Lab Code:	Case No.:	SAS No.:	SDG	No.:
GC Column:	ID:	(mm)	Lab File ID:	
Instrument ID:	····		Date Analyzed:	
	•	•	Time Analyzed:	
		T RT RST LAST TING ELUTING		

EPA SAMPLE NO.

5DFB PCDD/PCDF CHROMATOGRAPHIC RESOLUTION SUMMARY

Lab Name:	Con	tract:	
Lab Code: Case	No.: SA	s No.: sdc	No.:
GC Column:	ID:(mm)	Lab File ID:	
Instrument ID:	-	Date Analyzed	1:
•		Time Analyzed	
Percent Valley determinat For the CC3 standard begi 13C-2378-TCDD/13C-1234-TC	nning the 12-ho		ın –
123478-HxCDD/123678-HxCDD	•		
QC LIMITS:			
Percent Valley between th	e TCDD isomers 1	nust be less than o	r equal to 25%
Percent Valley between th	e HxCDD isomers	must be less than	or equal to 50%
Percent Valley Determinat For the Column Performanc	ion for SP-2331 e Solution begin	(or equivalent) Co uning the 12-hour p	lumn - eriod:
L478-TCDD/2378-TCDD:	-		
2378-TCDD/(1237/1238)-TCD	D:		

QC LIMITS:

Percent Valley between the TCDD isomers must be less than or equal to 25%.

EPA SAMPLE NO.

5DFC PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name:	4	Contract:		
ab Code:	Case No.: _	SAS No.:	S	OG No.:
C Column:	ID:	(mm)	Instrument	ID:
nit. Calib. Date(s):			
nit. Calib. Times	•			
THE ANALYTICAL S	EQUENCE OF ST DUPLICATES	ANDARDS, SAMPLES IS AS FOLLOWS:	s, BLANKS, S	SPIKES, AND
EPA	LAB	LAB	DATE	TIME-

EPA	LAB	LAB	DATE	TIME-
SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED	ANALYZED
		=======================================		
	•			
		-		
				· · · · · · · · · · · · · · · · · · ·
		·		<u> </u>
	-			
		.	<u> </u>	

PCDD/PCDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY

Lab Name:		Contract:		•
Lab Code:	Case No.:	SAS No.:	_ SDG No.:	
GC Column:	(mm) Instru	ment ID:	
Init. Calib. Date(s)):			
Init. Calib. Times:				

NATIVE ANALYTES		WEAV					
VS. INTERNAL STDS.	CC1	CC2	CC3	CC4	CC5	MEAN RRF	*RSD
2378-TCDD				=====		======	
2378-TCDF							l
12378-PeCDF							
12378-PeCDD							
23478-PeCDF							
123478-HxCDF	ĺ	ļ		•			
123678-HxCDF	1						
123478-HxCDD							
123678-HxCDD	ł	1					
123789-HxCDD							
234678-HxCDF	1	ł					
123789-HxCDF	- [į.					
1234678-HpCDF_	1	••]			
1234678-HpCDD							
1234789-HpCDF							
OCDD		ŀ		ı			
OCDF			-				
		-					
NTERNAL STANDARDS	İ	I	İ		i		
S. RECOVERY STDS.				1		i	
13C-2378-TCDD	· .		į	1		i	
13C-2378-TCDF				·			
13C-123678-HxCDD				 -			
13C-1234678-HpCDF				 -			
T3C-OCDD				 -	 [.	
37C1-2378-TCDD							
	1	· -		1	1.		

A single point calibration is performed for seven of the native analytes and the cleanup standard. Therefore, no %RSD is reported for these compounds.

QC Limits: %RSD must be less than or equal to 15.0%.

6DFB PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

Lab Name:			Contract:	
Lab Code:	Case	No.:	SAS No.:	SDG No.:
GC Column:		ID:	(mm)	Instrument ID:
Init. Calib.	Date(s):			
Init. Calib.	Times:		·	

	SELECTED		ION ABI	JNDANC.	E RATI)		00
NATIVE ANALYTES	IONS	CC1	CC2	CC3	CC4	CC5	FLAG	QC LIMITS
2378-TCDD	320/322		=====			====	====	0.65-0.89
2378-TCDF	304/306						<u> </u>	0.65-0.89
12378-PeCDF	340/342							1.24-1.86
12378-PeCDD	356/358							1.24-1.86
23478-PeCDF	340/342							
123478-HxCDF	374/376							1.24-1.86
123678-HxCDF	374/376							1.05-1.43
123478-HXCDD .	390/392							1.05-1.43
123678-HxCDD	390/392							1.05-1.43
123789-HxCDD	390/392							1.05-1.43
234678-HxCDF	374/376				· .	i		1.05-1.43
123789-HxCDF	374/376	1	į		•			1.05-1.43
1234678-HpCDF	408/410		1					1.05-1.43
1234678-HpCDD	424/426							0.88-1.20
1234789-HpCDF	408/410							0.88-1.20
OCDD	458/460					- 1		0.88-1.20
OCDF	442/444					<u>_</u>		0.76-1.02
	116/111							0.76-1.02
NTERNAL STANDARDS]		ľ	İ	l		
13C-2378-TCDD	332/334			l	1		1	0 65 0 00
13C-2378-TCDF	316/318							0.65-0.89
13C-123678-HxCDD	402/404							0.65-0.89
13C-1234678-HpCDF	420/422							1.05-1.43
13C-OCDD	470/472		·					0.88-1.20
	, 4.2		-					0.76-1.02
ECOVERY STANDARDS				1	i		.	
13C-1234-TCDD	332/334		-	l	1	1		
13C-123789-HxCDD	402/404				.			0.65-0.89
	.02/704		i.					1.05-1.43

QC limits represent ± 15% window around the theoretical ion abundance ratio.

A single point calibration is performed for seven of the native analytes and the cleanup standard.

The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the fl column.

7DFA PCDD/PCDF CONTINUING CALIBRATION SUMMARY

Lab Name:		Contra	ict:	
Lab Code:	Case No.: _	SAS N	o.: SDG No	.:
GC Column:	ID:	(mm)	Instrument ID:	
Date Analyzed:			Time Analyzed:	
Lab File ID:	ı	nit. Calib.	Date(s):	

	SELECTED		MEAN		RRF	ION	ION	QC
NATIVE ANALYTES	IONS	RRF	RRF	₽ D		RATIO		
2378-TCDD	320/322	======	=====	= ====	= ====		====	=======
2378-TCDF	304/306		I———	-	-			0.65-0.89
12378-PeCDF	340/342			-	-		 	0.65-0.89
12378-PeCDD	356/358		I	-	-			1.24-1.86
23478-PeCDF	340/342			-	-			1.24-1.86
123478-HxCDF	374/376			-				1.24-1.86
123678-HxCDF	374/376		l	-				1.05-1.43
123478-HxCDD	390/392		<u> </u>	-	·			1.05-1.43
123678-HxCDD .	390/392			-	-			1.05-1.43
123789-HxCDD	390/392		ļ	-	-			1.05-1.43
234678-HxCDF	374/376			-	.			1.05-1.43
123789-HxCDF	374/376			-	.			1.05-1.43
1234678-HpCDF	408/410			-	.			1.05-1.43
1234678-HpCDD	424/426			-	.			0.88-1.20
1234789-HpCDF	408/410			-	.			0.88-1.20
OCDD	458/460							0.88-1.20
OCDF	442/444							0.76-1.02
	172/774			-				0.76-1.02
INTERNAL STANDARDS				ł	1 1		- 1	
S. RECOVERY STDS.					1 1		1	
13C-2378-TCDD	332/334			1			j	
13C-2378-TCDF	316/318							0.65-0.89
13C-123678-HxCDD	402/404			.	ll.			0.65-0.89
13C-1234678-HpCDF	420/422			.				1.05-1.43
13C-OCDD					.			0.88-1.20
	470/472				ll			0.76-1.02
37C1-2378-TCDD	328/NA					NA		
:						WA.	NA	NA
ECOVERY STANDARDS						1	j	
13C-1234-TCDD	332/334	NA	NA	NA	NA	l		
13C-123789-HxCDD	402/404	NA	NA	NA	NA -	.		0.65-0.89
			4162	11.2	MA -			1.05-1.43
				I			1	-1

QC limits shown are for ion abundance ratios. Maximum %D for RRF is \pm 30.0% The laboratory must flag any analyte which does not meet criteria for %D or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB PCDD/PCDF CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name:		_ Contract:		
Lab Code:	Case No.:	SAS No.:	SDG No	.:
GC Column:	ID:	_ (mm)	Instrument ID:	
Date Analyzed:			Time Analyzed:	
Lab File ID:	Init	. Calib. Dat	:e(s):	

NATIVE ANALYTES	RRT	RT
2378-TCDD		
2378-TCDF		
12378-PeCDF		
12378-PeCDD		
23478-PeCDF		
123478-HxCDF		
123678-HxCDF		
123478-HxCDD		
123678-HxCDD		
123789-HxCDD		
234678-HxCDF		
123789-HxCDF		
1234678-HpCDF		
1234678-HpCDD		
1234789-HpCDF		
OCDD		
OCDF		
INTERNAL STANDARDS		
VS. RECOVERY STDS.		
13C-2378-TCDD	NA	
13C-2378-TCDF	NA	
13C-123678-HxCDD	NA	
13C-1234678-HpCDF	NA	
13C-OCDD	NA	
37C1-2378-TCDD		
RECOVERY STANDARDS		
13C-1234-TCDD	NA	l
13C-123789-HxCDD_	NA	

RRT = (RT of analyte)/(RT of appropriate internal standard)

Attachment D-2 Analytical Data Validation Summary

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GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

ANALYTICAL DATA VALIDATION SUMMARY (Results are presented in parts per million, ppm)

Sample Delivery				·						:	
Group No.	Sample 1D	Date Collected	Marida	Validation Level	١		1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4				
PCB ₁		1 Date Contested	1 CANTELLY	A SIGNION LEVEL	Qualification	Compound	QA/QC Parameter	Value	Control Limite	Qualified Result	Notes
7700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil							T Commenter Median	110(8)
700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No				7		T
7700001	EXAMPLE-SS-2 (0 - 0.5)	1/1/97	Soil	Tier II	No				 		
700001	EXAMPLE-SS-2 (0.5 - 1)	1/1/97	Soil	Tier II	No						
700001	EXAMPLE-SS-3 (0 - 0.5)	1/1/97	Soil	Tier II	No						
700001	EXAMPLE-SS-3 (0.5 - 1)	1/1/97	Soil	Tier II	No						
700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier II	No					<u>-</u>	
700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No					· · · · · · · · · · · · · · · · · · ·	
700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97		Tier I	No						
700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier I	No			<u> </u>			
700002	EXAMPLE-SS-DUP-1	1/1/97	Soil Soil	Tier I	No					<u> </u>	
letals		1/1/3/	2011	Tier I	No	1					Duplicate of EXAMPLE-SS-5 (0 5 - 1)
700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II		-			***************************************	<u> </u>	Institution of EXAMILE -22-2 (0.2 - 1)
	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	Yes	Copper	Matrix Spike %R	54.0%	75% to 125%	ND(5 62) J	
OC:		1/1/3/	2011	1 tet 13	Yes	Copper	Matrix Spike 14R	54.0%	75% to 125%	ND(5 62) J	
	EXAMPLE-SS-1 (0 - 0.5)	1/1/97							12.000 12.00	111/(3/02)3	
801047	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil Soil	Tier II	No						<u> </u>
VOC:		1/1/9/	2011	Tier II	No						
700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97						نجــــــــــــــــــــــــــــــــــــ			
	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II		2,6-Dinitrophenol	CCAL %D	59.0%	<25%	ND(3 6) J	
		1 """ 1	Soil	Tier II	Yes	2,6-Dinitrophenol	CCAL %D	85.3%	<25%	ND(3 6) J	
CDDs/PCDFs		<u> </u>				Pentachrolophenol	CCAL %D	52.3%	<25%	ND(3.6) J	
700001	EXAMPLE-SS-1 (0 - 0 5)	1/1/97	A 11							(17(3.0))	
		1 1/1/9/	Soil	Tier II		1,2,3,4,7,8-HxCDF	Internal Standard %R	188 0%	25% to 150%	0.00013 J	
i		1 1	- 1			1,2,3,6,7,8-11xCDF	Internal Standard %R	186.7%	25% to 150%	0.00013 J	
[[Total TCDF	Result exceeded calibration range	1.00.776	25761013076	0 00058 J	
00001	EXAMPLE-SS-1 (0 5 - 1)	1/1/97				Total HxCDF	Result exceeded calibration range	1			
ľ		"""	Soil	Tier II		1,2,3,4,6,7,8-HpCDD	Internal Standard %R	221.1%	25% to 150%	0 0021 J	
ł		1	- 1	ł		OCDD .	Internal Standard %R	235.2%	25% to 150%	0 000020 J	
ı		i i	ı	l			Internal Standard %R	422 3%	25% to 150%	0 00022 J	
				l l		1,2,3,6,7,8-HxCDF	Internal Standard %R	365.2%	25% to 150%	0 0000038 J	
1	•	1	- 1	ŀ		2,3,4,6,7,8-HxCDF	Internal Standard %R	332.0%	25% to 150%	0 0000020 J	
anide		L				1,2,3,4,6,7,8-HpCDF	Internal Standard %R	222.6%	25% to 150%	0.0000041.J	
	EXAMPLE-SS-1 (0 - 0.5)	11100						222.0%	23% 10 130%	0 000011 J	
	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No						
lfide	COUNT CE-33-1 (0.3 - 1)	1/1/97	Soil	Tier II	No			 			
	EVAMPLE OF LOOP								<u>l</u>		
	XAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No						
J107/	XAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No						

Validation Annex E

Data Validation Procedures for Conventional Parameters Analytes

Validation Annex E

Data Validation Procedures for Conventional Parameters Analytes

I. Introduction

This standard operating procedure (SOP) describes the data validation procedures for a USEPA Region I tiered review of data for conventional parameters (as defined in Section 4.2.2 of the FSP/QAPP) analyzed by Standard Methods for the Examination of Water and Wastewater and EPA Methods 100, 300, and 400 series. Data review procedures presented in this SOP were developed from the applicable quality control criteria specified in the following documents:

- Region I Tiered Organic and Inorganic Data Validation Guidelines, USEPA Region I, July 1, 1993.
- Region I Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses, USEPA Region I, June 13, 1988 (Modified February 1989).
- Standard Methods for the Examination of Water and Wastewater, 18th ed.
- USEPA Contract Laboratory Program, Statement of Work for the Inorganics Analysis, Revision OLM0.1.9, July 1993
- Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, 3rd Edition, USEPA, September 1986 and subsequent revisions.
- Methods for Chemical Analysis of Water and Wastes, USEPA, EPA 600/4-79-020, March 1979 and subsequent revisions.

II. USEPA Region I Tiered Validation Procedures

All analytical data on conventional parameters will be validated to a Tier I level following the procedures presented in the Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses (July 1996, revised December 1996) and the Region I Tiered Organic and Inorganic Data Validation Guidelines (USEPA guidelines). The basic Tier I review consists of a completeness evidence audit to ensure that all laboratory data and documentation are present. Additionally, for projects subject to this FSP/QAPP, the Tier I review will be modified and expanded to include a number of elements of Tier II review, including review of each sample delivery group (SDG) to identify data deficiencies that may potentially result in qualification of the data (e.g., systematic deviations such as low calibration response factors.) Based on this modified Tier I review, a subset of the data will be identified for additional Tier II review. If QA/QC deviations are identified during the modified Tier I review, those deviations will be addressed in the Tier II review. Otherwise, a minimum of 25% of the data will be chosen at random to be subjected to a Tier II review, which will consist of the Tier I completeness evidence audit and review of all data package summary forms for identification of QA/QC parameter deviations. The Tier II data review will be used to identify and evaluate systematic QA/QC deficiencies that may affect any or all of the sample data presented in a specific data package. The Tier II data validation also includes an evaluation of field duplicate relative percent difference (RPD) compliance. Additional Tier II review and Tier III (recalculation of sample results) review may also be performed for a larger portion of the data set, if required, to fully resolve data usability limitations identified during the modified Tier I data review and initial Tier II review for 25% of the data chosen at random.

The tiered data validation procedures consisting of modified Tier I review for all data, Tier II review of a minimum of 25% of the data, and additional Tier II and Tier III review, as required, will be used to evaluate compliance of each data set with the project-specific data quality objectives. The procedures presented in the following sections will be used to perform the Tier I, Tier II, and Tier III data validation reviews. Qualification of analytical data will also be performed, if required, as specified in the data validation protocols presented below.

III. Tier I Validation Procedures

Tier I validation of a data package consists of verifying that all raw data and forms are included and complete. In the event that data packages are determined to be incomplete, missing information will be requested from the laboratory. A data validation summary spreadsheet (in the form presented in Attachment E-1) will be prepared to document the data review. The following steps are taken to complete a Tier I validation:

- Step 1 Review the laboratory case narrative. During review of the case narrative, if there are any deviations that warrant a more extensive validation procedure, a Tier II review would be initiated to evaluate potential data use limitations.
- Step 2 Compare the chain-of-custody and the sample traffic reports. If there are any inconsistencies or if they are incomplete, then contact the laboratory for resolution.
- Step 3 Verify that all sample result summary forms are present and complete. If any of the forms are not in the data package, contact the laboratory for a resubmission.
- **Note**: If frequent or severe quality control deviations are present on the above-mentioned forms, a more extensive validation procedure may be warranted. Based on the reviewer's judgement, Tier II or Tier III review may be warranted to fully evaluate the usability of the data.
- Step 4 Verify that the following raw data is provided for each sample and any associated QA/QC samples in the data package. Contact the laboratory to obtain missing data (if required):
 - Case Narrative;
 - Chain-of-Custody Forms;
 - Traffic Reports;
 - QA Sample Summary Forms;
 - Laboratory Bench sheets;
 - Instrument Calibration Summary Forms;
 - Instrument Run Logs;
 - Sample Preparation Logs;
 - Instrument/Method Detection Limits:
 - Standards Preparation Logs; and
 - Supporting (raw) Data.
- Step 5 With a blue ink pen, record on the first page of the data package: the validation level, date, and reviewer's initials.

In addition to these steps, as discussed above, the Tier I review of data packages for projects subject to this FSP/QAPP will be expanded to include some elements of Tier II review, including review of the data packages to identify QA/QC deficiencies that may require qualification of the data.

VI. Tier II Validation Procedures

Tier II validation of a data package consists of the steps mentioned above for a Tier I review plus review of the data package for identification of QA/QC deviations. Tier II validation does not include review of the "raw data" or recalculation of sample results. The QC sample data presented on the data package summary forms will be compared against the control limits presented in Tables 4 and 5 of the FSP/QAPP to determine QC sample compliance. Sample qualification, if required, will be performed following USEPA Region I Guidelines, as discussed in the following sections.

A. Data Qualifiers

All data qualified due to QA/QC deviations will be clearly marked on a copy of the sample result summary forms with a blue ink pen. The laboratory qualification is lined out and the reviewer's qualification placed next to it. The date and the initials of the reviewer will also be placed on the sample result summary forms. Below is a list of qualifiers to be used.

- J The compound or analyte was positively identified, but the associated numerical value is an estimated concentration. This qualifier is used when the data evaluation procedure identifies a deficiency in the data generation process. This qualifier is also used when a compound or analyte is detected at estimated concentrations less than the practical quantitation limit (PQL). (When this qualifier is used in combination with the letter C -- i.e., JC -- that indicates that the sample result is an estimated concentration due to certain QC deficiencies and that a bias-corrected result is available, as discussed further below.)
- U The compound or analyte was analyzed for, but was not detected. The sample quantitation limit is presented and adjusted for dilution and (for solid samples only) percent moisture. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL) as presented in Attachment E-1.
- UJ The compound or analyte was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual level of quantitation. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL) J as presented in Attachment E-1.
- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purposes.

B. Holding Times

Criteria

The holding times presented in Table 1 of the FSP/QAPP for conventional parameter analyses must not be exceeded.

Action

The following steps are performed to review holding times for Tier II validation:

- Step 1 Establish the holding time by comparing the sampling date on the chain-of-custody with the dates of analysis and/or digestion on the sample result summary form. The chain-of-custody is also reviewed to determine if the samples were properly preserved.
- Step 2 If the holding times are exceeded by less than 24 hours, no qualification of data is needed.
- Step 3 If the holding times are exceeded by more than 24 hours, but less than 14 days, all positive results are flagged as estimated (J) and the non-detected compounds are flagged as estimated (UJ).
- Step 4 If the holding times are exceeded by more than twice the specified holding time, all results are flagged as unusable (R).

C. Percent Moisture Content

Criteria

Soil/sediment/solid sample results must be adjusted for percent solids, and must have percent solids greater than 30%.

Action

The following steps are performed by reviewing the sample result summary form during the validation of percent solids data:

Verify that the percent solids of soil/sediment/solid samples are greater than 30%.

- Soil/sediment/solid sample results with a percent solids of less than 10% are qualified as unusable (R).
- b. Detected and non-detected soil/sediment/solid sample results with percent solids within the range of greater than 10% to less than 30% are qualified as estimated (J) and unusable (R), respectively.

D. Method Detection Limit (MDL) Study

Criteria

- 1.0 The MDL for each analyte of interest must be established in accordance with the specified method and Code of Federal Regulations (40CFR Part 136, App. B). A minimum of seven replicates must be analyzed for each matrix of interest.
- 2.0 The percent relative standard deviation (%RSD) for the seven replicates of the analytes must be less than or equal to 25% and the mean percent recovery must be between 80 and 120%.

Action

- 1.1 If the mean percent recovery of any analyte is greater than 120% all associated detected sample results are qualified as estimated (J).
- 1.2 If the mean percent recovery of any analyte is less than 80% but greater than 10% all associated detected and non-detected sample results are qualified as estimated (J).

- 1.3 If the mean percent recovery of any analyte is less than 10%, all associated detected and non-detected sample results are qualified as estimated (J) and unusable (R), respectively.
- 1.4 If the %RSD of any analyte is greater than 25%, all associated detected results less than 3 times the PQL and non-detected sample results are qualified as estimated (J) and (UJ), respectively.

E. Calibration

Criteria

- 1.0 Instruments must be calibrated daily and each time the instrument is set up for analysis.
- 1.1 Initial Calibration
 - 1.1.1 A blank and at least three standards must be used in establishing the analytical curve.
 - 1.1.2 The correlation coefficient must be greater than or equal to 0.995.
- 1.2 Initial and Continuing Calibration Verification (ICV and CCV)
 - 1.2.1 A certified standard must be used for the initial Calibration Verification (ICV).
 - 1.2.2 All percent recoveries of the ICVs and CCVs for all analytes must be within 85 to 115% except for cyanide.
 - 1.2.3 A CCV must be analyzed every 10 samples.

Action

The following steps are performed to review instrument calibration for Tier II validation:

- Step 1 Verify that the instrument was calibrated daily and every time it was set up by reviewing the calibration result summary form or laboratory equivalent. Also, verify that the correct number of standards were used for the initial calibration for each analyte reported. If any of these tasks are not completed by the laboratory, the data are qualified as unusable (R).
- Step 2 Verify that the correlation coefficient is greater than or equal to 0.995. If this criterion is not meet, all detected and non-detected results are qualified as estimated (J) and (UJ), respectively.
- Step 3 Review the calibration result summary form or laboratory equivalent for the identification of the source of the ICV and CCV. If they are not from different sources, all detected and non-detected results are qualified as estimated (J) and (UJ), respectively.
- Step 4 ICV and CCV percent recovery calibration result summary form or laboratory equivalent are reviewed against the above mentioned criteria. If the ICV or CCV percent recovery are outside the acceptance criteria, the following steps are taken to qualify the data:
 - a. If the ICV or CCV percent recovery is not within control limits, but are within the range of 70 to 84% or 116 to 130% all detected results are qualified as estimated (J).

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- b. If the ICV or CCV percent recovery is not within control limits, but are within the ranges of 116 to 130% all non-detected results are not qualified.
- c. If the ICV or CCV percent recovery is not within control limits, but are within the ranges of 70 to 84%, all non-detected results are qualified as estimated (UJ).
- d. If the ICV or CCV percent recovery less than 70%, all non-detected results are qualified as unusable (R).
- Step 5 Laboratory bench sheets are reviewed to verify that the CCVs were analyzed in the required intervals. If they were not analyzed at the required intervals, all detected and non-detected results are qualified as estimated (J) and (UJ), respectively.

F. Blanks

Criteria

- 1.0 No contaminants should be present in the blank(s).
- 1.1 A preparation blank must be analyzed every 20 samples or for each batch digested, whichever is more frequent.
- 1.2 A calibration blank (CCB) must be analyzed after every 10 samples.

Action

Qualification of sample results due to blank contamination is dependent on the conditions and the origin of the blank. No sample results are reported unless the concentration of the analyte in the sample exceeds five times the amount detected in any blank. No sample results are corrected by subtracting blank values. Specific qualifications of sample data are as follows:

- Step 1 Review the blank result summary form or laboratory equivalent for all blanks within the data package.
- Step 2 If a blank result is greater than 2 times the negative IDL, all non-detects are qualified as estimated (UJ).
- Step 3 If an analyte is found in the blank, but not in the sample, the data are not qualified.
- Step 4 When an analyte is detected in the sample and the sample concentration is less than five times the concentration detected in the associated blank, the data are qualified as non-detected (U).
- Step 5 When a positive result is greater than the action level, the result is not qualified.
- **Note**: Any difference between the sample analyses and the related blank analyses which involve weights, volumes or dilution factors must be taken into account when the 5-times criteria are required.

The following are examples of how qualifications apply to blank data:

Example 1 (Step 4): When the sample result is less than the PQL but greater than the action level. Positive results less than the action level are qualified as non-detects.

Factor	5-times
Blank Result	7
PQL	5
Action level	35
Sample Result	22
Qualified Sample Result	22 U

<u>Example 2 (Step 5):</u> When the sample result is greater than the PQL and the action level, no qualification is used.

Factor	5-times
Blank Result	10
PQL	8
Action level	50
Sample Result	70
Qualified Sample Result	70

H. Matrix Spike Sample Analysis

Criteria

- 1.0 Samples identified as field blanks cannot be used for spiked sample analysis.
- 1.1 Spike recoveries must be within the control limits of 75 to 125%. However, the control limits do not apply when the sample concentration surpasses the spike concentration by a factor of four or more.

Action

The following steps are performed to review inorganic matrix spike analysis for Tier II validation:

- Step 1 Matrix spike recoveries are reviewed on the matrix spike result summary form or laboratory equivalent. If they are out of the control limits of 75 to 125%, the following steps are taken:
 - a. When the spike recovery is greater than 125% and the reported sample results are non-detected, no qualification of data is needed.
 - b. When the spike recovery is greater than 125% and the reported sample results are greater than the POL, the data are qualified as estimated (J).
 - c. When the spike recovery is less than 75% and the reported sample results are greater than the PQL, all positive results are qualified as estimated (J) and one of the following steps will be

- taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the notes field of the data validation summary table.
- d. If the spike recovery is within the range of 30 to 74% and the sample results are non-detected, the data are qualified as estimated (UJ).
- e. If the spike recovery is less than 30% and the sample results are non-detected, the data are qualified as unusable (R).

I. Duplicate Analysis

Criteria

- 1.0 Samples identified as field blanks cannot be used for duplicate sample analyses.
- 1.1 A control limit of +/- 20% for waters and +/- 35% for soils for the Relative Percent Difference (RPD) are used for sample results greater than five times the PQL as presented in Table 5 of the FSP/QAPP.
- 1.2 A control limit of +/- the PQL for waters and +/- 2 times the PQL for soils are used for sample values less than five times the PQL, including when only one sample value is greater than 5 times the PQL or when one sample is above the method detection limit (MDL) and one is non-detected.
- 1.3 Duplicate sample analysis must be prepared and analyzed for every 20 samples, for every batch digested, or for every matrix, whichever is more frequent.

Action

Verify on the duplicate result summary form or laboratory equivalent that the RPD for the duplicate samples analysis is within the above mentioned criteria. If duplicate analysis results are outside the appropriate control windows, all sample results greater than the PQL for that analyte and the same matrix are qualified as estimated (J).

J. Field Duplicates

Criteria

- 1.0 For sample values greater than 5 times the PQL, the control limit for the RPD for water matrices is +/- 30% and +/- 50% for soil matrices.
- 1.1 For sample values less than 5 times the PQL, the control limit of +/-2 times the PQL for waters and +/- 4 times the PQL for soils will be used.

<u>Action</u>

Step 1 - Calculate all the RPD values for positive results between the sample and the field duplicate.

- Step 2 If duplicate analysis results are outside the appropriate control limits, all sample results greater than the PQL for that analyte and the same matrix are qualified as estimated (J).
- K. Laboratory Control Sample (LCS) Analysis Limits

Criteria

- 1.0 Aqueous LCS results must fall within the control limits of 80 to 120%.
- 1.1 Solid LCS results must fall within the control limits established by the laboratory as presented on LCS result summary form or the laboratory equivalent.
- 1.2 A LCS must be prepared and analyzed for every 20 samples, for every batch digested, or for every matrix, whichever is more frequent.

Action

- 2.0 The following steps are taken to evaluate the aqueous LCS:
- Step 1 Review the Form VII or the laboratory equivalent for any analyte that is outside the control limits of 80 to 120%.
- Step 2 If the LCS recovery for any analyte is greater than 120%, results greater than the PQL are qualified as estimated (J).
- Step 3 If the LCS recovery for any analyte is less than 80%, sample results greater than the PQL are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) biascorrecting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the notes field of the data validation summary table.
- Step 4 If the sample results are non-detects and the LCS recovery is greater than 120%, no qualification of the data is performed.
- Step 5 If the sample results are non-detects and the LCS recoveries are within the control limits of 50 to 79%, the data are qualified as estimated (UJ).
- Step 6 If the LCS recoveries for any analyte are less than 50%, the data for that analyte are qualified as unusable (R).
- 2.1 The following steps are taken to evaluate the soil LCS:

- Step 1 Review the Form VII or laboratory equivalent to identify any analyte that is outside the control limits established by the laboratory.
- Step 2 -If any solid LCS recoveries for any analyte are greater than the upper laboratory established control limits, all results greater than the PQL are qualified as estimated (J).
- Step 3 If any solid LCS recoveries for any analyte are less than the lower laboratory established control limits, sample results greater than the PQL are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question; (ii) reanalyzing the existing sample; (iii) bias-correcting the sample result to 100% recovery; or (iv) if the result would have no significant effect on achieving the applicable Performance Standard, simply maintaining the qualifier in the database. In the event that the sample result is bias-corrected, the uncorrected result will be further qualified as estimated/bias-corrected result available (JC), and the bias-corrected result will be presented in the notes field of the data validation summary table.
- Step 4 If the LCS results are greater than the upper control limits and the sample results are non-detected, no qualification of the data is needed.
- Step 5 If the LCS results are less than the lower control limits and the sample results are non-detected, the data are qualified as estimated (UJ).

V.Tier III Validation Procedures

Tier III validation of a data package consists of the steps mentioned above for a Tier I and Tier II validation plus review of the "raw data" and recalculation of approximately 10% of the sample results.

A. Calibration

Criteria

- 1.0 The initial calibration for must contain three standards, one of which must be at the PQL.
- 1.1 The correlation coefficient must be greater than or equal to 0.995.

Action

The following steps are taken when verifying calibration for Tier III validation:

- Step 1 Review the calibration raw data and laboratory bench sheets to confirm that the curve for the analysis did include a standard at the PQL. If there is not a standard at the PQL, all positive sample results up to 2 times the PQL and non-detected results are qualified as estimated (J) and (UJ), respectively.
- Step 2 Evaluate the raw data and calculate the correlation coefficient. If the correlation coefficient is less than 0.995, all results greater than the PQL and non-detects are qualified as estimated (J) and (UJ), respectively.

C. Sample Result Verification

Criteria

The quantitation of the analytes and the adjustment of the PQL for dilution and percent solids must be recalculated for 10% of the data.

Action

If the criteria above have not been followed, then the laboratory will be contacted by the reviewer and the laboratory will be responsible for resolving any discrepancies and resubmission of results, if needed.

Attachment E-1 Analytical Data Validation Summary

TABLE I

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

ANALYTICAL DATA VALIDATION SUMMARY (Results are presented in parts per million, ppm)

Sample Delivery			7								
Group No.	Sample ID	Date Collected	Marie	Validation Level	Qualification		Problem to taking				
PCB ₃		1 Date Conecies	INTERCENT	1 "Andonnou Teast	- Qualification	Compound	QA/QC Pärämetet	Value	Control Limits	Qualified Result	Notes
9700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II		T	***				
9700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No	L					
9700001	EXAMPLE-SS-2 (0 - 0.5)	1/1/97	Soil	Tier II	No						<u> </u>
9700001	EXAMPLE-SS-2 (0.5 - 1)	1/1/97	Soil	Tier II	No						
9700001	EXAMPLE-SS-3 (0 - 0.5)	1/1/97	Soil	Tier II	No						
9700001	EXAMPLE-SS-3 (0.5 - 1)	1/1/97	Soil	Tier II	No						
9700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No						
9700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No						
9700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier 1	No	<u> </u>					
7700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier I	No						
7700002	EXAMPLE-SS-DUP-1	1/1/97	Soil	Tier I	No No						
Metals			3011	I ICI I	No	<u> </u>	<u> </u>				Duplicate of EXAMPLE-SS-5 (0.5 - 1)
7700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II		<u> </u>	.,				
	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	Yes Yes	Copper	Matrix Spike %R	54.0%	75% to 125%	ND(5.62) J	
VOC ₃		1,1,57	1 3011	गवग	Yes	Copper	Matrix Spike %R	54.0%	75% to 125%	ND(5,62) J	
801047	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II							
	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No						
SVOC ₃		1 11177	3011	na n	No	l					
700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II							
	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil		Yes	2,6-Dinitrophenol	CCAL%D	59.0%	<25%	ND(3.6) J	
		1/1/7/	2011	Tier II	Yes	2,6-Dinitrophenol	CCAL %D	85.3%	<25%	ND(3.6) J	
CDDs/PCDFs		<u> </u>	ـــــا			Pentachrolophenol	CCAL %D	52.3%	<25%	ND(3.6) J	
	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	6 11								
i	CARIMI LE-33-1 (0 - 0.3)	1/1/9/	Soil	Tier II	Yes	1,2,3,4,7,8-HxCDF	Internal Standard %R	188.0%	25% to 150%	0.00013 J	
				Ì		1,2,3,6,7,8-HxCDF	Internal Standard %R	186.7%	25% to 150%	0.000066 J	
				Ī		Total TCDF	Result exceeded calibration range			0.00058 J	
700001	EXAMPLE-SS-1 (0 5 - 1)	1/1/97	Soil		······	Total HxCDF	Result exceeded calibration range			0.0021 J	
	EXAMPLE-83-1 (0 3 - 1)	1/1/9/	2011	Tier II	Yes	1,2,3,4,6,7,8-HpCDD	Internal Standard %R	221.1%	25% to 150%	0.000020 J	
i				İ		OCDD	Internal Standard %R	235.2%	25% to 150%	0.00022 J	
l	·			į		1,2,3,4,7,8-HxCDF	Internal Standard %R	422.3%	25% to 150%	0.0000038 J	
				Į		1,2,3,6,7,8-HxCDF	Internal Standard %R	365.2%	25% to 150%	0.0000020 J	
i				i		2,3,4,6,7,8-HxCDF	Internal Standard %R	332.0%	25% to 150%	0.000004! J	
yanide						1,2,3,4,6,7,8-HpCDF	Internal Standard %R	222.6%	25% to 150%	0.000011 J	
	EXAMPLE-SS-1 (0 - 0.5)	1/1/02	2	<u>.</u>				i			
	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No						
ulfide	EAAMI LE-33-1 (U.3 - 1)	1/1/97	Soil	Tier II	No						
	5v 414bi 5 65 1 (5 6 5 5							······································			
	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No			T	ı	**	· · · · · · · · · · · · · · · · · · ·
3U1V4/	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No			 			

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Data Validation Procedures for Air Analyses of Polychlorinated Biphenyls (PCBs)

Validation Annex F

Data Validation Procedures for Air Analyses of Polychlorinated Biphenyls (PCBs)

I. Introduction

This Standard Operating Procedure (SOP) describes the data validation procedures for a United States Environmental Protection Agency (EPA) Region I tiered review of data from ambient air samples analyzed for polychlorinated biphenyls (PCBs) by EPA Method T0-4A. Data review procedures presented in this SOP were developed from the applicable quality control criteria specified in the following documents:

- Region I Tiered Organic and Inorganic Data Validation Guidelines, USEPA Region I, July 1, 1993.
- Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, USEPA Region I, Draft, December 1996.
- CLP Organics Data Review and Preliminary Review, USEPA SOP HW-6, Revision 10, October 1995.
- USEPA Compendium Methods TO-4A Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using High Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD), January, 1999.

This SOP is limited to the validation of PCB ambient air monitoring data. An SOP specifying the data validation procedures for data from samples of other matrices analyzed for PCBs (e.g., soil, sediment, water, and biota) is provided in Validation Annex B.

II. EPA Region I Tiered Validation Procedures

All analytical data on PCBs will be validated to a Tier I level following the procedures presented in the *Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses* (July 1996, revised December 1996) and the *Region I Tiered Organic and Inorganic Data Validation Guidelines* (USEPA guidelines). The basic Tier I review consists of a completeness evidence audit to ensure that all laboratory data and documentation are present. Additionally, for projects subject to this FSP/QAPP, the Tier I review will be modified and expanded to include a number of elements of Tier II review, including review of each sample delivery group (SDG) to identify data deficiencies that may potentially result in qualification of the data (e.g., systematic deviations such as low calibration response factors.)

For all analytical data for PCBs in ambient air samples, with the exception of the data collected from the ambient air monitors around GE's On-Plant Consolidation Areas (OPCAs) at the GE facility, a subset of the data will be identified for additional Tier II review. If QA/QC deviations are identified during the modified Tier I review, those deviations will be addressed in the Tier II review. Otherwise, a minimum of 25% of the data will be chosen at random to be subjected to a Tier II review, which will consist of the Tier I completeness evidence audit and review of all data package summary forms for identification of QA/QC parameter deviations. However, for the data collected from the OPCA air monitors, 100% of the data will be subject to full Tier II review. The Tier II data review will be used to identify and evaluate systematic QA/QC deficiencies that may affect any or all of the sample data presented in a specific data package. The Tier II data validation also includes an evaluation of field duplicate (co-located samples) Relative Percent Difference (RPD) compliance. Additional

Tier II review and Tier III (recalculation of sample results) review may also be performed for a larger portion of the data set, if required, to fully resolve data usability limitations identified during the modified Tier I data review and initial Tier II review for a minimum of 25% of the data chosen at random.

The tiered data validation procedures consisting of modified Tier I review for all data, Tier II review of 25% of the data (or 100% of the data from the OPCA air monitors), and additional Tier II and Tier III review, as required, will be used to evaluate compliance of each data set with the project-specific data quality objectives. The procedures presented in the following sections will be used to perform the Tier I, Tier II, and Tier III data validation reviews. Qualification of analytical data will also be performed, if required, as specified in the data validation protocols presented below.

III. Tier I Validation Procedures

Tier I validation of a data package consists of verifying that all raw data and forms are included and complete. An analytical data validation summary spreadsheet (in the form presented in Attachment F-2) is prepared to document the data review. The following steps are taken to complete a Tier I review:

- Step 1 Review the laboratory case narrative. During review, if there are any deviations that warrant a more extensive validation procedure, a Tier II review would be initiated to evaluate potential data use limitations.
- Step 2 Compare the chain-of-custody and the sample traffic reports. If there are any inconsistencies or if they are incomplete, then contact the laboratory for resolution.
- Step 3 Verify that all forms are present and complete. If any of the forms are not in the data package, contact the laboratory for a resubmission.
- Note: If frequent or severe quality control deviations are present on the above-mentioned forms, a more extensive validation procedure may be warranted. Based on the reviewer's judgement, Tier II or Tier III review may be conducted to fully evaluate the usability of the data.
- Step 4 Verify that the following raw data are provided for each sample and associated QA/QC samples in the data package. Contact the laboratory to obtain missing data (if required):
 - Case Narrative
 - Chain-of-Custody Forms
 - Traffic Reports
 - QA Sample Summary Forms
 - Instrument Calibration Summary Forms
 - Instrument Run Logs
 - Sample Preparation Logs
 - Instrument/Method Detection Limits
 - Standards Preparation Logs
 - Supporting (raw) Data
- Step 5 With a blue ink pen, record on the first page of the data package: the validation level, date, and reviewer's initials.

In addition to the steps discussed above, the Tier I review of data packages for projects subject to this FSP/QAPP will be expanded to include some elements of Tier II review, including review of the data packages to identify QA/QC deficiencies that may require qualification of the data.

IV. Tier II Validation Procedures

Tier II validation of a data package consists of the steps mentioned above for a Tier I review, plus review of the data package summary forms for identification of QA/QC deviations. Tier II validation does not include review of the "raw data" or recalculation of sample results. Sample qualification is performed (if required) following EPA Region I Guidelines presented in Section I.

A. Data Qualifiers

All data qualified due to QA/QC deviations will be clearly recorded on the data summary package Form I, or laboratory equivalent, with a blue or red ink pen. The laboratory qualification is lined out and the reviewer's qualification placed next to it. The date and the initials of the reviewer will also be placed on Form I. Below is a list of qualifiers that may be used.

- J The compound was positively identified, but the associated numerical value is an estimated concentration. This qualifier is used when the data evaluation procedure identifies a deficiency in the data generation process. This qualifier is also used when a compound or analyte is detected at estimated concentrations less than the practical quantitation limit (PQL).
- U The compound was analyzed for, but was not detected. The sample quantitation limit is presented and adjusted for dilution. For consistency with the database and summary tables prepared from the data, non-detected sample results are displayed as ND(PQL), as presented in Attachment F-1.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual level of quantitation. For consistency with the database and summary tables prepared from the data, these non-detected sample results are displayed as ND(PQL) J, as presented in Attachment F-1.
- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purposes.

B. Sample Collection and Holding Times

Criteria

Air samples must be collected over a time period of 24 hours (\pm /-60 minutes) at a sampling rate between 0.20 and 0.28 μ g/m³ with a sample volume no less than 276 standard cubic meters (scm) and no greater than 420 scm.

Air samples and extracts must be preserved at 4° centigrade. Air samples must be extracted within seven days and extracts must be analyzed within 40 days.

Action

Specific holding times for air samples to be analyzed for PCBs are included in Table 1 of the FSP/QAPP. The following steps are performed for the validation of data due to sample collection and holding times:

- Step 1 The sampling documentation is reviewed to determine the sampling period, sampling rate and total sample volume.
- Step 2 If the sampling period is less than 23 hours or greater than 25 hours, all positive results are qualified as estimated (J) and the non-detected compounds are qualified as estimated (UJ).
- Step 3 If the sampling rate is less than $0.20 \mu g/m^3$ or greater than $0.28 \mu g/m^3$, all positive results are qualified as estimated (J) and the non-detected compounds are qualified as estimated (UJ).
- Step 4 If the sample volume is less than 276 scm or greater than 420 scm, all positive results are qualified as estimated (J) and the non-detected compounds are qualified as estimated (UJ).
- Step 5 The holding time is established by comparing the sampling date on the chain-of-custody with the dates of analysis and/or extraction on Form I, or laboratory equivalent. The chain-of-custody is also reviewed to determine if the samples were properly preserved.
- Step 6 If the holding times are exceeded by less than 24 hours, then no qualification of data is needed.
- Step 7 If the holding times are exceeded by more than 24 hours but less than twice the holding time i.e., 14 days for extraction and/or 80 days for analysis all positive results are qualified as estimated (J) and the non-detected compounds are qualified as estimated (UJ).
- Step 8 If the holding times are exceeded by more than twice the specified holding time, then all results are qualified as unusable (R).

C. PCBs Instrument Performance

Criteria

- 1.0 The laboratory must report retention time window data on the PCBs Standards Summary (Form X), or laboratory equivalent, for each GC column used to analyze samples. Compounds must be within these retention time windows.
- 1.1 The retention time of DCB and TCMX in each analysis of PCBs must be compared to the retention time of the DCB and TCMX in Evaluation Standard Mix A. The Percent Difference (%D) must not exceed 0.3% for narrow-bore capillary columns and 1.5% if wide-bore capillary columns are used.

Action

Review the retention time %D presented on Form X or laboratory equivalent. The following steps outline the qualification of data for retention time shifts of DCB and TCMX:

- Step 1 If the retention time shift for DCB and TCMX is greater than 0.3% for a narrow-bore capillary column, or 1.5% for a wide-bore capillary column, the data are qualified as unusable (R).
- Step 2 If DCB and TCMX are absent, then the retention time shift cannot be evaluated (i.e., if they are diluted out due to high concentration of a target compound or matrix interference). No qualification of the data is required.

D. Calibration

Criteria

1.0 Initial Calibration for PCBs

At least a three-point calibration is required for quantification using a minimum of five peaks corresponding to the best matching Aroclor standard. The Percent Relative Standard Deviation (%RSD) of calibration factors must not be greater than 20%.

Note: The %RSD linearity check is required only for columns that are used for quantitation of sample and surrogate results. Columns used only to provide qualitative verification are not required to meet this criterion.

1.1 Initial Calibration Independent Verification for PCBs

The initial calibration should be verified by an independent calibration source yielding a percent recovery of 85% to 115%.

1.2 Analytical Sequence

1.2.1 Primary Analysis

At the beginning of each 24-hour period, continuing calibration verification (CCV) standard must be analyzed.

1.2.2 Confirmation Analysis

1.2.3 Only the standards containing the compounds to be confirmed are required. These standards must be repeated after every ten samples.

1.3 CCV Analysis

The calibration factor for each CCV standard analyzed at the midpoint must be within 15% of the initial calibration (20% on the confirmation columns). The CCV standard must be analyzed at the beginning of the analytical sequence and after very ten samples.

Action

The following steps are performed during the validation of data due to calibration deviations:

- Step 1 Verify that the criterion for the initial calibration linearity have been met by reviewing Form VI or laboratory equivalents. If the criteria in sections IV.D.1.0 through IV.D.1.3 are not met, then all associated positive results are qualified as estimated (J).
- Step 2 Verify by reviewing Form VII, or laboratory equivalents, that the associated CCV %D between calibration factors is not greater than 15% for the compound(s) being quantitated. If the %D is greater than this criterion, then all associated positive results are qualified as estimated (J).

Qualification of PCB Compounds Based on Initial Calibration Deviations

Quantitation of 1 CD compounds based on initial canonation be various				
Sample Results	Initial Calibration %RSD > 20.0%	Continuing Calibration %D > 15%		
Detects	J	J		
Non-Detects	J	J		

E. Blanks

Criteria

- 1.0 No contaminants should be present in the blank(s).
- 1.1 For each extracted batch, a method blank must be analyzed.

Action

Qualification of sample results due to blank contamination is dependent on the conditions and origin of the blank. No positive sample results are reported unless the concentration of the compound in the sample exceeds five times the amount in the blank. No sample results are corrected by subtracting blank values. Specific qualifications of sample data are as follows:

- Step 1 Review Form IV, or laboratory equivalent, within the data package to ensure that criteria IV.D.1.2 is in compliance. If they are not, the laboratory will be contacted by the reviewer for a written explanation.
- Step 2 Review Form I for all blanks within the data package.

- Step 3 When any compound is detected in the sample and the sample concentration is less than five times the concentration detected in the associated blank, the data are qualified as non-detect (U).
- Step 4 If a compound is found in the blank but not in the sample, then the data are not qualified.

Note: Any difference between the sample analyses and the related blank analyses which involve weights, volumes, or dilution factors, must be taken into account when the 5-times criteria is applied.

The following are examples of how qualifications apply to blank data:

Example 1 (Step 3): When the sample result is greater than the PQL but less than the action level, the sample results are qualified as non-detects. As in the example below, the sample result is less than the blank action level (or 5 x 1); therefore, the sample result is qualified as non-detect.

Factor	5-times
Blank Result	1.0
PQL	0.5
Action Level	5.0
Sample Result	4.0
Qualified Sample Result	4.0 U

Example 2 (Step 4): When the sample result is greater than the blank action level, the sample result is not qualified. As in the example below, the sample result is greater than the blank action level and the sample result is not qualified.

Factor	5-times
Blank Result	1.0
PQL	0.5
Action Level	5.0
Sample Result	6.0
Qualified Sample Result	6.0

Step 5 - When excessive amounts of contamination exist (i.e., saturated peaks by ECD), all compounds affected are qualified as unusable (R).

F. Surrogate Recovery

Criteria

Sample and blank surrogate recoveries (TCMX and DCB for PCBs) must be within the control limits listed in Table 5 of the FSP/QAPP.

Action

Qualification of the data due to surrogate recoveries being out of control is based on the evaluation of all data provided in the data package, especially considering the complexity of the effect of sample matrices. These qualifications are completed in the following steps:

- Step 1 Surrogate recoveries tabulated on Form II, or laboratory equivalent, for each fraction are evaluated against the control limits provided in Table 5 of the FSP/QAPP.
- Step 2 If both TCMX and DCB recoveries are less than the lower control limit, all positive results are qualified as estimated (J) and one of the following steps will be taken: (i) collecting and analyzing a new sample from the location in question or (ii) reanalyzing the existing sample.
- Step 3 If both TCMX and DCB recoveries are less than the lower control limit but greater than 10%, all non-detected results are qualified as estimated (UJ) and detected results are qualified as estimated (J).
- Step 4 If either TCMX or DCB recoveries are less than 10%, the non-detected results are qualified as unusable (R) and detected results are qualified as estimated (J).
- Step 5 If both TCMX and DCB recoveries are greater than the upper control limit, all positive results are qualified as estimated (J).

Qualification of Compounds Based on Surrogate Recovery Deviations

Sample Results	Recovery < 10%	10% ≤ %Recovery < LL	$\begin{array}{c} \text{Lower QC Limit} \leq \\ \text{Recovery} \leq \text{UL} \end{array}$	Recovery > UL
Detects	J	J	-	J
Non-Detects	R	ND()J	-	-

LL- Lower limit of method QC acceptance criteria.

G. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Criteria

- 1.0 Spike recoveries must be within the control limits in Table 5 of the FSP/QAPP.
- 1.1 The RPD value between MS and MSD recoveries must be within the control limits specified in Table 5.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

UL- Upper limit of method QC acceptance criteria.

Action

If recovery results are not within the control limits, the following steps are taken to qualify the data:

- Step 1 If the recovery results are greater than the lower control limits presented in Table 5, the positive results for the compound are qualified as estimated (J)
- Step 2 If the recovery result is less than the lower control limit presented in Table 5, detect and/or non-detect sample results for the compound are qualified as estimated (J).
- Step 3 If the recovery result is less than 10%, the non-detects for that compound in the unspiked sample are qualified as rejected (R) and detects for that compound are qualified as estimated (J). This is the only instance that a non-detect is qualified due to recovery results being out of control.
- Step 4 If any of the RPD values are greater than the limits presented in Table 5, Detect and/or non-detect sample results for that compound are qualified as estimated (J) in the unspiked sample.

Qualification of Compounds Based on MS/MSD Recovery and MS/MSD RPD Deviations

Sample Results	Recovery < 10%	10% ≤ %Recovery < Lower QC Limit	Lower QC Limit ≤ Recovery ≤ Upper QC Limit	Recovery > Upper QC Limit	RPD > QC Limit
Detects	J	J	-	J	J
Non-Detects	R	J	-	-	J

H. Field Duplicates

Criteria

1.0 For air matrices, each compound with a detectable concentration two times greater than the PQL must have an RPD value that is less than 50%.

Action

Step 1 - Calculate all RPD values for positive results between the sample and the field duplicate.

$$\label{eq:calculation: RPD = ----- x 100} Sample Result - Field Duplicate \\ Calculation: RPD = ----- x 100 \\ (Sample Result + Field Duplicate)/2$$

- Step 2 If the RPD value is greater than 50% in an air matrix and both sample results are greater than two times the PQL, the result for that compound in both samples is qualified as estimated (J).
- Step 3 If both sample results are less than two times the PQL, qualification of the sample data is not required.
- Step 4 If one sample result is less than two times the PQL and the other is greater than two times the PQL, the result for that compound in both samples is qualified as estimated (J).

Date: March 30, 2007

Qualification of Air Data Based on Field Duplicate RPD Deviations

RPD	> 50%	> 50%	>50%
Sample Results	Both duplicate sample concs. ≥ 2 times PQL	$\begin{array}{l} PQL \leq both \ duplicate \ samples \\ concs. < 2 \ times \ PQL \ and \ \geq \\ PQL \end{array}$	One sample conc. ≥ 2 times PQL and other sample conc. < 2 times PQL
Detects	J	-	J
Non-Detects	-	-	-

V. Tier III Validation Procedures

Tier III validation of a data package consists of the steps mentioned above for a Tier I and Tier II validation plus review of the "raw data" and recalculation of approximately 10% of the sample results. The compound identification, instrument performance, quantitation, and detection limits are also evaluated.

A. Compound Quantitation and Reported Quantitation Limits

Criteria

The quantitation of detected compounds and the adjustment of the PQL for dilutions must be recalculated for 10% of the data.

Action

- Step 1 If the criteria above have not been followed, the laboratory will be contacted by the reviewer and the laboratory will be responsible for a correction of the quantitation and resubmission of the reported data.
- Step 2 Quantitation limits affected by large, off-scale peaks are qualified as unusable (R).
- Step 3 If the interference is on-scale, the quantitation limit is qualified as estimated (J).

B. Instrument Performance

Criteria

The laboratory must report retention time window data on the PCB standards summary (Form X or laboratory equivalent) for each GC column used to analyze samples. Compounds must be within these retention time windows.

Action

Retention time windows are used in qualitative identification. If the sample results are not within the retention time windows, the following steps are taken to evaluate the data:

Step 1 - The chromatogram is reviewed to see if there are any peaks within an expanded window surrounding the expected retention time window of the compound of interest.

- Step 2 If there are no peaks present either within or close to the retention time window of the out of control targeted compound, then there is no qualification of the data. Non-detected results are considered valid.
- Step 3 If there are peaks present above or close to the PQL and either within or close to the retention time window of the out of control targeted compound, all positive data are qualified as unusable (R).

C. Compound Identification

Criteria

Reported compounds must be within calculated retention time windows for both chromatographic columns.

Action

The following steps are taken during the compound identification:

- Step 1 When the qualitative criteria for two-column confirmation are not met, all reported positive detects are reported as non-detects. The reviewer uses professional judgment and the following steps to report the appropriate quantitation limit:
 - a. If the misidentified peak was sufficiently outside the target compound retention time window, then the POL is reported.
 - b. If the misidentified peak poses an interference with potential detection of a target peak, the reported value is qualified as the estimated (J) quantitation limit.
- Step 2 When PCBs exhibit marginal pattern-matching quality, the reviewer's professional judgment is used to confirm whether the differences are credited to environmental "weathering." If the presence of a PCB is strongly suggested, results are reported as being present.
- Step 3 When an observed pattern closely matches more than one Aroclor, professional judgment is used to decide whether the neighboring Aroclor is a better match, or if multiple Aroclors are present.

Attachment F-1 Laboratory Reporting Forms Polychlorinated Biphenyls

1D ORGANICS ANALYSIS DATA SHEET

EPA S	A	MP	L	E	NO
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Lab Name:	Contract:	
Lab Code: Case No.:	SAS No.:	SDG No.:
Matrix: (soil/water)		ple ID:
Sample wt/vol:(g/s	mL) Lab File	e ID:
% Moisture: decanted:	(Y/N) Date Rec	ceived:
Extraction: (SepF/Cont/Sonc)	Date Ext	tracted:
Concentrated Extract Volume:		
Injection Volume:(uL)	Dilution	Factor:
GPC Cleanup: (Y/N)	oH: Sulfur (Cleanup: (Y/N)
CAS NO. COMPOUNE	CONCENTRATION (ug/L or ug/Kg	UNITS:
-		
12674-11-2Aroclor- 11104-28-2Aroclor- 11141-16-5Aroclor- 53469-21-9Aroclor- 12672-29-6Aroclor- 11097-69-1Aroclor- 11096-82-5Aroclor-	1221 1232 1242 1248 1254	

Contract:

WATER

Lab Name:

SURROGATE RECOVERY

Lab Code: _	Ca	ase No.:	SAS No	.:	SDG No.:	
GC Column(1	.):	ID:	_(mm) GC C	olumn(2):		ID:(mm)
10	AMPLE NO. 3	CCX 1 TCX REC # %REC	# %REC # %RI	B 2 OTHER	(2) 00	T
01 -						
04 05 06 07						
08 09 10						
11 -						_ _ _
14 15 16 17						_
18 19 20						
21 22 23 23						
24 25 26 27						-
28 29 30						

ADVISORY QC LIMITS TCX = Tetrachloro-m-xylene (60-150) DCB = Decachlorobiphenyl (60-150)

Column to be used to flag recovery values * Values outside of QC limits
D Surrogate diluted out

page	of	

SOIL

Lab Name:

SURROGATE RECOVERY

Contract:

0-3		SAS No.:	SDG No.:
Column(1):	ID:	_(mm) GC Column(2):	ID:
EPA	TCX 1 TCX 2	DCB 1 DCB 2 OTHER	OTHER TOT
SAMPLE NO	S. SKEC & SKEC 3	* *REC # *REC # (1)	(2) OUT
01			
02			_
03			
05			
06			
07			
08			
10			
11			
12			
13			
14			
15			
17			
18			
19			
20			
21			
23			
24			
25			
26			
27			
28			
30			

ADVISORY TCX = Tetrachloro-m-xylene QC LIMITS

DCB = Decachlorobiphenyl (60-150)

(60-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

page	Of
------	----

WATER

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:Cab Code: Catrix Spike - EPA Sa	Case No.:	SAS No.:		:	
COMPOUND	SPIKE ADDED (ug/L)		CONCENTRATION (ug/L)	MS % REC #	LIMIT:
					56-12: 40-13: 40-12: 52-12: 56-12: 38-12:
COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % % REC # RPD #	QC LI	
				15 20 22 18 21 27	56-123 40-131 40-120 52-126 56-121 38-127
Column to be used to Values outside of Que out of out of oike Recovery:	C limits			risk	
MOMENTS:					

3F MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

	SPIKE	SAMPLE	MS	MS	1 00
COMPOUND	ADDED	CONCENTRATION	CONCENTRATION	#5 %	QC.
COMPOUND	(ug/Kg)	(ug/Kg)	(ug/Kg)	REC #	REC.
*					46-12
***************************************					35-13
					34-13
-					42-13
					23-13
a	SPIKE	MSD	MSD		23-13
COMPOUND	ADDED	CONCENTRATION	\$ \$	QC L.	IMITS
COMPOUND				QC L:	IMITS REC.
COMPOUND	ADDED	CONCENTRATION	\$ \$	RPD ====================================	IMITS REC.
СОМРОИИР	ADDED	CONCENTRATION	\$ \$	50 31	IMITS REC. 46-127 35-130
COMPOUND	ADDED	CONCENTRATION	\$ \$	RPD ====================================	IMITS REC. 46-127 35-130 34-132
COMPOUND	ADDED	CONCENTRATION	\$ \$	50 31 43 38 45	IMITS REC. 46-127 35-130 34-132 31-134 42-139
сомроиир	ADDED	CONCENTRATION	\$ \$	50 31 43 38	MITS REC. 46-12: 35-13: 34-13: 31-13: 42-13:
	ADDED (ug/Kg)	CONCENTRATION (ug/Kg)	%	50 31 43 38 45 50	MITS REC. 46-12: 35-13: 34-13: 31-13: 42-13:
	ADDED (ug/Kg)	CONCENTRATION (ug/Kg)	%	50 31 43 38 45 50	IMITS REC. 46-127 35-130 34-132 31-134

4C METHOD BLANK SUMMARY

EPA	C31155 5	
P. P 2	SAMPLE	NO

Lab Name:		Contrac	ct:		
Lab Code:	Case No.:	SAS No	o7:	SDG No.:	
Lab Sample ID:				x :	
Matrix: (soil/wat	er)	Extr	action: (SepF	/Cont/Sonc)	
Sulfur Cleanup:	(Y/N)		Extracted:		
Date Analyzed (1):	Date	Analyzed (2):	Name of the last o
Time Analyzed (1			Analyzed (2		
Instrument ID (1):				
GC Column (1): _					
				LES, MS AND MSD	
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26		LAB SAMPLE ID	ANALYZED 1 A		

6F INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab	Name:_				Contra	ct:			
Lab	Code:		Case I	····	SAS N	0.:	SDG	No.:	
Ins	trument	ID: _			Date(s)	Analyzed:			
GC (Column:		ID:	(mm)					

	AMOUNT			RT W	INDOW	CALIBRATIO
COMPOUND	(ng)	PEAK	RT	FROM		FACTOR
The same state when the same state state and the same state		====				
		*1	-	-		
		*2				
		*3				***************************************
		4				***************************************
Aroclor 1016		5_				
HT0C101 1019		*1				-
		*2				
_		*3				
		4			-	
Aroclor 1221		5_				
120101 1221		*1				
		*2				
		*3				
		4				
Aroclor 1232		5_				
		*1				
		*2				
		*3				
		5				
roclor 1242						
		*2				
		*3				
		4 -				
		5				
roclor 1248		*1				
	-	*2 -				
		*3 -				
*		4 -				
		5				_
roclor 1254		*1	-			
		*2 -	-			
		*3				
		4				
		5	-			
roclor 1260		*1	-	-		
		*2	-	i		
		×3 !-		!-		
		4	-	-		
		5	-			

^{*} Denotes required peaks

7E CALIBRATION VERIFICATION SUMMARY

Lab Name:		Conti	ract:			
Lab Code: Case No.:		_ SAS	No.:	SD SD	G No.:	
GC Column: ID:	(mm)	Init.	Calib, I	Date(s):_		
EPA Sample No.(PIBLK):			Date	e Analyze	d :	
Lab Sample ID (PIBLK):			Time	e Analyze	d :	
EPA Sample No.(INDA):			Date	e Analyze	d :	Arrest Arrastic Arras
Lab Sample ID (INDA):			Time	e Analyze	d :	
INDIVIDUAL MIX A	RT	FROM		CALC AMOUNT (ng)	(ng)	

:						
EPA Sample No.(INDB):			Date			
Lab Sample ID (INDB):				Analyzed		
INDIVIDUAL MIX B COMPOUND	RT	FROM	INDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
Tatrachloro-m-xylene Decachlorobiphenyl						

QC LIMITS: RPD of amounts in the Individual Mixes must be less than or equal to 25.0%.

8D ANALYTICAL SEQUENCE

Lab Name:			Contract			
Lab Code:	: c	ase No.:	SAS No.:		SDG No.: _	
GC Column	7:	ID:(mm) Init. Cali	ib. Date(s)):	
Instrumer	nt ID:					
THE ANA	ALYTICAL SEQU	ENCE OF PERFO	RMANCE EVALU	JATION MIXT	TURES, BLAN	KS,
	SAMPLE	s, AND STANDA	RDS IS GIVEN	N BELOW:		
		GATE RT FROM DCB:		IBRATION	,	
	SAMPLE NO.	LAB SAMPLE ID	ANALYZED		RT #	
01					= =====================================	
.02						
04						
05 06					_	
07				NAME OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWNER OF THE OWNER OWNE		
08			-	***************************************		
10	***************************************					
11	***************************************		-	***************************************		
13 14						
15						
16 17			-			
18						
19 20						
21						
22			-			
24						
26					-	
27 28						
29						
30 31			-		-	
. 32						
			QC LI	KITS		
	ICH = Tetrach DCB = Decachl	loro-m-xylene orobiphenyl	(± 0.05 1	MINUTES)		
#	Column used	to flag rete	ntion time vits.	values with	an asteri	sk.
	•					

9 A FLORISIL CARTRIDGE CHECK

Lab Name:	Contract:	
Lab Code: Case No.:	SAS No.: SE	OG No.:
Florisil Cartridge Lot Number:	: Date of Analysis	:
GC Column(1): ID: _	(mm) GC Column(2):	ID:(mm)
	SPIKE SPIKE ADDED RECOVERED %	oc

COMPOUND	SPIKE ADDED . (ng)	SPIKE RECOVERED (ng)	% REC	#	QC LIMITS
,					80-120
					80-120
					80-120
					80-120
***************************************			***************************************		80-120
NAME OF THE PARTY					80-120
110					80-120
Adam of the second seco					80-120
D - 4					80-120
Tetrachloro-m-xylene_					80-120
Decachlorobiphenyl				-	80-120

[#] Column to be used to flag recovery with an asterisk.
* Values outside of QC limits.

THIS CARTRIDGE LOT APPLIES TO THE FOLLOWING SAMPLES, BLANKS, MS, AND MSD:

	EPA	LAB	DATE	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED 1	ANALYZED :
01				
02			-	
03				
04				
05				***************************************
06	-			
77				
180				
19				
10				
11				
		~~~~		
.2				
.3				
4				
.5				
F 1				
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	-		-	
9 :				
0				
1				
2				
3				

ge of _

# 10B IDENTIFICATION SUMMARY FOR MULTICOMPONENT ANALYTES

EPA	SAMPLE	но:	
 			Man de constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina de la constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della constantina della const

Lab Name:					Cont	ract:		
Lab Code:			Case No	.:	SAS	No.:	SDG No.:	
Lab Sampl	Le ID :				D	ate(s) Analyze	ed:	
Instrumen	nt ID (	1): _		-	I	nstrument ID (	(2):	_
GC Column	1(1):		ID		(mm) G	C Column(2): _	ID:	(mm)
1			-	·				,
				RT W		1	MEAN	
ANALYI	E,	PEAK		FROM	1	CONCENTRATION	CONCENTRATION	\$D
		1						
		2						
		3	-		***************************************			
COLUMN	1	4	-				-	
		5						
		1						
		2						
COLIDA		3						
COLUMN	2	4			-			
		5						
								=====
		2						
		3						
COLUMN	1	4						
		5						
						***************************************		
		1				*.		
		2						
		3	***************************************	***************************************		-		
COLUMN	2	4						
		5		-	-			
				-				
		1						į
		2					1	
		3						
COLUMN	1	4					-	
		5						
		1			***************************************			
		2		***************************************				un en en en en en en en en en en en en en
COLUMN	2	3						
COLUMN	2	4						of selection of
		5						
		:						

At least 3 peaks are required for identification of multicomponent analytes page __ of __

Attachment F-2 Analytical Data Validation Summary

#### TABLET

#### GENERAL ELECTRIC COMPANY - PITISFIELD, MASSACHUSETTS

### ANALYTICAL DATA VALIDATION SUMMARY (Results are presented in parts per million, ppm)

Sample Delivery Group No.	Sample 1D	Date Collected	Matrix	Validation Level	Qualification	Compound	QA/QC Paramèter,	Value	Control Limits	Qualified Result	Notes
PCB:	1 Skilpt ID	1 Date Contento	7-1XIII			Lyin					
A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PAR	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No	I		T			
9700001		1/1/97	Soil	Tier II	No		AND AND ADDRESS OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF				
9700001	EXAMPLE-SS-1 (0.5 - 1)	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	COMPANIES TO A PERSON NAMED IN	Tier II	No						
9700001	EXAMPLE-SS-2 (0 - 0.5)	1/1/97	Soil	Tier II	No		The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s				
9700001	EXAMPLE-SS-2 (0.5 - 1)	1/1/97	Soil	Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of th	No						
9700001	EXAMPLE-SS-3 (0 - 0.5)	1/1/97	Soil	Tier II	A CONTRACTOR OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF TH			-			
9700001	EXAMPLE-SS-3 (0.5 - 1)	1/1/97	Soil	Tier II	No			-			
9700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier I	No						
9700002	EXAMPLE-SS-5 (0.5 - 1)	1/1/97	Soil	Tier 1	No						
9700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier I	No						
9700002	EXAMPLE-SS-6 (0.5 - 1)	1/1/97	Soil	Tier I	No						Duplicate of EXAMPLE-SS-5 (0 5 - 1)
9700002	EXAMPLE-5S-DUP-1	1/1/97	Soil	Tier I	No						
Metali								54.0%	75% to 125%	NIX5 62) J	
9700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	Yes	Соррег	Matrix Spike %R	54.0%	75% to 125%	ND(5 62) J	
9700001	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	Yes	Соррег	Matrix Spike %R	34.0%	1374 10 12374	THE PARTY	
YOC:											
9801047	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No						
9801047	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No						
SVOC:											
9700001	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	Yes	2,6-Dinitrophenol	CCAL %D	59.0%	<25%	ND(16)1	
9700091	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	Yes	2,6-Dinicrophenol	CCAL %D	85.3%	<25%	ND(3.6) J	
7700007	L.Our Louis (out of					Pentachrolophenol	CCAL %D	\$2.3%	<25%	ND(3-6) J	
PCDDyPCDFs											
9700001	EXAMPLE-SS-1 (0 - 0 5)	1/1/97	Soil	Tier II	Yes	1,2,3,4,7,8-HxCDF	Internal Standard %R	188.0%	25% to 150%	0.000131	
9700001	EXAMPLE-33-1 (0 - 0 3)	1 11111	300			1,2,3,6,7,8-HxCDF	Internal Standard %R	186.7%	25% to 150%	0.000066.1	
						Total TCDF	Result exceeded calibration range			0.00058 J	
						Total HxCDF	Result exceeded calibration range		Notes of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state	0.0021 J	
	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	Yes	1,2,3,4,6,7,8-HpCDD	Internal Standard %R	221.1%	25% to 150%	0.000020 1	
9700001	EXAMPLE-22-1 (0.2 - 1)	miss.	2011			OCDD	Internal Standard %R	235.2%	25% to 150%	0.00022 J	
						1,2,3,4,7,8-HxCDF	Internal Standard %R	422.3%	25% to 150%	0.0000038 J	
						1,2,3,6,7,8-HxCDF	Internal Standard %R	365.2%	25% to 150%	0.0000020 J	
						2,3,4,6,7,8-HxCDF	Internal Standard %R	332.0%	25% to 150%	0.00000411	
						1,2,3,4,6,7,8-HpCDF	Internal Standard V-R	222.6%	25% to 150%	0.0000111	
						11,2,3,4,0,7,8-13pCDF	Time of the same of the				
Cyanide .									T		
9801017	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No						
9801047	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No						1
Sulfide										1	
9801017	EXAMPLE-SS-1 (0 - 0.5)	1/1/97	Soil	Tier II	No						
9801017	EXAMPLE-SS-1 (0.5 - 1)	1/1/97	Soil	Tier II	No				NOONE STORAGE STATE VALUE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF S	Lances	NAME OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY.



## Attachment A

Laboratory Qualifications for Northeast Analytical Services, Inc.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised March 05, 2007

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT E. WAGNER NORTHEAST ANALYTICAL INC 2190 TECHNOLOGY DRIVE SCHENECTADY, NY 12308

NY Lab Id No. 11078 EPA Lab Code: NY00906

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved analytes are listed below:

	Chlorinated Hydrocarbon Pesticides	
EPA 8270	Dieldrin	EPA 8081A
	Endosulfan I	EPA 608
EPA 625		EPA 8081A
	Endosulfan II	EPA 608
		EPA 8081A
	Endosulfan sulfate	EPA 608
EPA 608		EPA 8081A
EPA 8081A	Endrin	EPA 608
EPA 608		EPA 8081A
EPA 8081A	Endrin aldehyde	EPA 608
EPA 608		EPA 8081A
EPA 8081A	Heptachlor	EPA 608
EPA 608		EPA 8081A
EPA 8081A	Heptachlor epoxide	EPA 608
EPA 608		EPA 8081A
EPA 8081A	Lindane	EPA 608
EPA 608		EPA 8081A
EPA 8081A	Methoxychlor	EPA 608
EPA 608		EPA 8081A
EPA 8081A	Toxaphene	EPA 608
EPA 608		EPA 8081A
EPA 8081A		
EPA 608		
	EPA 625 EPA 8270  EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608	EPA 8270  EPA 625 EPA 8270  Endosulfan II  EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A EPA 608 EPA 8081A Toxaphene EPA 608 EPA 8081A

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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Chlorinated Hydrocarbons		Haloethers	
1,2,4-Trichlorobenzene	EPA 625	4-Chlorophenylphenyl ether	EPA 625
	EPA 8270		EPA 8270
2-Chloronaphthalene	EPA 625	Bis (2-chloroisopropyl) ether	EPA 625
	EPA 8270		EPA 8270
Hexachlorobenzene	EPA 625	Bis(2-chloroethoxy)methane	EPA 625
	EPA 8270		EPA 8270
Hexachlorobutadiene	EPA 625	Bis(2-chloroethyl)ether	EPA 625
	EPA 8270		EPA 8270
Hexachlorocyclopentadiene	EPA 625	Mineral	
	EPA 8270		==
Hexachloroethane	EPA 625	Calcium Hardness	EPA 200.7
	EPA 8270	Hardness, Total	EPA 200.7
Chlorophenoxy Acid Pesticides		Nitroaromatics and Isophorone	
2,4,5-TP (Silvex)	EPA 8151A	2,4-Dinitrotoluene	EPA 625
2,4-D	EPA 8151A		EPA 8270
		2,6-Dinitrotoluene	EPA 625
Fuel Oxygenates			EPA 8270
Methyl tert-butyl ether	EPA 8260B	Isophorone	EPA 625
t-Butyl alcohol	EPA 8260B		EPA 8270
Haloethers		Nitrobenzene	EPA 625
4-Bromophenylphenyl ether	EPA 625		EPA 8270
, D. G. Top Hony phony to the	EPA 8270		
	EFA 02/U		

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Nitrosoamines		Polychlorinated Biphenyls	
N-Nitrosodi-n-propylamine	EPA 625	PCB-1232	EPA 608
	EPA 8270		EPA 8082
N-Nitrosodiphenylamine	EPA 625	PCB-1242	EPA 608
	EPA 8270		EPA 8082
Phthalate Esters		PCB-1248	EPA 608
Benzyl butyl phthalate	EPA 625		EPA 8082
	EPA 8270	PCB-1254	EPA 608
Bis(2-ethylhexyl) phthalate	EPA 625	<b>***</b>	EPA 8082
• • •	EPA 8270	PCB-1260	EPA 608
Diethyl phthalate	EPA 625		EPA 8082
	EPA 8270	Polynuclear Aromatics	
Dimethyl phthalate	EPA 625	Acenaphthene	EPA 625
	EPA 8270		EPA 8270
Di-n-butyl phthalate	EPA 625	Acenaphthylene	EPA 625
	EPA 8270		EPA 8270
Di-n-octyl phthalate	EPA 625	Anthracene	EPA 625
	EPA 8270		EPA 8270
Polychlorinated Biphenyls		Benzo(a)anthracene	EPA 625
PCB-1016	EPA 608		EPA 8270
1 025-1010	EPA 8082	Benzo(a)pyrene	EPA 625
PCB-1221	EPA 608		EPA 8270
, 00 (22)	EPA 8082	Benzo(b)fluoranthene	EPA 625
	EFA 0002		

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All approved analytes are listed below:

Polynuclear Aromatics		Priority Pollutant Phenols	
Benzo(b)fluoranthene	EPA 8270	2,4,5-Trichlorophenol	EPA 625
Benzo(ghi)perylene	EPA 625		EPA 8270
	EPA 8270	2,4,6-Trichlorophenol	EPA 625
Benzo(k)fluoranthene	EPA 625		EPA 8270
	EPA 8270	2,4-Dichlorophenol	EPA 625
Chrysene	EPA 625		EPA 8270
	EPA 8270	2,4-Dimethylphenol	EPA 625
Dibenzo(a,h)anthracene	EPA 625		EPA 8270
	EPA 8270	2,4-Dinitrophenol	EPA 625
Fluoranthene	EPA 625		EPA 8270
	EPA 8270	2-Chlorophenol	EPA 625
Fluorene	EPA 625		EPA 8270
	EPA 8270	2-Methyl-4,6-dinitrophenol	EPA 625
Indeno(1,2,3-cd)pyrene	EPA 625		EPA 8270
	EPA 8270	2-Nitrophenol	EPA 625
Naphthalene	EPA 625		EPA 8270
	EPA 8270	4-Chloro-3-methylphenol	EPA 625
Phenanthrene	EPA 625		EPA 8270
	EPA 8270	4-Nitrophenol	EPA 625
Pyrene	EPA 625		EPA 8270
	EPA 8270	Cresols, Total	EPA 8270
		Pentachlorophenol	EPA 625
			EPA 8270

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Priority Pollutant Phenois		Purgeable Aromatics	
Phenol	EPA 625	Benzene	EPA 624
	EPA 8270		EPA 8021B
Purgeable Aromatics			EPA 8260B
		Chlorobenzene	EPA 624
1,2-Dichlorobenzene	EPA 602		EPA 8260B
	EPA 624	Ethyl benzene	EPA 602
	EPA 625	201/201/201/0	EPA 624
	EPA 8021B		
	EPA 8260B		EPA 8021B
	EPA 8270	<b></b> .	EPA 8260B
1,3-Dichlorobenzene	EPA 602	Toluene	EPA 602
	EPA 624		EPA 624
	EPA 625		EPA 8021B
			EPA 8260B
	EPA 8021B	Total Xylenes	EPA 602
	EPA 8260B		EPA 624
	EPA 8270		EPA 8021B
1,4-Dichlorobenzene	EPA 602		EPA 8260B
	EPA 624		EFA 0200D
	EPA 625	Purgeable Halocarbons	
	EPA 8021B	1,1,1-Trichloroethane	EPA 624
	EPA 8260B		EPA 8260B
	EPA 8270	1,1,2,2-Tetrachloroethane	EPA 624
Benzene	EPA 602		EPA 8260B

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All approved analytes are listed below:

Purgeable Halocarbons		Purgeable Halocarbons	
1,1,2-Trichloroethane	EPA 624	Chloroform	EPA 8260B
	EPA 8260B	Chloromethane	EPA 624
1,1-Dichloroethane	EPA 624		EPA 8260B
	EPA 8260B	cis-1,2-Dichloroethene	EPA 624
1,1-Dichloroethene	EPA 624		EPA 8260B
	EPA 8260B	cis-1,3-Dichloropropene	EPA 624
1,2-Dichloroethane	EPA 624		EPA 8260B
	EPA 8260B	Dibromochloromethane	EPA 624
1,2-Dichloropropane	EPA 624		EPA 8260B
	EPA 8260B	Dichlorodifluoromethane	EPA 624
2-Chloroethylvinyl ether	EPA 624		EPA 8260B
	EPA 8260B	Methylene chloride	EPA 624
Bromodichloromethane	EPA 624		EPA 8260B
	EPA 8260B	Tetrachioroethene	EPA 624
Bromoform	EPA 624		EPA 8021B
	EPA 8260B		EPA 8260B
Bromomethane	EPA 624	trans-1,2-Dichloroethene	EPA 624
	EPA 8260B		EPA 8260B
Carbon tetrachloride	EPA 624	trans-1,3-Dichloropropene	EPA 624
	EPA 8260B		EPA 8260B
Chloroethane	EPA 624	Trichloroethene	EPA 624
	EPA 8260B		EPA 8021B
Chloroform	EPA 624		EPA 8260B

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All approved analytes are listed below:

Purgeable Halocarbons		Wastewater Metals !	
Trichlorofluoromethane	EPA 624	Copper, Total	EPA 6010B
	EPA 8260B	Iron, Total	EPA 200.7
Vinyl chloride	EPA 624		EPA 6010B
	EPA 8260B	Lead, Total	EPA 200.7
Purgeable Organics			EPA 200.9
2-Butanone (Methylethyl ketone)	EPA 8260B		EPA 239.2
,	E1 A 0200B		EPA 6010B
Residue			EPA 7421
Solids, Total	EPA 160.3	Magnesium, Total	EPA 200.7
Solids, Total Dissolved	EPA 160.1		EPA 6010B
Solids, Total Suspended	EPA 160.2	Manganese, Total	EPA 200.7
Wastewater Metals I			EPA 6010B
		Nickel, Total	EPA 200.7
Barium, Total	EPA 200.7		EPA 6010B
~ · · · · · · · · · · · · · · · · · · ·	EPA 6010B	Potassium, Total	EPA 200.7
Cadmium, Total	EPA 200.7		EPA 6010B
	EPA 213.2	Silver, Total	EPA 200.7
	EPA 6010B		EPA 6010B
Calcium, Total	EPA 200.7	Sodium, Total	EPA 200.7
	EPA 6010B		EPA 6010B
Chromium, Total	EPA 200.7	Strontium, Total	EPA 200.7
	EPA 6010B	•	EPA 6010B
Copper, Total	EPA 200.7		

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Wastewater Metals II		Wastewater Metals III	
Aluminum, Total	EPA 200.7	Cobalt, Total	EPA 200.7
	EPA 6010B		EPA 6010B
Antimony, Total	EPA 200.7	Molybdenum, Total	EPA 200.7
	EPA 6010B		EPA 6010B
Arsenic, Total	EPA 200.7	Thallium, Total	EPA 200.7
	EPA 200.9		EPA 200.9
	EPA 6010B		EPA 6010B
Beryllium, Total	EPA 200.7	Tìn, Total	EPA 200.7
Chromium VI	EPA 7196A		EPA 6010B
	SM 18-19 3500-Cr D	Titanium, Total	EPA 200.7
	SM 20 3500-Cr B		EPA 6010B
Mercury, Total	EPA 245.2	Wastewater Miscellaneous	
	EPA 7470A		
Selenium, Total	EPA 200.7	Boron, Total	EPA 200.7
	EPA 270.2		EPA 6010B
	EPA 6010B	Hydrogen Ion (pH)	EPA 150.1
	EPA 7740		EPA 9040B
Vanadium, Total	EPA 200.7	Oil & Grease Total Recoverable	EPA 1664A
	EPA 6010B	Organic Carbon, Total	EPA 415.1
Zinc, Total	EPA 200.7		
	EPA 6010B		

Sample Preparation Methods

EPA 3010A

**EPA 3005A** 

EPA 3020A

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Characteristic Testing		Chlorinated Hydrocarbon Pesticides	
Ignitability	EPA 1010	Toxaphene	EPA 8081A
Reactivity	EPA 1030 SW-846 Ch7, Sec. 7.3	Chlorinated Hydrocarbons	
·		1,2,4-Trichlorobenzene	EPA 8270
Chlorinated Hydrocarbon Pesticides		2-Chloronaphthalene	EPA 8270
4,4'-DDD	EPA 8081A	Hexachlorobenzene	EPA 8270
4,4'-DDE	EPA 8081A	Hexachlorobutadiene	EPA 8270
4,4'-DDT	EPA 8081A	Hexachlorocyclopentadiene	EPA 8270
Aldrin	EPA 8081A	Hexachloroethane	EPA 8270
alpha-BHC	EPA 8081A	Haloethers	
beta-BHC	EPA 8081A		
Chlordane Total	EPA 8081A	4-Bromophenylphenyl ether	EPA 8270
delta-BHC	EPA 8081A	4-Chlorophenylphenyl ether	EPA 8270
Dieldrin	EPA 8081A	Bis (2-chloroisopropyl) ether	EPA 8270
Endosulfan i	EPA 8081A	Bis(2-chloroethoxy)methane	EPA 8270
Endosulfan II	EPA 8081A	Metals I	
Endosulfan sulfate	EPA 8081A	Barium, Total	EPA 6010B
Endrin	EPA 8081A	Cadmium, Total	EPA 6010B
Endrin aldehyde	EPA 8081A	Calcium, Total	EPA 6010B
Heptachlor	EPA 8081A	Chromium, Total	EPA 6010B
Heptachlor epoxide	EPA 8081A	Copper, Total	EPA 6010B
Lindane	EPA 8081A	Iron, Total	EPA 6010B
Methoxychlor	EPA 8081A	Lead, Total	EPA 6010B

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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Metals I		Miscellaneous	
Magnesium, Total	EPA 6010B	Hydrogen Ion (pH)	EPA 9040B
Manganese, Total	EPA 6010B		EPA 9045C
Nickel, Total	EPA 6010B	Lead in Paint	EPA 6010B
Potassium, Total	EPA 6010B	Oil & Grease Total Recoverable	EPA 9070
Silver, Total	EPA 6010B	Nitroaromatics and Isophorone	
Sodium, Total	EPA 6010B	·	EDA 2070
		2,4-Dinitrotoluene	EPA 8270
Metals II		2,6-Dinitrotoluene	EPA 8270
Aluminum, Total	EPA 6010B	Isophorone	EPA 8270
Antimony, Total	EPA 6010B	Nitrobenzene	EPA 8270
Arsenic, Total	EPA 6010B	Nitrosoamines	
Beryllium, Total	EPA 6010B		
Chromium VI	EPA 7196A	N-Nitrosodi-n-propylamine	EPA 8270
Mercury, Total	EPA 7471A	Phthalate Esters	
Selenium, Total	EPA 6010B	Benzyl butyl phthalate	EPA 8270
Vanadium, Total	EPA 6010B	Bis(2-ethylhexyl) phthalate	EPA 8270
Zinc, Total	EPA 6010B	Diethyl phthalate	EPA 8270
Metals III		Dimethyl phthalate	EPA 8270
Cobalt, Total	EPA 6010B	Di-n-butyl phthalate	EPA 8270
Molybdenum, Total		Di-n-octyl phthalate	EPA 8270
•	EPA 6010B		
Thallium, Total	EPA 6010B	Polychlorinated Biphenyls	
Tin, Total	EPA 6010B	PCB-1016	EPA 8082

Serial No.: 31933





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised March 05, 2007

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT E. WAGNER NORTHEAST ANALYTICAL INC 2190 TECHNOLOGY DRIVE SCHENECTADY, NY 12308 NY Lab Id No: 11078 EPA Lab Code: NY00906

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Polychlorinated Biphenyls		Polynuclear Aromatic Hydrocarb	ons
PCB-1221	EPA 8082	Pyrene	EPA 8270
PCB-1232	EPA 8082	Deignite, Ballistant Bhanala	
PCB-1242	EPA 8082	Priority Pollutant Phenols	
PCB-1248	EPA 8082	2,4,5-Trichlorophenol	EPA 8270
PCB-1254	EPA 8082	2,4,6-Trichlorophenol	EPA 8270
PCB-1260	EPA 8082	2,4-Dichlorophenol	EPA 8270
	_	2,4-Dimethylphenol	EPA 8270
Polynuclear Aromatic Hydrocar	bons	2,4-Dinitrophenol	EPA 8270
Acenaphthene	EPA 8270	2-Chlorophenol	EPA 8270
Acenaphthylene	EPA 8270	2-Methyl-4,6-dinitrophenol	EPA 8270
Anthracene	EPA 8270	2-Methylphenol	EPA 8270
Benzo(a)anthracene	EPA 8270	2-Nitrophenol	EPA 8270
Benzo(a)pyrene	EPA 8270	4-Chloro-3-methylphenol	EPA 8270
Benzo(b)fluoranthene	EPA 8270	4-Nitrophenol	EPA 8270
Benzo(ghi)perylene	EPA 8270	Pentachlorophenol	EPA 8270
Benzo(k)fluoranthene	EPA 8270	Phenol	EPA 8270
Chrysene	EPA 8270	Diseasable Assessing	
Dibenzo(a,h)anthracene	EPA 8270	Purgeable Aromatics	
Fluoranthene	EPA 8270	1,2,4-Trimethylbenzene	EPA 8021B
Fluorene	EPA 8270		EPA 8260B
Indeno(1,2,3-cd)pyrene	EPA 8270	1,2-Dichlorobenzene	EPA 8260B
Naphthalene	EPA 8270	1,3,5-Trimethylbenzene	EPA 8021B
Phenanthrene	EPA 8270	•	EPA 8260B
		1,3-Dichlorobenzene	EPA 8260B

Serial No.: 31933





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised March 05, 2007

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Purgeable Aromatics		Purgeable Halocarbons	
1,4-Dichlorobenzene	EPA 8260B	1,1,1,2-Tetrachloroethane	EPA 8260B
Benzene	EPA 8021B	1,1,1-Trichloroethane	EPA 8260B
	EPA 8260B	1,1,2,2-Tetrachloroethane	EPA 8260B
Chlorobenzene	EPA 8260B	1,1,2-Trichloroethane	EPA 8260B
Ethyl benzene	EPA 8021B	1,1-Dichloroethane	EPA 8260B
	EPA 8260B	1,1-Dichloroethene	EPA 8260B
Isopropylbenzene	EPA 8021B	1,2-Dichloroethane	EPA 8260B
	EPA 8260B	1,2-Dichloropropane	EPA 8260B
n-Butylbenzene	EPA 8021B	2-Chloroethylvinyl ether	EPA 8260B
	EPA 8260B	Bromodichloromethane	EPA 8260B
n-Propylbenzene	EPA 8021B	Bromoform	EPA 8260B
	EPA 8260B	Bromomethane	EPA 8260B
p-Isopropyltoluene (P-Cymene)	EPA 8021B	Carbon tetrachloride	EPA 8260B
	EPA 8260B	Chloroethane	EPA 8260B
sec-Butylbenzene	EPA 8021B	Chloroform	EPA 8260B
	EPA 8260B	Chloromethane	EPA 8260B
Styrene	EPA 8260B	cis-1,3-Dichloropropene	EPA 8260B
tert-Butylbenzene	EPA 8021B	Dibromochloromethane	EPA 8260B
	EPA 8260B	Dichlorodifluoromethane	EPA 8260B
Toluene	EPA 8021B	Methylene chloride	EPA 8260B
	EPA 8260B	Tetrachloroethene	EPA 8260B
Total Xylenes	EPA 8021B	trans-1,3-Dichloropropene	EPA 8260B
	EPA 8260B	Tríchloroethene	EPA 8260B

Serial No.: 31933





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised March 05, 2007

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NY Lab Id No: 11078 EPA Lab Code: NY00906

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#### Purgeable Halocarbons

Trichlorofluoromethane EPA 8260B Vinyl chloride EPA 8260B

**Purgeable Organics** 

4-Methyl-2-Pentanone EPA 82608
Methyl tert-butyl ether EPA 80218
EPA 82608

Semi-Volatile Organics

Dibenzofuran EPA 8270

Sample Preparation Methods

EPA 1310 EPA 1311

Serial No.: 31933



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised October 23, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT E. WAGNER NORTHEAST ANALYTICAL INC 2190 TECHNOLOGY DRIVE SCHENECTADY, NY 12308 NY Lab Id No: 11078 EPA Lab Code: NY00906

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below:

Drinking Water Metals I		Volatile Aromatics	
Arsenic, Total	EPA 200.9	1,2,3-Trichlorobenzene	EPA 502.2
Barium, Total	EPA 200.7	1,2,4-Trichlorobenzene	EPA 502.2
Cadmium, Total	EPA 200.7	1,2,4-Trimethylbenzene	EPA 502.2
Chromium, Total	EPA 200.7	1,2-Dichlorobenzene	EPA 502.2
Copper, Total	EPA 200.7	1,3,5-Trimethylbenzene	EPA 502.2
Iron, Total	EPA 200.7	1,3-Dichlorobenzene	EPA 502.2
Lead, Total	EPA 200.9	1,4-Dichlorobenzene	EPA 502.2
Manganese, Total	EPA 200.7	2-Chlorotoluene	EPA 502.2
Mercury, Total	EPA 245.2	4-Chlorotoluene	EPA 502.2
Selenium, Total	EPA 200.9	Benzene	EPA 502.2
Silver, Total	EPA 200.7	Bromobenzene	EPA 502.2
Zinc, Total	EPA 200.7	Chlorobenzene	EPA 502.2
Drinking Water Metals II		Ethyl benzene	EPA 502.2
Antimony, Total	EPA 200.9	Hexachlorobutadiene	EPA 502.2
Nickel, Total	EPA 200.7	Isopropylbenzene	EPA 502.2
Thallium, Total	EPA 200.9	n-Butylbenzene	EPA 502.2
·	2177200.0	n-Propylbenzene	EPA 502.2
Drinking Water Metals III		p-Isopropyltoluene (P-Cymene)	EPA 502.2
Sodium, Total	EPA 200.7	sec-Butylbenzene	EPA 502.2
Drinking Water Non-Metals		Styrene	EPA 502.2
Hydrogen Ion (pH)	EPA 150.1	tert-Butylbenzene	EPA 502.2
		Toluene	EPA 502.2
		Total Xylenes	EPA 502.2

Serial No.: 31050



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised October 23, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT E. WAGNER NORTHEAST ANALYTICAL INC 2190 TECHNOLOGY DRIVE SCHENECTADY, NY 12308 NY Lab Id No: 11078 EPA Lab Code: NY00906

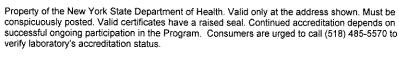
is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below:

#### Volatile Halocarbons

Tetrachloroethene EPA 502.2
Trìchloroethene EPA 502.2

Serial No.: 31050







Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised January 29, 2007

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ROBERT E. WAGNER NORTHEAST ANALYTICAL INC 2190 TECHNOLOGY DRIVE SCHENECTADY, NY 12308 NY Lab Id No: 11078 EPA Lab Code: NY00906

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:

#### Polychlorinated Biphenyls

PCB-1016	EPA TO-10A
PCB-1221	EPA TO-10A
PCB-1232	EPA TO-10A
PCB-1242	EPA TO-10A
PCB-1248	EPA TO-10A
PCB-1254	EPA TO-10A
PCB-1260	EPA TO-10A

Serial No.: 31743



# Attachment B

Laboratory Qualifications for SGS Environmental Services, Inc.



MITT ROMNEY Governor

KERRY HEALEY Lieutenant Governor

# COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Senator William X. Wall Experiment Station

ROBERT W. GOLLEDGE, Jr. Secretary

ARLEEN O"DONNELL Commissioner

October 11, 2006

Certified Mail # 7004 2510 0001 6607 1020

Mr. Mike Larkins SGS-Paradigm Analytical Laboratories, Inc. 5500 Business Dr Wilmington NC 28405

RE: Final Action on Certification Application for Initial Certification of Chemical Laboratory

AT: SGS-Paradigm Analytical Laboratories, Inc.

5500 Business Dr Wilmington NC 28405

Transmittal Number: W075862

Dear Mr. Larkins:

Enclosed is your Massachusetts certification as an environmental analysis laboratory. This certificate is in effect through June 30, 2007, and is subject to revision throughout the year to reflect your laboratory's performance on proficiency tests and the status of your certification in your resident state. Please examine the certificate and certified parameter list carefully to ensure that the categories and analytes for which your laboratory is approved appear correct. In addition, please verify the accuracy of your laboratory name, address, telephone number, and director.

Certification is not possible for aluminum in non-potable water and polychlorinated biphenyls in oil because the laboratory did not achieve a sufficient number of acceptable results in proficiency test studies.

Please display the certified parameter list with your certificate. Your certificate is valid only when accompanied by the latest dated certified parameter list, as issued by the Massachusetts DEP.

Renewal of this certificate is contingent upon timely receipt of the results of your participation in NIST-approved water supply and water pollution proficiency test studies. Satisfactory results must be achieved in the analyte categories and methods for which certification is requested. In addition, you are required to submit to this office current copies of your resident state certificate and resident state on-site audit report as renewals occur. Any change in the status of your resident state certification must be reported immediately to this office.

# COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of:

10 OCT 2006

M-NC919

SGS-PARADIGM ANALYTICAL LABORATORIES INC WILMINGTON NC

NON POTABLE WATER (CHEMIST	ΓRY)	Effective Date	10 OCT 2006	Expiration Date	30 JUN 2007
Analytes an	d Methods				
ANTIMONY	EPA 200.7				
ARSENIC	EPA 200.7				
BERYLLIUM	EPA 200.7				
CADMIUM	EPA 200.7				
CHROMIUM	EPA 200.7				
COBALT	EPA 200.7				
COPPER	EPA 200.7				
IRON	EPA 200.7				
LEAD	EPA 200.7				
MANGANESE	EPA 200.7				
MERCURY	EPA 245.1				
MOLYBDENUM	EPA 200.7				
NICKEL	EPA 200.7				
SELENIUM	EPA 200.7				
SILVER	EPA 200.7				
STRONTIUM	EPA 200.7				
THALLIUM	EPA 200.7				
TITANIUM	EPA 200.7				
VANADIUM	EPA 200.7				
ZINC	EPA 200.7				
PH	EPA 150.1				
CALCIUM	EPA 200.7				
MAGNESIUM	EPA 200.7				
SODIUM	EPA 200.7				
POTASSIUM	EPA 200.7				
VOLATILE HALOCARBONS	EPA 601				
VOLATILE HALOCARBONS	EPA 624				
VOLATILE AROMATICS	EPA 602				
VOLATILE AROMATICS	EPA 624				
CHLORDANE	EPA 608				
ALDRIN	EPA 608				
DIELDRIN	EPA 608				
DDD	EPA 608				
DDE	EPA 608				
DDT	EPA 608				
HEPTACHLOR	EPA 608				
HEPTACHLOR EPOXIDE	EPA 608				
POLYCHLORINATED BIPHENYLS (WATER	EPA 608				





### Department of Environmental Protection

Division of Environmental Analysis Senator William X. Wall Experiment Station

### certifies

M-NC919

SGS-PARADIGM ANALYTICAL LABORATORIES INC

5500 BUSINESS DR

**WILMINGTON, NC 28405-0000** 

Laboratory Director: MIKE LARKINS

for the analysis of NON POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued:

10 OCT 2006

Expires:

30 JUN 2007

Director, Division of Environmental Analysis

Vacar Q. Parcarla



Wadsworth Center

The Governor Nelson A. Rockefeller Empire State Plaza P.O. BOX 509

Albany, New York 12201-0509

Antonia C. Novello, M.D., M.P.H., Dr.P.H.

Commissioner

Dennis P. Whalen **Executive Deputy Commissioner** 

LAB ID: 11685

April 03, 2006

MR. W MICHAEL LARKINS PARADIGM ANALYTICAL LABORATORIES 5500 BUSINESS DRIVE WILMINGTON, NC 28405

Certificate Expiration Date: April 01, 2007

Dear Mr. Larkins,

Enclosed are the ELAP and/or NELAP Certificate(s) of Approval issued to your environmental laboratory for the current permit year. The Certificate(s) supersede any previously issued and is(are) in effect through the expiration date listed above. Please carefully examine the Certificate(s) to insure that the categories, subcategories, analytes and methods for which your laboratory is approved are listed correctly, as well as verifying your laboratory's name, address, lead technical director and identification number.

Pursuant to regulation (Part 55-2 NYCRR), original certificates must be posted conspicuously in the laboratory and shall, upon request, be made available to any client of the laboratory. Certificates remain the property of the New York State Department of Health and must be surrendered promptly on demand.

Please note, pursuant to Section 55-2.5(a) NYCRR, any misrepresentation of the Fields of Accreditation (Matrix - Method - Analyte) for which your laboratory is approved may result in denial, suspension, or revocation of your certification. Any use of the ELAP or NELAP name, reference to the laboratory's approval status and/or using the NELAC/NELAP logo in any catalogs, advertising, business solicitations, proposals, quotations, laboratory analytical reports or other materials must include the laboratory's ELAP identification number, and must distinguish between proposed testing for which the laboratory is approved and the proposed testing for which the laboratory is not approved.

Please notify the ELAP office of any changes you feel need to be made to your Certificate(s). We may be reached via email to elap@health.state.ny.us or by calling (518) 485-5570.

Sincerely.

Joyce Reilly

**Program Administrator Environmental Laboratory** 

Approval Program

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. W MICHAEL LARKINS PARADIGM ANALYTICAL LABORATORIES 5500 BUSINESS DRIVE WILMINGTON, NC 28405 NY Lab Id No: 11685 EPA Lab Code: NC00919

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

### **Drinking Water Miscellaneous**

2,3,7,8-Tetrachlorodibenzo-p-dioxin

**EPA 1613** 

Serial No.: 29715



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Acrylates		Chlorinated Hydrocarbon Pesticide	es
Acrolein (Propenal)	EPA 8260B	Endosulfan I	EPA 8081A
Acrylonitrile	EPA 8260B	Endosulfan II	EPA 8081A
Amines		Endosulfan sulfate	EPA 8081A
2-Nitroaniline	EPA 8270C	Endrin	EPA 8081A
3-Nitroaniline	EPA 8270C	Endrin aldehyde	EPA 8081A
4-Chloroaniline	EPA 8270C	Endrin Ketone	EPA 8081A
4-Nitroaniline	EPA 8270C	gamma-Chlordane	EPA 8081A
Pyridine	EPA 8270C	Heptachlor	EPA 8081A
•	217(02700	Heptachlor epoxide	EPA 8081A
Benzidines		Lindane	EPA 8081A
3,3' -Dichlorobenzidine	EPA 8270C	Methoxychlor	EPA 8081A
Benzidine	EPA 8270C	Toxaphene	EPA 8081A
Chlorinated Hydrocarbon Pesticio	ies	Chlorinated Hydrocarbons	
4,4'-DDD	EPA 8081A	Hexachlorobenzene	EPA 8270C
4,4'-DDE	EPA 8081A	Hexachlorobutadiene	EPA 8270C
4,4'-DDT	EPA 8081A	Hexachlorocyclopentadiene	EPA 8270C
Aldrin	EPA 8081A	Hexachloroethane	EPA 8270C
alpha-BHC	EPA 8081A		
alpha-Chlordane	EPA 8081A	Chlorophenoxy Acid Pesticides	
beta-BHC	EPA 8081A	2,4,5-T	EPA 8151A
Chlordane Total	EPA 8081A	2,4,5-TP (Silvex)	EPA 8151A
delta-BHC	EPA 8081A	2,4-D	EPA 8151A
Dieldrin	EPA 8081A	Dalapon	EPA 8151A

**Serial No.: 29716** 



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Chlorophenoxy Acid Pesticides		Nitrosoamines	
Dicamba	EPA 8151A	N-Nitrosodimethylamine	EPA 8270C
Dinoseb	EPA 8151A	N-Nitrosodi-n-propylamine	EPA 8270C
Dioxins		N-Nitrosodiphenylamine	EPA 8270C
2,3,7,8-Tetrachlorodibenzo-p-dioxin	EPA 1613	Nutrient	
Fuel Oxygenates		Nitrate (as N)	EPA 300.0
Methyl tert-butyl ether	EPA 8260B	Nitrite (as N)	EPA 300.0
t-Butyl alcohol	EPA 8260B	Orthophosphate (as P)	EPA 300.0
Haloethers		Phthalate Esters	
4-Chlorophenylphenyl ether	EPA 8270C	Benzyl butyl phthalate	EPA 8270C
Bis (2-chloroisopropyl) ether	EPA 8270C	Bis(2-ethylhexyl) phthalate	EPA 8270C
Bis(2-chloroethoxy)methane	EPA 8270C	Diethyl phthalate	EPA 8270C
Bis(2-chloroethyl)ether	EPA 8270C	Dimethyl phthalate	EPA 8270C
•	LI NOLI OC	Di-n-butyl phthalate	EPA 8270C
Microextractables		Di-n-octyl phthalate	EPA 8270C
1,2-Dibromoethane	EPA 8011	Polychlorinated Biphenyls	
Mineral		2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	EPA 1668 A
Chloride	EPA 300.0	2,2',3,3',4,4',5-Heptachlorobiphenyl	EPA 1668 A
Fluoride, Total	EPA 300.0	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	EPA 1668 A
Sulfate (as SO4)	EPA 300.0	2,2',3,3',5,5',6,6'-Octachlorobiphenyl	EPA 1668 A
Nitroaromatics and Isophorone		2,2',3,4,4',5,5'-Heptachlorobiphenyl	EPA 1668 A
Isophorone	EPA 8270C	2,2',3,4,4',5',6-Heptachlorobiphenyl	EPA 1668 A
Nitrobenzene	EPA 8270C	2,2',3,4,4',5'-Hexachlorobiphenyl	EPA 1668 A

Serial No.: 29716



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Polychlorinated Biphenyls		Polychlorinated Biphenyls	
2,2',3,4',5,5',6-Heptachlorobiphenyl	EPA 1668 A	2,3,4,4',5-Pentachlorobiphenyl	EPA 1668 A
2,2',3,4,5,5'-Hexachlorobiphenyl	EPA 1668 A	2,3',4,4',5-Pentachlorobiphenyl	EPA 1668 A
2,2',3,4',5,6,6'-Heptachlorobiphenyl	EPA 1668 A	2,3',4,4'-Tetrachlorobiphenyl	EPA 1668 A
2,2',3,4,5'-Pentachlorobiphenyl	EPA 1668 A	2,3-Dichlorobiphenyl	EPA 1668 A
2,2',3,5,5',6-Hexachlorobiphenyl	EPA 1668 A	2,4',5-Trichlorobiphenyl	EPA 1668 A
2,2',3,5'-Tetrachlorobiphenyl	EPA 1668 A	2-Chlorobiphenyl	EPA 1668 A
2,2',4,4',5,5-Hexachlorobiphenyl	EPA 1668 A	3,3',4,4',5,5'-Hexachlorobiphenyl	EPA 1668 A
2,2',4,4',6,6'-Hexachlorobiphenyl	EPA 1668 A	3,3',4,4',5-Pentachlorobiphenyl	EPA 1668 A
2,2',4,5,5'-Pentachlorobiphenyl	EPA 1668 A	3,3',4,4'-Tetrachlorobiphenyl	EPA 1668 A
2,2',4,6,6'-Pentachlorobiphenyl	EPA 1668 A	3,4,4',5-Tetrachlorobiphenyl	EPA 1668 A
2,2',5,5'-Tetrachlorobiphenyl	EPA 1668 A	3,4,4'-Trchlorobiphenyl	EPA 1668 A
2,2',5-Trichlorobiphenyl	EPA 1668 A	4,4'-Dichlorobiphenyl	EPA 1668 A
2,2',6,6'-Tetrachlorobiphenyl	EPA 1668 A	4-Chlorobiphenyl	EPA 1668 A
2,2',6-Trichlorobiphenyl	EPA 1668 A	Decachlorobiphenyl	EPA 1668 A
2,2'-dichlorobiphenyl	EPA 1668 A	PCB-1016	EPA 8082
2,3,3',4,4',5,5',6-Octachlorobiphenyl	EPA 1668 A	PCB-1221	EPA 8270C
2,3,3',4,4',5,5'-Heptachlorobiphenyl	EPA 1668 A	PCB-1232	EPA 8082
2,3,3',4,4',5'-Hexachlorobiphenyl	EPA 1668 A	PCB-1242	EPA 8082
2,3,3',4,4',5-Hexachlorobiphenyl	EPA 1668 A	PCB-1248	EPA 8082
2,3,3',4,4'-Pentachlorobiphenyl	EPA 1668 A	PCB-1254	EPA 8082
2,3,3',4,6-Pentachlorobiphenyl	EPA 1668 A	PCB-1260	EPA 8082
2,3',4,4',5,5'-Hexachlorobiphenyl	EPA 1668 A	Polynuclear Aromatics	
2,3',4,4',5'-Pentachlorobiphenyl	EPA 1668 A	Acenaphthene	EPA 8270C

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Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. W MICHAEL LARKINS PARADIGM ANALYTICAL LABORATORIES 5500 BUSINESS DRIVE WILMINGTON, NC 28405 NY Lab Id No: 11685 EPA Lab Code: NC00919

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Polynuclear Aromatics		Priority Pollutant Phenols	
Acenaphthylene	EPA 8270C	2-Methylphenol	EPA 8270C
Anthracene	EPA 8270C	2-Nitrophenol	EPA 8270C
Benzo(a)anthracene	EPA 8270C	4-Chloro-3-methylphenol	EPA 8270C
Benzo(a)pyrene	EPA 8270C	4-Methylphenol	EPA 8270C
Benzo(b)fluoranthene	EPA 8270C	4-Nitrophenol	EPA 8270C
Benzo(ghi)perylene	EPA 8270C	Pentachlorophenol	EPA 8270C
Benzo(k)fluoranthene	EPA 8270C	Phenol	EPA 8270C
Chrysene	EPA 8270C	Purgeable Aromatics	
Dibenzo(a,h)anthracene	EPA 8270C	1,2-Dichlorobenzene	EPA 8260B
Fluoranthene	EPA 8270C	1,3-Dichlorobenzene	EPA 8260B
Fluorene	EPA 8270C	1,4-Dichlorobenzene	EPA 8260B
Indeno(1,2,3-cd)pyrene	EPA 8270C	Benzene	EPA 8260B
Naphthalene	EPA 8270C	Chlorobenzene	EPA 8260B
Phenanthrene	EPA 8270C	Ethyl benzene	EPA 8260B
Pyrene	EPA 8270C	Styrene	EPA 8260B
Priority Pollutant Phenois		Toluene	EPA 8260B
2,4,5-Trichlorophenol	EPA 8270C	Total Xylenes	EPA 8260B
2,4,6-Trichlorophenol	EPA 8270C	Purgeable Halocarbons	
2,4-Dichlorophenol	EPA 8270C	1,1,1,2-Tetrachloroethane	EPA 8260B
2,4-Dimethylphenol	EPA 8270C	1,1,1-Trichloroethane	EPA 8260B
2,4-Dinitrophenol	EPA 8270C	1,1,2,2-Tetrachloroethane	EPA 8260B
2-Chlorophenol	EPA 8270C	1,1,2-Trichloroethane	EPA 8260B
2-Methyl-4,6-dinitrophenol	EPA 8270C	i, i,2: monorounano	2. / (02000

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Purgeable Halocarbons		Purgeable Halocarbons	
1,1-Dichloroethane	EPA 8260B	Tetrachloroethene	EPA 8260B
1,1-Dichloroethene	EPA 8260B	trans-1,2-Dichloroethene	EPA 8260B
1,1-Dichloropropene	EPA 8260B	trans-1,3-Dichloropropene	EPA 8260B
1,2,3-Trichloropropane	EPA 8260B	Trichloroethene	EPA 8260B
1,2-Dichloroethane	EPA 8260B	Trichlorofluoromethane	EPA 8260B
1,2-Dichloropropane	EPA 8260B	Vinyl chloride	EPA 8260B
1,3-Dichloropropane	EPA 8260B	Purgeable Organics	
2,2-Dichloropropane	EPA 8260B	1,4-Dioxane	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B	2-Butanone (Methylethyl ketone)	EPA 8260B
Bromochloromethane	EPA 8260B	2-Hexanone	EPA 8260B
Bromodichloromethane	EPA 8260B	4-Methyl-2-Pentanone	EPA 8260B
Bromoform	EPA 8260B	Acetone	EPA 8260B
Bromomethane	EPA 8260B	Acetonitrile	EPA 8260B
Carbon tetrachloride	EPA 8260B	Carbon Disulfide	EPA 8260B
Chloroethane	EPA 8260B	Isobutyl alcohol	EPA 8260B
Chloroform	EPA 8260B	Methyl iodide	EPA 8260B
Chloromethane	EPA 8260B		
cis-1,2-Dichloroethene	EPA 8260B	Semi-Volatile Organics	
cis-1,3-Dichloropropene	EPA 8260B	Benzoic Acid	EPA 8270C
Dibromochloromethane	EPA 8260B	Benzyl alcohol	EPA 8270C
Dibromomethane	EPA 8260B	Dibenzofuran	EPA 8270C
Dichlorodifluoromethane	EPA 8260B	Wastewater Metals I	
Methylene chloride	EPA 8260B	Barium, Total	EPA 6010B

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Wastewater Metals I		Wastewater Metals III	
Cadmium, Total	EPA 6010B	Cobalt, Total	EPA 6010B
Calcium, Total	EPA 6010B	Molybdenum, Total	EPA 6010B
Chromium, Total	EPA 6010B	Thallium, Total	EPA 6010B
Copper, Total	EPA 6010B	Tin, Total	EPA 6010B
Iron, Total	EPA 6010B	Titanium, Total	EPA 6010B
Lead, Total	EPA 6010B	Wastewater Miscellaneous	
Magnesium, Total	EPA 6010B	Hydrogen Ion (pH)	EPA 150.1
Manganese, Total	EPA 6010B	riyarogen lon (pri)	El A 100.1
Nickel, Total	EPA 6010B		
Potassium, Total	EPA 6010B		
Silver, Total	EPA 6010B		
Sodium, Total	EPA 6010B		
Wastewater Metals II			
Aluminum, Total	EPA 6010B		
Antimony, Total	EPA 6010B		
Arsenic, Total	EPA 6010B		
Beryllium, Total	EPA 6010B		
Chromium VI	EPA 7196A		•
Mercury, Total	EPA 7470A		
Selenium, Total	EPA 6010B		
Vanadium, Total	EPA 6010B		
Zinc, Total	EPA 6010B		

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Amines		Chlorinated Hydrocarbon Pesticides	
2-Nitroaniline	EPA 8270C	Endosulfan II	EPA 8081A
3-Nitroaniline	EPA 8270C	Endosulfan sulfate	EPA 8081A
4-Chloroaniline	EPA 8270C	Endrin	EPA 8081A
4-Nitroaniline	EPA 8270C	Endrin aldehyde	EPA 8081A
Benzidines		Endrin Ketone	EPA 8081A
3,3' -Dichlorobenzidine	EPA 8270C	gamma-Chlordane	EPA 8081A
Benzidine	EPA 8270C	Heptachlor	EPA 8081A
Delizidille	LFA 02/00	Heptachlor epoxide	EPA 8081A
Characteristic Testing		Lindane	EPA 8081A
Ignitability	EPA 1030	Methoxychlor	EPA 8081A
TCLP	EPA 1311	Toxaphene	EPA 8081A
Chlorinated Hydrocarbon Pesticides		Chlorinated Hydrocarbons	
4,4'-DDD	EPA 8270C	1,2,4-Trichlorobenzene	EPA 8270C
4,4'-DDE	EPA 8081A	Hexachlorobenzene	EPA 8270C
4,4'-DDT	EPA 8081A	Hexachlorobutadiene	EPA 8270C
Aldrin	EPA 8081A	Hexachlorocyclopentadiene	EPA 8270C
alpha-BHC	EPA 8081A	Hala etha e	
alpha-Chlordane	EPA 8081A	Haloethers	EDA 92700
beta-BHC	EPA 8081A	4-Chlorophenylphenyl ether	EPA 8270C
Chlordane Total	EPA 8270C	Bis (2-chloroisopropyl) ether	EPA 8270C
delta-BHC	EPA 8081A	Bis(2-chloroethoxy)methane	EPA 8270C
Dieldrin	EPA 8081A	Bis(2-chloroethyl)ether	EPA 8270C
Endosulfan I	EPA 8081A		

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Barium, Total         EPA 6010B         Cobalt, Total         EPA 6010B           Cadmium, Total         EPA 6010B         Molybdenum, Total         EPA 6010B           Calcium, Total         EPA 6010B         Thallium, Total         EPA 6010B           Copper, Total         EPA 6010B         Tin, Total         EPA 6010B           Lead, Total         EPA 6010B         Titanium, Total         EPA 6010B           Lead, Total         EPA 6010B         Nitroaromatics and Isophorone           Magnesium, Total         EPA 6010B         2,4-Dinitrotoluene         EPA 8270C           Manganese, Total         EPA 6010B         2,6-Dinitrotoluene         EPA 8270C           Nickel, Total         EPA 6010B         Nitrobenzene         EPA 8270C           Potassium, Total         EPA 6010B         Pyridine         EPA 8270C           Silver, Total         EPA 6010B         Nitrosoamines         EPA 8270C           Silver, Total         EPA 6010B         Nitrosoamines         EPA 8270C           Strontium, Total         EPA 6010B         Nitrosoamines         EPA 8270C           Metals II         Aluminum, Total         EPA 6010B         Phthalate Esters           Aluminum, Total         EPA 6010B         Polychlorinated Biphenyls         EPA 8270C	Metals I		Metals III	
Calcium, Total         EPA 6010B         Thallium, Total         EPA 6010B           Copper, Total         EPA 6010B         Tin, Total         EPA 6010B           Iron, Total         EPA 6010B         Titanium, Total         EPA 6010B           Lead, Total         EPA 6010B         Nitroaromatics and Isophorone           Magnesium, Total         EPA 6010B         2,4-Dinitrotoluene         EPA 8270C           Manganese, Total         EPA 6010B         2,6-Dinitrotoluene         EPA 8270C           Nickel, Total         EPA 6010B         Nitroseane         EPA 8270C           Potassium, Total         EPA 6010B         Pyridine         EPA 8270C           Silver, Total         EPA 6010B         Nitrosoamines           Sodium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Metals II         N-Nitrosodiphenylamine         EPA 8270C           Metals II         N-Nitrosodiphenylamine         EPA 8270C           Antimony, Total         EPA 6010B         Phthalate Esters           Antimony, Total         EPA 6010B         Benzyl butyl phthalate         EPA 8270C           Beryllium, Total         EPA 6010B         Polychlorinated Biphenyls           Mercury, Total         EPA 6010B         2,2'3,3'4,4'5,5'5',6-Nonac	Barium, Total	EPA 6010B	Cobalt, Total	EPA 6010B
Copper, Total         EPA 6010B         Tin, Total         EPA 6010B           Iron, Total         EPA 6010B         Titanium, Total         EPA 6010B           Lead, Total         EPA 6010B         Nitroaromatics and Isophorone           Magnesium, Total         EPA 6010B         2,4-Dinitrotoluene         EPA 8270C           Manganese, Total         EPA 6010B         2,6-Dinitrotoluene         EPA 8270C           Nickel, Total         EPA 6010B         Nitrobenzene         EPA 8270C           Potassium, Total         EPA 6010B         Pyridine         EPA 8270C           Silver, Total         EPA 6010B         Nitrosoamines           Sodium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Strontium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Metals II         N-Nitrosodiphenylamine         EPA 8270C           Aluminum, Total         EPA 6010B         Phthalate Esters           Antimony, Total         EPA 6010B         Benzyl butyl phthalate         EPA 8270C           Beryllium, Total         EPA 6010B         Polychlorinated Biphenyls           Mercury, Total         EPA 7471A         2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl         EPA 1668 A           Vanadium, Total	Cadmium, Total	EPA 6010B	Molybdenum, Total	EPA 6010B
Iron, Total	Calcium, Total	EPA 6010B	Thallium, Total	EPA 6010B
Lead, Total         EPA 6010B         Nitroaromatics and Isophorone           Magnesium, Total         EPA 6010B         2,4-Dinitrotoluene         EPA 8270C           Manganese, Total         EPA 6010B         2,6-Dinitrotoluene         EPA 8270C           Nickel, Total         EPA 6010B         Nitrobenzene         EPA 8270C           Potassium, Total         EPA 6010B         Pyridine         EPA 8270C           Silver, Total         EPA 6010B         Nitrosoamines           Sodium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Strontium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Metals II         N-Nitrosodiphenylamine         EPA 8270C           Aluminum, Total         EPA 6010B         Phthalate Esters           Arsenic, Total         EPA 6010B         Benzyl butyl phthalate         EPA 8270C           Beryllium, Total         EPA 6010B         Polychlorinated Biphenyls           Mercury, Total         EPA 7471A         2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl         EPA 1668 A           Selenium, Total         EPA 6010B         2,2',3,3',4,4',5-Heptachlorobiphenyl         EPA 1668 A           Vanadium, Total         EPA 6010B         2,2',3,3',4,5',5',6-Nonachlorobiphenyl         EPA 1668 A <td>Copper, Total</td> <td>EPA 6010B</td> <td>Tin, Total</td> <td>EPA 6010B</td>	Copper, Total	EPA 6010B	Tin, Total	EPA 6010B
Magnesium, Total         EPA 6010B         2,4-Dinitrotoluene         EPA 8270C           Manganese, Total         EPA 6010B         2,6-Dinitrotoluene         EPA 8270C           Nickel, Total         EPA 6010B         Nitrobenzene         EPA 8270C           Potassium, Total         EPA 6010B         Pyridine         EPA 8270C           Silver, Total         EPA 6010B         Pyridine         EPA 8270C           Sodium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Strontium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Metals II         N-Nitrosodiphenylamine         EPA 8270C           Aluminum, Total         EPA 6010B         Phthalate Esters           Arsenic, Total         EPA 6010B         Benzyl butyl phthalate         EPA 8270C           Beryllium, Total         EPA 6010B         Polychlorinated Biphenyls         EPA 1668 A           Mercury, Total         EPA 7471A         2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl         EPA 1668 A           Selenium, Total         EPA 6010B         2,2',3,3',4,4',5-Heptachlorobiphenyl         EPA 1668 A           Vanadium, Total         EPA 6010B         2,2',3,3',4,4',5-Heptachlorobiphenyl         EPA 1668 A	iron, Total	EPA 6010B	Titanium, Total	EPA 6010B
Magnesium, Total         EPA 6010B         2,4-Dinitrotoluene         EPA 8270C           Manganese, Total         EPA 6010B         2,6-Dinitrotoluene         EPA 8270C           Nickel, Total         EPA 6010B         Nitrobenzene         EPA 8270C           Potassium, Total         EPA 6010B         Pyridine         EPA 8270C           Silver, Total         EPA 6010B         Nitrosoamines         FPA 8270C           Sodium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Strontium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Metals II         N-Nitrosodiphenylamine         EPA 8270C           Aluminum, Total         EPA 6010B         Phthalate Esters           Arsenic, Total         EPA 6010B         Benzyl butyl phthalate         EPA 8270C           Beryllium, Total         EPA 6010B         Polychlorinated Biphenyls         EPA 1668 A           Mercury, Total         EPA 7471A         2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl         EPA 1668 A           Selenium, Total         EPA 6010B         2,2',3,3',4,4',5-Heptachlorobiphenyl         EPA 1668 A           Vanadium, Total         EPA 6010B         2,2',3,3',4,4',5-Heptachlorobiphenyl         EPA 1668 A	Lead, Total	EPA 6010B	Nitroaromatics and Isophorone	
Manganese, Total         EPA 6010B         2,6-Dinitrotoluene         EPA 8270C           Nickel, Total         EPA 6010B         Nitrobenzene         EPA 8270C           Potassium, Total         EPA 6010B         Pyridine         EPA 8270C           Silver, Total         EPA 6010B         Nitrosoamines           Sodium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Strontium, Total         EPA 6010B         N-Nitrosodiphenylamine         EPA 8270C           Metals II         N-Nitrosodiphenylamine         EPA 8270C           Aluminum, Total         EPA 6010B         Phthalate Esters           Arsenic, Total         EPA 6010B         Benzyl butyl phthalate         EPA 8270C           Beryllium, Total         EPA 6010B         Polychlorinated Biphenyls           Mercury, Total         EPA 7471A         2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl         EPA 1668 A           Selenium, Total         EPA 6010B         2,2',3,3',4,4',5-Heptachlorobiphenyl         EPA 1668 A           Vanadium, Total         EPA 6010B         2,2',3,3',4,5',5-Heptachlorobiphenyl         EPA 1668 A	Magnesium, Total	EPA 6010B	•	EPA 8270C
Nickel, Total         EPA 6010B         Nitrobenzene         EPA 8270C           Potassium, Total         EPA 6010B         Pyridine         EPA 8270C           Silver, Total         EPA 6010B         Nitrosoamines         N-Nitrosodimethylamine         EPA 8270C           Strontium, Total         EPA 6010B         N-Nitrosodimethylamine         EPA 8270C           Metals II         N-Nitrosodiphenylamine         EPA 8270C           Aluminum, Total         EPA 6010B         Phthalate Esters           Arsenic, Total         EPA 6010B         Benzyl butyl phthalate         EPA 8270C           Beryllium, Total         EPA 6010B         Polychlorinated Biphenyls           Mercury, Total         EPA 7471A         2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl         EPA 1668 A           Selenium, Total         EPA 6010B         2,2',3,3',4,4',5-Heptachlorobiphenyl         EPA 1668 A           Vanadium, Total         EPA 6010B         2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl         EPA 1668 A	Manganese, Total	EPA 6010B	·	EPA 8270C
Silver, Total EPA 6010B  Sodium, Total EPA 6010B  Strontium, Total EPA 6010B  Strontium, Total EPA 6010B  Metals II  Aluminum, Total EPA 6010B  Antimony, Total EPA 6010B  Arsenic, Total EPA 6010B  Beryllium, Total EPA 6010B  Arsenic, Total EPA 6010B  Beryllium, Total EPA 6010B  Mercury, Total EPA 6010B  Mercury, Total EPA 6010B  Mercury, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total EPA 6010B  Selenium, Total	Nickel, Total	EPA 6010B	•	EPA 8270C
Sodium, Total EPA 6010B Nitrosoamines  Strontium, Total EPA 6010B N-Nitrosodimethylamine EPA 8270C  Metals II N-Nitrosodin-propylamine EPA 8270C  Aluminum, Total EPA 6010B Antimony, Total EPA 6010B Arsenic, Total EPA 6010B Beryllium, Total EPA 6010B Beryllium, Total EPA 6010B Beryllium, Total EPA 6010B Mercury, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B Selenium, Total EPA 6010B S	Potassium, Total	EPA 6010B	Pyridine	EPA 8270C
Strontium, Total  EPA 6010B  N-Nitrosodimethylamine  EPA 8270C  N-Nitrosodimethylamine  EPA 8270C  N-Nitrosodimethylamine  EPA 8270C  N-Nitrosodiphenylamine  EPA 8270C  N-Nitrosodiphenylamine  EPA 8270C  N-Nitrosodiphenylamine  EPA 8270C  Phthalate Esters  Arsenic, Total  EPA 6010B  Benzyl butyl phthalate  EPA 8270C  Beryllium, Total  EPA 6010B  Polychlorinated Biphenyls  Mercury, Total  EPA 6010B  Selenium, Total  EPA 6010B  2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl  EPA 1668 A  Vanadium, Total  EPA 6010B  2,2',3,3',4,4',5-Heptachlorobiphenyl  EPA 1668 A	Silver, Total	EPA 6010B		
Strontium, Total  Metals II  Aluminum, Total  EPA 6010B  Antimony, Total  EPA 6010B  Arsenic, Total  Beryllium, Total  EPA 6010B  Beryllium, Total  EPA 6010B  Beryllium, Total  EPA 6010B  Beryllium, Total  EPA 6010B  Polychlorinated Biphenyls  Mercury, Total  EPA 7471A  Selenium, Total  EPA 6010B  2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl  EPA 1668 A  Vanadium, Total  EPA 6010B  2,2',3,3',4,4',5,5',6,6'-Nonachlorobiphenyl  EPA 1668 A	Sodium, Total	EPA 6010B		
Metals IIN-NitrosodiphenylamineEPA 8270CAluminum, TotalEPA 6010BPhthalate EstersAntimony, TotalEPA 6010BBenzyl butyl phthalateEPA 8270CArsenic, TotalEPA 6010BPolychlorinated BiphenylsBeryllium, TotalEPA 6010BPolychlorinated BiphenylsMercury, TotalEPA 7471A2,2',3,3',4,4',5,5',6-NonachlorobiphenylEPA 1668 ASelenium, TotalEPA 6010B2,2',3,3',4,4',5-HeptachlorobiphenylEPA 1668 AVanadium, TotalEPA 6010B2,2',3,3',4,5,5',6,6'-NonachlorobiphenylEPA 1668 A	Strontium, Total	EPA 6010B	·	
Aluminum, Total EPA 6010B Antimony, Total EPA 6010B Arsenic, Total EPA 6010B Beryllium, Total EPA 6010B Beryllium, Total EPA 6010B Beryllium, Total EPA 6010B Beryllium, Total EPA 6010B Beryllium, Total EPA 6010B Beryllium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Total EPA 6010B Capabase Selenium, Tot	Metals II		• ••	
Antimony, Total EPA 6010B Benzyl butyl phthalate Esters Arsenic, Total EPA 6010B Benzyl butyl phthalate EPA 8270C Beryllium, Total EPA 6010B Polychlorinated Biphenyls Mercury, Total EPA 7471A 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl EPA 1668 A Selenium, Total EPA 6010B 2,2',3,3',4,4',5-Heptachlorobiphenyl EPA 1668 A Vanadium, Total EPA 6010B 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl EPA 1668 A		EPA 6010B	N-Nitrosodiphenylamine	EPA 8270C
Arsenic, Total EPA 6010B Benzyl butyl phthalate EPA 8270C  Beryllium, Total EPA 6010B Polychlorinated Biphenyls  Mercury, Total EPA 7471A 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl EPA 1668 A  Selenium, Total EPA 6010B 2,2',3,3',4,4',5-Heptachlorobiphenyl EPA 1668 A  Vanadium, Total EPA 6010B 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl EPA 1668 A	•		Phthalate Esters	
Mercury, TotalEPA 7471A2,2',3,3',4,4',5,5',6-NonachlorobiphenylEPA 1668 ASelenium, TotalEPA 6010B2,2',3,3',4,4',5-HeptachlorobiphenylEPA 1668 AVanadium, TotalEPA 6010B2,2',3,3',4,5,5',6,6'-NonachlorobiphenylEPA 1668 A	••		Benzyl butyl phthalate	EPA 8270C
Selenium, Total EPA 6010B 2,2',3,3',4,4',5-Heptachlorobiphenyl EPA 1668 A  Vanadium, Total EPA 6010B 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl EPA 1668 A	Beryllium, Total	EPA 6010B	Polychlorinated Biphenyls	
Vanadium, Total EPA 6010B 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl EPA 1668 A	Mercury, Total	EPA 7471A	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	EPA 1668 A
<b>2,2  0 0   1   1   1   1   1   1   1   1   </b>	Selenium, Total	EPA 6010B	2,2',3,3',4,4',5-Heptachlorobiphenyl	EPA 1668 A
Zinc, Total EPA 6010B 2,2',3,3',5,5',6,6'-Octachlorobiphenyl EPA 1668 A	Vanadium, Total	EPA 6010B	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	EPA 1668 A
	Zinc, Total	EPA 6010B	2,2',3,3',5,5',6,6'-Octachlorobiphenyl	EPA 1668 A

**Serial No.: 29717** 



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. W MICHAEL LARKINS PARADIGM ANALYTICAL LABORATORIES 5500 BUSINESS DRIVE WILMINGTON, NC 28405 NY Lab Id No: 11685 EPA Lab Code: NC00919

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Polychlorinated Biphenyls		Polychlorinated Biphenyls	
2,2',3,4,4',5,5'-Heptachlorobiphenyl	EPA 1668 A	2,3',4,4',5,5'-Hexachlorobiphenyl	EPA 1668 A
2,2',3,4,4',5',6-Heptachlorobiphenyl	EPA 1668 A	2,3',4,4',5'-Pentachlorobiphenyl	EPA 1668 A
2,2',3,4,4',5'-Hexachlorobiphenyl	EPA 1668 A	2,3,4,4',5-Pentachlorobiphenyl	EPA 1668 A
2,2',3,4',5,5',6-Heptachlorobiphenyl	EPA 1668 A	2,3',4,4',5-Pentachlorobiphenyl	EPA 1668 A
2,2',3,4,5,5'-Hexachlorobiphenyl	EPA 1668 A	2,3',4,4'-Tetrachlorobiphenyl	EPA 1668 A
2,2',3,4',5,6,6'-Heptachlorobiphenyl	EPA 1668 A	2,3-Dichlorobiphenyl	EPA 1668 A
2,2',3,4,5'-Pentachlorobiphenyl	EPA 1668 A	2,4',5-Trichlorobiphenyl	EPA 1668 A
2,2',3,5,5',6-Hexachlorobiphenyl	EPA 1668 A	2-Chlorobiphenyl	EPA 1668 A
2,2',3,5'-Tetrachlorobiphenyl	EPA 1668 A	3,3',4,4',5,5'-Hexachlorobiphenyl	EPA 1668 A
2,2',4,4',5,5-Hexachlorobiphenyl	EPA 1668 A	3,3',4,4',5-Pentachlorobiphenyl	EPA 1668 A
2,2',4,4',6,6'-Hexachlorobiphenyl	EPA 1668 A	3,3',4,4'-Tetrachlorobiphenyl	EPA 1668 A
2,2',4,5,5'-Pentachlorobiphenyl	EPA 1668 A	3,4,4',5-Tetrachlorobiphenyl	EPA 1668 A
2,2',5,5'-Tetrachlorobiphenyl	EPA 1668 A	3,4,4'-Trchlorobiphenyl	EPA 1668 A
2,2',5-Trichlorobiphenyl	EPA 1668 A	4,4'-Dichlorobiphenyl	EPA 1668 A
2,2',6,6'-Tetrachlorobiphenyl	EPA 1668 A	4-Chlorobiphenyl	EPA 1668 A
2,2',6-Trichlorobiphenyl	EPA 1668 A	Decachlorobiphenyl	EPA 1668 A
2,2'-dichlorobiphenyl	EPA 1668 A	PCB-1016	EPA 8082
2,3,3',4,4',5,5',6-Octachlorobiphenyl	EPA 1668 A	PCB-1221	EPA 8082
2,3,3',4,4',5,5'-Heptachlorobiphenyl	EPA 1668 A	PCB-1232	EPA 8082
2,3,3',4,4',5'-Hexachlorobiphenyl	EPA 1668 A	PCB-1242	EPA 8082
2,3,3',4,4',5-Hexachlorobiphenyl	EPA 1668 A	PCB-1248	EPA 8082
2,3,3',4,4'-Pentachlorobiphenyl	EPA 1668 A	PCB-1254	EPA 8082
2,3,3',4,6-Pentachlorobiphenyl	EPA 1668 A	PCB-1260	EPA 8082

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5500 BUSINESS DRIVE
WILMINGTON, NC 28405

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Polynuclear Aromatic Hydrocarb	ons	Priority Pollutant Phenols	
Acenaphthene	EPA 8270C	2-Methyl-4,6-dinitrophenol	EPA 8270C
Acenaphthylene	EPA 8270C	2-Methylphenol	EPA 8270C
Anthracene	EPA 8270C	2-Nitrophenol	EPA 8270C
Benzo(a)anthracene	EPA 8270C	4-Chloro-3-methylphenol	EPA 8270C
Benzo(a)pyrene	EPA 8270C	4-Methylphenol	EPA 8270C
Benzo(b)fluoranthene	EPA 8270C	4-Nitrophenol	EPA 8270C
Benzo(ghi)perylene	EPA 8270C	Pentachiorophenol	EPA 8270C
Benzo(k)fluoranthene	EPA 8270C	Phenol	EPA 8270C
Chrysene	EPA 8270C	Purgeable Aromatics	
Dibenzo(a,h)anthracene	EPA 8270C	1,2,4-Trimethylbenzene	EPA 8260B
Fluoranthene	EPA 8270C	1,2-Dichlorobenzene	EPA 8260B
Fluorene	EPA 8270C	1,3,5-Trimethylbenzene	EPA 8260B
Indeno(1,2,3-cd)pyrene	EPA 8270C	1,3-Dichlorobenzene	EPA 8260B
Naphthalene	EPA 8270C	1,4-Dichlorobenzene	EPA 8260B
Phenanthrene	EPA 8270C	2-Chlorotoluene	EPA 8260B
Pyrene	EPA 8270C	4-Chlorotoluene	EPA 8260B
Priority Pollutant Phenois		Benzene	EPA 8260B
2,4,5-Trichlorophenol	EPA 8270C	Bromobenzene	EPA 8260B
2,4,6-Trichlorophenol	EPA 8270C	Chlorobenzene	EPA 8260B
2,4-Dichlorophenol	EPA 8270C	Ethyl benzene	EPA 8260B
2,4-Dimethylphenol	EPA 8270C	Isopropylbenzene	EPA 8260B
2,4-Dinitrophenol	EPA 8270C	n-Butylbenzene	EPA 8260B
2-Chlorophenol	EPA 8270C	n-Propylbenzene	EPA 8260B

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Purgeable Aromatics		Purgeable Halocarbons	
p-Isopropyltoluene (P-Cymene)	EPA 8260B	Bromoform	EPA 8260B
sec-Butylbenzene	EPA 8260B	Bromomethane	EPA 8260B
Styrene	EPA 8260B	Carbon tetrachloride	EPA 8260B
tert-Butylbenzene	EPA 8260B	Chloroethane	EPA 8260B
Toluene	EPA 8260B	Chloroform	EPA 8260B
Total Xylenes	EPA 8260B	Chloromethane	EPA 8260B
Purgeable Halocarbons		cis-1,2-Dichloroethene	EPA 8260B
1,1,1,2-Tetrachloroethane	EPA 8260B	cis-1,3-Dichloropropene	EPA 8260B
1,1,1-Trichloroethane	EPA 8260B	Dibromomethane	EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 8260B	Dichlorodifluoromethane	EPA 8260B
1,1,2-Trichloroethane	EPA 8260B	Methylene chloride	EPA 8260B
1,1-Dichloroethane	EPA 8260B	Tetrachloroethene	EPA 8260B
1,1-Dichloroethene	EPA 8260B	trans-1,2-Dichloroethene	EPA 8260B
1,2,3-Trichloropropane	EPA 8260B	trans-1,3-Dichloropropene	EPA 8260B
1,2-Dibromo-3-chloropropane	EPA 8260B	Trichloroethene	EPA 8260B
1,2-Dichloroethane	EPA 8260B	Trichlorofluoromethane	EPA 8260B
1,2-Dichloropropane	EPA 8260B	Vinyl chloride	EPA 8260B
1,3-Dichloropropane	EPA 8260B	Purgeable Organics	
2,2-Dichloropropane	EPA 8260B	1,4-Dioxane	EPA 8260B
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260B	2-Butanone (Methylethyl ketone)	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B	2-Hexanone	EPA 8260B
Bromochloromethane	EPA 8260B	4-Methyl-2-Pentanone	EPA 8260B
Bromodichloromethane	EPA 8260B	Acetone	EPA 8260B

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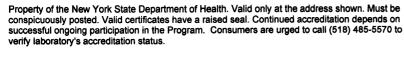
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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

#### **Purgeable Organics**

Acetonitrile	EPA 8260B
Carbon Disulfide	EPA 8260B
Isobutyl alcohol	EPA 8260B
Methyl tert-butyl ether	EPA 8260B
Semi-Volatile Organics	
2-Methylnaphthalene	EPA 8270C
Benzoic Acid	EPA 8270C
Benzyl alcohol	EPA 8270C
Dibenzofuran	EPA 8270C

Serial No.: 29717





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5500 BUSINESS DRIVE
WILMINGTON. NC 28405

NY Lab Id No: 11685 EPA Lab Code: NC00919

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#### Metals i

Chromium, Total	EPA 6010B
Phthalate Esters	
Bis(2-ethylhexyl) phthalate	EPA 8270C
Diethyl phthalate	EPA 8270C
Dimethyl phthalate	EPA 8270C
Di-n-butyl phthalate	EPA 8270C
Di-n-octyl phthalate	EPA 8270C

Serial No.: 29718

# Attachment C

Laboratory Qualifications for Columbia Analytical Services





### Department of Environmental Protection

Division of Environmental Analysis Senator William X. Wall Experiment Station

### certifies

M-NY032

COLUMBIA ANALYTICAL SERVICES

1 MUSTARD ST SUITE 250

**ROCHESTER, NY 14609-0000** 

Laboratory Director: Michael K. Perry

for the analysis of NON POTABLE WATER (CHEMISTRY)
POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued:

01 JUL 2006

Expires:

30 JUN 2007

Director, Division of Environmental Analysis

Sear Q. Parcarba

# COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of:

22 SEP 2006

M-NY032

### COLUMBIA ANALYTICAL SERVICES

ROCHESTER NY

NON POTABLE WATER (CHE	MISTRY)	Effective Date	22 SEP 2006	Expiration Date	30 JUN 2007
Analyte	es and Methods				
ALUMINUM	EPA 200.7		NON-FILTERABLE RESID	JE.	EPA 160.2
ANTIMONY	EPA 200.7		OIL AND GREASE		EPA 1664
ARSENIC	EPA 200.7		PHENOLICS, TOTAL		EPA 420.2
BERYLLIUM	EPA 200.7		VOLATILE HALOCARBON	S	EPA 601
CADMIUM	EPA 200.7		VOLATILE HALOCARBON	S	EPA 624
CHROMIUM	EPA 200.7		VOLATILE AROMATICS		EPA 602
COBALT	EPA 200.7		VOLATILE AROMATICS		EPA 624
COPPER	EPA 200.7				
IRON	EPA 200.7				
LEAD	EPA 200.7				
MANGANESE	EPA 200.7				
MERCURY	EPA 245.1				
MOLYBDENUM	EPA 200.7				
NICKEL	EPA 200.7				
SELENIUM	EPA 200.7				
SILVER	EPA 200.7				
THALLIUM	EPA 200.7				
VANADIUM	EPA 200.7				
ZINC	EPA 200.7				
PH	EPA 150.1				
SPECIFIC CONDUCTIVITY	EPA 120.1				
TOTAL DISSOLVED SOLIDS	EPA 160.1				
HARDNESS (CACO3), TOTAL	EPA 130.2				
CALCIUM	EPA 200.7				
MAGNESIUM	EPA 200.7				
SODIUM	EPA 200.7				
POTASSIUM	EPA 200.7				
ALKALINITY, TOTAL	EPA 310.1				
CHLORIDE	EPA 325.2				
CHLORIDE	EPA 300.0				
FLUORIDE	EPA 300.0				
SULFATE	EPA 300.0				
AMMONIA-N	EPA 350.1				
NITRATE-N	EPA 300.0				
NITRATE-N	EPA 353.2				
KJELDAHL-N	EPA 351.2				
ORTHOPHOSPHATE	EPA 365.1				
PHOSPHORUS, TOTAL	EPA 365.1				
CHEMICAL OXYGEN DEMAND	EPA 410.4				
BIOCHEMICAL OXYGEN DEMAND	EPA 405.1				
TOTAL ORGANIC CARBON	EPA 415.1				
CYANIDE, TOTAL	EPA 335.4				

# COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 22 SEP 2006

M-NY032 COLUMBIA ANALYTICAL SERVICES ROCHESTER NY

NICKEL

POTABLE WATER	(CHEMISTRY)	Effective Date	01 JUL 2006	Expiration Date	30 JUN 2007
	<b>Analytes and Methods</b>				
BARIUM	EPA 200.7				
BERYLLIUM	EPA 200.7				
CADMIUM	EPA 200.7				
CHROMIUM	EPA 200.7				
COPPER	EPA 200.7				
MERCURY	EPA 245.1				

EPA 200.7

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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All approved analytes are listed below:

Drinking Water Bacteriology		Drinking Water Metals I	
Coliform, Total	SM 18-20 9223	Zinc, Total	EPA 200.7
D t the later was a second			EPA 200.8
Drinking Water Metals I	EPA 200.7	Drinking Water Metals II	
Arsenic, Total		Antimony, Total	EPA 200.8
	EPA 200.8	• '	EPA 200.7
	SM 18-19 3113B	Beryllium, Total	
Barium, Total	EPA 200.7		EPA 200.8
	EPA 200.8	Nickel, Total	EPA 200.7
Cadmium, Total	EPA 200.7		EPA 200.8
	EPA 200.8	Thallium, Total	EPA 200.8
Chromium, Total	EPA 200.7		SM 18-19 3113B
	EPA 200.8	Drinking Water Metals III	
Copper, Total	EPA 200.7	Sodium, Total	EPA 200.7
	EPA 200.8	Coardini, Forci.	
Iron, Total	EPA 200.7	Drinking Water Miscellaneous	
Lead, Total	EPA 200.8	Methyl tert-butyl ether	EPA 524.2
cood, form.	SM 18-19 3113B	Temperature	EPA 170.1
Manganese, Total	EPA 200.7	Drinking Water Non-Metals	
	EPA 200.8	Alkalinity	EPA 310.1
Mercury, Total	EPA 245.1	Calcium Hardness	EPA 200.7
Selenium, Total	EPA 200.8	Chloride	EPA 300.0
	SM 18-19 3113B		EPA 325.2
Silver, Total	EPA 200.7	Color	EPA 110.2
	EPA 200.8		

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Drinking Water Non-Metals		Microextractibles	
Cyanide, Free	EPA 335.2	1,2-Dibromo-3-chloropropane	EPA 504.1
	EPA 335.4	1,2-Dibromoethane	EPA 504.1
Cyanide, Total	EPA 335.4	Volatile Aromatics	
Fluoride, Total	EPA 300.0	1,2,3-Trichlorobenzene	EPA 524.2
Hydrogen Ion (pH)	EPA 150.1	1,2,4-Trichlorobenzene	EPA 524.2
Nitrate (as N)	EPA 300.0	1,2,4-Trimethylbenzene	EPA 524.2
	EPA 353.2	1,2-Dichlorobenzene	EPA 524.2
Nitrite (as N)	EPA 300.0	1,3,5-Trimethylbenzene	EPA 524.2
	EPA 353.2	1,3-Dichlorobenzene	EPA 524.2
Orthophosphate (as P)	EPA 300.0	1,4-Dichlorobenzene	EPA 524.2
	EPA 365.1	2-Chlorotoluene	EPA 524.2
Silica, Dissolved	SM 18-19 4500-Si F	4-Chlorotoluene	EPA 524.2
Solids, Total Dissolved	EPA 160.1	Benzene	EPA 524.2
	SM 18-20 2540C	Bromobenzene	EPA 524.2
Specific Conductance	EPA 120.1	Chlorobenzene	EPA 524.2
Sulfate (as SO4)	EPA 300.0	Ethyl benzene	EPA 524.2
Drinking Water Trihalomethanes	3	Hexachlorobutadiene	EPA 524.2
Bromodichloromethane	EPA 524.2	Isopropylbenzene	EPA 524.2
Bromoform	EPA 524.2	n-Butylbenzene	EPA 524.2
Chloroform	EPA 524.2	n-Propylbenzene	EPA 524.2
Dibromochloromethane	EPA 524.2	p-Isopropyltoluene (P-Cymene)	EPA 524.2
		sec-Butylbenzene	EPA 524.2
		Styrene	EPA 524.2

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Volatile Aromatics		Volatile Halocarbons	
tert-Butylbenzene	EPA 524.2	Dibromomethane	EPA 524.2
Toluene	EPA 524.2	Dichlorodifluoromethane	EPA 524.2
Total Xylenes	EPA 524.2	Methylene chloride	EPA 524.2
•		Tetrachloroethene	EPA 524.2
Volatile Halocarbons		trans-1,2-Dichloroethene	EPA 524.2
1,1,1,2-Tetrachloroethane	EPA 524.2	,	EPA 524.2
1,1,1-Trichloroethane	EPA 524.2	trans-1,3-Dichloropropene	EPA 524.2
1,1,2,2-Tetrachloroethane	EPA 524.2	Trichloroethene	EPA 524.2
1,1,2-Trichloroethane	EPA 524.2	Trichlorofluoromethane	
1,1-Dichloroethane	EPA 524.2	Vinyl chloride	EPA 524.2
1,1-Dichloroethene	EPA 524.2		
1,1-Dichloropropene	EPA 524.2		
1,2,3-Trichloropropane	EPA 524.2		
1,2-Dichloroethane	EPA 524.2		
1,2-Dichloropropane	EPA 524.2		
1,3-Dichloropropane	EPA 524.2		
2,2-Dichloropropane	EPA 524.2		
Bromochloromethane	EPA 524.2		
Bromomethane	EPA 524.2		
Carbon tetrachloride	EPA 524.2		
Chloroethane	EPA 524.2		
Chloromethane	EPA 524.2		
cis-1,2-Dichloroethene	EPA 524.2		
cis-1,3-Dichloropropene	EPA 524.2		

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All approved analytes are listed below:

Acrylates		Amines	
Acrolein (Propenal)	EPA 624	Pyridine	EPA 8270
	EPA 8260B	Benzidines	
Acrylonitrile	EPA 624		EPA 625
	EPA 8260B	3,3' -Dichlorobenzidine	EPA 8270
Ethyl methacrylate	EPA 8260B	3,3'-Dimethylbenzidene	EPA 8270
Methyl acrylonitrile	EPA 8260B	Benzidine	EPA 625
Methyl methacrylate	EPA 8260B	benzigine	EPA 8270
Amines		Chlorinated Hydrocarbon Pestic	ridae
1,4-Phenylenediamine	EPA 8270		
1-Naphthylamine	EPA 8270	4,4'-DDD	EPA 8081A
2-Nitroaniline	EPA 8270	4,4'-DDE	EPA 8081A
3-Nitroaniline	EPA 8270	4,4'-DDT	EPA 8081A
4-Chloroaniline	EPA 8270	Aldrin	EPA 8081A
4-Nitroaniline	EPA 8270	alpha-BHC	EPA 8081A
5-Nitro-o-toluidine	EPA 8270	alpha-Chlordane	EPA 8081A
Aniline	EPA 8270	beta-BHC	EPA 8081A
Carbazole	EPA 8270	Chlordane Total	EPA 8081A
Diphenylamine	EPA 8270	Chlorobenzilate	EPA 8270
Methapyriline	EPA 8270	delta-BHC	EPA 8081A EPA 8270
Pronamide	EPA 8270	Diallate	
Propionitrile	EPA 8260B	Dieldrin	EPA 8081A
Pyridine	EPA 625	Endosulfan I	EPA 8081A
-		Endosulfan II	EPA 8081A

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All approved analytes are listed below:

Chlorinated Hydrocarbon Pesticides	<b>5</b>	Chlorinated Hydrocarbons	
Endosulfan sulfate	EPA 8081A	Hexachlorobenzene	EPA 8270
Endrin	EPA 8081A	Hexachlorobutadiene	EPA 625
Endrin aldehyde	EPA 8081A		EPA 8260B
Endrin Ketone	EPA 8081A		EPA 8270
gamma-Chlordane	EPA 8081A	Hexachlorocyclopentadiene	EPA 625
Heptachlor	EPA 8081A		EPA 8270
Heptachlor epoxide	EPA 8081A	Hexachloroethane	EPA 625
Isodrin	EPA 8270		EPA 8270
Kepone	EPA 8081A	Hexachloropropene	EPA 8270
Lindane	EPA 8081A	Pentachlorobenzene	EPA 8270
Methoxychlor	EPA 8081A	Chlorophenoxy Acid Pesticides	
PCNB	EPA 8270		EDA 1070 - 115
Toxaphene	EPA 8081A	2,4,5-T	EPA 1978, p.115
Chlorinated Hydrocarbons		2,4,5-TP (Silvex)	EPA 8151A EPA 1978, p.115
1,2,3-Trichlorobenzene	EPA 8260B		EPA 8151A
1,2,4,5-Tetrachlorobenzene	EPA 8270	2,4-D	EPA 1978, p.115
1,2,4-Trichlorobenzene	EPA 625		EPA 8151A
	EPA 8260B	Dicamba	EPA 1978, p.115
	EPA 8270		EPA 8151A
2-Chloronaphthalene	EPA 625	Dinoseb	EPA 8151A
	EPA 8270		EPA 8270
Hexachlorobenzene	EPA 625		

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Demand		Microextractables	
Biochemical Oxygen Demand	EPA 405.1	1,2-Dibromoethane	EPA 8011
Chemical Oxygen Demand	EPA 410.4		EPA 8260B
Fuel Oxygenates		Mineral	
Ethanol	EPA 8015 B	Acidity	EPA 305.1
Methyl tert-butyl ether	EPA 8021B	Alkalinity	EPA 310.1
	EPA 8260B	Calcium Hardness	EPA 200.7
t-Butyl alcohol	EPA 8260B	Chloride	EPA 300.0
Haloethers			EPA 325.2
			EPA 9056
4-Bromophenylphenyl ether	EPA 625	Fluoride, Total	EPA 300.0
	EPA 8270		EPA 9056
4-Chlorophenylphenyl ether	EPA 625	Hardness, Total	EPA 130.2
	EPA 8270		EPA 200.7
Bis (2-chloroisopropyl) ether	EPA 625	Sulfate (as SO4)	EPA 300.0
	EPA 8270	, ,	EPA 375.4
Bis(2-chloroethoxy)methane	EPA 625		EPA 9056
	EPA 8270		
Bis(2-chloroethyl)ether	EPA 625	Nitroaromatics and Isophorone	
	EPA 8270	1,3,5-Trinitrobenzene	EPA 8270
Microextractables		1,3-Dinitrobenzene	EPA 8270
	## A BOA	1,4-Naphthoquinone	EPA 8270
1,2-Dibromo-3-chloropropane	EPA 8011	2,4-Dinitrotoluene	EPA 625
	EPA 8260B		EPA 8270

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Nitroaromatics and Isophorone		Nutrient	
2,6-Dinitrotoluene	EPA 625	Nitrite (as N)	EPA 300.0
	EPA 8270		EPA 353.2
Isophorone	EPA 625	Orthophosphate (as P)	EPA 300.0
	EPA 8270		EPA 365.1
Nitrobenzene	EPA 625	Phosphorus, Total	EPA 365.1
	EPA 8270	Organophosphate Pesticides	
Nitrosoamines		Dimethoate	EPA 8270
N-Nitrosodiethylamine	EPA 8270	Disulfoton	EPA 8270
N-Nitrosodimethylamine	EPA 625	Parathion ethyl	EPA 8270
	EPA 8270	Parathion methyl	EPA 8270
N-Nitrosodi-n-butylamine	EPA 8270	Phorate	EPA 8270
N-Nitrosodi-n-propylamine	EPA 625	Phthalate Esters	
	EPA 8270	Benzyl butyl phthalate	EPA 625
N-Nitrosodiphenylamine	EPA 625	Delizyi butyi pilitiasate	EPA 8270
	EPA 8270	Bis(2-ethylhexyl) phthalate	EPA 625
N-nitrosopiperidine	EPA 8270	Dis(2-etilyhlexyl) phthalate	EPA 8270
N-Nitrosopyrrolidine	EPA 8270	Diethyl phthalate	EPA 625
Nutrient		District Price and Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Co	EPA 8270
Ammonia (as N)	EPA 350.1	Dimethyl phthalate	EPA 625
Kjeldahl Nitrogen, Total	EPA 351.2		EPA 8270
Nitrate (as N)	EPA 300.0	Di-n-butyl phthalate	EPA 625
	EPA 353.2		EPA 8270

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Phthalate Esters		Polynuclear Aromatics	
Di-n-octyl phthalate	EPA 625	Benzo(a)anthracene	EPA 625
	EPA 8270		EPA 8270
Polychlorinated Biphenyls			EPA 8310
		Benzo(a)pyrene	EPA 625
PCB-1016	EPA 8082		EPA 8270
PCB-1221	EPA 8082		EPA 8310
PCB-1232	EPA 8082	Benzo(b)fluoranthene	EPA 625
PCB-1242	EPA 8082	DC1120(D)118018111110110	EPA 8270
PCB-1248	EPA 8082		EPA 8310
PCB-1254	EPA 8082	Benzo(ghi)perylene	EPA 625
PCB-1260	EPA 8082	Benzo(gm)peryiene	EPA 8270
Polynuclear Aromatics			EPA 8310
3-Methylcholanthrene	EPA 8270	Benzo(k)fluoranthene	EPA 625
7,12-Dimethylbenzyl (a) anthracene	EPA 8270		EPA 8270
Acenaphthene	EPA 625	•	EPA 8310
·	EPA 8270	Chrysene	EPA 625
	EPA 8310		EPA 8270
Acenaphthylene	EPA 625		EPA 8310
, ,	EPA 8270	Dibenzo(a,h)anthracene	EPA 625
	EPA 8310		EPA 8270
Anthracene	EPA 625		EPA 8310
	EPA 8270	Fluoranthene	EPA 625
	EPA 8310		EPA 8270

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Polynuclear Aromatics		Priority Pollutant Phenols	
Fluoranthene	EPA 8310	2,4-Dichlorophenol	EPA 625
Fluorene	EPA 625		EPA 8270
	EPA 8270	2,4-Dimethylphenol	EPA 625
	EPA 8310		EPA 8270
Indeno(1,2,3-cd)pyrene	EPA 625	2,4-Dinitrophenol	EPA 625
	EPA 8270		EPA 8270
	EPA 8310	2,6-Dichlorophenol	EPA 8270
Naphthalene	EPA 625	2-Chlorophenol	EPA 625
	EPA 8270		EPA 8270
	EPA 8310	2-Methyl-4,6-dinitrophenol	EPA 625
Phenanthrene	EPA 625		EPA 8270
	EPA 8270	2-Methylphenol	EPA 8270
	EPA 8310	2-Nitrophenol	EPA 625
Pyrene	EPA 625		EPA 8270
	EPA 8270	3-Methylphenol	EPA 8270
	EPA 8310	4-Chloro-3-methylphenol	EPA 625
Priority Pollutant Phenols			EPA 8270
•	EPA 8270	4-Methylphenol	EPA 8270
2,3,4,6 Tetrachlorophenol		4-Nitrophenol	EPA 625
2,4,5-Trichlorophenol	EPA 625		EPA 8270
C. A. C. Weightlesenhamel	EPA 8270	Cresols, Total	EPA 8270
2,4,6-Trichlorophenol	EPA 625	Pentachlorophenol	EPA 625
	EPA 8270		EPA 8151A

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Priority Pollutant Phenols		Purgeable Aromatics	
Pentachlorophenol	EPA 8270	1,4-Dichlorobenzene	EPA 8021B
Phenol	EPA 625		EPA 8260B
	EPA 8270		EPA 8270
Purgeable Aromatics		Benzene	EPA 602
•			EPA 624
1,2-Dichlorobenzene	EPA 601		EPA 8021B
	EPA 602		EPA 8260B
	EPA 624	Chlorobenzene	EPA 601
	EPA 625		EPA 602
	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B
	EPA 8270		EPA 8260B
1,3-Dichlorobenzene	EPA 601	Ethyl benzene	EPA 602
	EPA 602	Ettiy, bottaario	EPA 624
	EPA 624		EPA 8021B
	EPA 625		EPA 8260B
	EPA 8021B	Styrene	EPA 624
	EPA 8260B		EPA 8260B
	EPA 8270	Toluene	EPA 602
1,4-Dichlorobenzene	EPA 601	, 5.25.1.5	EPA 624
	EPA 602		EPA 8021B
	EPA 624		EPA 8260B
	EPA 625	Total Xylenes	EPA 602

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Purgeable Aromatics		Purgeable Halocarbons	
Total Xylenes	EPA 624 EPA 8021B EPA 8260B	1,1-Dichloroethene	EPA 624 EPA 8021B EPA 8260B
Purgeable Halocarbons 1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane	EPA 8260B EPA 601 EPA 624 EPA 8021B	1,1-Dichloropropene 1,2,3-Trichloropropane 1,2-Dichloroethane	EPA 8260B EPA 8260B EPA 601 EPA 624 EPA 8021B EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 8260B EPA 601 EPA 624 EPA 8021B EPA 8260B	1,2-Dichloropropane  1,3-Dichloropropane	EPA 601 EPA 624 EPA 8021B EPA 8260B EPA 8260B
1,1,2-Trichloroethane	EPA 601 EPA 624 EPA 8021B EPA 8260B	2,2-Dichloropropane 2,-Chloro-1,3-butadiene (Chloroprene) 2-Chloroethylvinyl ether	EPA 8260B EPA 8260B EPA 601 EPA 624
1,1-Dichloroethane 1,1-Dichloroethene	EPA 601 EPA 624 EPA 8021B EPA 8260B EPA 601	3-Chloropropene (Allyl chloride) Bromochloromethane Bromodichloromethane	EPA 8021B EPA 8260B EPA 8260B EPA 8260B EPA 601

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Purgeable Halocarbons		Purgeable Halocarbons	
Bromodichloromethane	EPA 624	Chloromethane	EPA 601
	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B
Bromoform	EPA 601		EPA 8260B
	EPA 624	cis-1,2-Dichloroethene	EPA 624
	EPA 8021B		EPA 8021B
	EPA 8260B		EPA 8260B
Bromomethane	EPA 601	cis-1,3-Dichloropropene	EPA 601
	EPA 624		EPA 624
	EPA 8021B		EPA 8021B
	EPA 8260B		EPA 8260B
Carbon tetrachloride	EPA 601	Dibromochloromethane	EPA 601
	EPA 624		EPA 624
	EPA 8021B		EPA 8021B
	EPA 8260B		EPA 8260B
Chloroethane	EPA 601	Dibromomethane	EPA 8260B
	EPA 624	Dichlorodifluoromethane	EPA 601
	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B
Chloroform	EPA 601		EPA 8260B
	EPA 624	Methylene chloride	EPA 601
	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B

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Purgeable Halocarbons		Purgeable Halocarbons	
Methylene chloride	EPA 8260B	Vinyl chloride	EPA 624
Tetrachloroethene	EPA 601		EPA 8021B
	EPA 624		EPA 8260B
	EPA 8021B	Purgeable Organics	
	EPA 8260B	· ·	EDA 0000E
trans-1,2-Dichloroethene	EPA 601	1,4-Dioxane	EPA 8260B
	EPA 624	2-Butanone (Methylethyl ketone)	EPA 8260B
	EPA 8021B	2-Hexanone	EPA 8260B
	EPA 8260B	4-Methyl-2-Pentanone	EPA 8260B
trans-1.3-Dichloropropene	EPA 601	Acetone	EPA 8260B
trans-1,0-bioindroproperio	EPA 624	Acetonitrile	EPA 8260B
	EPA 8021B	Carbon Disulfide	EPA 8260B
	EPA 8260B	Isobutyl alcohol	EPA 8260B
trans-1,4-Dichloro-2-butene	EPA 8260B	Methyl iodide	EPA 8260B
, in the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second	EPA 601	o-Toluidine	EPA 8260B
Trichloroethene	EPA 624		EPA 8270
	EPA 8021B	Vinyl acetate	EPA 8260B
	EPA 8260B	Residue	
Trickless floors as a three a	EPA 601		
Trichlorofluoromethane		Solids, Total	EPA 160.3
	EPA 624		SM 18-20 2540B
	EPA 8021B	Solids, Total Dissolved	EPA 160.1
	EPA 8260B		SM 18-20 2540C
Vinyl chloride	EPA 601	Solids, Total Suspended	EPA 160.2

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Marantauratau Mastalau I

Semi-Volatile Organics		Wastewater Metals I	
2-Methylnaphthalene	EPA 8270	Calcium, Total	EPA 200.7
4-Amino biphenyl	EPA 8270		EPA 6010B
Acetophenone	EPA 8270	Chromium, Total	EPA 200.7
Benzoic Acid	EPA 8270		EPA 200.8
Benzyl alcohol	EPA 8270		EPA 6010B
Dibenzofuran	EPA 8270		EPA 6020
Ethyl methanesulfonate	EPA 8270	Copper, Total	EPA 200.7
Isosafrole	EPA 8270		EPA 200.8
Methyl methanesulfonate	EPA 8270		EPA 6010B
O,O,O-Triethyl phosphorothioate	EPA 8270		EPA 6020
p-Dimethylaminoazobenzene	EPA 8270	Iron, Total	EPA 200.7
Phenacetin	EPA 8270		EPA 6010B
Safrole	EPA 8270	Lead, Total	EPA 200.7
Wastewater Metals I			EPA 200.8
			EPA 239.2
Barium, Total	EPA 200.7		EPA 6010B
	EPA 200.8		EPA 6020
	EPA 6010B		EPA 7421
	EPA 6020	Managarium Takat	
Cadmium, Total	EPA 200.7	Magnesium, Total	EPA 200.7
<b>4 4 -</b> - · · · · · · · · · · · · · · · · · ·	EPA 200.8		EPA 6010B
	EPA 6010B	Manganese, Total	EPA 200.7
			EPA 200.8
	EPA 6020		EPA 6010B

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Wastewater Metals I		Wastewater Metals II	
Manganese, Total	EPA 6020	Antimony, Total	EPA 6010B
Nickel, Total	EPA 200.7		EPA 6020
	EPA 200.8	Arsenic, Total	EPA 200.7
	EPA 6010B		EPA 200.8
	EPA 6020		EPA 206.2
Potassium, Total	EPA 200.7		EPA 6010B
	EPA 6010B		EPA 6020
Silver, Total	EPA 200.7		EPA 7060A
	EPA 200.8	Beryllium, Total	EPA 200.7
	EPA 6010B		EPA 200.8
	EPA 6020		EPA 6010B
Sodium, Total	EPA 200.7		EPA 6020
	EPA 6010B	Chromium VI	EPA 7196A
Strontium, Total	EPA 200.7		EPA 7199
	EPA 6010B		LACHAT 10-124-13-1-A
Wastewater Metals II		Mercury, Total	EPA 1631E
***************************************	EDA 200 7		EPA 245.1
Aluminum, Total	EPA 200.7		EPA 245.2
	EPA 200.8		EPA 7470A
	EPA 6010B	Selenium, Total	EPA 200.7
	EPA 6020		EPA 200.8
Antimony, Total	EPA 200.7		EPA 270.2
	EPA 200.8		EPA 6010B

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Wastewater Metals II		Wastewater Metals III	
Selenium, Total	EPA 6020	Thallium, Total	EPA 6010B
	EPA 7740		EPA 6020
Vanadium, Total	EPA 200.7		EPA 7841
	EPA 200.8	Tin, Total	EPA 200.7
	EPA 6010B		EPA 6010B
	EPA 6020	Titanium, Total	EPA 200.7
Zinc, Total	EPA 200.7		EPA 6010B
	EPA 200.8	Wastewater Miscellaneous	
	EPA 6010B		EPA 200.7
	EPA 6020	Boron, Total	EPA 6010B
Wastewater Metals III		Promido	EPA 300.0
		Bromide	
Cobalt, Total	EPA 200.7	Color	EPA 110.2
	EPA 200.8	Cyanide, Total	EPA 335.1
	EPA 6010B		EPA 335.2
	EPA 6020		EPA 335.4
Molybdenum, Total	EPA 200.7	·	EPA 9012A
	EPA 200.8	Hydrogen Ion (pH)	EPA 150.1
	EPA 6010B		EPA 9040B
	EPA 6020	Oil & Grease Total Recoverable	EPA 1664A
Thallium, Total	EPA 200.7		EPA 413.1
	EPA 200.8	Organic Carbon, Total	EPA 415.1
	EPA 279.2	Phenols	EPA 420.2

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#### Wastewater Miscellaneous

Phenois	EPA	9066
Silica, Dissolved	EPA	370.1
Specific Conductance	EPA	120.1
Sulfide (as S)	EPA	376.1
	EPA	9034
Surfactant (MBAS)	EPA	425.1
Temperature	EPA	170.1
Total Recoverable Petroleum Hydrocarb	EPA	1664A
	EPA	418.1

Sample Preparation Methods

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Renzidinas

Acrylates		Benzidines	
Acrolein (Propenal)	EPA 8260B	3,3' -Dichlorobenzídine	EPA 8270
Acrylonitrile	EPA 8260B	3,3'-Dimethylbenzidene	EPA 8270
Ethyl methacrylate	EPA 8260B	Benzidine	EPA 8270
Methyl acrylonitrile	EPA 8260B	Characteristic Testing	
Methyl methacrylate	EPA 8260B	Corrosivity	EPA 9045C
Amines		Ignitability	EPA 1010
1,2-Diphenylhydrazine	EPA 8270	Reactivity	SW-846 Ch7, Sec. 7.3
1,4-Phenylenediamine	EPA 8270	Chlorinated Hydrocarbon Pestic	cides
1-Naphthylamine	EPA 8270	4,4'-DDD	EPA 8081A
2-Naphthylamine	EPA 8270	·	EPA 8081A
2-Nitroaniline	EPA 8270	4,4'-DDE	EPA 8081A
3-Nitroaniline	EPA 8270	4,4'-DDT	EPA 8081A
4-Chloroaniline	EPA 8270	Aldrin	
4-Nitroaniline	EPA 8270	alpha-BHC	EPA 8081A
5-Chloro-2-methylaniline	EPA 8270	alpha-Chlordane	EPA 8081A
5-Nitro-o-toluidine	EPA 8270	beta-BHC	EPA 8081A
Aniline	EPA 8270	Chlordane Total	EPA 8081A
Carbazole	EPA 8270	Chlorobenzilate	EPA 8270
Diphenylamine	EPA 8270	delta-BHC	EPA 8081A
Methapyriline	EPA 8270	Diallate	EPA 8270
Pronamide	EPA 8270	Dieldrin	EPA 8081A
		Endosulfan I	EPA 8081A
		Endosulfan II	EPA 8081A

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Chlorinated Hydrocarbon Pesticide	s	Chlorinated Hydrocarbons	
Endosulfan sulfate	EPA 8081A	Hexachloroethane	EPA 8270
Endrin	EPA 8081A	Hexachlorophene	EPA 8270
Endrin aldehyde	EPA 8081A	Hexachloropropene	EPA 8270
Endrin Ketone	EPA 8081A	Pentachlorobenzene	EPA 8270
gamma-Chlordane	EPA 8081A	Chlorophenoxy Acid Pesticides	
Heptachlor	EPA 8081A	` ·	EPA 8151A
Heptachlor epoxide	EPA 8081A	2,4,5-T	EPA 8151A
Kepone	EPA 8081A	2,4,5-TP (Silvex) 2,4-D	EPA 8151A
Lindane	EPA 8081A	Dicamba	EPA 8151A
Methoxychior	EPA 8081A	Dinoseb	EPA 8151A
Pentachloronitrobenzene	EPA 8270	Dillosen	LFAGISIA
Toxaphene	EPA 8081A	Haloethers	
Chlorinated Hydrocarbons		4-Bromophenylphenyl ether	EPA 8270
1.2.4.5-Tetrachlorobenzene	EPA 8270	4-Chlorophenylphenyl ether	EPA 8270
1,2,4-Trichlorobenzene	EPA 8260B	Bis (2-chloroisopropyl) ether	EPA 8270
1,2,4*110110100001120110	EPA 8270	Bis(2-chloroethoxy)methane	EPA 8270
1-Chloronaphthalene	EPA 8270	Bis(2-chloroethyl)ether	EPA 8270
2-Chloronaphthalene	EPA 8270	Metals I	
Hexachlorobenzene	EPA 8270	Barium, Total	EPA 6010B
Hexachlorobutadiene	EPA 8260B	Dationi, Fotal	EPA 6020
1 100 GOI HOLO GOOD TO	EPA 8270	Cadmium, Total	EPA 6010B
Hexachlorocyclopentadiene	EPA 8270	Oddinions, Total	EPA 6020
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Metals I		Metals II	
Calcium, Total	EPA 6010B	Antimony, Total	EPA 6020
Chromium, Total	EPA 6010B	Arsenic, Total	EPA 6010B
	EPA 6020		EPA 6020
Copper, Total	EPA 6010B		EPA 7060A
	EPA 6020	Beryllium, Total	EPA 6010B
Iron, Total	EPA 6010B		EPA 6020
Lead, Total	EPA 6010B	Chromium VI	EPA 7196A
	EPA 6020		EPA 7199
	EPA 7421	Lithium, Total	EPA 6010B
Magnesium, Total	EPA 6010B	Mercury, Total	EPA 7471A
Manganese, Total	EPA 6010B	Selenium, Total	EPA 6010B
	EPA 6020		EPA 6020
Nickel, Total	EPA 6010B		EPA 7740
	EPA 6020	Vanadium, Total	EPA 6010B
Potassium, Total	EPA 6010B		EPA 6020
Silver, Total	EPA 6010B	Zinc, Total	EPA 6010B
	EPA 6020		EPA 6020
Sodium, Total	EPA 6010B	Metals III	
Strontium, Total	EPA 6010B		EDA 60400
Metals II		Cobalt, Total	EPA 6010B
	EDA 6010B	Makedan was Taket	EPA 6020
Aluminum, Total	EPA 6010B	Molybdenum, Total	EPA 6010B
Antimony, Total	EPA 6010B		EPA 6020

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Metals III		Nitroaromatics and Isophorone	
Silica, Dissolved	EPA 6010B	1,4-Naphthquinone	EPA 8270
Thallium, Total	EPA 6010B	2,4,6-Trinitrotoluene	EPA 8330
	EPA 6020	2,4-Dinitrotoluene	EPA 8270
	EPA 7841		EPA 8330
Tin, Total	EPA 6010B	2,6-Dinitrotoluene	EPA 8270
Minerals			EPA 8330
	EDA 0050	2-Amino-4,6-dinitrotoluene	EPA 8330
Bromide	EPA 9056	2-Nitrotoluene	EPA 8330
Chloride	EPA 9056	3-Nitrotoluene	EPA 8330
Fluoride, Total	EPA 9056	4-Amino-2,6-dinitrotoluene	EPA 8330
Sulfate (as SO4)	EPA 9056	4-Dimethylaminoazobenzene	EPA 8270
Miscellaneous		4-Nitrotoluene	EPA 8330
Boron, Total	EPA 6010B	Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330
Cyanide, Total	EPA 9012A	Isophorone	EPA 8270
Hydrogen Ion (pH)	EPA 9040B	Methyl-2,4,6-trinitrophenylnitramine	EPA 8330
	EPA 9045C	Nitrobenzene	EPA 8270
Oil & Grease Total Recoverable	EPA 9071		EPA 8330
Phenols	EPA 9066	Nitroquinoline-1-oxide	EPA 8270
Sulfide (as S)	EPA 9034	Octahydro-tetranitro-tetrazocine	EPA 8330
		Pyridine	EPA 8270
Nitroaromatics and Isophorone		Nitrosoamines	
1,3,5-Trinitrobenzene	EPA 8330		EE. 00=-
1,3-Dinitrobenzene	EPA 8330	N-Nitrosodiethylamine	EPA 8270

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Nitrosoamines		Phthalate Esters	
N-Nitrosodimethylamine	EPA 8270	Benzyl butyl phthalate	EPA 8270
N-Nitrosodí-n-butylamine	EPA 8270	Bis(2-ethylhexyl) phthalate	EPA 8270
N-Nitrosodi-n-propylamine	EPA 8270	Diethyl phthalate	EPA 8270
N-Nitrosodiphenylamine	EPA 8270	Dimethyl phthalate	EPA 8270
N-nitrosomethylethylamine	EPA 8270	Di-n-butyl phthalate	EPA 8270
N-nitrosomorpholine	EPA 8270	Di-n-octyl phthalate	EPA 8270
N-nitrosopiperidine	EPA 8270	Polychlorinated Biphenyls	
N-Nitrosopyrrolidine	EPA 8270	• •	ED 1 0000
		PCB-1016	EPA 8082
Nutrients		PCB-1221	EPA 8082
Nitrate (as N)	EPA 9056	PCB-1232	EPA 8082
Nitrite (as N)	EPA 9056	PCB-1242	EPA 8082
Orthophosphate (as P)	EPA 9056	PCB-1248	EPA 8082
Organophosphate Pesticides		PCB-1254	EPA 8082
***	EDA 0070	PCB-1260	EPA 8082
Dimethoate	EPA 8270	Material and America Lively and the second	
Disulfoton	EPA 8270	Polynuclear Aromatic Hydrocarbons	
Parathion ethyl	EPA 8270	3-Methylcholanthrene	EPA 8270
Parathion methyl	EPA 8270	7,12-Dimethylbenzyl (a) anthracene	EPA 8270
Phorate	EPA 8270	Acenaphthene	EPA 8270
Sulfotepp	EPA 8270	Acenaphthylene	EPA 8270
Thionazín	EPA 8270	Anthracene	EPA 8270
		Benzo(a)anthracene	EPA 8270
		Benzo(a)pyrene	EPA 8270

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Polynuclear Aromatic Hydrocarbo	ons	<b>Priority Pollutant Phenols</b>	
Benzo(b)fluoranthene	EPA 8270	2-Methyl-4,6-dinitrophenol	EPA 8270
Benzo(ghi)perylene	EPA 8270	2-Methylphenol	EPA 8270
Benzo(k)fluoranthene	EPA 8270	2-Nitrophenol	EPA 8270
Chrysene	EPA 8270	3-Methylphenol	EPA 8270
Dibenzo(a,h)anthracene	EPA 8270	4-Chloro-3-methylphenol	EPA 8270
Fluoranthene	EPA 8270	4-Methylphenol	EPA 8270
Fluorene	EPA 8270	4-Nitrophenol	EPA 8270
	EPA 8310	Pentachlorophenol	EPA 8151A
Indeno(1,2,3-cd)pyrene	EPA 8270		EPA 8270
Naphthalene	EPA 8260B	Phenol	EPA 8270
	EPA 8270	Purgeable Aromatics	
Phenanthrene	EPA 8270	ū	
Pyrene	EPA 8270	1,2,4-Trimethylbenzene	EPA 8021B
Priority Pollutant Phenols		1.2-Dichlorobenzene	EPA 8260B EPA 8021B
2,3,4,6 Tetrachlorophenol	EPA 8270	1,2-Didiliotoberizene	EPA 8260B
2,4,5-Trichlorophenol	EPA 8270		EPA 8270
2,4,6-Trichlorophenol	EPA 8270	1,3,5-Trimethylbenzene	EPA 8021B
2,4-Dichlorophenol	EPA 8270	•	EPA 8260B
2,4-Dimethylphenol	EPA 8270	1,3-Dichlorobenzene	EPA 8021B
2,4-Dinitrophenol	EPA 8270		EPA 8260B
2,6-Dichlorophenol	EPA 8270		EPA 8270
2-Chlorophenol	EPA 8270	1,4-Dichlorobenzene	EPA 8021B

Serial No.: 31926





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised March 05, 2007

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. MICHAEL PERRY COLUMBIA ANALYTICAL SERVICES 1 MUSTARD ST - STE 250 ROCHESTER, NY 14609 NY Lab Id No: 10145 EPA Lab Code: NY00032

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Purgeable Aromatics		Purgeable Aromatics	
1,4-Dichlorobenzene	EPA 8260B EPA 8270	tert-Butylbenzene Toluene	EPA 8260B EPA 8021B
2-Chlorotoluene 4-Chlorotoluene Benzene Bromobenzene Chlorobenzene	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8021B	Total Xylenes  Purgeable Halocarbons  1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8021B
Ethyl benzene	EPA 8021B EPA 8260B EPA 8021B	1,1,2,2-Tetrachloroethane	EPA 8260B EPA 8021B EPA 8260B EPA 8021B
n-Butylbenzene	EPA 8260B EPA 8021B EPA 8260B	1,1-Dichloroethane	EPA 8260B EPA 8021B EPA 8260B
n-Propylbenzene p-Isopropyltoluene (P-Cymene)	EPA 8021B EPA 8260B EPA 8021B	1,1-Dichloroethene	EPA 8021B EPA 8260B
sec-Butylbenzene	EPA 8260B EPA 8021B EPA 8260B	1,1-Dichloropropene 1,2,3-Trichloropropane 1,2-Dibromo-3-chloropropane	EPA 8260B EPA 8260B EPA 8260B
Styrene tert-Butylbenzene	EPA 8260B EPA 8021B	1,2-Dichloroethane	EPA 8021B EPA 8260B

Serial No.: 31926





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised March 05, 2007

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Purgeable Halocarbons		Purgeable Halocarbons	
1,2-Dichloropropane	EPA 8021B	cis-1,2-Dichloroethene	EPA 8021B
	EPA 8260B		EPA 8260B
1,3-Dichloropropane	EPA 8260B	cis-1,3-Dichloropropene	EPA 8021B
2,2-Dichloropropane	EPA 8260B		EPA 8260B
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260B	Dibromochloromethane	EPA 8021B
2-Chloroethylvinyl ether	EPA 8021B		EPA 8260B
	EPA 8260B	Dibromomethane	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B	Dichlorodifluoromethane	EPA 8021B
Bromochloromethane	EPA 8260B		EPA 8260B
Bromodichloromethane	EPA 8021B	Methylene chloride	EPA 8021B
	EPA 8260B		EPA 8260B
Bromoform	EPA 8021B	Tetrachloroethene	EPA 8021B
	EPA 8260B		EPA 8260B
Bromomethane	EPA 8021B	trans-1,2-Dichloroethene	EPA 8021B
	EPA 8260B		EPA 8260B
Carbon tetrachloride	EPA 8021B	trans-1,3-Dichloropropene	EPA 8021B
	EPA 8260B		EPA 8260B
Chloroethane	EPA 8021B	trans-1,4-Dichloro-2-butene	EPA 8260B
	EPA 8260B	Trichloroethene	EPA 8021B
Chloroform	EPA 8021B		EPA 8260B
	EPA 8260B	Trichlorofluoromethane	EPA 8021B
Chloromethane	EPA 8021B		EPA 8260B
	EPA 8260B	Vinyl chloride	EPA 8021B

Serial No.: 31926





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised March 05, 2007

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Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. MICHAEL PERRY COLUMBIA ANALYTICAL SERVICES 1 MUSTARD ST - STE 250 ROCHESTER, NY 14609

NY Lab Id No: 10145 EPA Lab Code: NY00032

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Purgeable Halocarbons		Semi-Volatile Organics	
Vinyl chloride	EPA 8260B	Benzoic Acid	EPA 8270
Purgeable Organics		Benzyl alcohol Dibenzofuran	EPA 8270 EPA 8270
1,4-Dioxane 2-Butanone (Methylethyl ketone) 2-Hexanone 4-Methyl-2-Pentanone Acetone Acetonitrile Carbon Disulfide Ethyl Acetate Isobutyl alcohol Methyl tert-butyl ether	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	Ethyl methanesulfonate Isosafrole Methyl methanesulfonate O,O,O-Triethyl phosphorothioate Phenacetin Safrole	EPA 8270 EPA 8270 EPA 8270 EPA 8270 EPA 8270
Propionitrile Vinyl acetate	EPA 8260B EPA 8260B		
Semi-Volatile Organics			
2-Methylnaphthalene 4-Amino biphenyl Acetophenone Aramite	EPA 8270 EPA 8270 EPA 8270 EPA 8270		

Sample Preparation Methods

**EPA 3540C** EPA 1311 EPA 9030B EPA 3050B EPA 3060A EPA 3550B EPA 5030B EPA 5035

Serial No.: 31926





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 27, 2007

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. MICHAEL PERRY COLUMBIA ANALYTICAL SERVICES 1 MUSTARD ST - STE 250 ROCHESTER, NY 14609 NY Lab Id No: 10145 EPA Lab Code: NY00032

is hereby APPROVED as an Environmental Laboratory for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved subcategories and/or analytes are listed below:

Miscellaneous

Lead in Paint

EPA 6010B

 EPA 3550B
 EPA 5030B
 EPA 5035
 EPA 3060A

 Sample Preparation Methods

 EPA 1311
 EPA 9030B
 EPA 3050B
 EPA 3540C

 EPA 3550B
 EPA 5030B
 EPA 5035
 EPA 3060A

Serial No.: 31874

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised November 16, 2006

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. MICHAEL PERRY COLUMBIA ANALYTICAL SERVICES 1 MUSTARD ST - STE 250 ROCHESTER, NY 14609 NY Lab Id No: 10145 EPA Lab Code: NY00032

is hereby APPROVED as an Environmental Laboratory for the category ENVIRONMENTAL ANALYSES ANALYTICAL SERVICES PROTOCOL All approved subcategories and/or analytes are listed below:

CLP PCB/Pesticides
CLP Semi-Volatile Organics
CLP Volatile Organics
CLP Inorganics

Serial No.: 31298

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised October 20, 2006

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. MICHAEL PERRY COLUMBIA ANALYTICAL SERVICES 1 MUSTARD ST - STE 250 ROCHESTER, NY 14609 NY Lab Id No: 10145 EPA Lab Code: NY00032

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:

Acrylates		Purgeable Halocarbons	
Acrylonitrìle	EPA TO-15	1,1,1-Trichloroethane	EPA TO-15
Ethyl acrylate	EPA TO-15	1,1,2,2-Tetrachloroethane	EPA TO-15
Methyl methacrylate	EPA TO-15	1,1,2-Trichloroethane	EPA TO-15
Chlorinated Hydrocarbons		1,1,2-Trifluoro-1,2,2-Trichloroethane	EPA TO-15
1,2,4-Trichlorobenzene	EPA TO-15	1,1-Dichloroethane	EPA TO-15
Hexachlorobutadiene	EPA TO-15	1,1-Dichloroethene	EPA TO-15
1 ICAGONO ODGIGACIO	2.77.10	1,2-Dichloro-1,1,2,2-tetrafluoroethane	EPA TO-15
Miscellaneous Air		1,2-Dichloroethane	EPA TO-15
Formaldehyde	EPA TO-15	1,2-Dichloropropane	EPA TO-15
Purgeable Aromatics		Bromodichloromethane	EPA TO-15
1,2,4-Trimethylbenzene	EPA TO-15	Bromoform	EPA TO-15
1,2-Dichlorobenzene	EPA TO-15	Bromomethane	EPA TO-15
1,3,5-Trimethylbenzene	EPA TO-15	Carbon tetrachloride	EPA TO-15
1,3-Dichlorobenzene	EPA TO-15	Chloroethane	EPA TO-15
1,4-Dichlorobenzene	EPA TO-15	Chloroform	EPA TO-15
Benzene	EPA TO-15	Chloromethane	EPA TO-15
Chlorobenzene	EPA TO-15	cis-1,2-Dichloroethene	EPA TO-15
Ethyl benzene	EPA TO-15	cis-1,3-Dichloropropene	EPA TO-15
Styrene	EPA TO-15	Dichlorodifluoromethane	EPA TO-15
Toluene	EPA TO-15	Methylene chloride	EPA TO-15
Total Xylenes	EPA TO-15	Tetrachloroethene	EPA TO-15
		trans-1,2-Dichloroethene	EPA TO-15
		trans-1,3-Dichloropropene	EPA TO-15

Serial No.: 31001



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised October 20, 2006

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. MICHAEL PERRY COLUMBIA ANALYTICAL SERVICES 1 MUSTARD ST - STE 250 ROCHESTER, NY 14609 NY Lab Id No: 10145 EPA Lab Code: NY00032

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES AIR AND EMISSIONS

All approved analytes are listed below:

### **Purgeable Halocarbons**

Trichloroethene	EPA TO-15
Trichlorofluoromethane	EPA TO-15
Vinyl chloride	EPA TO-15
Volatile Chlorinated Organics	
Benzyl chloride	EPA TO-15
Volatile Organics	
1,3-Butadiene	EPA TO-15
2,2,4-Trimethylpentane	EPA TO-15
2-Butanone (Methylethyl ketone)	EPA TO-15
4-Methyl-2-Pentanone	EPA TO-15
Hexane	EPA TO-15
Methyl iodide	EPA TO-15
Methyl tert-butyl ether	EPA TO-15
Vinyl acetate	EPA TO-15

Serial No.: 31001



# Attachment D

Laboratory Qualifications for Severn Trent Laboratories, Inc.





### Department of Environmental Protection

Division of Environmental Analysis Senator William X. Wall Experiment Station

### certifies

M-NY044

STL BUFFALO 10 HAZELWOOD DR AMHERST, NY 14228-2298

Laboratory Director: CHRISTOPHER SPENCER

for the analysis of POTABLE WATER (CHEMISTRY)
NON POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued:

Expires:

01 JUL 2006

30 JUN 2007

Director, Division of Environmental Analysis

Vacar Q. Parcalo

# COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 28 DEC 2006

M-NY044 STL BUFFALO AMHERST NY

NON POTABLE WATER	(CHEMISTRY)	Effective Date	01 JUL 2006	Expiration 3	30 JUN 2007
	Analytes and Methods				
ALUMINUM	EPA 200.7		POTASSIUM		EPA 200.7
ANTIMONY	EPA 200.7		ALKALINITY, TOTAL		EPA 310.1
ANTIMONY	EPA 200.8		ALKALINITY, TOTAL		EPA 310.2
ARSENIC	EPA 200.7		CHLORIDE		EPA 325.2
ARSENIC	EPA 200.8		CHLORIDE		EPA 300.0
BERYLLIUM	EPA 200.7		FLUORIDE		EPA 340.2
BERYLLIUM	EPA 200.8		FLUORIDE		EPA 300.0
CADMIUM	EPA 200.7		SULFATE		EPA 375.4
CADMIUM	EPA 200.8		SULFATE		EPA 300.0
CHROMIUM	EPA 200.7		AMMONIA-N		EPA 350.1
CHROMIUM	EPA 200.8		NITRATE-N		EPA 300.0
COBALT	EPA 200.7		NITRATE-N		EPA 353.2
COBALT	EPA 200.8		KJELDAHL-N		EPA 351.2
COPPER	EPA 200.7		ORTHOPHOSPHATE		EPA 365.2
COPPER	EPA 200.8		PHOSPHORUS, TOTAL		EPA 365.2
IRON	EPA 200.7		CHEMICAL OXYGEN DEMA	AND	EPA 410.4
LEAD	EPA 200.7		BIOCHEMICAL OXYGEN D	EMAND	EPA 405.1
LEAD	EPA 200.8		TOTAL ORGANIC CARBON	1	EPA 415.1
MANGANESE	EPA 200.7		CYANIDE, TOTAL		EPA 335.2
MANGANESE	EPA 200.8		CYANIDE, TOTAL		EPA 335.4
MERCURY	EPA 245.1		NON-FILTERABLE RESIDU	IE .	EPA 160.2
MOLYBDENUM	EPA 200.7		OIL AND GREASE		EPA 1664
MOLYBDENUM	EPA 200.8		PHENOLICS, TOTAL		EPA 420.2
NICKEL	EPA 200.7		VOLATILE HALOCARBONS	3	EPA 624
NICKEL	EPA 200.8		VOLATILE AROMATICS		EPA 624
SELENIUM	EPA 200.7		CHLORDANE		EPA 608
SELENIUM	EPA 200.8		ALDRIN		EPA 608
SILVER	EPA 200.7		DIELDRIN		EPA 608
SILVER	EPA 200.8		DDD		EPA 608
THALLIUM	EPA 200.7		DDE		EPA 608
THALLIUM	EPA 200.8		DDT		EPA 608
TITANIUM	EPA 200.7		HEPTACHLOR		EPA 608
VANADIUM	EPA 200.7		HEPTACHLOR EPOXIDE		EPA 608
VANADIUM	EPA 200.8		POLYCHLORINATED BIPH	ENYLS (WATEF	EPA 608
ZINC	EPA 200.7				
ZINC	EPA 200.8				
PH	EPA 150.1				
TOTAL DISSOLVED SOLIDS					
HARDNESS (CACO3), TOTA					
CALCIUM	EPA 200.7				
MAGNESIUM	EPA 200.7				
SODIUM	EPA 200.7				

### COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 28 DEC 2006

M-NY044 STL BUFFALO AMHERST NY

POTABLE WATER (CH	IEMISTRY)	Effective Date	28 DEC 2006	Expiration Date	30 JUN 2007
	<b>Analytes and Methods</b>				
ANTIMONY	EPA 200.8				
ARSENIC	EPA 200.8				
BARIUM	EPA 200.7				
BARIUM	EPA 200.8				
BERYLLIUM	EPA 200.7				
BERYLLIUM	EPA 200.8				
CADMIUM	EPA 200.7				
CADMIUM	EPA 200.8				
CHROMIUM	EPA 200.7				
CHROMIUM	EPA 200.8				
COPPER	EPA 200.7				
COPPER	EPA 200.8				
LEAD	EPA 200.8				
MERCURY	EPA 245.1				
NICKEL	EPA 200.7				
NICKEL	EPA 200.8				
SELENIUM	EPA 200.8				
THALLIUM	EPA 200.8				
FLUORIDE	EPA 300.0				
CYANIDE, TOTAL	EPA 335.4				
CALCIUM	EPA 200.7				
PH	EPA 150.1				
VOLATILE ORGANIC COM	POUNDS EPA 524.2				



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER SPENCER STL BUFFALO 10 HAZELWOOD DRIVE - SUITE 106 AMHERST, NY 14228 NY Lab Id No: 10026 EPA Lab Code: NY00044

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Acrylates		Benzidin <del>e</del> s	
Acrolein (Propenal)	EPA 8260B	3,3'-Dimethylbenzidene	EPA 8270
Acrylonitrile	EPA 8260B	Benzidine	EPA 8270
Ethyl methacrylate	EPA 8260B	Characteristic Testing	
Methyl acrylonitrile	EPA 8260B	-	EPA 9040B
Methyl methacrylate	EPA 8260B	Corrosivity	EPA 9045C
Amines		Ignitability	EPA 1010
1,2-Diphenylhydrazine	EPA 8270	Reactivity	. SW-846 Ch7, Sec. 7.3
1,4-Phenylenediamine	EPA 8270	Chlorinated Hydrocarbon Pestic	ides
1-Naphthylamine	EPA 8270	4,4'-DDD	EPA 8081A
2-Naphthylamine	EPA 8270	4.4'-DDE	EPA 8081A
2-Nitroaniline	EPA 8270	4,4'-DDT	EPA 8081A
3-Nitroaniline	EPA 8270	Aldrin	EPA 8081A
4-Chloroaniline	EPA 8270	alpha-BHC	EPA 8081A
4-Nitroaniline	EPA 8270	alpha-Chlordane	EPA 8081A
5-Nitro-o-toluidine	EPA 8270	beta-BHC	EPA 8081A
Aniline	EPA 8270 .	Chlordane Total	EPA 8081A
Carbazole	EPA 8270	Chlorobenzilate	EPA 8270
Diphenylamine	EPA 8270	delta-BHC	EPA 8081A
Methapyriline	EPA 8270	Diallate	EPA 8270
Pronamide	EPA 8270	Dieldrin	EPA 8081A
Benzidines		Endosulfan I	EPA 8081A
3,3' -Dichlorobenzidine	EPA 8270	Endosulfan II	EPA 8081A

Serial No.: 31844





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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MR. CHRISTOPHER SPENCER STL BUFFALO 10 HAZELWOOD DRIVE - SUITE 106 AMHERST, NY 14228 NY Lab Id No: 10026 EPA Lab Code: NY00044

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Chlorinated Hydrocarbon Pesticio	les	Chlorinated Hydrocarbons	
Endosulfan sulfate	EPA 8081A	Hexachloropropene	EPA 8270
Endrin	EPA 8081A	Pentachlorobenzene	EPA 8270
Endrin aldehyde	EPA 8081A	Chlorophenoxy Acid Pesticides	
Endrin Ketone	EPA 8081A	·	EPA 8151A
gamma-Chlordane	EPA 8081A	2,4,5-T	
Heptachlor	EPA 8081A	2,4,5-TP (Silvex)	EPA 8151A
Heptachlor epoxide	EPA 8081A	2,4-D	EPA 8151A
Kepone	EPA 8270	Dalapon	EPA 8151A
Lindane	EPA 8081A	Dinoseb	EPA 8151A
Methoxychlor	EPA 8081A	Haloethers	
Pentachloronitrobenzene	EPA 8270	4-Bromophenylphenyl ether	EPA 8270
Toxaphene	EPA 8081A	4-Chlorophenylphenyl ether	EPA 8270
Chlorinated Hydrocarbons		Bis (2-chloroisopropyl) ether	EPA 8270
1,2,4,5-Tetrachlorobenzene	EPA 8270	Bis(2-chloroethoxy)methane	EPA 8270
1,2,4-Trichlorobenzene	EPA 8270	Bis(2-chloroethyl)ether	EPA 8270
2-Chloronaphthalene	EPA 8270	Metals I	
Hexachlorobenzene	EPA 8270	Barium, Total	EPA 6010B
Hexachlorobutadiene	EPA 8260B		EPA 6020
	EPA 8270	Cadmium, Total	EPA 6010B
Hexachlorocyclopentadiene	EPA 8270		EPA 6020
Hexachloroethane	EPA 8270	Calcium, Total	EPA 6010B
Hexachlorophene	EPA 8270	Chromium, Total	EPA 6010B

Serial No.: 31844





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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MR. CHRISTOPHER SPENCER STL BUFFALO 10 HAZELWOOD DRIVE - SUITE 106 AMHERST, NY 14228 NY Lab Id No: 10026 EPA Lab Code: NY00044

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BB-4-1- II

Metals I		Metals II	
Chromium, Total	EPA 6020	Beryllium, Total	EPA 6020
Copper, Total	EPA 6010B	Chromium VI	EPA 7196A
	EPA 6020	Lithium, Total	EPA 6010B
Iron, Total	EPA 6010B	Mercury, Total	EPA 7471A
Lead, Total	EPA 6010B	Selenium, Total	EPA 6010B
	EPA 6020		EPA 6020
Magnesium, Total	EPA 6010B	Vanadium, Total	EPA 6010B
Manganese, Total	EPA 6010B	Zinc, Total	EPA 6010B
-	EPA 6020		EPA 6020
Nickel, Total	EPA 6010B	Metals III	
	EPA 6020		EDA 6040D
Potassium, Total	EPA 6010B	Cobalt, Total	EPA 6010B
Silver, Total	EPA 6010B		EPA 6020
	EPA 6020	Molybdenum, Total	EPA 6010B
Sodium, Total	EPA 6010B	·	EPA 6020
NA -4 -4 - 11		Thallium, Total	EPA 6010B
Metals II			EPA 6020
Aluminum, Total	EPA 6010B	Tin, Total	EPA 6010B
Antimony, Total	EPA 6010B	Titanium, Total	EPA 6010B
	EPA 6020	Minerals	
Arsenic, Total	EPA 6010B		ED4 0050
	EPA 6020	Bromide	EPA 9056
Beryllium, Total	EPA 6010B	Chloride	EPA 9056
20.7			EPA 9251

Serial No.: 31844





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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Minerals		Nitrosoamines	
Fluoride, Total	EPA 9056	N-Nitrosodiethylamine	EPA 8270
Sulfate (as SO4)	EPA 9038	N-Nitrosodimethylamine	EPA 8270
	EPA 9056	N-Nitrosodi-n-butylamine	EPA 8270
Miscellaneous		N-Nitrosodi-n-propylamine	EPA 8270
Boron, Total	EPA 6010B	N-Nitrosodiphenylamine	EPA 8270 OLM 4.2 BNA
Cyanide, Total	EPA 9012A	N nitrogomothylothylomine	EPA 8270
Hydrogen Ion (pH)	EPA 9040B	N-nitrosomethylethylamine N-nitrosomorpholine	EPA 8270
	EPA 9045C	N-nitrosopiperidine	EPA 8270
Oil & Grease Total Recoverable	EPA 9070	N-Nitrosopyrrolidine	EPA 8270
	EPA 9071	14-14ti osopytrolidine	LFA 0270
Phenois	EPA 9066	Nutrients	
Specific Conductance	EPA 9050	Nitrate (as N)	EPA 9056
Nitroaromatics and Isophorone		Organophosphate Pesticides	
1,4-Dinitrobenzene	EPA 8270	Dimethoate	EPA 8270
1,4-Naphthquinone	EPA 8270	Disulfoton	EPA 8270
2,4-Dinitrotoluene	EPA 8270	Famphur	EPA 8270
2,6-Dinitrotoluene	EPA 8270	Parathion ethyl	EPA 8270
4-Dimethylaminoazobenzene	EPA 8270	Parathion methyl	EPA 8270
Hydroquinone	EPA 8270	Phorate	EPA 8270
Isophorone	EPA 8270	Phthalate Esters	
Nitrobenzene	EPA 8270		FD4 0070
Pyridine:	EPA 8270	Benzyl butyl phthalate	EPA 8270

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### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER SPENCER STL BUFFALO 10 HAZELWOOD DRIVE - SUITE 106 AMHERST, NY 14228 NY Lab Id No: 10026 EPA Lab Code: NY00044

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Phthalate Esters		Polynuclear Aromatic Hydrocarbons		
Bis(2-ethylhexyl) phthalate	EPA 8270	Benzo(ghi)perylene	EPA 8270	
Diethyl phthalate	EPA 8270	Benzo(k)fluoranthene	EPA 8270	
Dimethyl phthalate	EPA 8270	Chrysene	EPA 8270	
Di-n-butyl phthalate	EPA 8270	Dibenzo(a,e)pyrene	EPA 8270	
Di-n-octyl phthalate	EPA 8270	Dibenzo(a,h)anthracene	EPA 8270	
Polychlorinated Biphenyls	•	Fluoranthene	EPA 8270	
PCB-1016 PCB-1221 PCB-1232 PCB-1242 PCB-1248 PCB-1254	EPA 8082 EPA 8082 EPA 8082 EPA 8082 EPA 8082 EPA 8082	Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene  Priority Pollutant Phenols	EPA 8270 EPA 8270 EPA 8270 EPA 8270 EPA 8270	
PCB-1260	EPA 8082	2,3,4,6 Tetrachlorophenol	EPA 8270	
Polynuclear Aromatic Hydrocarbons		2,4,5-Trichlorophenol 2,4,6-Trichlorophenol	EPA 8270 EPA 8270	
3-Methylcholanthrene	EPA 8270	2,4-Dichlorophenol	EPA 8270	
7,12-Dimethylbenzyl (a) anthracene	EPA 8270	2,4-Dimethylphenol	EPA 8270	
Acenaphthene	EPA 8270	2,4-Dinitrophenol	EPA 8270	
Acenaphthylene	EPA 8270	2,6-Dichlorophenol	EPA 8270	
Anthracene	EPA 8270	2-Chlorophenol	EPA 8270	
Benzo(a)anthracene	EPA 8270	2-Methyl-4,6-dinitrophenol	EPA 8270	
Benzo(a)pyrene	EPA 8270	2-Methylphenol	EPA 8270	
Benzo(b)fluoranthene	EPA 8270		/. 02.0	

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Priority Pollutant Phenols		Purgeable Aromatics	
2-Nitrophenol	EPA 8270	Benzene	EPA 8021B
3-Methylphenol	EPA 8270		EPA 8260B
4-Chloro-3-methylphenol	EPA 8270	Bromobenzene	EPA 8021B
4-Methylphenol	EPA 8270		EPA 8260B
4-Nitrophenol	EPA 8270	Chlorobenzene	EPA 8260B
Pentachlorophenol	EPA 8270	Ethyl benzene	EPA 8021B
Phenol	EPA 8270		EPA 8260B
Purgeable Aromatics	•	Isopropylbenzene	EPA 8021B
•	ED4 0004D		EPA 8260B
1,2,4-Trimethylbenzene	EPA 8021B	n-Butylbenzene	EPA 8021B
	EPA 8260B		EPA 8260B
1,2-Dichlorobenzene	EPA 8260B	n-Propylbenzene	EPA 8021B
	EPA 8270		EPA 8260B
1,3,5-Trimethylbenzene	EPA 8021B	p-Isopropyltoluene (P-Cymene)	EPA 8021B
	EPA 8260B		EPA 8260B
1,3-Dichlorobenzene	EPA 8260B	sec-Butylbenzene	EPA 8021B
	EPA 8270	•••• ==• <b>y</b> =	EPA 8260B
1,4-Dichlorobenzene	EPA 8260B	Styrene	EPA 8260B
	EPA 8270	tert-Butylbenzene	EPA 8021B
2-Chlorotoluene	EPA 8021B	tort butyloon.	EPA 8260B
	EPA 8260B	Toluene	EPA 8021B
4-Chlorotoluene	EPA 8021B	Totalo	EPA 8260B
	EPA 8260B	Total Xylenes	EPA 8021B
		Total Aylonos	EI / COLID

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Purgeable Aromatics		Purgeable Halocarbons	
Total Xylenes	EPA 8260B	Carbon tetrachloride	EPA 8260B
Purgeable Halocarbons		Chloroethane Chloroform	EPA 8260B EPA 8260B
1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene 1,2,3-Trichloropropane 1,2-Dibromo-3-chloropropane 1,2-Dichloroethane 1,2-Dichloropropane	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene cis-1,4-Dichloro-2-butene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Methylene chloride Tetrachloroethene trans-1,2-Dichloroethene	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B
1,3-Dichloropropane 2,2-Dichloropropane 2-Chloro-1,3-butadiene (Chloroprene) 2-Chloroethylvinyl ether 3-Chloropropene (Allyl chloride) Bromochloromethane	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	trans-1,3-Dichloropropene trans-1,4-Dichloro-2-butene Trichloroethene Trichlorofluoromethane Vinyl chloride	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B
Bromodichloromethane Bromoform Bromomethane	EPA 8260B EPA 8260B EPA 8260B	Purgeable Organics 1,4-Dioxane 2-Butanone (Methylethyl ketone)	EPA 8260B ⁻ EPA 8260B

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> **EPA 8270** EPA 8270 **EPA 8270**

EPA 8260B

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Purgeable Organics		Semi-Volatile Organics
2-Hexanone	EPA 8260B	Methyl methanesulfonate
4-Methyl-2-Pentanone	EPA 8260B	O,O,O-Triethyl phosphorothioate
Acetone	EPA 8260B	Phenacetin
Acetonitrile	EPA 8260B	Volatile Chlorinated Organics
Carbon Disulfide	EPA 8260B	-
Ethyl Acetate	EPA 8260B	Epichlorohydrin
Ethylene Glycol	EPA 8015 B	
Isobutyl alcohol	EPA 8015 B	
	EPA 8260B	
Methyl tert-butyl ether	EPA 8260B	
o-Toluidine	EPA 8260B	
Propionitrile	EPA 8260B	
Vinyl acetate	EPA 8260B	•
Semi-Volatile Organics		
2-Methylnaphthalene	EPA 8270	
4-Amino biphenyl	EPA 8270	
Acetophenone	EPA 8270	
Benzoic Acid	EPA 8270	
Benzyl alcohol	EPA 8270	
Dibenzofuran	EPA 8270	
Ethyl methanesulfonate	EPA 8270	

### Sample Preparation Methods

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**EPA 1311 EPA 3010A** EPA 3580 EPA 3550B EPA 3005A **EPA 5030B**  **EPA 3050B** EPA 3020A

FPA 5035 Serial No.: 31844 FPA 3060A EPA 5035

EPA 3060A

EPA 3580

**EPA 3550B** 

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.

EPA 8270





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D. W. Methylcarbamate Pesticides		Drinking Water Metals I	
3-Hydroxy Carbofuran	EPA 531.1	Manganese, Total	EPA 200.7
Aldicarb	EPA 531.1		EPA 200.8
Aldicarb Sulfone	EPA 531.1	Mercury, Total	EPA 245.1
Aldicarb Sulfoxide	EPA 531.1	Selenium, Total	EPA 200.8
Carbaryl	EPA 531.1	Silver, Total	EPA 200.7
Carbofuran	EPA 531.1		EPA 200.8
Methomyl	EPA 531.1	Zinc, Total	EPA 200.7
Oxamyl	EPA 531.1		EPA 200.8
Drinking Water Metals I		Drinking Water Metals II	
Arsenic, Total	EPA 200.7	Aluminum, Total	EPA 200.7
	EPA 200.8	Antimony, Total	EPA 200.7
Barium, Total	EPA 200.7		EPA 200.8
	EPA 200.8	Beryllium, Total	EPA 200.7
Cadmium, Total	EPA 200.7		EPA 200.8
	EPA 200.8	Molybdenum, Total	EPA 200.7
Chromium, Total	EPA 200.7		EPA 200.8
	EPA 200.8	Nickel, Total	EPA 200.7
Copper, Total	EPA 200.7		EPA 200.8
	EPA 200.8	Thallium, Total	EPA 200.8
Iron, Total	EPA 200.7	Vanadium, Total	EPA 200.7
Lead, Total	EPA 200.7		EPA 200.8
	EPA 200.8		

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All approved analytes are listed below:

Drinking Water Metals III		<b>Drinking Water Non-Metals</b>	
Boron, Total	EPA 200.7	Nitrite (as N)	EPA 353.2
Calcium, Total	EPA 200.7	Orthophosphate (as P)	EPA 365.2
Magnesium, Total	EPA 200.7	Solids, Total Dissolved	EPA 160.1
Potassium, Total	EPA 200.7		SM 18-20 2540C
Sodium, Total	EPA 200.7	Specific Conductance	EPA 120.1
Drinking Water Miscellaneous		Sulfate (as SO4)	EPA 300.0
Endothall	EPA 548.1	,	EPA 375.4
Methyl tert-butyl ether	EPA 524.2	<b>Drinking Water Trihalomethanes</b>	
Drinking Water Non-Metals		Bromodichloromethane	EPA 524.2
•		Bromoform	EPA 524.2
Alkalinity	EPA 310.1	Chloroform	EPA 524.2
	EPA 310.2	Dibromochloromethane	EPA 524.2
	SM 18-20 2320B	Total Trihalomethanes	EPA 524.2
Calcium Hardness	EPA 200.7		
Chloride	EPA 300.0	Microextractibles	
	EPA 325.2	1,2-Dibromo-3-chloropropane	EPA 504.1
Color	EPA 110.2	1,2-Dibromoethane	EPA 504.1
Cyanide, Free	EPA 335.4	Volatile Aromatics	
Cyanide, Total	EPA 335.2		
•	EPA 335.4	1,2,3-Trichlorobenzene	EPA 524.2
Fluoride, Total	EPA 300.0	1,2,4-Trichlorobenzene	EPA 524.2
Hydrogen Ion (pH)	EPA 150.1	1,2,4-Trimethylbenzene	EPA 524.2
Nitrate (as N)	EPA 300.0	1,2-Dichlorobenzene	EPA 524.2

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All approved analytes are listed below:

Volatile Aromatics		Volatile Halocarbons	
1,3,5-Trimethylbenzene	EPA 524.2	1,1,2,2-Tetrachloroethane	EPA 524.2
1,3-Dichlorobenzene	EPA 524.2	1,1,2-Trichloroethane	EPA 524.2
1,4-Dichlorobenzene	EPA 524.2	1,1-Dichloroethane	EPA 524.2
2-Chlorotoluene	EPA 524.2	1,1-Dichloroethene	EPA 524.2
4-Chlorotoluene	EPA 524.2	1,1-Dichloropropene	EPA 524.2
Benzene	EPA 524.2	1,2,3-Trichloropropane	EPA 524.2
Bromobenzene	EPA 524.2	1,2-Dichloroethane	EPA 524.2
Chlorobenzene	EPA 524.2	1,2-Dichloropropane	EPA 524.2
Ethyl benzene	EPA 524.2	1,3-Dichloropropane	EPA 524.2
Hexachlorobutadiene	EPA 524.2	2,2-Dichloropropane	EPA 524.2
Isopropylbenzene	EPA 524.2	Bromochloromethane	EPA 524.2
n-Butylbenzene	EPA 524.2	Bromomethane	EPA 524.2
n-Propylbenzene	EPA 524.2	Carbon tetrachloride	EPA 524.2
p-Isopropyltoluene (P-Cymene)	EPA 524.2	Chloroethane	' EPA 524.2
sec-Butylbenzene	EPA 524.2	Chloromethane	EPA 524.2
Styrene	EPA 524.2	cis-1,2-Dichloroethene	EPA 524.2
tert-Butylbenzene	EPA 524.2	cis-1,3-Dichloropropene	EPA 524.2
Toluene	EPA 524.2	Dibromomethane	EPA 524.2
Total Xylenes	EPA 524.2	Dichlorodifluoromethane	EPA 524.2
Volatile Halocarbons		Methylene chloride	EPA 524.2
		Tetrachloroethene	EPA 524.2
1,1,1,2-Tetrachloroethane	EPA 524.2	trans-1,2-Dichloroethene	EPA 524.2
1,1,1-Trichloroethane	EPA 524.2	trans-1,3-Dichloropropene	EPA 524.2

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All approved analytes are listed below:

#### Volatile Halocarbons

Trichloroethene EPA 524.2
Trichlorofluoromethane EPA 524.2
Vinyl chloride EPA 524.2

Sample Preparation Methods SM 18-20 2340B

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Acrylates		Amines	
Acrolein (Propenal)	EPA 624	Pyridine	EPA 625
	EPA 8260B		EPA 8270
- Acrylonitrile	EPA 624	Benzidines	
•	EPA 8260B		EDA 605
Ethyl methacrylate	EPA 8260B	3,3' -Dichlorobenzidine	EPA 625
Methyl acrylonitrile	EPA 8260B	O Ol Dissethadhaanidana	EPA 8270
Methyl methacrylate	EPA 8260B	3,3'-Dimethylbenzidene	EPA 8270
Amines		Benzidine	EPA 625
		•	EPA 8270
1,4-Phenylenediamine	EPA 8270	Chlorinated Hydrocarbon Pestion	ides
1-Naphthylamine	EPA 8270	4.4'-DDD	EPA 608
2-Naphthylamine	EPA 8270	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	EPA 8081A
2-Nitroaniline	EPA 8270	4,4'-DDE	EPA 608
3-Nitroaniline	EPA 8270	4,4 -DDL	EPA 8081A
4-Chloroaniline	EPA 8270	4,4'-DDT	EPA 608
4-Nitroaniline	EPA 8270	4,4 -001	
5-Nitro-o-toluidine	EPA 8270	A1.4	EPA 8081A
. Aniline	EPA 8270	Aldrin	EPA 608
Carbazole	EPA 8270		EPA 8081A
Diphenylamine	EPA 8270	alpha-BHC	EPA 608
Methapyriline	EPA 8270		EPA 8081A
Pronamide .	EPA 8270	alpha-Chlordane	EPA 8081A
Propionitrile	EPA 8260B	beta-BHC	EPA 608
•			EPA 8081A

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All approved analytes are listed below:

Chlorinated Hydrocarbon Pesticides		Chlorinated Hydrocarbon Pesticides	
Chlordane Total	EPA 608	Heptachlor epoxide	EPA 8081A
	EPA 8081A	Isodrin	EPA 8270
Chlorobenzilate	EPA 8270	Kepone	EPA 8270
delta-BHC	EPA 608	Lindane	EPA 608
	EPA 8081A	·	EPA 8081A
Diallate	EPA 8270	Methoxychlor	EPA 608
Dieldrin	EPA 608		EPA 8081A
	EPA 8081A	Mirex	SM 18-20 6630C
Endosulfan I	EPA 608	PCNB	EPA 8270
	EPA 8081A	Toxaphene	EPA 608
Endosulfan II	EPA 608		EPA 8081A
	EPA 8081A	Chlorinated Hydrocarbons	
Endosulfan sulfate	EPA 608	1,2,3-Trichlorobenzene	EPA 8260B
	EPA 8081A	• •	EPA 8270
Endrin	EPA 608	1,2,4,5-Tetrachlorobenzene	EPA 625
	EPA 8081A	1,2,4-Trichlorobenzene	EPA 8260B
Endrin aldehyde	EPA 608		EPA 8270
	EPA 8081A	2 Ohlassauhthalana	EPA 625
Endrin Ketone	EPA 8081A	2-Chloronaphthalene	EPA 8270
gamma-Chlordane	EPA 8081A	Hexachlorobenzene	EPA 625
Heptachlor	EPA 608	nexaciilolopenzerie	EPA 8270
	EPA 8081A	Hexachlorobutadiene	EPA 625
Heptachlor epoxide	EPA 608	nexactioloputadiene	LFA 023

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Chlorinated Hydrocarbons		Demand	
Hexachlorobutadiene	EPA 8260B	Chemical Oxygen Demand	HACH 8000
	EPA 8270	Fuel Oxygenates	
Hexachlorocyclopentadiene  Hexachloroethane	EPA 625 EPA 8270 EPA 625	Ethanol  Methyl tert-butyl ether  t-Butyl alcohol	EPA 8260B EPA 8260B EPA 8260B
Hexachloropropene	EPA 8270 EPA 8270	Haloethers	C; A 0200B
Pentachlorobenzene	EPA 8270	4-Bromophenylphenyl ether	EPA 625
Chlorophenoxy Acid Pesticides 2,4,5-T	EPA 1978, p.115	4-Chlorophenylphenyl ether	EPA 8270 EPA 625 EPA 8270
2,4,5-TP (Silvex)	EPA 8151A EPA 1978, p.115	Bis (2-chloroisopropyl) ether	EPA 625 EPA 8270
2,4-D	EPA 8151A EPA 1978, p.115	Bis(2-chloroethoxy)methane	EPA 625 EPA 8270
Dalapon Dinoseb	EPA 8151A EPA 8151A EPA 8151A	Bis(2-chloroethyl)ether	EPA 625 EPA 8270
Demand	LIAUISIA	Microextractables	
Biochemical Oxygen Demand	EPA 405.1 SM 18-20 5210B	1,2-Dibromo-3-chloropropane	EPA 8011 EPA 8260B
Carbonaceous BOD Chemical Oxygen Demand	SM 18-20 5210B EPA 410.4	1,2-Dibromoethane	EPA 8011 EPA 8260B

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Mineral		Nitroaromatics and Isophorone	
Acidity	EPA 305.1	1,3,5-Trinitrobenzene	EPA 8270
	SM 18-20 2310B(4a)	1,3-Dinitrobenzene	EPA 8270
Alkalinity	EPA 310.1	1,4-Naphthoquinone	EPA 8270
	EPA 310.2	2,4-Dinitrotoluene	EPA 625
	SM 18-20 2320B		EPA 8270
Calcium Hardness	EPA 200.7	2,6-Dinitrotoluene	EPA 625
Chloride	EPA 300.0		EPA 8270
	EPA 325.2	Isophorone	EPA 625
	EPA 9056		EPA 8270
	SM 18-20 4110B	Nitrobenzene	EPA 625
	SM 18-20 4500-CI E		EPA 8270
Fluoride, Total	EPA 300.0	Nitrosoamines	
	EPA 340.2		EDA 0070
	EPA 9056	N-Nitrosodiethylamine	EPA 8270
	SM 18-20 4110B	N-Nitrosodimethylamine	EPA 625
	SM 18-20 4500-F C	S. NINE P. L. L. C.	EPA 8270
Hardness, Total	EPA 130.2	N-Nitrosodi-n-butylamine	EPA 8270
Sulfate (as SO4)	EPA 300.0	N-Nitrosodi-n-propylamine	EPA 625
	EPA 375.4		EPA 8270
	EPA 9056	N-Nitrosodiphenylamine	EPA 625
,	SM 18-20 4110B		EPA 8270
	•	N-nitrosopiperidine	EPA 8270
		N-Nitrosopyrrolidine	EPA 8270

Serial No.: 31843





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

## CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER SPENCER STL BUFFALO 10 HAZELWOOD DRIVE - SUITE 106 AMHERST, NY 14228 NY Lab Id No: 10026 EPA Lab Code: NY00044

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved analytes are listed below:

Nutrient	•	Phthalate Esters	
Ammonia (as N)	EPA 350.1	Benzyl butyl phthalate	EPA 8270
Kjeldahl Nitrogen, Total	EPA 351.2	Bis(2-ethylhexyl) phthalate	EPA 625
Nitrate (as N)	EPA 300.0		EPA 8270
	EPA 353.2	Diethyl phthalate	EPA 625
	EPA 9056		EPA 8270
	SM 18-20 4110B	Dimethyl phthalate	EPA 625
	SM 18-20 4500-NO3 F		EPA 8270
Nitrite (as N)	EPA 353.2	Di-n-butyl phthalate	EPA 625
	SM 18-20 4500-NO3 F		EPA 8270
Orthophosphate (as P)	EPA 365.2	Di-n-octyl phthalate	EPA 625
	SM 18-20 4500-P E	•	EPA 8270
Phosphorus, Total	EPA 365.2	Polychlorinated Biphenyls	
•	SM 18-20 4500-P E	PCB-1016	EPA 608
Organophosphate Pesticides		POB-1010	EPA 8082
Dimethoate	EPA 8270	PCB-1221	EPA 608
Disulfoton	EPA 8270		EPA 8082
Famphur	EPA 8270	PCB-1232	EPA 608
Parathion ethyl	EPA 8270		EPA 8082
Parathion methyl	EPA 8270	PCB-1242	EPA 608
Phorate	EPA 8270		EPA 8082
Phthalate Esters		PCB-1248	EPA 608
			EPA 8082
Benzyl butyl phthalate	EPA 625		

Serial No.: 31843





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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Polychlorinated Biphenyls		Polynuclear Aromatics	
PCB-1254	EPA 608	Benzo(k)fluoranthene	EPA 8270
	EPA 8082	Chrysene	EPA 625
PCB-1260	EPA 608		EPA 8270
	EPA 8082	Dibenzo(a,h)anthracene	EPA 625
Polynuclear Aromatics			EPA 8270
•		Fluoranthene	EPA 625
3-Methylcholanthrene	EPA 8270	•	EPA 8270
7,12-Dimethylbenzyl (a) anthracene	EPA 8270	Fluorene	EPA 625
Acenaphthene	EPA 625	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	EPA 8270
	EPA 8270	Indeno(1,2,3-cd)pyrene	EPA 625
Acenaphthylene	EPA 625		EPA 8270
	EPA 8270	Naphthalene	EPA 625
Anthracene	EPA 625	Naphinalone	EPA 8260B
	EPA 8270		EPA 8270
Benzo(a)anthracene	EPA 625	Phenanthrene	EPA 625
	EPA 8270	7 Horianamono	EPA 8270
Benzo(a)pyrene	EPA 625	Pyrene	EPA 625
	EPA 8270	Fylene	EPA 8270
Benzo(b)fluoranthene	EPA 625		LFA 02/0
	EPA 8270	Priority Pollutant Phenois	
Benzo(ghi)perylene	EPA 625	2,3,4,6 Tetrachlorophenol	EPA 8270
	EPA 8270	2,4,5-Trichlorophenol	EPA 625
Benzo(k)fluoranthene	EPA 625		EPA 8270

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Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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All approved analytes are listed below:

Priority Pollutant Phenols		Priority Pollutant Phenols	
2,4,6-Trichlorophenol	EPA 625	Cresols, Total	EPA 8270
	EPA 8270	Pentachlorophenol	EPA 625
2,4-Dichlorophenol	EPA 625		EPA 8270
	EPA 8270	Phenol	EPA 625
2,4-Dimethylphenol	EPA 625		EPA 8270
	EPA 8270	Purgeable Aromatics	
2,4-Dinitrophenol	EPA 625	<del>-</del>	<u></u> -
•	EPA 8270	1,2-Dichlorobenzene	EPA 601
2,6-Dichlorophenol	EPA 8270		EPA 602
2-Chlorophenol	EPA 625		EPA 624
	EPA 8270		EPA 625
2-Methyl-4,6-dinitrophenol	EPA 625		EPA 8260B
•	EPA 8270		EPA 8270
2-Methylphenol	EPA 8270	1,3-Dichlorobenzene	EPA 601
2-Nitrophenol	EPA 625		EPA 602
•	EPA 8270		EPA 624
3-Methylphenol	EPA 8270		EPA 625
4-Chloro-3-methylphenol	EPA 625		EPA 8260B
,,	EPA 8270		EPA 8270
4-Methylphenol	EPA 8270	1,4-Dichlorobenzene	EPA 601
4-Nitrophenol	EPA 625		EPA 602
•	EPA 8270		EPA 624
Cresols, Total	EPA 625		EPA 625
- · · - · · · · - · · · · · · · · ·			•

Serial No.: 31843





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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All approved analytes are listed below:

Purgeable Aromatics		Purgeable Aromatics	
1,4-Dichlorobenzene	EPA 8260B	Total Xylenes	EPA 8260B
Danvana	EPA 8270 EPA 602	Purgeable Halocarbons	
Benzene	EPA 602 EPA 624 EPA 8021B EPA 8260B	1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane	EPA 8260B EPA 601 EPA 624
Chlorobenzene	· EPA 601 EPA 602 EPA 624	1,1,2,2-Tetrachloroethane	EPA 8260B EPA 601 EPA 624 EPA 8260B
Ethyl benzene	EPA 8260B EPA 602 EPA 624 EPA 8021B	1,1,2-Trichloroethane	EPA 601 EPA 624 EPA 8260B
Styrene	EPA 8260B EPA 624 EPA 8260B	1,1-Dichloroethane 1,1-Dichloroethene	EPA 601 EPA 624 EPA 8260B EPA 601
Toluene	EPA 602 EPA 624 EPA 8021B	1,1-Dichloropropene	EPA 624 EPA 8260B EPA 8260B
Total Xylenes	EPA 8260B EPA 602 EPA 624 EPA 8021B	1,2,3-Trichloropropane 1,2-Dichloroethane	EPA 8260B EPA 601 EPA 624

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Purgeable Halocarbons		Purgeable Halocarbons	
1,2-Dichloroethane	EPA 8260B	Carbon tetrachloride	EPA 8260B
1,2-Dichloropropane	EPA 601	Chloroethane	EPA 601
	EPA 624		EPA 624
	EPA 8260B		EPA 8260B
1,3-Dichloropropane	EPA 8260B	Chloroform	EPA 601
2,2-Dichloropropane	EPA 8260B		EPA 624
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260B		EPA 8260B
2-Chloroethylvinyl ether	EPA 601	Chloromethane	<b>EPA</b> 601
	EPA 624		EPA 624
	EPA 8260B		EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B	cis-1,2-Dichloroethene	EPA 8260B
Bromochloromethane	EPA 8260B	cis-1,3-Dichloropropene	EPA 601
Bromodichloromethane	EPA 601		EPA 624
	EPA 624		EPA 8260B
	EPA 8260B	cis-1,4-Dichloro-2-butene	EPA 8260B
Bromoform	EPA 601	Dibromochloromethane	EPA 601
	EPA 624		EPA 624
	EPA 8260B		EPA 8260B
Bromomethane	EPA 601	Dibromomethane	EPA 8260B
	EPA 624	Dichlorodifluoromethane	EPA 601
	EPA 8260B		EPA 624
Carbon tetrachloride	EPA 601		EPA 8260B
	EPA 624	Methylene chloride	EPA 601

Serial No.: 31843





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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All approved analytes are listed below:

Purgeable Halocarbons		Purgeable Organics	
Methylene chloride	EPA 624	1,4-Dioxane	EPA 8260B
·	EPA 8260B	2-Butanone (Methylethyl ketone)	EPA 8260B
Tetrachloroethene	EPA 601	2-Hexanone	EPA 8260B
	EPA 624	4-Methyl-2-Pentanone	EPA 8260B
	EPA 8260B	Acetone	EPA 8260B
trans-1,2-Dichloroethene	EPA 601	Acetonitrile	EPA 8260B
	EPA 624	Carbon Disulfide	EPA 8260B
	EPA 8260B	Isobutyl alcohol	EPA 8015 B
trans-1,3-Dichloropropene	EPA 601		EPA 8260B
	EPA 624	Methyl iodide	EPA 8260B
	EPA 8260B	o-Toluidine	EPA 8270
trans-1,4-Dichloro-2-butene	EPA 8260B	Vinyl acetate	EPA 8260B
Trichloroethene	EPA 601	Residue	
	EPA 624		EBA 400.0
	EPA 8260B	Solids, Total	EPA 160.3
Trichlorofluoromethane	EPA 601		SM 18-20 2540B
•	EPA 624	Solids, Total Dissolved	EPA 160.1
	EPA 8260B		SM 18-20 2540C
Vinyl chloride	EPA 601	Solids, Total Suspended	EPA 160.2
•	EPA 624		SM 18-20 2540D
	EPA 8260B	Semi-Volatile Organics	
		2-Methylnaphthalene	EPA 8270
		4-Amino biphenyl	EPA 8270
· ·			

Serial No.: 31843





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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MR. CHRISTOPHER SPENCER STL BUFFALO 10 HAZELWOOD DRIVE - SUITE 106 AMHERST, NY 14228

NY Lab Id No: 10026 EPA Lab Code: NY00044

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved analytes are listed below:

Semi-Volatile Organics		Wastewater Metals I	
Acetophenone	EPA 8270	Calcium, Total	EPA 200.7
Benzoic Acid	EPA 8270		EPA 6010B
Benzyl alcohol	EPA 8270	Chromium, Total	EPA 200.7
Dibenzofuran	EPA 8270		EPA 200.8
Ethyl methanesulfonate	EPA 8270		EPA 6010B
Isosafrole	EPA 8270		EPA 6020
Methyl methanesulfonate	EPA 8270	Copper, Total	EPA 200.7
O,O,O-Triethyl phosphorothioate	EPA 8270	*	EPA 200.8
p-Dimethylaminoazobenzene	EPA 8270		EPA 6010B
Phenacetin	EPA 8270		EPA 6020
Safrole	EPA 8270	Iron, Total	EPA 200.7
Volatile Chlorinated Organics			EPA 6010B
Epichlorohydrin EPA 8260B		Lead, Total	EPA 200.7
, ,	2, 7, 32305		EPA 200.8
Wastewater Metals I			EPA 6010B
Barium, Total	EPA 200.7		EPA 6020
	EPA 200.8	Magnesium, Total	EPA 200.7
	EPA 6010B		EPA 6010B
	EPA 6020	Manganese, Total	EPA 200.7
Cadmium, Total	EPA 200.7		EPA 200.8
	EPA 200.8		EPA 6010B
	EPA 6010B		EPA 6020
	EPA 6020	Nickel, Total	EPA 200.7

Serial No.: 31843





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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Wastewater Metals i		Wastewater Metals II	
Nickel, Total	EPA 200.8	Arsenic, Total	EPA 6010B
	EPA 6010B		EPA 6020
	EPA 6020	Beryllium, Total	EPA 200.7
Potassium, Total	EPA 200.7		EPA 200.8
	EPA 6010B		EPA 6010B
Silver, Total	EPA 200.7		EPA 6020
	EPA 200.8	Chromium VI	EPA 7196A
	EPA 6010B		SM 18-19 3500-Cr D
	EPA 6020	Mercury, Total	EPA 245.1
Sodium, Total	EPA 200.7	·	EPA 7470A
	EPA 6010B	Selenium, Total	EPA 200.7
Strontium, Total	EPA 200.8		EPA 200.8
	EPA 6020		EPA 6010B
Wastewater Metals II			EPA 6020
Aluminum, Total	EPA 200.7	Vanadium, Total	EPA 200.7
Mariniani, Total	EPA 6010B		EPA 200.8
Antimony, Total	EPA 200.7		EPA 6010B
Antimony, Fotal	EPA 200.8		EPA 6020
	EPA 6010B	Zinc, Total	EPA 200.7
	EPA 6020		EPA 200.8
Arsenic, Total	EPA 8020 EPA 200.7		EPA 6010B
Alsello, Total			EPA 6020
	EPA 200.8		

Serial No.: 31843





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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Wastewater Metals III		Wastewater Miscellaneous	
Cobalt, Total	EPA 200.7	Color	SM 18-20 2120B
	EPA 200.8	Cyanide, Total	EPA 335.2
	EPA 6010B		EPA 335.4
	EPA 6020		EPA 9012A
Molybdenum, Total	EPA 200.7		LACHAT 10-204-00-1-A
	EPA 200.8		SM 18-20 4500-CN E
	EPA 6010B		SM 18-20 4500-CN G
	EPA 6020	Hydrogen Ion (pH)	EPA 150.1
Thallium, Total	EPA 200.7		EPA 9040B
	EPA 200.8		SM 18-20 4500-H B
	EPA 6010B	Oil & Grease Total Recoverable	EPA 1664A
	EPA 6020	Organic Carbon, Total	EPA 415.1
Tin, Total	EPA 200.7		SM 18-20 5310B
	EPA 6010B	Phenois	EPA 420.2
Titanium, Total	EPA 200.7		EPA 9065
	EPA 6010B	Silica, Dissolved	EPA 370.1
Wastewater Miscellaneous			SM 20 4500 SiO2-C
Boron, Total	EPA 200.7	Specific Conductance	EPA 120.1
Boron, Total			EPA 9050
Bromide	EPA 6010B		SM 18-20 2510B
Biolitide	EPA 300.0	Sulfide (as S)	EPA 376.1
Color	EPA 9056		EPA 376.2
COIOI	EPA 110.2		SM 18-20 4500-S D

Serial No.: 31843





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 22, 2007

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MR. CHRISTOPHER SPENCER STL BUFFALO 10 HAZELWOOD DRIVE - SUITE 106 AMHERST, NY 14228 NY Lab Id No: 10026 EPA Lab Code: NY00044

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

#### Wastewater Miscellaneous

Sulfide (as S)

SM 19-20 4500-S F

Surfactant (MBAS)

EPA 425.1

SM 18-20 5540C

Temperature

EPA 170.1

SM 18-20 2550B

Sample Preparation Methods

SM 18-20 2340B

EPA 200.2 EPA 3510C EPA 9010B EPA 3520C EPA 3010A EPA 5030B

FPA 3020A

Serial No.: 31843

EPA 3520C

EPA 5030B





Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised February 27, 2007

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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is hereby APPROVED as an Environmental Laboratory for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved subcategories and/or analytes are listed below:

#### **Fuel Oxygenates**

Ethanol

EPA 8015 B

t-Butyl alcohol

EPA 8015 B

EPA 3020A

EPA 3020A

Sample நகுparation Methods EPA 3510C

SM 18-20 2340B EPA 200.2

EPA 3005A

EPA 3510C

EPA 3520C

EPA 9010B EPA 3520C EPA 5030B EPA 3010A

EPA 5030B

Serial No.: 31871

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised November 07, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:

Metals I

Lead, Total EPA 200.7

Serial No.: 31250



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised October 23, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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is hereby APPROVED as an Environmental Laboratory for the category ENVIRONMENTAL ANALYSES ANALYTICAL SERVICES PROTOCOL All approved subcategories and/or analytes are listed below:

CLP PCB/Pesticides
CLP Semi-Volatile Organics
CLP Volatile Organics
CLP Inorganics

Serial No.: 31054

# State of New Jersey Department of Environmental Protection Certifies That



# STL Buffalo Laboratory Certification ID#: NY455

having duly met the requirements of the Regulations Governing The Certification Of Laboratories And Environmental Measurements N.J.A.C. 7:18 et. seq.

and

having been found compliant with the standard approved by the National Environmental Laboratory Accreditation Conference

is hereby approved as a

Nationally Accredited Environmental Laboratory
to perform the analyses as indicated on the Annual Certified Parameter List
which must accompany this certificate to be valid

nelap

Expiration Date June 30, 2007

Joseph F. Aiello, Chief

Office of Quality Assurance

NJDEP is a NELAP Recognized Accrediting Authority

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZEĽWOOD DR AMHERST, NY 14228



Category: SDW02 - Inorganic Parameters Including Na + Ca

Eligible to	
Report	

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SDW02.02000	DW	Automated Cadmium Reduction	[EPA 353.2]	Nitrate
Certified	Yes	NY	SDW02.04000	DW	Ion Chromatography	[EPA 300.0]	Nitrate
Certified	Yes	NY	SDW02.06000	DW	Automated Cadmium Reduction	[EPA 353.2]	Nitrite
Certified	Yes	NY	SDW02.14000	DW	Ion Chromatography	[EPA 300.0]	Fluoride
Certified	Yes	NY	SDW02.15200	DW	Spectrophotometric, Distill, Semi Automated	[EPA 335.4]	Cyanide
Certified	No	NJ	SDW02.17000	DW	Colorimetric (Automated)	[USER DEFINED EPA 375.4]	Sulfate
Certified	Yes	NY	SDW02.19000	DW	Ion Chromatography	[EPA 300.0]	Sulfate
Certified	Yes	NY	SDW02.20000	DW	ICP	[EPA 200.7]	Sodium
Certified	Yes	NY	SDW02.24000	DW	Gravimetric At 180	[SM 2540 C] [EPA 160.1]	Total dissolved solids (TDS)
Certified	Yes	IL	SDW02.27000	DW	ICP	[EPA 200.7]	Calcium
Certified	Yes	NJ	SDW02.27200	DW	Ca as Carbonate	[EPA 200.7]	Calcium-hardness
Certified	Yes	NJ	SDW02.27300	DW	Hardness By Calculation	[EPA 200.7]	Total hardness
Certified	Yes	NY	SDW02.28000	DW	Titrimetric Indicator	[SM 2320 B]	Alkalinity
Applied	No	NJ	SDW02.29310	DW	Automated Phenate	[EPA 350.1]	Ammonia
Certified	Yes	NY	SDW02.31000	DW	Ion Chromatography	[EPA 300.0]	Chloride
Certified	Yes	NY	SDW02.32000	DW	Platinum-Cobalt	[EPA 110.2]	Color
Applied	No	NY	SDW02.37000	DW	Colorimetric	[SM 4500-P E]	Orthophosphate

Category: SDW03 -- Analyze-Immediately Inorganic Parameter

Eligible to

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SDW03.08000	DW	Electrometric	[EPA 150.1]	pH

Category: SDW04 - Inorganic Parameters, Metals

Eligible to Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SDW04.03000	DW	ICP	[EPA 200.7]	Aluminum
Certified	Yes	NY	SDW04.07000	DW	ICP/MS	[EPA 200.8]	Antimony
Certified	Yes	NY	SDW04.12000	DW	ICP/MS	[EPA 200.8]	Arsenic

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SDW04 - Inorganic Parameters, Metals

Eligible	to
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Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SDW04.16000	DW	ICP	[EPA 200.7]	Barium
Certified	Yes	NY	SDW04.17000	DW	ICP/MS	[EPA 200.8]	Barium
Certified	Yes	NY	SDW04.20000	DW	ICP	[EPA 200.7]	Beryllium
Certified	Yes	NY	SDW04.21000	DW	ICP/MS	[EPA 200.8]	Beryllium
Certified	Yes	NY	SDW04.24000	DW	ICP	[EPA 200.7]	Cadmium
Certified	Yes	NY	SDW04.25000	DW	ICP/MS	[EPA 200.8]	Cadmium
Certified	Yes	NY	SDW04.28000	DW	ICP	[EPA 200.7]	Chromium
Certified	Yes	NY	SDW04.29000	DW	ICP/MS	[EPA 200.8]	Chromium
Certified	Yes	NY	SDW04.33000	DW	ICP	[EPA 200.7]	Copper
Certified	Yes	NY	SDW04.34000	DW	ICP/MS	[EPA 200.8]	Copper
Certified	Yes	NY	SDW04.37000	DW	ICP	[EPA 200.7]	Iron
Certified	Yes	NY	SDW04.40000	DW	ICP/MS	[EPA 200.8]	Lead
Certified	Yes	IL	SDW04.41100	DW	ICP	[EPA 200.7]	Magnesium
Certified	Yes	NY	SDW04.44000	DW	ICP	[EPA 200.7]	Manganese
Certified	Yes	NY	SDW04.45000	DW	ICP/MS	[EPA 200.8]	Manganese
Certified	Yes	NY	SDW04.46000	DW	Manual Cold Vapor	[EPA 245.1]	Mercury
Certified	Yes	NY	SDW04.52000	DW	ICP	[EPA 200.7]	Nickel
Certified	Yes	NY	SDW04.53000	DW	ICP/MS	[EPA 200.8]	Nickel
Certified	Yes	NY	SDW04.57000	DW	ICP/MS	[EPA 200.8]	Selenium
Certified	Yes	NY	SDW04.62000	DW	ICP	[EPA 200.7]	Silver
Certified	Yes	NY	SDW04.63000	DW	ICP/MS	[EPA 200.8]	Silver
Certified	Yes	NY	SDW04.65000	DW	ICP/MS	[EPA 200.8]	Thallium
Certified	Yes	NY	SDW04.67000	DW	ICP	[EPA 200.7]	Zinc
Certified	Yes	NY	SDW04.68000	DW	ICP/MS	[EPA 200.8]	Zinc

Category: SDW05 - Organic Parameters, Chromatography

Eligible to Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	SDW05.01010	DW	HPLC	[EPA 531.1]	Carbofuran (furadan)	
Certified	Yes	NY	SDW05.01020	DW	HPLC	[EPA 531.1]	Oxamyl	

#### National Environmental Laboratory Accreditation Program

## ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

DW

Solvent Extract, GC

10 HAZELWOOD DR AMHERST, NY 14228

Yes

Certified

Eligible to



Dibromo-3-chloropropane (1,2-)

Category: SDW05 -- Organic Parameters, Chromatography

	Report						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SDW05.01040	DW	HPLC	[EPA 531.1]	Aldicarb
Certified	Yes	NY	SDW05.01050	DW	HPLC	[EPA 531.1]	Aldicarb sulfone
Certified	Yes	NY	SDW05.01060	DW	HPLC	[EPA 531.1]	Aldicarb sulfoxide
Certified	Yes	NY	SDW05.01070	DW	HPLC	[EPA 531.1]	Carbaryl
Certified	Yes	NY	SDW05.01080	DW	HPLC	[EPA 531.1]	Hydroxy carbofuran (3-)
Certified	Yes	NY	SDW05.01090	DW	HPLC	[EPA 531.1]	Methomyl (Lannate)
Certified	Yes	IL	SDW05.12010	DW	Solvent Extract, GC	[EPA 504.1]	Dibromoethane (1,2-) (EDB)

[EPA 504.1]

Category: SDW06 -- Organic Parameters, Chromatography/MS

SDW05.12020

NY

Eligible to Report NJ Data State Code Matrix **Technique Description** Approved Method **Parameter Description** Status Yes DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Bromoform Certified NY SDW06.01010 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Chloroform Certified Yes NY SDW06.01020 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dibromochloromethane Certified Yes NY SDW06.01030 GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Bromodichloromethane Certified Yes NY SDW06.01040 DW GC/MS, P & T or Direct Injection, Capillary Benzene NY SDW06.02010 DW [EPA 524.2] Certified Yes NY SDW06.02020 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Carbon tetrachloride Certified Yes SDW06.02030 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Chlorobenzene Certified Yes NY SDW06.02040 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dichlorobenzene (1,2-) Certified Yes NY SDW06.02050 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dichlorobenzene (1,3-) Certified Yes NY SDW06.02060 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dichlorobenzene (1,4-) Certified Yes NY SDW06.02070 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dichloroethane (1,1-) Certified No NY SDW06.02080 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dichloroethane (1,2-) Certified Yes NY SDW06.02090 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dichloroethene (cis-1,2-) Certified Yes NY DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dichloroethene (trans-1,2-) Certified NY SDW06.02100 Yes SDW06.02110 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Methylene chloride (Dichloromethane) Certified Yes NY SDW06.02120 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Dichloropropane (1,2-) Certified NY Yes DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Ethylbenzene Certified NY SDW06.02130 Yes SDW06.02140 DW GC/MS, P & T or Direct Injection, Capillary [EPA 524.2] Methyl tert-butyl ether Certified No NY

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SDW06 - Organic Parameters, Chromatography/MS

	Eligible to Report	)					
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	IL	SDW06.02150	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Naphthalene
Certified	Yes	NY	SDW06.02160	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Styrene
Certified	Yes	NY	SDW06.02170	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NY	SDW06.02180	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethene
Certified	Yes	NY	SDW06.02190	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethane (1,1,1-)
Certified	Yes	NY	SDW06.02200	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethene
Certified	Yes	NY	SDW06.02210	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Toluene
Certified	Yes	NY	SDW06.02220	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorobenzene (1,2,4-)
Certified	Yes	NY	SDW06.02230	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethene (1,1-)
Certified	Yes	NY	SDW06.02240	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethane (1,1,2-)
Certified	Yes	NY	SDW06.02250	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Vinyl chloride
Certified	Yes	NY	SDW06.02260	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Xylenes (total)
Certified	Yes	NY	SDW06.03010	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromobenzene
Certified	Yes	NY	SDW06.03020	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromochloromethane
Certified	Yes	NY	SDW06.03030	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromomethane
Certified	Yes	NY	SDW06.03040	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Butyl benzene (n-)
Certified	Yes	NY	SDW06.03050	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Sec-butylbenzene
Certified	Yes	NY	SDW06.03060	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tert-butylbenzene
Certified	Yes	NY	SDW06.03070	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloroethane
Certified	Yes	NY	SDW06.03080	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloromethane
Certified	Yes	NY	SDW06.03090	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorotoluene (2-)
Certified	Yes	NY	SDW06.03100	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorotoluene (4-)
Applied	No	NJ	SDW06.03110	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromo-3-chloropropane (1,2-)
Applied	No	NJ	SDW06.03120	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NY	SDW06.03130	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromomethane
Certified	Yes	NY	SDW06.03140	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorodifluoromethane
Certified	Yes	NY	SDW06.03150	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropane (1,3-)
Certified	Yes	NY	SDW06.03160	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropane (2,2-)
Certified	Yes	NY	SDW06.03170	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropene (1,1-)
Certified	Yes	NY	SDW06.03180	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropene (cis-1,3-)

[EPA 524.2]

[EPA 524.2]

GC/MS, P & T or Direct Injection, Capillary

GC/MS, P & T or Direct Injection, Capillary

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

SDW06.03190

SDW06.03200

DW

DW

NY

NY

Certified

Certified

Yes

Yes

Dichloropropene (trans-1,3-)

Hexachlorobutadiene (1,3-)

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SDW06 -- Organic Parameters, Chromatography/MS

	Eligible to Report	D					
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SDW06.03210	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Isopropylbenzene
Certified	Yes	NY	SDW06.03220	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Isopropyltoluene (4-)
Certified	Yes	NY	SDW06.03230	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Propylbenzene (n-)
Certified	Yes	NY	SDW06.03240	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethane (1,1,1,2-)
Certified	Yes	NY	SDW06.03250	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorobenzene (1,2,3-)
Certified	Yes	NY	SDW06.03260	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorofluoromethane
Certified	Yes	NY	SDW06.03280	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trimethylbenzene (1,2,4-)
Certified	Yes	NY	SDW06.03300	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trimethylbenzene (1,3,5-)
Certified	Yes	IL	SDW06.03310	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Nitrobenzene

Category: SHW04 - Inorganic Parameters

Eligible to Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.01000	NPW	Acid Digestion/Surface and Groundwater, ICP, FLAA	[SW-846 3005A, Rev. 1, 7/92]	Metals, Total Rec and Dissolved
Certified	Yes	NJ	SHW04.01500	NPW	Acid Digestion/Aqueous Samples, ICP, FLAA	[SW-846 3010A, Rev. 1, 7/92]	Metals, Total
Certified	Yes	NJ	SHW04.02000	NPW	Acid Digestion For GFAA, Aqueous	[SW-846 3020A, Rev. 1, 7/92]	Metals

Category: SHW05 -- Organic Parameters, Prep. / Screening

Eligible to Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NJ	SHW05.01000	NPW	Separatory Funnel Extraction	[SW-846 3510C, Rev. 3, 12/96]	Semivolatile organics	
Certified	Yes	NJ	SHW05.02000	NPW	Continuous Liquid-Liquid Extraction	[SW-846 3520C, Rev. 3, 12/96]	Semivolatile organics	
Certified	Yes	NJ	SHW05.07000	NPW	Purge & Trap Aqueous	[SW-846 5030B, Rev. 2, 12/96]	Volatile organics	

# National Environmental Laboratory Accreditation Program

## ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR **AMHERST, NY 14228** 



Category: SHW07 - Organic Parameters, Chromatography/MS

Eligible	to
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Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	SHW07.04081	NPW	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylene (m-)	
Certified	Yes	NY	SHW07.04082	NPW	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylene (o-)	
Certified	Yes	NY	SHW07.04083	NPW	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylene (p-)	

Category: SHW09 - Miscellaneous Parameters

Eligible to

Report
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Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	IL	SHW09.17000	NPW	Wheatstone Bridge	[SW-846 9050A, Rev. 1, 12/96]	Specific conductance	
Certified	Yes	NY	SHW09.24100	NPW	Extraction & Gravimetric - LL or SPE	[SW-846 1664A, Rev. 1, 2/99]	Oil & grease - hem	

Category: WPP02 -- Inorganic Parameters, Nutrients and Dema

Eligible to

	Report						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	WPP02.01000	NPW	Electrometric or Phenolphthalein	[EPA 305.1]	Acidity as CaCO3
Certified	Yes	NY	WPP02.01500	NPW	Electrometric or Color Titration	[EPA 310.1]	Alkalinity as CaCO3
Certified	Yes	NY	WPP02.02000	NPW	Automated Titration	[EPA 310.2]	Alkalinity as CaCO3
Certified	Yes	NY	WPP02.04000	NPW	Distillation, Automated Phenate	[EPA 350.2 + .1]	Ammonia
Certified	Yes	NY	WPP02.05000	NPW	Dissolved Oxygen Depletion	[EPA 405.1] [SM 5210 B]	Biochemical oxygen demand
Certified	Yes	NY	WPP02.06000	NPW	ICP	[EPA 200.7]	Boron
Certified	Yes	NY	WPP02.07100	NPW	Ion Chromatography	[EPA 300.0]	Bromide
Certified	Yes	NY	WPP02.08000	NPW	Digestion, ICP	[EPA 200.7]	Calcium
Certified	Yes	NY	WPP02.09500	NPW	Dissolved Oxygen Depletion, Nitrification Inhibition	[SM 5210 B]	Carbonaceous BOD (CBOD)
Certified	Yes	NY	WPP02.10500	NPW	Spectrophotometric Manual/Auto	[EPA 410.4] [OTHER Hach 8000]	Chemical oxygen demand
Certified	Yes	NY	WPP02.12500	NPW	Colorimetric, Automated (Ferricyanide)	[EPA 325.1 OR .2]	Chloride
Certified	Yes	NY	WPP02.12600	NPW	Ion Chromatography	[EPA 300.0]	Chloride
Certified	Yes	NY	WPP02.13500	NPW	Colorimetric (Platinum-Cobalt)	[EPA 110.2]	Color
Certified	Yes	NY	WPP02.15000	NPW	Distillation, Spectrophotometric (Manual)	[EPA 335.2]	Cyanide
Certified	Yes	NY	WPP02.15500	NPW	Distillation, Spectrophotometric (Auto)	[EPA 335.4]	Cyanide
Certified	Yes	NY	WPP02.16000	NPW	Manual Distillation, Titrimetr/Spectro	[EPA 335.1]	Cyanide - amenable to Cl2

# National Environmental Laboratory Accreditation Program

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10 HAZELWOOD DR AMHERST, NY 14228



Category: WPP02 -- Inorganic Parameters, Nutrients and Dema

Eligible to	
Report	

Status	Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	WPP02.16500	NPW	Distillation + Electrode, Manual	[EPA 340.2]	Fluoride	
Certified	Yes	NY	WPP02.18100	NPW	Ion Chromatography	[EPA 300.0]	Fluoride	
Certified	Yes	NY	WPP02.19000	NPW	Titrimetric, EDTA	[EPA 130.2]	Hardness - total as CaCO3	
Certified	Yes	IL	WPP02.20100	NPW	Ca + Mg Carbonates, ICP	[EPA 200.7]	Hardness - total as CaCO3	
Certified	Yes	NY	WPP02.22500	NPW	Digestion, Distillation, Semiautomated Digestor	[EPA 351.2]	Kjeldahl nitrogen - total	
Certified	Yes	NY	WPP02.24000	NPW	Digestion, ICP	[EPA 200.7]	Magnesium	
Certified	Yes	NY	WPP02.26100	NPW	Ion Chromatography	[EPA 300.0]	Nitrate	
Certified	Yes	IL	WPP02.27000	NPW	Cadmium Reduction, Automated	[EPA 353.2]	Nitrate - nitrite	
Dropped	No	NY	WPP02.28600	NPW	Ion Chromatography	[EPA 300.0]	Nitrite	
Certified	No	NY	WPP02.29150	NPW	Gravimetric, Hexane Extractable Material-SPE	[EPA 1664A]	Oil & grease - hem-SPE	
Certified	Yes	NY	WPP02.29200	NPW	Gravimetric, Silica Gel Treated-Hem	[EPA 1664A]	Oil & grease - sgt-non polar	
Certified	Yes	NY	WPP02.29250	NPW	Gravimetric, Silica Gel Treated-Hem-SPE	[EPA 1664A]	Oil & grease - non polar	
Certified	Yes	NY	WPP02.30000	NPW	Combustion or Oxidation	[EPA 415.1]	Total organic carbon (TOC)	
Certified	Yes	NY	WPP02.30500	NPW	Total Kjeldahl-N Minus Ammonía-N	[EPA 351.1,.2, .3,.4 - 350.1 .2 .3]	Organic nitrogen	
Certified	Yes	NY	WPP02.31500	NPW	Ascorbic Acid, Manual Single Reagent	[EPA 365.2]	Orthophosphate	
Certified	Yes	NY	WPP02.33000	NPW	Manual Distillation, Colorimetric Auto	[EPA 420.1 + .2]	Phenols	
Certified	Yes	NY	WPP02.35000	NPW	Auto Ascorbic Acid Reduction	[EPA 365.2 + .1]	Phosphorus (total)	
Certified	Yes	NY	WPP02.36500	NPW	Digestion, ICP	[EPA 200.7]	Potassium	
Certified	Yes	NY	WPP02.38000	NPW	Gravimetric, 103-105 Degrees C	[EPA 160.3]	Residue - total	
Certified	Yes	NY	WPP02.38500	NPW	Gravimetric, 180 Degrees C	[EPA 160.1]	Residue - filterable (TDS)	
Certified	Yes	NY	WPP02.39000	NPW	Gravimetric, 103-105 Degrees C, Post Washing	[EPA 160.2]	Residue - nonfilterable (TSS)	
Certified	Yes	IL	WPP02.39500	NPW	Volumetric (Imhoff Cone) or Gravimetric	[EPA 160.5]	Residue - settleable	
Certified	Yes	IL	WPP02.40000	NPW	Gravimetric, 550 Degrees C	[EPA 160.4]	Resídue - volatile	
Certified	Yes	NY	WPP02.41500	NPW	0.45u Filtration + Colorimetric (Manual)	[EPA 370.1]	Silica - dissolved	
Certified	Yes	NY	WPP02.44000	NPW	Digestion, ICP	[EPA 200.7]	Sodium	
Certified	Yes	NY	WPP02.45500	NPW	Wheatstone Bridge	[EPA 120.1] [SM 2510 B]	Specific conductance	
Certified	Yes	NY	WPP02.46500	NPW	Turbidimetric	[EPA 375.4]	Sulfate	
Certified	Yes	NY	WPP02.47100	NPW	Ion Chromatography	[EPA 300.0]	Sulfate	
Certified	Yes	NY	WPP02.47500	NPW	Titrimetric, Iodine	[EPA 376.1]	Sulfides	
Certified	Yes	NY	WPP02.48000	NPW	Colorimetric (Methylene Blue)	[EPA 376.2]	Sulfides	
Certified	Yes	NY	WPP02.48500	NPW	Colorimetric (Methylene Blue)	[EPA 425.1]	Surfactants	

# National Environmental Laboratory Accreditation Program

## ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: WPP02 - Inorganic Parameters, Nutrients and Dema

Eligible to

Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Applied	No	IL	WPP02.50000	NPW	Nephelometric	[EPA 180.1]	Turbidity	

Category: WPP03 - Analyze-Immediately Inorganic Parameters

Eligible to Report

	Report						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	IL	WPP03.04000	NPW	DPD-FAS	[EPA 330.4]	Chlorine
Certified	Yes	IL	WPP03.07000	NPW	Winkler, Azide Modification	[EPA 360.2]	Oxygen (dissolved)
Certified	Yes	NJ	WPP03.08000	NPW	Electrode	[EPA 360.1]	Oxygen (dissolved)
Certified	Yes	NY	WPP03.09000	NPW	Electrometric	[EPA 150.1]	pН
Certified	Yes	NY	WPP03.14000	NPW	Thermometric	[EPA 170.1]	Temperature

Category: WPP04 -- Inorganic Parameters, Metals

Eligible to

	Report						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	WPP04.02000	NPW	Digestion, ICP	[EPA 200.7]	Aluminum
Applied	No	IL	WPP04.02100	NPW	ICP/MS	[EPA 200.8]	Aluminum
Certified	Yes	NY	WPP04.04500	NPW	Digestion, ICP	[EPA 200.7]	Antimony
Certified	Yes	NY	WPP04.04600	NPW	ICP/MS	[EPA 200.8]	Antimony
Certified	Yes	NY	WPP04.05600	NPW	Digestion, ICP	[EPA 200.7]	Arsenic
Certified	Yes	NY	WPP04.05700	NPW	ICP/MS	[EPA 200.8]	Arsenic
Certified	Yes	NY	WPP04.08000	NPW	Digestion, ICP	[EPA 200.7]	Barium
Certified	Yes	NY	WPP04.08200	NPW	ICP/MS	[EPA 200.8]	Barium
Certified	Yes	NY	WPP04.11000	NPW	Digestion, ICP	[EPA 200.7]	Beryllium
Certified	Yes	NY	WPP04.11100	NPW	ICP/MS	[EPA 200.8]	Beryllium
Certified	Yes	NY	WPP04.13500	NPW	Digestion, ICP	[EPA 200.7]	Cadmium
Certified	Yes	NY	WPP04.13600	NPW	ICP/MS	[EPA 200.8]	Cadmium
Certified	Yes	NY	WPP04.15000	NPW	0.45u Filter, Colorimetric DPC	[SM 3500-Cr D]	Chromium (VI)
Certified	Yes	NY	WPP04.18000	NPW	Digestion, ICP	[EPA 200.7]	Chromium
Certified	Yes	NY	WPP04.18100	NPW	ICP/MS	[EPA 200.8]	Chromium

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: WPP04 -- Inorganic Parameters, Metals

Eligible	to	
Donort		

	Report						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	WPP04.19500	NPW	Digestion, ICP	[EPA 200.7]	Cobalt
Certified	Yes	NY	WPP04.19600	NPW	ICP/MS	[EPA 200.8]	Cobalt
Certified	Yes	NY	WPP04.21500	NPW	Digestion, ICP	[EPA 200.7]	Copper
Certified	Yes	NY	WPP04.21600	NPW	ICP/MS	[EPA 200.8]	Copper
Certified	Yes	NY	WPP04.26500	NPW	Digestion, ICP	[EPA 200.7]	Iron
Certified	Yes	NY	WPP04.28000	NPW	Digestion, ICP	[EPA 200.7]	Lead
Certified	Yes	NY	WPP04.28100	NPW	ICP/MS	[EPA 200.8]	Lead
Certified	Yes	NY	WPP04.31000	NPW	Digestion, ICP	[EPA 200.7]	Manganese
Certified	Yes	NY	WPP04.31100	NPW	ICP/MS	[EPA 200.8]	Manganese
Certified	Yes	NY	WPP04.33000	NPW	Manual Cold Vapor	[EPA 245.1]	Mercury
Certified	Yes	NY	WPP04.35000	NPW	Digestion, ICP	[EPA 200.7]	Molybdenum
Certified	Yes	NY	WPP04.35200	NPW	ICP/MS	[EPA 200.8]	Molybdenum
Certified	Yes	NY	WPP04.37500	NPW	Digestion, ICP	[EPA 200.7]	Nickel
Certified	Yes	NY	WPP04.37600	NPW	ICP/MS	[EPA 200.8]	Nickel
Certified	Yes	NY	WPP04.45500	NPW	Digestion, ICP	[EPA 200.7]	Selenium
Certified	Yes	NY	WPP04.45600	NPW	ICP/MS	[EPA 200.8]	Selenium
Certified	Yes	NY	WPP04.48000	NPW	Digestion, ICP	[EPA 200.7]	Silver
Certified	Yes	NY	WPP04.48200	NPW	ICP/MS	[EPA 200.8]	Silver
Certified	Yes	NY	WPP04.50000	NPW	Digestion, ICP	[EPA 200.7]	Thallium
Certified	Yes	NY	WPP04.50100	NPW	ICP/MS	[EPA 200.8]	Thallium
Certified	Yes	NY	WPP04.51100	NPW	Digestion, ICP	[EPA 200.7]	Tin
Certified	Yes	NY	WPP04.52050	NPW	Digestion, ICP	[EPA 200.7]	Titanium
Certified	Yes	NY	WPP04.54000	NPW	Digestion, ICP	[EPA 200.7]	Vanadium
Certified	Yes	NY	WPP04.54100	NPW	ICP/MS	[EPA 200.8]	Vanadium
Certified	Yes	NY	WPP04.56500	NPW	Digestion, ICP	[EPA 200.7]	Zinc
Certified	Yes	NY	WPP04.56600	NPW	ICP/MS	[EPA 200.8]	Zinc

# National Environmental Laboratory Accreditation Program

## ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228

Certified

Certified

Certified

Certified

Yes

Yes

Yes



Category: WPP05 -- Organic Parameters, Chromatography

Status	Eligible to Report NJ Data Stat		State Code	ode Matrix Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	WPP05.01010	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Bromodichloromethane
Certified	Yes	NY	WPP05.01020	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Bromoform
Certified	Yes	NY	WPP05.01030	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Bromomethane
Certified	Yes	NY	WPP05.01040	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Carbon tetrachloride
Certified	Yes	NY	WPP05.01050	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Chlorobenzene
Certified	Yes	NY	WPP05.01060	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Chloroethane
Certified	Yes	NY	WPP05.01070	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Chloroethyl vinyl ether (2-)
Certified	Yes	NY	WPP05.01080	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Chloroform
Certified	Yes	NY	WPP05.01090	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Chloromethane
Certified	Yes	NY	WPP05.01100	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dibromochloromethane
Applied	No	NJ	WPP05.01105	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NY	WPP05.01110	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichlorobenzene (1,2-)
Certified	Yes	NY	WPP05.01120	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichlorobenzene (1,3-)
Certified	Yes	NY	WPP05.01130	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichlorobenzene (1,4-)
Certified	Yes	NY	WPP05.01140	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichlorodifluoromethane
Certified	Yes	NY	WPP05.01150	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichloroethane (1,1-)
Certified	Yes	NY	WPP05.01160	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichloroethane (1,2-)
Certified	Yes	NY	WPP05.01170	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichloroethene (1,1-)
Certified	Yes	NY	WPP05.01180	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichloroethene (trans-1,2-)
Certified	Yes	NY	WPP05.01190	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichloropropane (1,2-)
Certified	Yes	NY	WPP05.01200	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichloropropene (cis-1,3-)
Certified	Yes	NY	WPP05.01210	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Dichloropropene (trans-1,3-)
Certified	Yes	NY	WPP05.01220	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Methylene chloride (Dichloromethane)
Certified	Yes	NY	WPP05.01230	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NY	WPP05.01240	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Tetrachloroethene
Certified	Yes	NY	WPP05.01250	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Trichloroethane (1,1,1-)
Certified	Yes	NY	WPP05.01260	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Trichloroethane (1,1,2-)
Certified	Yes	NY	WPP05.01270	NPW	Purge & Trap, GC (HECD)	[EPA 601]	Trichloroethene

[EPA 601]

[EPA 601]

[EPA 602]

[EPA 602]

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

Purge & Trap, GC (HECD)

Purge & Trap, GC (HECD)

Purge & Trap, GC (PID)

Purge & Trap, GC (PID)

NPW

NPW

NPW

NPW

WPP05.01280

WPP05.01290

WPP05.02010

WPP05.02020

NY

NY

NY

NY

Trichlorofluoromethane

Vinyl chloride

Chlorobenzene

Benzene

## National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: WPP05 - Organic Parameters, Chromatography

Eligible	to
Report	

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	WPP05.02030	NPW	Purge & Trap, GC (PID)	[EPA 602]	Dichlorobenzene (1,2-)
Certified	Yes	NY	WPP05.02040	NPW	Purge & Trap, GC (PID)	[EPA 602]	Dichlorobenzene (1,3-)
Certified	Yes	NY	WPP05.02050	NPW	Purge & Trap, GC (PID)	[EPA 602]	Dichlorobenzene (1,4-)
Certified	Yes	NY	WPP05.02060	NPW	Purge & Trap, GC (PID)	[EPA 602]	Ethylbenzene
Applied	No	NY	WPP05.02062	NPW	Purge & Trap, GC (PID)	[EPA 602]	Methyl tert-butyl ether
Certified	Yes	NY	WPP05.02070	NPW	Purge & Trap, GC (PID)	[EPA 602]	Toluene
Certified	Yes	NY	WPP05.02080	NPW	Purge & Trap, GC (PID)	[EPA 602]	Xylenes (total)
Certified	Yes	NY	WPP05.09010	NPW	Extract/GC (ECD)	[EPA 608]	Aldrin
Certified	Yes	NY	WPP05.09020	NPW	Extract/GC (ECD)	[EPA 608]	Alpha BHC
Certified	Yes	NY	WPP05.09030	NPW	Extract/GC (ECD)	[EPA 608]	Beta BHC
Certified	Yes	NY	WPP05.09040	NPW	Extract/GC (ECD)	[EPA 608]	Delta BHC
Certified	Yes	NY	WPP05.09050	NPW	Extract/GC (ECD)	[EPA 608]	Lindane (gamma BHC)
Certified	Yes	NY	WPP05.09060	NPW	Extract/GC (ECD)	[EPA 608]	Chlordane
Applied	No	NJ	WPP05.09062	NPW	Extract/GC (ECD)	[EPA 608]	Chlordane (alpha)
Applied	No	NJ	WPP05.09063	NPW	Extract/GC (ECD)	[EPA 608]	Chlordane (gamma)
Certified	Yes	NY	WPP05.09070	NPW	Extract/GC (ECD)	[EPA 608]	DDD (4,4'-)
Certified	Yes	NY	WPP05.09080	NPW	Extract/GC (ECD)	[EPA 608]	DDE (4,4'-)
Certified	Yes	NY	WPP05.09090	NPW	Extract/GC (ECD)	[EPA 608]	DDT (4,4'-)
Certified	Yes	NY	WPP05.09100	NPW	Extract/GC (ECD)	[EPA 608]	Dieldrin
Certified	Yes	NY	WPP05.09110	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan I
Certified	Yes	NY	WPP05.09120	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan II
Certified	Yes	NY	WPP05.09130	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan sulfate
Certified	Yes	NY	WPP05.09140	NPW	Extract/GC (ECD)	[EPA 608]	Endrin
Certified	Yes	NY	WPP05.09150	NPW	Extract/GC (ECD)	[EPA 608]	Endrin aldehyde
Applied	No	NJ	WPP05.09160	NPW	Extract/GC (ECD)	[EPA 608]	Endrin ketone
Certified	Yes	NY	WPP05.09170	NPW	Extract/GC (ECD)	[EPA 608]	Heptachlor
Certified	Yes	NY	WPP05.09180	NPW	Extract/GC (ECD)	[EPA 608]	Heptachlor epoxide
Certified	Yes	NY	WPP05.09190	NPW	Extract/GC (ECD)	[EPA 608]	Methoxychlor
Certified	Yes	NY	WPP05.09200	NPW	Extract/GC (ECD)	[EPA 608]	Toxaphene
Certified	Yes	NY	WPP05.11010	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1016
Certified	Yes	NY	WPP05.11020	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1221
Certified	Yes	NY	WPP05.11030	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1232

## National Environmental Laboratory Accreditation Program

## ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: WPP05 -- Organic Parameters, Chromatography

Eligible to Report

NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Yes	NY	WPP05.11040	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1242	-
Yes	NY	WPP05.11050	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1248	
Yes	NY	WPP05.11060	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1254	
Yes	NY	WPP05.11070	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1260	
	Yes Yes Yes Yes	Yes NY Yes NY Yes NY	NJ Data         State         Code           Yes         NY         WPP05.11040           Yes         NY         WPP05.11050           Yes         NY         WPP05.11060	NJ Data         State         Code         Matrix           Yes         NY         WPP05.11040         NPW           Yes         NY         WPP05.11050         NPW           Yes         NY         WPP05.11060         NPW	NJ Data         State         Code         Matrix         Technique Description           Yes         NY         WPP05.11040         NPW         Extract/GC (ECD)           Yes         NY         WPP05.11050         NPW         Extract/GC (ECD)           Yes         NY         WPP05.11060         NPW         Extract/GC (ECD)	NJ Data         State         Code         Matrix         Technique Description         Approved Method           Yes         NY         WPP05.11040         NPW         Extract/GC (ECD)         [EPA 608]           Yes         NY         WPP05.11050         NPW         Extract/GC (ECD)         [EPA 608]           Yes         NY         WPP05.11060         NPW         Extract/GC (ECD)         [EPA 608]	NJ Data         State         Code         Matrix         Technique Description         Approved Method         Parameter Description           Yes         NY         WPP05.11040         NPW         Extract/GC (ECD)         [EPA 608]         PCB 1242           Yes         NY         WPP05.11050         NPW         Extract/GC (ECD)         [EPA 608]         PCB 1248           Yes         NY         WPP05.11060         NPW         Extract/GC (ECD)         [EPA 608]         PCB 1254

Category: WPP06 - Organic Parameters, Chromatography/MS

Eligible to Report

_	NI Data	<b>a</b>	<b>~</b> .				
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.02002	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Amyl alcohol (n-)
Certified	Yes	NJ	WPP06.02003	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Acetone
Certified	Yes	NY	WPP06.02007	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Acrolein
Certified	Yes	NY	WPP06.02009	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Acrylonitrile
Certified	Yes	NY	WPP06.02010	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Benzene
Applied	No	NJ	WPP06.02015	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromobenzene
Applied	No	NJ	WPP06.02017	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromochloromethane
Certified	Yes	NY	WPP06.02020	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromodichloromethane
Certified	Yes	NY	WPP06.02025	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromoethane
Certified	Yes	NY	WPP06.02030	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromoform
Certified	Yes	NY	WPP06.02040	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Bromomethane
Applied	No	NJ	WPP06.02041	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Butanone (2-)
Applied	No	NJ	WPP06.02045	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Carbon disulfide
Certified	Yes	NY	WPP06.02050	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Carbon tetrachloride
Certified	Yes	NY	WPP06.02060	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chlorobenzene
Certified	Yes	NY	WPP06.02070	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chloroethane
Certified	No	NY	WPP06.02080	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chloroethyl vinyl ether (2-)
Certified	Yes	NY	WPP06.02090	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chloroform
Certified	Yes	NY	WPP06.02100	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chloromethane
Applied	No	NJ	WPP06.02107	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NY	WPP06.02110	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dibromochloromethane
Applied	No	NJ	WPP06.02115	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dibromoethane (1,2-) (EDB)

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: WPP06 -- Organic Parameters, Chromatography/MS

Eligible to	
Report	

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.02116	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dibromomethane
Certified	Yes	NY	WPP06.02120	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichlorobenzene (1,2-)
Certified	Yes	NY	WPP06.02130	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichlorobenzene (1,3-)
Certified	Yes	NY	WPP06.02140	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichlorobenzene (1,4-)
Applied	No	NY	WPP06.02145	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichlorodifluoromethane
Certified	Yes	NY	WPP06.02150	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethane (1,1-)
Certified	Yes	NY	WPP06.02160	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethane (1,2-)
Certified	Yes	NY	WPP06.02170	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethene (1,1-)
Applied	No	NJ	WPP06.02175	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethene (cis-1,2-)
Certified	Yes	NY	WPP06.02180	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloroethene (trans-1,2-)
Certified	Yes	NY	WPP06.02190	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropane (1,2-)
Applied	No	NJ	WPP06.02192	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropane (1,3-)
Applied	No	NJ	WPP06.02194	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropane (2,2-)
Applied	No	NJ	WPP06.02195	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropene (1,1-)
Certified	Yes	NY	WPP06.02200	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropene (cis-1,3-)
Certified	Yes	NY	WPP06.02210	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Dichloropropene (trans-1,3-)
Certified	Yes	NY	WPP06.02220	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Ethylbenzene
Applied	No	NJ	WPP06.02227	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Isopropylether
Certified	Yes	NY	WPP06.02230	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Methylene chloride (Dichloromethane)
Certified	No	NJ	WPP06.02232	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Methyl tert-butyl ether
Applied	No	NJ	WPP06.02233	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Methyl isobutyl ketone
Applied	No	NJ	WPP06.02234	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tert-butyl alcohol
Certified	Yes	NJ	WPP06.02238	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Styrene
Certified	Yes	NY	WPP06.02240	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tetrachloroethane (1,1,2,2-)
Applied	No	NJ	WPP06.02245	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tetrachloroethane (1,1,1,2-)
Certified	Yes	NY	WPP06.02250	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tetrachloroethene
Certified	Yes	NY	WPP06.02260	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Toluene
Certified	Yes	NY	WPP06.02270	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichloroethane (1,1,1-)
Certified	Yes	NY	WPP06.02280	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichloroethane (1,1,2-)
Certified	Yes	NY	WPP06.02290	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichloroethene
Certified	Yes	IL	WPP06.02300	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichlorofluoromethane
Applied	No	NJ	WPP06.02305	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)

## National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZEĽWOOD DR AMHERST, NY 14228



Category: WPP06 -- Organic Parameters, Chromatography/MS

Eligible	to
Report	

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.02307	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Vinyl acetate
Certified	Yes	NY	WPP06.02310	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Vinyl chloride
Certified	Yes	IL	WPP06.02312	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylenes (total)
Applied	No	NJ	WPP06.02314	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylene (m-)
Applied	No	NJ	WPP06.02315	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylene (o-)
Applied	No	NJ	WPP06.02316	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylene (p-)
Applied	No	NJ	WPP06.02317	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylene (m- + p-)
Applied	No	NJ	WPP06.02325	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Hexanone (2-)
Applied	No	NJ	WPP06.02460	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Isopropylbenzene
Applied	No	NJ	WPP06.02610	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichlorobenzene (1,2,3-)
Applied	No	NJ	WPP06.02620	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Trichlorobenzene (1,2,4-)
Certified	Yes	NY	WPP06.03010	NPW	Extract, GC/MS	[EPA 625]	Acenaphthene
Certified	Yes	NY	WPP06.03020	NPW	Extract, GC/MS	[EPA 625]	Acenaphthylene
Certified	Yes	NY	WPP06.03030	NPW	Extract, GC/MS	[EPA 625]	Anthracene
Certified	Yes	NY	WPP06.03040	NPW	Extract, GC/MS	[EPA 625]	Benzo(a)anthracene
Certified	Yes.	NY	WPP06.03050	NPW	Extract, GC/MS	[EPA 625]	Benzo(b)fluoranthene
Certified	Yes	NY	WPP06.03060	NPW	Extract, GC/MS	[EPA 625]	Benzo(k)fluoranthene
Certified	Yes	NY	WPP06.03070	NPW	Extract, GC/MS	[EPA 625]	Benzo(a)pyrene
Certified	Yes	NY	WPP06.03080	NPW	Extract, GC/MS	[EPA 625]	Benzo(ghi)perylene
Certified	Yes	NY	WPP06.03090	NPW	Extract, GC/MS	[EPA 625]	Butyl benzyl phthalate
Certified	Yes	NY	WPP06.03100	NPW	Extract, GC/MS	[EPA 625]	Bis (2-chloroethyl) ether
Certified	Yes	NY	WPP06.03110	NPW	Extract, GC/MS	[EPA 625]	Bis (2-chloroethoxy) methane
Certified	Yes	NY	WPP06.03120	NPW	Extract, GC/MS	[EPA 625]	Bis (2-ethylhexyl) phthalate
Certified	Yes	NY	WPP06.03130	NPW	Extract, GC/MS	[EPA 625]	Bis (2-chloroisopropyl) ether
Certified	Yes	NY	WPP06.03140	NPW	Extract, GC/MS	[EPA 625]	Bromophenyl-phenyl ether (4-)
Certified	Yes	NY	WPP06.03150	NPW	Extract, GC/MS	[EPA 625]	Chloronaphthalene (2-)
Certified	Yes	NY	WPP06.03160	NPW	Extract, GC/MS	[EPA 625]	Chlorophenyl-phenyl ether (4-)
Certified	Yes	NY	WPP06.03170	NPW	Extract, GC/MS	[EPA 625]	Chrysene
Certified	Yes	NY	WPP06.03180	NPW	Extract, GC/MS	[EPA 625]	Dibenzo(a,h)anthracene
Certified	Yes	NJ	WPP06.03186	NPW	Extract, GC/MS	[EPA 625]	Dibenzofuran
Certified	Yes	NY	WPP06.03190	NPW	Extract, GC/MS	[EPA 625]	Di-n-butyl phthalate
Certified	Yes	NY	WPP06.03200	NPW	Extract, GC/MS	[EPA 625]	Dichlorobenzene (1,3-)

## National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZEĽWOOD DR AMHERST, NY 14228

Certified

Yes

NY



Category: WPP06 - Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	WPP06.03210	NPW	Extract, GC/MS	[EPA 625]	Dichlorobenzene (1,2-)
ertified	Yes	NY	WPP06.03220	NPW	Extract, GC/MS	[EPA 625]	Dichlorobenzene (1,4-)
Certified	Yes	NY	WPP06.03230	NPW	Extract, GC/MS	[EPA 625]	Dichlorobenzidine (3,3'-)
Certified	Yes	NY	WPP06.03240	NPW	Extract, GC/MS	[EPA 625]	Diethyl phthalate
Certified	Yes	NY	WPP06.03250	NPW	Extract, GC/MS	[EPA 625]	Dimethyl phthalate
Certified	Yes	NY	WPP06.03260	NPW	Extract, GC/MS	[EPA 625]	Dinitrotoluene (2,4-)
Certified	Yes	NY	WPP06.03270	NPW	Extract, GC/MS	[EPA 625]	Dinitrotoluene (2,6-)
Certified	Yes	NY	WPP06.03280	NPW	Extract, GC/MS	[EPA 625]	Di-n-octyl phthalate
Certified	Yes	NY	WPP06.03290	NPW	Extract, GC/MS	[EPA 625]	Fluoranthene
Certified	Yes	NY	WPP06.03300	NPW	Extract, GC/MS	[EPA 625]	Fluorene
Certified	Yes	NY	WPP06.03310	NPW	Extract, GC/MS	[EPA 625]	Hexachlorobenzene
Certified	Yes	NY	WPP06.03320	NPW	Extract, GC/MS	[EPA 625]	Hexachlorobutadiene (1,3-)
Certified	Yes	NY	WPP06.03330	NPW	Extract, GC/MS	[EPA 625]	Hexachloroethane
Certified	Yes	NY	WPP06.03340	NPW	Extract, GC/MS	[EPA 625]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NY	WPP06.03350	NPW	Extract, GC/MS	[EPA 625]	Isophorone
Certified	Yes	NJ	WPP06.03358	NPW	Extract, GC/MS	[EPA 625]	Methylnaphthalene (2-)
Certified	Yes	NY	WPP06.03360	NPW	Extract, GC/MS	[EPA 625]	Naphthalene
Certified	Yes	NJ	WPP06.03366	NPW	Extract, GC/MS	[EPA 625]	Chloroaniline (4-)
Certified	Yes	NJ	WPP06.03367	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (2-)
Certified	Yes	NJ	WPP06.03368	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (3-)
Certified	Yes	NJ	WPP06.03369	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (4-)
Certified	Yes	NY	WPP06.03370	NPW	Extract, GC/MS	[EPA 625]	Nitrobenzene
Certified	Yes	NY	WPP06.03380	NPW	Extract, GC/MS	[EPA 625]	N-Nitroso-di-n-propylamine
Certified	Yes	NY	WPP06.03390	NPW	Extract, GC/MS	[EPA 625]	Phenanthrene
Certified	Yes	NY	WPP06.03400	NPW	Extract, GC/MS	[EPA 625]	Pyrene
pplied	No	NJ	WPP06.03405	NPW	Extract, GC/MS	[EPA 625]	Tetrachlorobenzene (1,2,4,5-)
ertified	Yes	NY	WPP06.03410	NPW	Extract, GC/MS	[EPA 625]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	WPP06.03417	NPW	Extract, GC/MS	[EPA 625]	Methylphenol (2-)
ertified	Yes	NJ	WPP06.03418	NPW	Extract, GC/MS	[EPA 625]	Methylphenol (4-)
Certified	Yes	NY	WPP06.03420	NPW	Extract, GC/MS	[EPA 625]	Methyl phenol (4-chloro-3-)
Certified	Yes	NY	WPP06.03430	NPW	Extract, GC/MS	[EPA 625]	Chlorophenol (2-)

[EPA 625]

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

Extract, GC/MS

NPW

WPP06.03440

Dichlorophenol (2,4-)

# National Environmental Laboratory Accreditation Program

## ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: WPP06 - Organic Parameters, Chromatography/MS

Eligible to	
Report	
NJ Data	

	Report						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	WPP06.03450	NPW	Extract, GC/MS	[EPA 625]	Dimethylphenol (2,4-)
Certified	Yes	NY	WPP06.03460	NPW	Extract, GC/MS	[EPA 625]	Dinitrophenol (2,4-)
Certified	Yes	NY	WPP06.03470	NPW	Extract, GC/MS	[EPA 625]	Dinitrophenol (2-methyl-4,6-)
Certified	Yes	NY	WPP06.03480	NPW	Extract, GC/MS	[EPA 625]	Nitrophenol (2-)
Certified	Yes	NY	WPP06.03490	NPW	Extract, GC/MS	[EPA 625]	Nitrophenol (4-)
Certified	Yes	NY	WPP06.03500	NPW	Extract, GC/MS	[EPA 625]	Pentachlorophenol
Certified	Yes	NY	WPP06.03510	NPW	Extract, GC/MS	[EPA 625]	Phenol
Certified	Yes	NY	WPP06.03518	NPW	Extract, GC/MS	[EPA 625]	Trichlorophenol (2,4,5-)
Certified	Yes	NY	WPP06.03520	NPW	Extract, GC/MS	[EPA 625]	Trichlorophenol (2,4,6-)
Applied	No	NJ	WPP06.03550	NPW	Extract, GC/MS	[EPA 625]	Acetophenone
Certified	Yes	NY	WPP06.03580	NPW	Extract, GC/MS	[EPA 625]	Benzidine
Certified	Yes	NJ	WPP06.03605	NPW	Extract, GC/MS	[EPA 625]	Diphenylhydrazine (1,2-)
Certified	Yes	NJ	WPP06.03610	NPW	Extract, GC/MS	[EPA 625]	Methylphenol (2-)
Certified	Yes	NJ	WPP06.03620	NPW	Extract, GC/MS	[EPA 625]	Decane (n-)
Certified	Yes	NY	WPP06.03660	NPW	Extract, GC/MS	[EPA 625]	Hexachlorocyclopentadiene
Certified	Yes	NY	WPP06.03680	NPW	Extract, GC/MS	[EPA 625]	N-Nitrosodimethylamine
Certified	Yes	NY	WPP06.03690	NPW	Extract, GC/MS	[EPA 625]	N-Nitrosodiphenylamine
Certified	Yes	NJ	WPP06.03700	NPW	Extract, GC/MS	[EPA 625]	Octadecane (n-)

Category: SHW02 - Characteristics of Hazardous Waste

Eligible to Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	SHW02.01000	NPW, SCM	Pensky Martens	[SW-846 1010, Rev. 0, 9/86]	Ignitability	

Category: SHW04 - Inorganic Parameters

Eligible to

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	SHW04.05000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Aluminum	
Certified	Yes	NY	SHW04.06500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Antimony	

## National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228

Certified

Certified

Certified

Certified

Certified

Certified

Certified

Certified

Yes

No

Yes

Yes

Yes

Yes

Yes

Yes

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Category: SHW04 - Inorganic Parameters

Eligible to Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SHW04.07000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Antimony
Certified	Yes	NY	SHW04.09000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Arsenic
Certified	Yes	NY	SHW04.09500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Arsenic
Certified	Yes	NY	SHW04.11500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Barium
Certified	Yes	NY	SHW04.12000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Barium
Certified	Yes	NY	SHW04.13500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Beryllium
Certified	Yes	NY	SHW04.14000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Beryllium
Certified	Yes	IL	SHW04.15100	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Boron
Certified	Yes	NY	SHW04.15500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Cadmium
Certified	Yes	NY	SHW04.16000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Cadmium
Certified	Yes	NY	SHW04.17500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Calcium
Certified	Yes	NY	SHW04.18500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Chromium
Certified	Yes	NY	SHW04.19000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Chromium
Certified	Yes	NY	SHW04.21000	NPW, SCM	Colorimetric	[SW-846 7196A, Rev. 1, 7/92]	Chromium (VI)
Certified	Yes	NY	SHW04.22500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Cobalt
Certified	Yes	IL	SHW04.23000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Cobalt
Certified	Yes	NY	SHW04.24500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Copper
Certified	Yes	IL	SHW04.25000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Copper
Certified	Yes	NY	SHW04.26000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Iron
Certified	Yes	NY	SHW04.27500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Lead
Certified	Yes	NY	SHW04.28000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Lead
Applied	No	IL	SHW04.29500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Lithium
Certified	Yes	NY	SHW04.30500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Magnesium
Certified	Yes	NY	SHW04.31500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Manganese

[SW-846 6020, Rev. 0, 9/94]

[SW-846 7470A, Rev. 1, 9/94]

[SW-846 6010B, Rev. 2 12/96]

[SW-846 6010B, Rev. 2, 12/96]

[SW-846 6010B, Rev. 2 12/96]

[SW-846 6010B, Rev. 2 12/96]

[SW-846 6020, Rev. 0, 9/94]

[SW-846 6020, Rev. 0, 7/92]

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

ICP/MS

ICP/MS

ICP/MS

**ICP** 

ICP

ICP

ICP

AA, Manual Cold Vapor

NPW, SCM

NPW, SCM

NPW, SCM

NPW, SCM

NPW, SCM

NPW, SCM

NPW, SCM

NPW, SCM

SHW04.31600

SHW04.33000

SHW04.34000

SHW04.34005

SHW04.35500

SHW04.36000

SHW04.38000

SHW04.39000

Manganese

Molybdenum

Molybdenum

Nickel

Nickel

Potassium

Selenium

Mercury - liquid waste

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW04 - Inorganic Parameters

	Eligible to Report	)					
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SHW04.40600	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Selenium
Certified	Yes	NY	SHW04.41000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Silver
Certified	Yes	NY	SHW04.41500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Silver
Certified	Yes	NY	SHW04.43000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Sodium
Certified	Yes	IL	SHW04.44000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Strontium
Applied	No	NJ	SHW04.44001	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Strontium
Certified	Yes	NY	SHW04.45000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Thallium
Certified	Yes	IL	SHW04.45500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Thallium
Certified	Yes	NY	SHW04.47100	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Tin
Certified	Yes	NY	SHW04.47500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Vanadium
Certified	Yes	IL	SHW04.47505	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Vanadium
Certified	Yes	NY	SHW04.49000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Zinc
Certified	Yes	NY	SHW04.49500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Zinc

Category: SHW06 - Organic Parameters, Chromatography

	Eligible to Report	)					
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Dropped	No	NY	SHW06.05020	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chlorobenzene
Dropped	No	NY	SHW06.05030	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,2-)
Dropped	No	NY	SHW06.05040	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,3-)
Dropped	No	NY	SHW06.05050	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,4-)
Certified	Yes	NY	SHW06.05060	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Ethylbenzene
Certified	Yes	NY	SHW06.05070	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Toluene
Dropped	No	NY	SHW06.05110	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Bromodichloromethane
Dropped	No	NY	SHW06.05120	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Bromoform
Dropped	No	NY	SHW06.05130	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Bromomethane
Dropped	No	NY	SHW06.05140	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Carbon tetrachloride
Dropped	No	NY	SHW06.05150	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chloroethane
Dropped	No	NY	SHW06.05160	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chloroform
Dropped	No	NY	SHW06.05170	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chloromethane

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZEĽWOOD DR AMHERST, NY 14228



Category: SHW06 - Organic Parameters, Chromatography

	Eligible to							
itatus	Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
ropped	No	NY	SHW06.05180	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloropropene (trans-1,3-)	
ropped	No	NY	SHW06.05190	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dibromochloromethane	
Dropped	No	NY	SHW06.05200	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorodifluoromethane	
Oropped	No	NY	SHW06.05210	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethane (1,1-)	
Dropped	No	NY	SHW06.05220	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethane (1,2-)	
Dropped	No	NY	SHW06.05230	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethene (1,1-)	
Dropped	No	NY	SHW06.05260	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloropropane (1,2-)	
Dropped	No	NY	SHW06.05270	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloropropene (cis-1,3-)	
Dropped	No	NY	SHW06.05280	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Methylene chloride (Dichloromethane)	
Oropped	No	NY	SHW06.05290	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Tetrachloroethane (1,1,2,2-)	
Dropped	No	NY	SHW06.05300	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Tetrachloroethene	
Dropped	No	NY	SHW06.05310	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichloroethane (1,1,1-)	
Dropped	No	NY	SHW06.05320	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichloroethane (1,1,2-)	
Dropped	No	NY	SHW06.05330	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichloroethene	
Dropped	No	NY	SHW06.05340	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichlorofluoromethane	
Dropped	No	NY	SHW06.05350	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Vinyl chloride	
Dropped	No	NY	SHW06.05370	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chloroethyl vinyl ether (2-)	
Certified	Yes	NY	SHW06.12010	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Aldrin	
Certified	Yes	NY	SHW06.12020	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Alpha BHC	
Certified	Yes	NY	SHW06.12030	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Beta BHC	
Certified	Yes	NY	SHW06.12040	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Delta BHC	
Certified	Yes	NY	SHW06.12050	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Lindane (gamma BHC)	
Certified	Yes	NY	SHW06.12060	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (technical)	
Certified	Yes	NY	SHW06.12070	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (alpha)	
Certified	Yes	NY	SHW06.12080	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (gamma)	
Certified	Yes	NY	SHW06.12090	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDD (4,4'-)	
Certified	Yes	NY	SHW06.12100	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDE (4,4'-)	
Certified	Yes	NY	SHW06.12110	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDT (4,4'-)	
Certified	Yes	NY	SHW06.12120	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Dieldrin	
Certified	Yes	NY	SHW06.12130	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan I	
Certified	Yes	NY	SHW06.12140	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan II	
Certified	Yes	NY	SHW06.12150	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan sulfate	

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW06 - Organic Parameters, Chromatography

	Eligible to Report	)					
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SHW06.12160	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin
Certified	Yes	NY	SHW06.12170	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin aldehyde
Certified	Yes	NY	SHW06.12180	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin ketone
Certified	Yes	NY	SHW06.12190	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Heptachlor
Certified	Yes	NY	SHW06.12200	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Heptachlor epoxide
Certified	Yes	NY	SHW06.12210	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Methoxychlor
Certified	Yes	NY	SHW06.12220	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Toxaphene
Certified	Yes	NY	SHW06.13110	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1016
Certified	Yes	NY	SHW06.13120	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1221
Certified	Yes	NY	SHW06.13130	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1232
Certified	Yes	NY	SHW06.13140	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1242
Certified	Yes	NY	SHW06.13150	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1248
Certified	Yes	NY	SHW06.13160	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1254
Certified	Yes	NY	SHW06.13170	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1260
Certified	Yes	NY	SHW06.23020	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Dicamba
Certified	Yes	NY	SHW06.23040	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	D (2,4-)
Certified	Yes	NY	SHW06.23050	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	T (2,4,5-)
Certified	Yes	NY	SHW06.23060	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	TP (2,4,5-) (Silvex)

Category: SHW07 - Organic Parameters, Chromatography/MS

	Eligible to Report	)					
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SHW07.04010	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Benzene
Certified	Yes	NY	SHW07.04020	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chlorobenzene
Certified	Yes	NY	SHW07.04030	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,2-)
Certified	Yes	NY	SHW07.04040	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,3-)
Certified	Yes	NY	SHW07.04050	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,4-)
Certified	Yes	NY	SHW07.04060	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Ethylbenzene
Certified	Yes	NY	SHW07.04070	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Toluene
Certified	Yes	NY	SHW07.04080	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylenes (total)

# National Environmental Laboratory Accreditation Program

# ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZEĽWOOD DR AMHERST, NY 14228



Category: SHW07 - Organic Parameters, Chromatography/MS

Caregory.	ttegory: SHW07 — Organic Parameters, Chromatography/MS  Eligible to							
	Report							
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	SHW07.04090	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromodichloromethane	
Certified	Yes	NY	SHW07.04100	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromoform	
Certified	Yes	NY	SHW07.04110	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromomethane	
Certified	Yes	NY	SHW07.04120	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Carbon tetrachloride	
Certified	Yes	NY	SHW07.04130	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroethane	
Certified	Yes	NY	SHW07.04140	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroethyl vinyl ether (2-)	
Certified	Yes	NY	SHW07.04150	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroform	
Certified	Yes	NY	SHW07.04160	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloromethane	
Certified	Yes	NY	SHW07.04170	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropene (trans-1,3-)	
Certified	Yes	NY	SHW07.04180	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromochloromethane	
Certified	Yes	NY	SHW07.04190	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorodifluoromethane	
Certified	Yes	NY	SHW07.04200	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethane (1,1-)	
Certified	Yes	NY	SHW07.04210	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethane (1,2-)	
Certified	Yes	NY	SHW07.04220	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (1,1-)	
Certified	Yes	IL	SHW07.04230	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (trans-1,2-)	
Certified	Yes	NY	SHW07.04240	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropane (1,2-)	
Certified	Yes	NY	SHW07.04250	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropene (cis-1,3-)	
Certified	Yes	NY	SHW07.04260	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methylene chloride (Dichloromethane)	
Certified	Yes	NY	SHW07.04270	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethane (1,1,2,2-)	
Certified	Yes	NY	SHW07.04280	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethene	
Certified	Yes	NY	SHW07.04290	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethane (1,1,1-)	
Certified	Yes	NY	SHW07.04300	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethane (1,1,2-)	
Certified	Yes	NY	SHW07.04310	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethene	
Certified	Yes	NY	SHW07.04320	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichlorofluoromethane	
Applied	No	NJ	SHW07.04322	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)	
Certified	Yes	NY	SHW07.04327	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Vinyl acetate	
Certified	Yes	NY	SHW07.04330	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Vinyl chloride	
Certified	Yes	NY	SHW07.04340	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acetone	
Certified	Yes	NY	SHW07.04350	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Carbon disulfide	
Certified	Yes	NY	SHW07.04360	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Butanone (2-)	
Certified	Yes	NY	SHW07.04370	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Hexanone (2-)	
Certified	Yes	NY	SHW07.04380	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Pentanone (4-methyl-2-)	

#### National Environmental Laboratory Accreditation Program

#### ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW07 - Organic Parameters, Chromatography/MS

Eligible to							
Status	Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NY	SHW07.04400	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acrolein
Certified	Yes	NY	SHW07.04410	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acrylonitrile
Certified	Yes	NY	SHW07.04550	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Styrene
Certified	Yes	IL	SHW07.04895	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachlorobenzene
Certified	Yes	IL	SHW07.05005	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosodimethylamine
Certified	Yes	NY	SHW07.05006	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitroso-di-n-propylamine
Certified	Yes	IL	SHW07.05010	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosodiphenylamine
Certified	Yes	IL	SHW07.05038	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzidine
Certified	Yes	NY	SHW07.05040	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzidine (3,3'-)
Certified	Yes	NY	SHW07.05050	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chloraniline (4-)
Certified	Yes	NY	SHW07.05060	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (2-)
Certified	Yes	NY	SHW07.05062	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (3-)
Certified	Yes	NY	SHW07.05063	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (4-)
Certified	Yes	NY	SHW07.05070	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chloronaphthalene (2-)
Certified	Yes	NY	SHW07.05080	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorobenzene
Certified	Yes	NY	SHW07.05090	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorobutadiene (1,3-)
Certified	Yes	NY	SHW07.05100	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorocyclopentadiene
Certified	Yes	NY	SHW07.05110	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachloroethane
Certified	Yes	NY	SHW07.05120	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Trichlorobenzene (1,2,4-)
Certified	Yes	NY	SHW07.05130	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroethoxy) methane
Certified	Yes	NY	SHW07.05132	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroethyl) ether
Certified	Yes	NY	SHW07.05140	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroisopropyl) ether
Certified	Yes	NY	SHW07.05150	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlorophenyl-phenyl ether (4-)
Certified	Yes	NY	SHW07.05170	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrotoluene (2,4-)
Certified	Yes	NY	SHW07.05180	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrotoluene (2,6-)
Certified	Yes	NY	SHW07.05190	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Isophorone
Certified	Yes	NY	SHW07.05200	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrobenzene
Certified	Yes	NY	SHW07.05210	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Butyl benzyl phthalate
Certified	Yes	NY	SHW07.05220	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-ethylhexyl) phthalate
Certified	Yes	NY	SHW07.05230	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diethyl phthalate
Certified	Yes	NY	SHW07.05240	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethyl phthalate
Certified	Yes	NY	SHW07.05250	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Di-n-butyl phthalate

#### National Environmental Laboratory Accreditation Program

#### ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW07 - Organic Parameters, Chromatography/MS

Certified   Yes   NY   SHW07.05260   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 1296   Accenaphthene certified   Yes   NY   SHW07.05270   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 1296   Anthracene   Accenaphthene   SW-846 8270C, Rev. 3, 1296   Accenaphthene   Accenaphthene   SW-846 8270C, Rev. 3, 1296   Accenaphthene   SW-846 8270C, Rev. 3, 1296   Accenaphthene   Accenaphthylene   SW-846 8270C, Rev. 3, 1296   Accenaphthylene   Accenaphthylene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(a)anthracene   SW-846 8270C, Rev. 3, 1296   Benzo(	Eligih Repo	rt					
Pertified   Yes   NY   SHW07.05270   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Accemphthene   Anthracene   Pertified   Yes   NY   SHW07.05280   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Accemphthylene   Pertified   Yes   NY   SHW07.05300   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)pyrene   Pertified   Yes   NY   SHW07.05310   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)pyrene   Pertified   Yes   NY   SHW07.05320   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)pyrene   Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)pyrene   Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)pyrene   Pertified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene   Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene   Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene   Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   Pertified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Piloranthracene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 12/96   Piloranthracene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   SW-846 8270C, Rev. 3, 1	tatus NJ Da	ata State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified   Yes   NY	Certified Yes	NY	SHW07.05260	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Di-n-octyl phthalate
Certified   Yes   NY   SHW07.05290   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)anthracene Pertified   Yes   NY   SHW07.05310   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)anthracene Pertified   Yes   NY   SHW07.05320   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)pyrene Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(ph)perylene Pertified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Denzo(ph)perylene Pertified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene Pertified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene Pertified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene Pertified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene Pertified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene Pertified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Indenc(1,2,3-ed)pyrene   Retrified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Indenc(1,2,3-ed)pyrene   Retrified   Yes   NY   SHW07.05420   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Naphthalene   Pertified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Naphthalene   Pertified   Yes   NY   SHW07.05450   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dibinfo	Certified Yes	NY	SHW07.05270	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Acenaphthene
Sertified   Yes   NY   SHW07.05300   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Benzo(a)pyrene   Sertified   Yes   NY   SHW07.05310   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Benzo(a)pyrene   Sertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Benzo(ph)perylene   Sertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Benzo(ph)perylene   Sertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dibenzo(a,h)anthracene   Sertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dibenzo(a,h)anthracene   Sertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Fluoranthene   Sertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-cd)pyrene   Sertified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-cd)pyrene   Sertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methylnaphthalene   (2-)   Sertified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methylnaphthalene   Sertified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Naphthalene   Sertified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methylphenol   (4-chloro-3-)   Sertified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methylphenol   (2-4)   Sertified   Yes   NY   SHW07.05450   NPW, SCM   GC/MS, Extract or Dir Inj.	Certified Yes	NY	SHW07.05280	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Anthracene
Pertified   Yes   NY   SHW07.05310   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(a)pyrene   Pertified   Yes   NY   SHW07.05320   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(b)fluoranthene   Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dienzo(a,b)anthracene   Pertified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dienzo(a,b)anthracene   Pertified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dienzo(a,b)anthracene   Pertified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   Pertified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-cd)pyrene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-cd)pyrene   Pertified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Methylnaphthalene (2-)   Pertified   Yes   NY   SHW07.05420   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Methylnaphthalene   Pertified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Pertified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Pertified   Yes   NY   SHW07.05460   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Pertified   Yes   NY   SHW07.05460   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dichrophenol (2-4)   Pertified   Yes   NY   SHW07.05460   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dichrophenol (2-4)   Pertified   Yes   NY   SH	Certified Yes	NY	SHW07.05290	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Acenaphthylene
Pertified   Yes   NY   SHW07.05320   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Benzo(ghi)perylene   Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Chrysene   Pertified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene   Pertified   Yes   NY   SHW07.05360   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dibenzo(a,h)anthracene   Pertified   Yes   NY   SHW07.05370   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   Pertified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   Pertified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-ed)pyrene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Methylnaphthalene (2-)   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Methylnaphthalene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Naphthalene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Prene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Prene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Methylphenol (4-chloro-3-)   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dichlorophenol (2-4-)   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dichlorophenol (2-4-)	Certified Yes	NY	SHW07.05300	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)anthracene
Pertified   Yes   NY   SHW07.05330   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Chrysene   Certified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dibenzo(a,h)anthracene   Certified   Yes   NY   SHW07.05370   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dibenzo(a,h)anthracene   Certified   Yes   NY   SHW07.05370   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Fluoranthene   Certified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-cd)pyrene   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-cd)pyrene   Certified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methylnaphthalene (2-)   Certified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Naphthalene   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Naphthalene   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Proceeding   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methyl phenol (4-chloro-3-)   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methyl phenol (4-chloro-3-)   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Diblorophenol (2-4-)   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dimitrophenol (2-4-)   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-8	Certified Yes	NY	SHW07.05310	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)pyrene
Certified   Yes   NY   SHW07.05350   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dibenzo(a,h)anthracene   Certified   Yes   NY   SHW07.05370   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dibenzo(a,h)anthracene   Certified   Yes   NY   SHW07.05370   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Fluorenthene   Certified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-ed)pyrene   Certified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-ed)pyrene   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methylnaphthalene   Certified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Naphthalene   Certified   Yes   NY   SHW07.05420   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Phenanthrene   Certified   Yes   NY   SHW07.05430   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Pyrene   Certified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methyl phenol (4-chloro-3-)   Certified   Yes   NY   SHW07.05460   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dichlorophenol (2,4-)   Certified   Yes   NY   SHW07.05470   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dichlorophenol (2,4-)   Certified   Yes   NY   SHW07.05470   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dichlorophenol (2,4-)   Certified   Yes   NY   SHW07.05470   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dinitrophenol (2,4-)   Certified   Yes   NY   SHW07.05540   NPW, SCM   GC/MS, Extract or Dir Inj. Capil	Certified Yes	NY	SHW07.05320	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(b)fluoranthene
Certified   Yes   NY   SHW07.05360   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   Certified   Yes   NY   SHW07.05370   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   Certified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-ed)pyrene   Certified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-ed)pyrene   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Methylnaphthalene (2-)   Certified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Naphthalene   Certified   Yes   NY   SHW07.05420   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Naphthalene   Certified   Yes   NY   SHW07.05420   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Pyrene   Certified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Methyl phenol (4-chloro-3-)   Certified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Methyl phenol (4-chloro-3-)   Certified   Yes   NY   SHW07.0540   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dichlorophenol (2-4-)   Certified   Yes   NY   SHW07.05480   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dichlorophenol (2-4-)   Certified   Yes   NY   SHW07.05480   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dimitrylphenol (2-4-)   Certified   Yes   NY   SHW07.05500   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Dimitrylphenol (2-4-)   Certified   Yes   NY   SHW07.05500   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3,	Certified Yes	NY	SHW07.05330	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(ghi)perylene
Pretrified   Yes   NY   SHW07.05370   NPW, SCM   GC/MS, Extract or Dir Inj. Capillary   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   SW-846 8270C, Rev. 3, 12/96   Fluoranthene   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-cd)pyrene   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-cd)pyrene   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-cd)pyrene   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-cd)pyrene   SW-846 8270C, Rev. 3, 12/96   Indeno(1,2,3-cd)pyrene   SW-846 8270C, Rev. 3, 12/96   Methylnaphthalene (2-)   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthalene   SW-846 8270C, Rev. 3, 12/96   Naphthale	Certified Yes	NY	SHW07.05350	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chrysene
Pertified   Yes   NY   SHW07.05380   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-ed)pyrene   Pertified   Yes   NY   SHW07.05390   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-ed)pyrene   Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methylnaphthalene (2-)   Pertified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Naphthalene   Pertified   Yes   NY   SHW07.05420   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Phenanthrene   Pertified   Yes   NY   SHW07.05430   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Pyrene   Pertified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methyl phenol (4-chloro-3-)   Pertified   Yes   NY   SHW07.05450   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dichlorophenol (2,4-)   Pertified   Yes   NY   SHW07.05460   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dichlorophenol (2,4-)   Pertified   Yes   NY   SHW07.05480   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dichlorophenol (2,4-)   Pertified   Yes   NY   SHW07.05480   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dinitrophenol (2,4-)   Pertified   Yes   NY   SHW07.05480   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dinitrophenol (2,4-)   Pertified   Yes   NY   SHW07.05590   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dinitrophenol (2,4-)   Pertified   Yes   NY   SHW07.05530   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   SW-846 8270C, Rev. 3, 12/96   Methylphenol (2-)   Pertified   Yes   NY   SHW07.05530   NPW, SCM   GC/MS, Extract or Dir Inj, C		NY	SHW07.05360	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenzo(a,h)anthracene
Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Indeno(1,2,3-cd)pyrene   Certified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methylnaphthalene (2-)   Nertified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Naphthalene   Nertified   Yes   NY   SHW07.05420   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Phenathrene   Nertified   Yes   NY   SHW07.05430   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Phenathrene   Nertified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methyl phenol (4-chloro-3-)   Nertified   Yes   NY   SHW07.05450   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methyl phenol (4-chloro-3-)   Nertified   Yes   NY   SHW07.05460   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dichlorophenol (2,4-)   Nertified   Yes   NY   SHW07.05460   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dimethylphenol (2,4-)   Nertified   Yes   NY   SHW07.05480   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dimitrophenol (2,4-)   Nertified   Yes   NY   SHW07.05540   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dimitrophenol (2,4-)   Nertified   Yes   NY   SHW07.05550   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dimitrophenol (2-nethyl-4,6-)   Nertified   Yes   NY   SHW07.05550   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Nitrophenol (2-)   Nertified   Yes   NY   SHW07.05550   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Nitrophenol (2-)   Nertified   Yes   NY   SHW07.05550   NPW, SCM   GC/MS, Extract	Certified Yes	NY	SHW07.05370	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Fluoranthene
Pertified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Naphthalene (2-)	Certified Yes	NY	SHW07.05380	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Fluorene
Partified   Yes   NY   SHW07.05400   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Naphthalene (2-)	Certified Yes	NY	SHW07.05390	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Indeno(1,2,3-cd)pyrene
Partified   Yes   NY   SHW07.05410   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   SW-846 8270C, Rev. 3, 12/96   Phenanthrene		NY	SHW07.05400	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylnaphthalene (2-)
Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Principal   Prin		NY	SHW07.05410	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Naphthalene
ertified Yes NY SHW07.05430 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pyrene ertified Yes NY SHW07.05440 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methyl phenol (4-chloro-3-) ertified Yes NY SHW07.05450 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Chlorophenol (2,4-) ertified Yes NY SHW07.05460 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dichlorophenol (2,4-) ertified Yes NY SHW07.05470 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dimethylphenol (2,4-) ertified Yes NY SHW07.05480 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dinitrophenol (2,4-) ertified Yes NY SHW07.05490 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dinitrophenol (2,4-) ertified Yes NY SHW07.05500 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dinitrophenol (2-methyl-4,6-) ertified Yes NY SHW07.05510 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (2-) ertified Yes NY SHW07.05520 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (4-) ertified Yes NY SHW07.05530 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) ertified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) ertified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) ertified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol ertified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol (2,4,5-) ertified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) ertified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or			SHW07.05420	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phenanthrene
Sertified   Yes   NY   SHW07.05440   NPW, SCM   GC/MS, Extract or Dir Inj, Capillary   [SW-846 8270C, Rev. 3, 12/96]   Methyl phenol (4-chloro-3-)			SHW07.05430	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pyrene
Certified   Yes   NY   SHW07.05450   NPW, SCM   GC/MS, Extract or Dir Inj., Capillary   [SW-846 8270C, Rev. 3, 12/96]   Dichlorophenol (2-)			SHW07.05440	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methyl phenol (4-chloro-3-)
Certified         Yes         NY         SHW07.05460         NPW, SCM         GC/MS, Extract or Dir Inj, Capillary         [SW-846 8270C, Rev. 3, 12/96]         Dichlorophenol (2,4-)           Certified         Yes         NY         SHW07.05470         NPW, SCM         GC/MS, Extract or Dir Inj, Capillary         [SW-846 8270C, Rev. 3, 12/96]         Dimethylphenol (2,4-)           Certified         Yes         NY         SHW07.05480         NPW, SCM         GC/MS, Extract or Dir Inj, Capillary         [SW-846 8270C, Rev. 3, 12/96]         Dinitrophenol (2,4-)           Certified         Yes         NY         SHW07.05490         NPW, SCM         GC/MS, Extract or Dir Inj, Capillary         [SW-846 8270C, Rev. 3, 12/96]         Dinitrophenol (2,4-)           Certified         Yes         NY         SHW07.05500         NPW, SCM         GC/MS, Extract or Dir Inj, Capillary         [SW-846 8270C, Rev. 3, 12/96]         Methylphenol (2-methyl-4,6-)           Certified         Yes         NY         SHW07.05510         NPW, SCM         GC/MS, Extract or Dir Inj, Capillary         [SW-846 8270C, Rev. 3, 12/96]         Methylphenol (2-)           Certified         Yes         NY         SHW07.05530         NPW, SCM         GC/MS, Extract or Dir Inj, Capillary         [SW-846 8270C, Rev. 3, 12/96]         Nitrophenol (2-)           Certified         Yes         NY <td></td> <td></td> <td>SHW07.05450</td> <td>NPW, SCM</td> <td>GC/MS, Extract or Dir Inj, Capillary</td> <td>[SW-846 8270C, Rev. 3, 12/96]</td> <td>Chlorophenol (2-)</td>			SHW07.05450	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlorophenol (2-)
Certified Yes NY SHW07.05470 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dimethylphenol (2,4-) Certified Yes NY SHW07.05480 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dinitrophenol (2,4-) Certified Yes NY SHW07.05490 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dinitrophenol (2-methyl-4,6-) Certified Yes NY SHW07.05500 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (2-) Certified Yes NY SHW07.05510 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (4-) Certified Yes NY SHW07.05520 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (2-) Certified Yes NY SHW07.05530 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) Certified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)		NY	SHW07.05460	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorophenol (2,4-)
Certified Yes NY SHW07.05480 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dinitrophenol (2,4-) Certified Yes NY SHW07.05500 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dinitrophenol (2-methyl-4,6-) Certified Yes NY SHW07.05500 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (2-) Certified Yes NY SHW07.05510 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (4-) Certified Yes NY SHW07.05520 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (2-) Certified Yes NY SHW07.05530 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) Certified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-)	Certified Yes	NY	SHW07.05470	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethylphenol (2,4-)
Certified Yes NY SHW07.05490 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Dinitrophenol (2-methyl-4,6-) Certified Yes NY SHW07.05500 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (2-) Certified Yes NY SHW07.05510 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (4-) Certified Yes NY SHW07.05520 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (2-) Certified Yes NY SHW07.05530 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) Certified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)		NY	SHW07.05480	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrophenol (2,4-)
Certified Yes NY SHW07.05500 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (2-) Certified Yes NY SHW07.05510 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (4-) Certified Yes NY SHW07.05520 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (2-) Certified Yes NY SHW07.05530 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) Certified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)	Certified Yes	NY	SHW07.05490	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrophenol (2-methyl-4,6-)
Certified Yes NY SHW07.05510 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Methylphenol (4-) Certified Yes NY SHW07.05520 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (2-) Certified Yes NY SHW07.05530 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) Certified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)			SHW07.05500	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (2-)
Certified Yes NY SHW07.05520 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (2-) Certified Yes NY SHW07.05530 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) Certified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)		NY	SHW07.05510	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (4-)
Certified Yes NY SHW07.05530 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Nitrophenol (4-) Certified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)	Certified Yes		SHW07.05520	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrophenol (2-)
Certified Yes NY SHW07.05540 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Pentachlorophenol Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)			SHW07.05530	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrophenol (4-)
Certified Yes NY SHW07.05550 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Phenol Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)			SHW07.05540	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachlorophenol
Certified Yes NY SHW07.05560 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,5-) Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)			SHW07.05550	NPW, SCM		[SW-846 8270C, Rev. 3, 12/96]	Phenol
Certified Yes NY SHW07.05570 NPW, SCM GC/MS, Extract or Dir Inj, Capillary [SW-846 8270C, Rev. 3, 12/96] Trichlorophenol (2,4,6-)			SHW07.05560		GC/MS, Extract or Dir Inj, Capillary		Trichlorophenol (2,4,5-)
			SHW07.05570	NPW, SCM			
			SHW07.05691	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,2-)

#### National Environmental Laboratory Accreditation Program

#### ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW07 - Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	SHW07.05692	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,3-)	
Certified	Yes	NY	SHW07.05700	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,4-)	
Certified	Yes	NY	SHW07.05710	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzoic acid	
Certified	Yes	IL	SHW07.05750	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pyridine	
Certified	No	NY	SHW07.05770	NPW, SCM	GC/MS, Extract or Dir Ini, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Aldrin	

#### Category: SHW09 - Miscellaneous Parameters

	Eligible to Report	•					
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	No	NY	SHW09.02000	NPW, SCM	Distillation	[SW-846 9010B, Rev. 2, 12/96]	Cyanide
Certified	Yes	NY	SHW09.03000	NPW, SCM	Distillation	[SW-846 9010B, Rev. 2, 12/96]	Cyanide - amenable to Cl2
Certified	Yes	NY	SHW09.05000	NPW, SCM	Colorimetric, Automated	[SW-846 9012A, Rev. 1, 12/96]	Cyanide
Certified	Yes	NY	SHW09.14000	NPW, SCM	Electrometric	[SW-846 9040B, Rev. 2, 1/95]	pH - waste, >20% water
Applied	No	NJ	SHW09.28350	NPW, SCM	Bomb Calorimeter	[ASTM D-240]	Heat of combustion (BTU)

#### Category: SHW02 - Characteristics of Hazardous Waste

Elicible to

Report	*				•	
NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Yes	IL	SHW02.02100	SCM	Burn Rate	[SW-846 1030, Rev. 0, 12/96]	Ignitability of solids
Yes	NY	SHW02.03000	SCM	Aqueous Waste, Potentiometric	[SW-846 9040B, Rev. 2, 1/95]	Corrosivity - pH waste, >20% water
Yes	NY	SHW02.06900	SCM	TCLP, Toxicity Procedure, ZHE	[SW-846 1311, Rev. 0, 7/92]	Volatile organics
No	NY	SHW02.07000	SCM	TCLP, Toxicity Procedure, Shaker	[SW-846 1311, Rev. 0, 7/92]	Metals - semi volatile organics
Yes	NY	SHW02.07100	SCM	EP Toxicity Test	[SW-846 1310A, Rev. 1, 7/92]	Metals - organics
Yes	IL	SHW02.08000	SCM	Synthetic PPT Leachate Procedure	[SW-846 1312, Rev. 0, 9/94]	Metals - organics
	Report NJ Data  Yes Yes Yes No Yes	Report NJ Data Yes IL Yes NY Yes NY No NY Yes NY	Report NJ Data         State         Code           Yes         IL         SHW02.02100           Yes         NY         SHW02.03000           Yes         NY         SHW02.06900           No         NY         SHW02.07000           Yes         NY         SHW02.07100	Report NJ Data         State         Code         Matrix           Yes         IL         SHW02.02100         SCM           Yes         NY         SHW02.03000         SCM           Yes         NY         SHW02.06900         SCM           No         NY         SHW02.07000         SCM           Yes         NY         SHW02.07100         SCM	Report NJ DataStateCodeMatrixTechnique DescriptionYesILSHW02.02100SCMBurn RateYesNYSHW02.03000SCMAqueous Waste, PotentiometricYesNYSHW02.06900SCMTCLP, Toxicity Procedure, ZHENoNYSHW02.07000SCMTCLP, Toxicity Procedure, ShakerYesNYSHW02.07100SCMEP Toxicity Test	Report NJ Data         State         Code         Matrix         Technique Description         Approved Method           Yes         IL         SHW02.02100         SCM         Burn Rate         [SW-846 1030, Rev. 0, 12/96]           Yes         NY         SHW02.03000         SCM         Aqueous Waste, Potentiometric         [SW-846 9040B, Rev. 2, 1/95]           Yes         NY         SHW02.06900         SCM         TCLP, Toxicity Procedure, ZHE         [SW-846 1311, Rev. 0, 7/92]           No         NY         SHW02.07000         SCM         TCLP, Toxicity Procedure, Shaker         [SW-846 1311, Rev. 0, 7/92]           Yes         NY         SHW02.07100         SCM         EP Toxicity Test         [SW-846 1310A, Rev. 1, 7/92]

#### National Environmental Laboratory Accreditation Program

#### ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW03 - Analyze-Immediately Parameters

Eligible to

Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NY	SHW03.01000	SCM	Aqueous, Electrometric	[SW-846 9040B, Rev. 2, 1/95]	pН	

Category: SHW04 - Inorganic Parameters

Eligible to

	Keport							
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NJ	SHW04.03000	SCM	Acid Digestion, Soil Sediment & Sludge	[SW-846 3050B, Rev. 2, 12/96]	Metals	
Certified	Yes	NJ	SHW04.03700	SCM	Chromium VI Digestion	[SW-846 3060A, Rev. 1, 12/96]	Metals	
Certified	Yes	NY	SHW04.33500	SCM	AA, Manual Cold Vapor	[SW-846 7471A, Rev. 1, 9/94]	Mercury - solid waste	
Certified	Yes	NY	SHW04.47145	SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Titanium	

Category: SHW05 - Organic Parameters, Prep. / Screening

Eligible to

	Report						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW05.05000	SCM	Ultrasonic Extraction	[SW-846 3550B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.06000	SCM	Waste Dilution	[SW-846 3580A, Rev. 1, 7/92]	Organics
Certified	Yes	NJ	SHW05.07300	SCM	Closed System Purge & Trap	[SW-846 5035L, Rev. 0, 12/96]	Volatile organics - low conc.
Certified	Yes	NJ	SHW05.07310	SCM	Methanol Extract, Closed System P & T	[SW-846 5035H, Rev. 0, 12/96]	Volatile organics - high conc.
Certified	Yes	NJ	SHW05.12000	SCM	Cleanup-Florisil	[SW-846 3620B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.14000	SCM	Cleanup-Gel Permeation	[SW-846 3640A, Rev. 1, 9/94]	Semivolatile organics
Certified	Yes	NJ	SHW05.16000	SCM	Cleanup-Sulfur Removal	[SW-846 3660B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.17000	SCM	Cleanup-Sulfuric Acid/KMnO4	[SW-846 3665A, Rev. 1, 12/96]	Semivolatile organics

Category: SHW06 - Organic Parameters, Chromatography

Eligible to Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method
Applied	No	IL	SHW06.02010	SCM	Microextraction, GC, ECD	[SW-846 8011, Rev. 0, 7/92]
Applied	No	IL	SHW06.02020	SCM	Microextraction, GC, ECD	[SW-846 8011, Rev. 0, 7/92]
Certified	No	IL	SHW06.03010	SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

**Parameter Description** 

Acetone

Dibromoethane (1,2-) (EDB)

Dibromo-3-chloropropane (1,2-)

#### National Environmental Laboratory Accreditation Program

#### ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW06 - Organic Parameters, Chromatography

	Eligible to	)					
Status	Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
***************************************				SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Tert-butyl alcohol
Certified	No	IL **	SHW06.03050	SCM	,	[SW-846 8015B, Rev. 2, 12/96]	Iso-butyl alcohol
Certified	No	IL	SHW06.03090		GC, Direct Injection or P & T, FID		•
Certified	Yes	IL	SHW06.03145	SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Isopropyl alcohol
Certified	Yes	IL	SHW06.03170	SCM	GC, Direct Injection, FID	[SW-846 8015B, Rev. 2, 12/96]	Ethylene glycol
Certified	Yes	IL	SHW06.03180	SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Methyl alcohol (Methanol)
Certified	Yes	IL	SHW06.03778	SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Ethyl alcohol
Certified	Yes	IL	SHW06.04010	SCM	GC P&T, FID	[SW-846 8015B, Rev. 2, 12/96]	Gasoline range organic
Certified	Yes	ΙL	SHW06.04500	SCM	Extraction, GC, FID	[SW-846 8015B, Rev. 2, 12/96]	Diesel range organic
Certified	Yes	NY	SHW06.05010	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Benzene
Dropped	No	IL	SHW06.05066	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Naphthalene
Dropped	No	IL	SHW06.05068	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Styrene
Dropped	No	IL	SHW06.05080	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (o-)
Dropped	No	IL	SHW06.05090	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (m-)
Dropped	No	IL	SHW06.05100	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (p-)
Dropped	No	IL	SHW06.05240	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethene (cis-1,2-)
Dropped	No	IL	SHW06.05250	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethene (trans-1,2-)
Certified	Yes	IL	SHW06.05360	SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Methyl tert-butyl ether
Certified	Yes	IL	SHW06.12212	SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Mirex
Certified	Yes	IL	SHW06.23001	SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Acifluorfen
Certified	Yes	IL	SHW06.23010	SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Dalapon
Certified	Yes	IL	SHW06.23011	SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	DCPA
Certified	Yes	IL	SHW06.23021	SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Dichlorprop
Certified	Yes	IL	SHW06.23030	SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Dinoseb
Certified	Yes	IL	SHW06.23066	SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Pentachlorophenol
Certified	Yes	IL	SHW06.23070	SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Picloram

Category: SHW07 - Organic Parameters, Chromatography/MS

	Eligible to	)					
	Report						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	IL	SHW07.04011	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromobenzene

#### National Environmental Laboratory Accreditation Program

#### ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZEĽWOOD DR AMHERST, NY 14228



Category: SHW07 - Organic Parameters, Chromatography/MS

	Eligible to	•					
Status	Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	IL	SHW07.04012	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Butyl benzene (n-)
Certified	Yes	IL	SHW07.04013	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Sec-butylbenzene
Certified	Yes	IL	SHW07.04014	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tert-butylbenzene
Certified	Yes	IL	SHW07.04065	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Isopropylbenzene
Certified	Yes	IL	SHW07.04067	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Propylbenzene (n-)
Certified	Yes	IL	SHW07.04071	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Isopropyltoluene (4-)
Certified	Yes	IL	SHW07.04072	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichlorobenzene (1,2,3-)
Certified	Yes	IL	SHW07.04073	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trimethylbenzene (1,2,4-)
Certified	Yes	IL	SHW07.04089	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromochloromethane
Certified	Yes	IL	SHW07.04185	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromoethane (1,2-) (EDB)
Certified	Yes	IL	SHW07.04186	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromomethane
Certified	Yes	IL	SHW07.04187	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	IL	SHW07.04235	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (cis-1,2-)
Certified	Yes	IL	SHW07.04255	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloro-2-butene (trans-1,4-)
Certified	Yes	IL	SHW07.04259	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Ethanol
Certified	Yes	IL	SHW07.04325	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloropropane (1,2,3-)
Certified	Yes	IL	SHW07.04375	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methyl iodide
Certified	Yes	IL	SHW07.04376	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Iso-butyl alcohol
Certified	Yes	IL	SHW07.04377	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Isopropanol
Certified	Yes	IL	SHW07.04390	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methyl tert-butyl ether
Certified	Yes	IL	SHW07.04395	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tert-butyl alcohol
Certified	Yes	ΙL	SHW07.04398	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acetonitrile
Certified	Yes	IL	SHW07.04500	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Hexachlorobutadiene (1,3-)
Certified	Yes	IL	SHW07.04540	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260C, Rev. 2, 12/96]	Naphthalene
Certified	Yes	IL	SHW07.04560	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethane (1,1,1,2-)
Certified	Yes	IL	SHW07.04570	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichlorobenzene (1,2,4-)
Certified	Yes	IL	SHW07.04590	SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dioxane (1,4-)
Certified	Yes	IL	SHW07.04665	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Acetophenone
Certified	Yes	NY	SHW07.04885	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Parathion
Certified	Yes	NY	SHW07.04890	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Parathion methyl
Certified	Yes	IL	SHW07.04975	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Tetrachlorobenzene (1,2,4,5-)
Certified	Yes	IL	SHW07.04980	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Tetrachlorophenol (2,3,4,6-)

#### National Environmental Laboratory Accreditation Program

#### ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW07 - Organic Parameters, Chromatography/MS

Eligible to Report

	Keport						
Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	IL	SHW07.05004	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosodiethylamine
Certified	Yes	IL	SHW07.05012	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosopyrrolidine
Certified	Yes	IL	SHW07.05020	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diphenylamine
Certified	Yes	NY	SHW07.05030	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Carbazole
Certified	Yes	IL	SHW07.05048	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Aniline
Certified	Yes	IL	SHW07.05160	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bromophenyl-phenyl ether (4-)
Certified	Yes	IL	SHW07.05340	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(k)fluoranthene
Certified	Yes	IL	SHW07.05590	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (3-)
Certified	Yes	NY	SHW07.05600	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenzofuran
Certified	Yes	NY	SHW07.05720	SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzyl alcohol

Category: SHW09 - Miscellaneous Parameters

Eligible to

	State	Code				
,		Code	Matrix	Technique Description	Approved Method	Parameter Description
	IL	SHW09.06000	SCM	Combustion, Titration	[SW-846 9020B, Rev. 2, 9/94]	Total organic halides (TOX)
1	IL	SHW09.08100	SCM	Extraction	[SW-846 9023, Rev. 0, 12/96]	Extractable organic halides (EOX)
]	IL	SHW09.10100	SCM	Titration	[SW-846 9034, Rev. 0, 12/96]	Sulfides, acid sol. & insol.
1	IL	SHW09.13000	SCM	Turbidimetric	[SW-846 9038, Rev. 0, 9/86]	Sulfate
s 1	IL	SHW09.13050	SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 9/94]	Sulfate
s 1	NY	SHW09.16000	SCM	Mix with Water or Calcium Chloride	[SW-846 9045C, Rev. 3, 1/95]	pH - soil and waste
1	IL	SHW09.19000	SCM	Infrared Spectrometry or FID	[SW-846 9060, Rev. 0, 9/86]	Total organic carbon (TOC)
s I	IL	SHW09.22000	SCM	Colorimetric, Auto, 4AAP Distillation	[SW-846 9066, Rev. 0, 9/86]	Phenols
s ]	ΙL	SHW09.29000	SCM	Flow-Through Paint Filter, Observation	[SW-846 9095, Rev. 0, 9/86]	Free liquid
s ]	IL	SHW09.30150	SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/94]	Nitrate
s l	IL	SHW09.30250	SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Bromide
s i	IL	SHW09.32000	SCM	Colorimetric, Automated (Ferri-CN AAII)	[SW-846 9251, Rev. 0, 9/86]	Chloride
s I	IL	SHW09.33100	SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Chloride
s I	IL	SHW09.34150	SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Fluoride
s s s s		IL IL IL IL IL IL IL IL IL IL IL IL IL I	IL SHW09.08100 IL SHW09.10100 IL SHW09.13000 IL SHW09.13050 NY SHW09.16000 IL SHW09.19000 IL SHW09.22000 IL SHW09.29000 IL SHW09.30150 IL SHW09.30250 IL SHW09.30250 IL SHW09.3100	IL SHW09.08100 SCM IL SHW09.10100 SCM IL SHW09.13000 SCM IL SHW09.13050 SCM IL SHW09.16000 SCM IL SHW09.19000 SCM IL SHW09.22000 SCM IL SHW09.29000 SCM IL SHW09.30150 SCM IL SHW09.30150 SCM IL SHW09.30250 SCM IL SHW09.30250 SCM IL SHW09.32000 SCM IL SHW09.32000 SCM	IL SHW09.08100 SCM Extraction  IL SHW09.10100 SCM Titration  IL SHW09.13000 SCM Turbidimetric  IL SHW09.13050 SCM Ion Chromatography  NY SHW09.16000 SCM Mix with Water or Calcium Chloride  IL SHW09.19000 SCM Infrared Spectrometry or FID  IL SHW09.22000 SCM Colorimetric, Auto, 4AAP Distillation  IL SHW09.29000 SCM Flow-Through Paint Filter, Observation  IL SHW09.30150 SCM Ion Chromatography  IL SHW09.30250 SCM Ion Chromatography  IL SHW09.32000 SCM Colorimetric, Automated (Ferri-CN AAII)  IL SHW09.33100 SCM Ion Chromatography	IL         SHW09.08100         SCM         Extraction         [SW-846 9023, Rev. 0, 12/96]           IL         SHW09.10100         SCM         Titration         [SW-846 9034, Rev. 0, 12/96]           IL         SHW09.13000         SCM         Turbidimetric         [SW-846 9038, Rev. 0, 9/86]           IL         SHW09.13050         SCM         Ion Chromatography         [SW-846 9056, Rev. 0, 9/94]           NY         SHW09.16000         SCM         Mix with Water or Calcium Chloride         [SW-846 9045C, Rev. 3, 1/95]           IL         SHW09.19000         SCM         Infrared Spectrometry or FID         [SW-846 9060, Rev. 0, 9/86]           IL         SHW09.22000         SCM         Colorimetric, Auto, 4AAP Distillation         [SW-846 9066, Rev. 0, 9/86]           IL         SHW09.29000         SCM         Flow-Through Paint Filter, Observation         [SW-846 9056, Rev. 0, 9/86]           IL         SHW09.30150         SCM         Ion Chromatography         [SW-846 9056, Rev. 0, 12/94]           IL         SHW09.32000         SCM         Ion Chromatography         [SW-846 9056, Rev. 0, 9/86]           IL         SHW09.33100         SCM         Colorimetric, Automated (Ferri-CN AAII)         [SW-846 9056, Rev. 0, 12/96]           IL         SHW09.33100         SCM         Ion Chromatogr

#### National Environmental Laboratory Accreditation Program

#### ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228



Category: SHW10 - Facility-Specific Parameters

Eligible to Report

Status	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description	
Certified	Yes	NJ	SHW10.20010	SCM	Ion Chromatography	[USER DEFINED KODAK-CQS-ETCM-QOD-0161]	Acetic acid	
Certified	Yes	NJ	SHW10.20020	SCM	Ion Chromatography	[USER DEFINED KODAK-CQS-ETCM-QOD-0161]	Salicylic acid	

Joseph F. Aiello, Chief

#### New Jersey Department of Environmental Protection Environmental Laboratory Certification Program LABORATORY PERSONNEL LIST

#### LABORATORT TERSONIV

Effective as of: 07/01/2006

Laboratory Name: STL BUFFALO Laboratory Number: NY455 Activity ID: NLC060001

10 HAZELWOOD DR AMHERST, NY 14228

Position: Laboratory Man	ager					
Employee	Category/Instrument	Start Date	End Date	<b>Documentation Status</b>	Complete Date	Comments
JOHN SCHOVE		7/1/2006		Complete/Qualified		
Position: Lead Tech. Direc	etor					
Employee	Category/Instrument	Start Date	End Date	<b>Documentation Status</b>	Complete Date	Comments
CHRISTOPHER SPENCER		4/1/2005		Complete/Qualified		
Position: Operator						
Employee	Category/Instrument	Start Date	End Date	Documentation Status	Complete Date	Comments
JIM LIS	GC/MS	7/1/2006		Complete/Qualified		
PAUL MC NAMARA	GC/MS	7/1/2000		Complete/Qualified		
JENNIFER PIERCE	ICP/MS	7/1/2002		Complete/Qualified		
Position: QA Officer						
Employee	Category/Instrument	Start Date	End Date	<b>Documentation Status</b>	Complete Date	Comments
VERL PRESTON		7/1/2000		Complete/Qualified		
Position: Supervisor						
Employee	Category/Instrument	Start Date	End Date	Documentation Status	Complete Date	Comments
	SDW02, WPP02, CAP01 or CAP04	7/1/2004		Complete/Qualified		
PEGGY GRAY-ERDMANN	SDW03, WPP03 or SHW03	7/1/2004		Complete/Qualified		
JENNIFER PIERCE	SDW04, WPP04, SHW04, 09, 10 or CAP02	7/1/2002		Complete/Qualified		
KATHLEEN ALDRICH	SDW05, 06, WPP05-07, SHW05-12 or CAP03	7/1/2000		Complete/Qualified		
JIM LIS	SDW05, 06, WPP05-07, SHW05-12 or CAP03	7/1/2006		Complete/Qualified		
PAUL MC NAMARA	SDW05, 06, WPP05-07, SHW05-12 or CAP03	7/1/2000		Complete/Qualified		
GARY RUDZ	SDW05, 06, WPP05-07, SHW05-12 or CAP03	7/1/2003		Complete/Qualified		
				-		





## Department of Environmental Protection

Division of Environmental Analysis Senator William X. Wall Experiment Station

#### certifies

M-GA006

**STL SAVANNAH** 5102 LAROCHE AVE SAVANNAH, GA 31404-0000

Laboratory Director: MYRON YOUNG

for the analysis of POTABLE WATER (CHEMISTRY) NON POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42,00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: 01 JUL 2006

Expires: 30 JUN 2007

Director, Division of Environmental Analysis

Decar Q. Parale

#### COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2006

M-GA006

June 22, 2006

STL SAVANNAH SAVANNAH GA

NON POTABLE WATER (C	HEMISTRY)	Effective Date	01 JUL 2006	Expiration Date	30 JUN 2007
<u>Ana</u>	alytes and Methods				
ALUMINUM	EPA 200.7		SODIUM		EPA 200.7
ALUMINUM	EPA 200.8		POTASSIUM		EPA 200.7
ANTIMONY	EPA 200.8		ALKALINITY, TOTAL		SM 2320B
ARSENIC	EPA 200.7		ALKALINITY, TOTAL		EPA 310.1
ARSENIC	EPA 200.8		CHLORIDE		EPA 325.2
BERYLLIUM	EPA 200.7		CHLORIDE		EPA 300.0
BERYLLIUM	EPA 200.8		FLUORIDE		EPA 340.2
CADMIUM	EPA 200.7		FLUORIDE		EPA 300.0
CADMIUM	EPA 200.8		SULFATE		EPA 300.0
CHROMIUM	EPA 200.7		AMMONIA-N		EPA 350.1
CHROMIUM	EPA 200.8		NITRATE-N		EPA 300.0
COBALT	EPA 200.7		NITRATE-N		EPA 353.2
COBALT	EPA 200.8		KJELDAHL-N		EPA 351.2
COPPER	EPA 200.7		PHOSPHORUS, TOTAL		EPA 365.4
IRON	EPA 200.7		CHEMICAL OXYGEN DEMA	AND	EPA 410.1
LEAD	EPA 200.7		BIOCHEMICAL OXYGEN D	EMAND	EPA 405.1
LEAD	EPA 200.8		TOTAL ORGANIC CARBON	I	EPA 415.1
MANGANESE	EPA 200.7		NON-FILTERABLE RESIDU	E	EPA 160.2
MANGANESE	EPA 200.8		OIL AND GREASE		EPA 1664
MERCURY	EPA 245.1		VOLATILE HALOCARBONS	3	EPA 624
MOLYBDENUM	EPA 200.7		VOLATILE AROMATICS		EPA 624
MOLYBDENUM	EPA 200.8		CHLORDANE		EPA 608
NICKEL	EPA 200.7		ALDRIN		EPA 608
NICKEL	EPA 200.8		DIELDRIN		EPA 608
SELENIUM	EPA 200.7		DDD		EPA 608
SELENIUM	EPA 200.8		DDE		EPA 608
SILVER	EPA 200.7		DDT		EPA 608
SILVER	EPA 200.8		HEPTACHLOR		EPA 608
STRONTIUM	EPA 200.7		HEPTACHLOR EPOXIDE		EPA 608
THALLIUM	EPA 200.7		POLYCHLORINATED BIPHI	ENYLS (WATER	EPA 608
THALLIUM ·	EPA 200.8				
TITANIUM	EPA 200.7				
VANADIUM	EPA 200.7				
VANADIUM	EPA 200.8				
ZINC	EPA 200.7				
ZINC	EPA 200.8				
РН	EPA 150.1				
SPECIFIC CONDUCTIVITY	EPA 120.1				
TOTAL DISSOLVED SOLIDS	EPA 160.1				
HARDNESS (CACO3), TOTAL	SM 2340B				
CALCIUM	EPA 200.7				
MAGNESIUM	EPA 200.7				

## COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2006

M-GA006 STL SAVANNAH SAVANNAH GA

POTABLE WATER (CH	EMISTRY)	Effective Date	01 JUL 2006	Expiration Date	30 JUN 2007
	Analytes and Methods				
ARSENIC	EPA 200.8		HEPTACHLOR		EPA 525.2
BARIUM	EPA 200.7		HEPTACHLOR EPOXIDE		EPA 508
BARIUM	EPA 200.8		HEPTACHLOR EPOXIDE		EPA 525.2
BERYLLIUM	EPA 200.7		HEXACHLOROBENZENE		EPA 525.2
BERYLLIUM	EPA 200.8		HEXACHLOROCYCLOPE	NTADIENE	EPA 525.2
CADMIUM	EPA 200.7		LINDANE		EPA 508
CADMIUM	EPA 200.8		LINDANE		EPA 525.2
CHROMIUM	EPA 200.7		METHOXYCHLOR		EPA 508
CHROMIUM	EPA 200.8		METHOXYCHLOR		EPA 525.2
COPPER	EPA 200.7		SIMAZINE		EPA 525.2
COPPER	EPA 200.8		TOXAPHENE		EPA 508
LEAD	EPA 200.8		ALDICARB SULFONE		EPA 531.1
MERCURY	EPA 245.1		CARBOFURAN		EPA 531.1
MERCURY	EPA 200.8		POLYNUCLEAR AROMAT	IC HYDROCARB	
NICKEL	EPA 200.7		ADIPATES/PHTHALATES		EPA 525.2
NICKEL	EPA 200.8		TRIHALOMETHANES		EPA 524.2
SELENIUM	EPA 200.8		VOLATILE ORGANIC COM	//POUNDS	EPA 524.2
THALLIUM	EPA 200.8		1,2-DIBROMOETHANE		EPA 504.1
NITRATE-N	EPA 300.0		1,2-DIBROMO-3-CHLORO	PROPANE	EPA 504.1
NITRATE-N	EPA 353.2		HALOACETIC ACIDS		EPA 552.2
NITRITE-N	EPA 300.0		BROMATE		EPA 300.1
NITRITE-N	EPA 353.2		CHLORITE		EPA 300.1
FLUORIDE	EPA 300.0				
SODIUM	EPA 200.7				
SULFATE	EPA 300.0				
CYANIDE, TOTAL	EPA 335.4				
TURBIDITY	EPA 180.1				
CALCIUM	EPA 200.7				
ALKALINITY, TOTAL	SM 2320B				
TOTAL DISSOLVED SOLIDS	SM 2540C				
PH	EPA 150.1				
2,4-D	EPA 515.1				
2,4,5-TP	EPA 515.1				
DALAPON	EPA 515.1				
DINOSEB .	EPA 515.1				
PENTACHLOROPHENOL	EPA 515.1				
PICLORAM	EPA 515.1				
ALACHLOR	EPA 525.2				
ATRAZINE	EPA 525.2				
CHLORDANE	EPA 508				
ENDRIN	EPA 508				
HEPTACHLOR	EPA 508				



Wadsworth Center

The Governor Nelson A. Rockefeller Empire State Plaza P.O. BOX 509

Albany, New York 12201-0509

Antonia C. Novello, M.D., M.P.H., Dr.P.H.

Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

LAB ID: 11182

November 02, 2006

MR. ALBERT VICINIE SEVERN TRENT LABORATORIES, INC./STL PITTSBURGH 301 ALPHA DRIVE RIDC PARK PITTSBURGH, PA 15238

April 01, 2007

Certificate Expiration Date:

Dear Mr. Vicinie,

Enclosed are revised ELAP and/or NELAP Certificate(s) of Approval issued to your environmental laboratory for the current permit year. The Certificate(s) supersede any previously issued and are in effect through the expiration date listed above. Please carefully examine the Certificate(s) to insure that the categories, subcategories, analytes and methods for which your laboratory is approved are listed correctly, as well as verifying your laboratory's name, address, lead technical director and identification number.

Pursuant to regulation (Part 55-2 NYCRR), original certificates must be posted conspicuously in the laboratory and shall, upon request, be made available to any client of the laboratory. Certificates remain the property of the New York State Department of Health and must be surrendered promptly on demand.

You must now return the certificate(s) listed below within ten days of the date of this letter. Please check the serial number(s) carefully and return only those certificates with their serial numbers listed. Please be advised that the certificate(s) listed are the property of the New York State Department of Health and MUST be returned to the ELAP office at this time.

Please note, pursuant to Section 55-2.5(a) NYCRR, any misrepresentation of the Fields of Accreditation (Matrix - Method - Analyte) for which your laboratory is approved may result in denial, suspension, or revocation of your certification. Any use of the ELAP or NELAP name, reference to the laboratory's approval status and/or using the NELAC/NELAP logo in any catalogs, advertising, business solicitations, proposals, quotations, laboratory analytical reports or other materials must include the laboratory's ELAP identification number, and must distinguish between proposed testing for which the laboratory is approved and the proposed testing for which the laboratory is not approved.

Please notify the ELAP office of any changes you feel need to be made to your Certificate(s). We may be reached via email to elap@health.state.ny.us or by calling (518) 485-5570.

Please return the following Certificates: 30257 NW NELAC 30258 CLP ELAP Sincerely,

Joyce Reilly

Program Administrator Environmental Laboratory

Approval Program

Red 11/11/06

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised May 15, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ALBERT VICINIE SEVERN TRENT LABORATORIES, INC./STL PITTSBURGH 301 ALPHA DRIVE RIDC PARK PITTSBURGH, PA 15238 NY Lab Id No: 11182 EPA Lab Code: PA00146

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Acrylates		Chlorinated Hydrocarbon Pest	icides
Acrolein (Propenal)	EPA 8260B	4,4'-DDD	EPA 8081A
Acrylonitrile	EPA 8260B	4,4'-DDE	EPA 8081A
Ethyl methacrylate	EPA 8260B	4,4'-DDT	EPA 8081A
Methyl methacrylate	EPA 8260B	Aldrin	EPA 8081A
		alpha-BHC	EPA 8081A
Amines	EPA 8270C	alpha-Chlordane	EPA 8081A
2-Nitroaniline		beta-BHC	EPA 8081A
3-Nitroaniline	EPA 8270C	Chlordane Total	EPA 8081A
4-Chloroaniline	EPA 8270C	Chlorobenzilate	EPA 8270C
4-Nitroaniline	EPA 8270C	delta-BHC	EPA 8081A
Aniline	EPA 8270C	Dieldrin	EPA 8081A
Carbazole	EPA 8270C	Endosulfan I	EPA 8081A
Diphenylamine	EPA 8270C	Endosulfan li	EPA 8081A
Pronamide	EPA 8270C	Endosulfan sulfate	EPA 8081A
Benzidines		Endrin	EPA 8081A
3,3' -Dichlorobenzidine	EPA 8270C	Endrin aldehyde	EPA 8081A
3,3'-Dimethylbenzidene	EPA 8270C	Endrin Ketone	EPA 8081A
Benzidine	EPA 8270C	gamma-Chlordane	EPA 8081A
Characteristic Testing		Heptachlor	EPA 8081A
E.P. Toxicity	EPA 1310	Heptachlor epoxide	EPA 8081A
Ignitability	EPA 1010	Lindane	EPA 8081A
ginconicy	EPA 1020	Methoxychlor	EPA 8081A
TCLP	EPA 1311	Toxaphene	EPA 8081A

Serial No.: 30217



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Chlorinated Hydrocarbons		Haloethers	
1,2,4,5-Tetrachiorobenzene	EPA 8270C	4-Bromophenylphenyl ether	EPA 8270C
1,2,4-Trichlorobenzene	EPA 8260B	4-Chlorophenylphenyl ether	EPA 8270C
,,,	EPA 8270C	Bis (2-chloroisopropyl) ether	EPA 8270C
2-Chloronaphthalene	EPA 8270C	Bis(2-chloroethoxy)methane	EPA 8270C
Hexachlorobenzene	EPA 8270C	Bis(2-chloroethyl)ether	EPA 8270C
Hexachlorobutadiene	EPA 8260B	Metals I	
	EPA 8270C	Barium, Total	EPA 3005A
Hexachlorocyclopentadiene	EPA 8270C	2010111, 10001	EPA 3010A
Hexachloroethane	EPA 8270C		EPA 3050B
Hexachloropropene	EPA 8270C		EPA 6010B
Pentachlorobenzene	EPA 8270C		EPA 6020
Chlorophenoxy Acid Pesticides		Cadmium, Total	EPA 3005A
2,4,5-T	EPA 8151A		EPA 3010A
2,4,5-TP (Silvex)	EPA 8151A		EPA 3050B
2,4-D	EPA 8151A		EPA 6010B
2,4-DB	EPA 8151A		EPA 6020
Dalapon	EPA 8151A	Calcium, Total	EPA 6010B
Dicamba	EPA 8151A	Chromium, Total	EPA 3005A
Dinoseb	EPA 8151A		EPA 3010A
MCPA	EPA 8151A		EPA 3050B
MCPP	EPA 8151A		EPA 6010B
			EPA 6020
		Copper, Total	EPA 6010B

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Metals I		Metais II	
Iron, Total	EPA 6010B	Antimony, Total	EPA 6020
Lead, Total	EPA 3005A	Arsenic, Total	EPA 3005A
	EPA 3010A		EPA 3010A
	EPA 3050B		EPA 3050B
	EPA 6010B		EPA 6010B
	EPA 6020		EPA 6020
Magnesium, Total	EPA 6010B	Beryllium, Total	EPA 6010B
Manganese, Total	EPA 6010B	Chromium VI	EPA 7196A
Nickel, Total	EPA 3005A	Mercury, Total	EPA 7471A
	EPA 3010A	Selenium, Total	EPA 3005A
	EPA 3050B		EPA 3010A
	EPA 6010B		EPA 3050B
	EPA 6020		EPA 6010B
Potassium, Total	EPA 6010B		EPA 6020
Silver, Total	EPA 6010B	Vanadium, Total	EPA 6010B
****	EPA 6020	Zinc, Total	EPA 6010B
Sodium, Total	EPA 6010B	Metals III	
Strontium, Total	EPA 6010B	Cobalt, Total	EPA 6010B
Metals II		Silica, Dissolved	EPA 6010B
Aluminum, Total	EPA 6010B	Thallium, Total	EPA 6010B
Antimony, Total	EPA 3005A	Minerals	
	EPA 3050B	Chloride	EPA 9056
	EPA 6010B	Omoride	23,710000

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Minerals		Nitrosoamines	
Fluoride, Total	EPA 9056	N-Nitrosopyrrolidine	EPA 8270C
Sulfate (as SO4)	EPA 9056	Nutrients	
Miscellaneous		Nitrate (as N)	EPA 9056
Boron, Total	EPA 6010B	Nitrite (as N)	EPA 9056
Cyanide, Total	EPA 9012A	Orthophosphate (as P)	EPA 9056
Hydrogen Ion (pH)	EPA 9040B	Organophosphate Pesticides	
	EPA 9045C	Azinphos methyl	EPA 8141A
Phenois	EPA 9066	Coumaphos	EPA 8141A
Sulfide (as S)	EPA 9030B	Demeton-O	EPA 8141A
	EPA 9034	Demeton-S	EPA 8141A
Nitroaromatics and Isophorone		Diazinon	EPA 8141A
2,4-Dinitrotoluene	EPA 8270C	Dimethoate	EPA 8141A
2.6-Dinitrotoluene	EPA 8270C	EPN	EPA 8141A
Isophorone	EPA 8270C	Ethoprop	EPA 8141A
Nitrobenzene	EPA 8270C	Famphur	EPA 8141A
		Fensulfothion	EPA 8141A
Nitrosoamines	EPA 8270C	Fenthion	EPA 8141A
N-Nitrosodiethylamine	<del></del>	Malathion	EPA 8141A
N-Nitrosodimethylamine	EPA 8270C	Mevinphos	EPA 8141A
N-Nitrosodi-n-butylamine	EPA 8270C	Parathion ethyl	EPA 8141A
N-Nitrosodi-n-propylamine	EPA 8270C	Parathion methyl	EPA 8141A
N-Nitrosodiphenylamine	EPA 8270C	ŕ	EPA 8270C
N-nitrosomethylethylamine	EPA 8270C		

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Organophosphate Pesticides		Polynuclear Aromatic Hydrocarb	ons
Phorate	EPA 8141A	Anthracene	EPA 8310
		Benzo(a)anthracene	EPA 8270C
Phthalate Esters			EPA 8310
Benzyl butyl phthalate	EPA 8270C	Benzo(a)pyrene	EPA 8270C
Bis(2-ethylhexyl) phthalate	EPA 8270C		EPA 8310
Diethyl phthalate	EPA 8270C	Benzo(b)fluoranthene	EPA 8270C
Dimethyl phthalate	EPA 8270C	DOMEO(D) NOTATION	EPA 8310
Di-n-butyl phthalate	EPA 8270C	Benzo(ghi)perylene	EPA 8270C
Di-n-octyl phthalate	EPA 8270C	Delizo(Gui)ber Aleue	EPA 8310
Polychlorinated Biphenyls		Benzo(k)fluoranthene	EPA 8270C
PCB-1016	EPA 8082		EPA 8310
PCB-1221	EPA 8082	Chrysene	EPA 8270C
PCB-1232	EPA 8082		EPA 8310
PCB-1242	EPA 8082	Dibenzo(a,h)anthracene	EPA 8270C
PCB-1248	EPA 8082		EPA 8310
PCB-1254	EPA 8082	Fluoranthene	EPA 8270C
PCB-1260	EPA 8082		EPA 8310
Polynuclear Aromatic Hydrocart	none	Fluorene	EPA 8270C
·	EPA 8270C		EPA 8310
Acenaphthene	EPA 8310	Indeno(1,2,3-cd)pyrene	EPA 8270C
	EPA 8270C		EPA 8310
Acenaphthylene		Naphthalene	EPA 8270C
	EPA 8310	· varpo esta construir	EPA 8310
Anthracene	EPA 8270C		

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Polynuciear Aromatic Hydrocarbons		Priority Pollutant Phenois	
Phenanthrene	EPA 8270C	2-Nitrophenol	EPA 8270C
	EPA 8310	3-Methylphenol	EPA 8270C
Pyrene	EPA 8270C	4-Chloro-3-methylphenol	EPA 8041
•	EPA 8310		EPA 8270C
Priority Pollutant Phenols		4-Methylphenol	EPA 8041
2,3,4,6 Tetrachiorophenol	EPA 8041		EPA 8270C
w(e) -1	EPA 8270C	4-Nitrophenol	EPA 8041
2,4,5-Trichlorophenol	EPA 8270C		EPA 8270C
2,4,6-Trichlorophenol	EPA 8041	Pentachlorophenol	EPA 8041
	EPA 8270C		EPA 8270C
2,4-Dichlorophenol	EPA 8041	Phenol	EPA 8041
,	EPA 8270C		EPA 8270C
2,4-Dimethylphenol	EPA 8041	Purgeable Aromatics	
, , ,	EPA 8270C	1,2-Dichlorobenzene	EPA 8260B
2,4-Dinitrophenol	EPA 8270C	1,3-Dichlorobenzene	EPA 8260B
2,6-Dichlorophenol	EPA 8041	1,4-Dichlorobenzene	EPA 8260B
	EPA 8270C	2-Chlorotoluene	EPA 8260B
2-Chlorophenol	EPA 8041	4-Chlorotoluene	EPA 8260B
	EPA 8270C	Benzene	EPA 8260B
2-Methyl-4,6-dinitrophenol	EPA 8041	Bromobenzene	EPA 8260B
·	EPA 8270C	Chlorobenzene	EPA 8260B
2-Methylphenol	EPA 8041	Ethyl benzene	EPA 8260B
	EPA 8270C	Isopropylbenzene	EPA 8260B

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Purgeable Aromatics		Purgeable Halocarbons	
n-Butylbenzene	EPA 8260B	Chloroform	EPA 8260B
sec-Butylbenzene	EPA 8260B	Chloromethane	EPA 8260B
Styrene	EPA 8260B	cis-1,2-Dichloroethene	EPA 8260B
tert-Butylbenzene	EPA 8260B	cis-1,3-Dichloropropene	EPA 8260B
Toluene	EPA 8260B	Dibromochloromethane	EPA 8260B
Total Xylenes	EPA 8260B	Dibromomethane	EPA 8260B
		Dichlorodifluoromethane	EPA 8260B
Purgeable Halocarbons	EPA 8260B	Methylene chloride	EPA 8260B
1,1,1-Trichloroethane	EPA 8260B	Tetrachloroethene	EPA 8260B
1,1,2,2-Tetrachioroethane	EPA 8260B	trans-1,2-Dichloroethene	EPA 8260B
1,1,2-Trichloroethane	EPA 8260B	trans-1,3-Dichloropropene	EPA 8260B
1,1-Dichloroethane	EPA 8260B	Trichloroethene	EPA 8260B
1,1-Dichloroethene	EPA 8260B	Trichlorofluoromethane	EPA 8260B
1,2,3-Trichloropropane	EPA 8260B	Vinyl chloride	EPA 8260B
1,2-Dibromo-3-chloropropane	EPA 8260B	Purgeable Organics	
1,2-Dichloroethane	EPA 8260B	1,4-Dioxane	EPA 8260B
1,2-Dichloropropane		2-Butanone (Methylethyl ketone)	EPA 8260B
2-Chloroethylvinyl ether	EPA 8260B	2-Hexanone	EPA 8260B
Bromochloromethane	EPA 8260B	4-Methyl-2-Pentanone	EPA 8260B
Bromodichioromethane	EPA 8260B	Acetone	EPA 8260B
Bromoform	EPA 8260B		EPA 8260B
Bromomethane	EPA 8260B	Acetonitrile	EPA 8260B
Carbon tetrachloride	EPA 8260B	Carbon Disulfide	EPA 8260B
Chloroethane	EPA 8260B	Propionitrile	ELW 070AD

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#### **Purgeable Organics**

Vinyl acetate EPA 82608

Semi-Volatile Organics

2-Methylnaphthalene EPA 8270C

Aramite EPA 8270C

Benzoic Acid EPA 8270C

Benzyl alcohol EPA 8270C

Dibenzofuran EPA 8270C

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Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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Amines		Chlorinated Hydrocarbon Pesticides	
2-Nitroaniline	EPA 8270C	Endosulfan sulfate	EPA 608
3-Nitroaniline	EPA 8270C	Endrin	EPA 608
4-Chloroaniline	EPA 8270C	Endrin aldehyde	EPA 608
4-Nitroaniline	EPA 8270C	Endrin Ketone	EPA 8081A
Carbazole	EPA 8270C	gamma-Chlordane	EPA 8081A
Benzidines		Heptachlor	EPA 608
3,3' -Dichlorobenzidine	EPA 625	Heptachlor epoxide	EPA 608
Benzidine	EPA 625	Lindane	EPA 608
Defizione	L1 A 020	Methoxychlor	EPA 8081A
Chlorinated Hydrocarbon Pesticides		Toxaphene	EPA 608
4,4'-DDD .	EPA 608	Chlorinated Hydrocarbons	
4,4'-DDE	EPA 608	•	~~ A AAF
4,4'-DDT	EPA 608	1,2,4-Trichlorobenzene	EPA 625
Aldrin	EPA 608	2-Chloronaphthalene	EPA 625
alpha-BHC	EPA 608	Hexachlorobenzene	EPA 625
alpha-Chlordane	EPA 8081A	Hexachlorobutadiene	EPA 625
beta-BHC	EPA 608	Hexachlorocyclopentadiene	EPA 625
Chlordane Total	EPA 608	Hexachloroethane	EPA 625
delta-BHC	EPA 608	Demand	
Diallate	EPA 8270C	Biochemical Oxygen Demand	EPA 405.1
Dieldrin	EPA 608		SM 18-20 5210B
Endosulfan I	EPA 608	Chemical Oxygen Demand	EPA 410.4
Endosulfan II	EPA 608		

Serial No.: 31188



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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Haloethers		Nitrosoamines	
4-Bromophenylphenyl ether	EPA 625	N-Nitrosodimethylamine	EPA 625
4-Chlorophenylphenyl ether	EPA 625	N-Nitrosodi-n-butylamine	EPA 8270C
Bis (2-chloroisopropyl) ether	EPA 625	N-Nitrosodi-n-propylamine	EPA 625
Bis(2-chloroethoxy)methane	EPA 625	N-Nitrosodiphenylamine	EPA 625
	EPA 8270C	Nutrient	
Bis(2-chloroethyl)ether	EPA 625	Ammonia (as N)	EPA 350.1
Mineral		Nitrate (as N)	EPA 300.0
Acidity	EPA 305.1		EPA 353.2
Alkalinity	EPA 310.1	Nitrite (as N)	EPA 300.0
Chloride	EPA 300.0	Orthophosphate (as P)	EPA 300.0
	EPA 325.2	Phthalate Esters	
Fluoride, Total	EPA 300.0	Benzyl butyl phthalate	EPA 625
Hardness, Total	EPA 130.2	Bis(2-ethylhexyl) phthalate	EPA 625
	EPA 200.7	Diethyl phthalate	EPA 625
Sulfate (as SO4)	EPA 300.0	Dimethyl phthalate	EPA 625
	EPA 375.4	Di-n-butyl phthalate	EPA 625
Nitroaromatics and Isophorone		Di-n-octyl phthalate	EPA 625
2,4-Dinitrotoluene	EPA 625	Polychlorinated Biphenyls	
2,6-Dinitrotoluene	EPA 625	PCB-1016 PCB-1221	EPA 608
Isophorone	EPA 625		EPA 608
Nitrobenzene	EPA 625	PCB-1232	EPA 608
		PCB-1232	EPA 608
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Serial No.: 31188



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised November 02, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ALBERT VICINIE SEVERN TRENT LABORATORIES, INC./STL PITTSBURGH 301 ALPHA DRIVE RIDC PARK PITTSBURGH, PA 15238 NY Lab Id No: 11182 EPA Lab Code: PA00146

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Polychlorinated Biphenyls		Polynuclear Aromatics	
PCB-1248	EPA 608	Dibenzo(a,h)anthracene	EPA 625
PCB-1254	EPA 608	Fluoranthene	EPA 610
PCB-1260	EPA 608		EPA 625
Polynuclear Aromatics		Fluorene	EPA 610
Acenaphthene	EPA 610		EPA 625
Acenaphiniene	EPA 625	Indeno(1,2,3-cd)pyrene	EPA 610
Acenaphthylene	EPA 610		EPA 625
Acenaphinylene		Naphthalene	EPA 610
	EPA 625		EPA 625
Anthracene	EPA 610	Phenanthrene	EPA 610
	EPA 625		EPA 625
Benzo(a)anthracene	EPA 610	Pyrene	EPA 610
	EPA 625	rylene	
Benzo(a)pyrene	EPA 610		EPA 625
	EPA 625	<b>Priority Pollutant Phenois</b>	
Benzo(b)fluoranthene	EPA 610	2,4,5-Trichlorophenol	EPA 625
	EPA 625	2,4,6-Trichlorophenol	EPA 604
Benzo(ghi)perylene	EPA 610		EPA 625
	EPA 625	2,4-Dichlorophenol	EPA 604
Benzo(k)fluoranthene	EPA 610		EPA 625
	EPA 625	2,4-Dimethylphenol	EPA 604
Chrysene	EPA 610		EPA 625
	EPA 625	2,4-Dinitrophenol	EPA 604
Dibenzo(a,h)anthracene	EPA 610		EPA 625

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EPA 624 EPA 624 EPA 8260B EPA 624 EPA 624
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Purgeable Halocarbons		Semi-Volatile Organics	
Dibromochloromethane	EPA 8260B	Benzoic Acid	EPA 8270C
Dichlorodifluoromethane	EPA 624	Benzyl alcohol	EPA 8270C
Methylene chloride	EPA 624	Dibenzofuran	EPA 8270C
Tetrachloroethene	EPA 624	Wastewater Metals I	
trans-1,2-Dichloroethene	EPA 624	Barium, Total	EPA 200.7
trans-1,3-Dichloropropene	EPA 624		EPA 200.8
Trichloroethene	EPA 624	Cadmium, Total	EPA 200.7
Trichlorofluoromethane	EPA 624	<b>4</b>	EPA 200.8
Vinyl chloride	EPA 624	Calcium, Total	EPA 200.7
Purgeable Organics		Chromium, Total	EPA 200.7
2-Butanone (Methylethyl ketone)	EPA 8260B		EPA 200.8
2-Hexanone	EPA 8260B	Copper, Total	EPA 200.7
4-Methyl-2-Pentanone	EPA 8260B		EPA 200.8
Acetone	EPA 8260B	Iron, Total	EPA 200.7
Carbon Disulfide	EPA 8260B	Lead, Total	EPA 200.7
Vinyl acetate	EPA 8260B		EPA 200.8
Residue		Magnesium, Total	EPA 200.7
Solids, Total	EPA 160.3	Manganese, Total	EPA 200.7
Solids, Total Dissolved	EPA 160.1		EPA 200.8
Solids, Total Suspended	EPA 160.2	Nickel, Total	EPA 200.7
•			EPA 200.8
Semi-Volatile Organics		Potassium, Total	EPA 200.7
2-Methylnaphthalene	EPA 8270C	Silver, Total	EPA 200.7

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Wastewater Metals I		Wastewater Metals III	
Silver, Total	EPA 200.8	Molybdenum, Total	EPA 200.7
Sodium, Total	EPA 200.7		EPA 200.8
Wastewater Metals II		Thallium, Total	EPA 200.7
Aluminum, Total	EPA 200.7		EPA 200.8
,, , , , , , , , , , , , , , , ,	EPA 200.8	Tin, Total	EPA 200.7
Antimony, Total	EPA 200.7	Titanium, Total	EPA 200.7
•	EPA 200.8	Wastewater Miscellaneous	
Arsenic, Total	EPA 200.7	Boron, Total	EPA 200.7
	EPA 200.8	Bromide	EPA 300.0
Beryllium, Total	EPA 200.7	Color	EPA 110.2
	EPA 200.8	Cyanide, Total	EPA 335.4
Chromium VI	SM 18-19 3500-Cr D		OIA-1677
Mercury, Total	EPA 245.1	Hydrogen Ion (pH)	EPA 150.1
Selenium, Total	EPA 200.7	Oil & Grease Total Recoverable	EPA 1664A
	EPA 200.8	Organic Carbon, Total	EPA 415.1
Vanadium, Total	EPA 200.7	Phenols	EPA 420.2
	EPA 200.8	Silica, Dissolved	EPA 200.7
Zinc, Total	EPA 200.7	Specific Conductance	EPA 120.1
	EPA 200.8	Sulfide (as S)	EPA 376.1
Wastewater Metals III			
Cobalt, Total	EPA 200.7		
	EPA 200.8		

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is hereby APPROVED as an Environmental Laboratory for the category ENVIRONMENTAL ANALYSES ANALYTICAL SERVICES PROTOCOL All approved subcategories and/or analytes are listed below:

CLP PCB/Pesticides
CLP Semi-Volatile Organics
CLP Volatile Organics
CLP Inorganics

Serial No.: 31189

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Laboratory Qualifications for Adirondack Environmental Services, Inc.





## Department of Environmental Protection

Division of Environmental Analysis Senator William X. Wall Experiment Station

#### certifies

M-NY063

ADIRONDACK ENVIRONMENTAL SERVICES INC 314 NORTH PEARL ST ALBANY, NY 12207-0000

Laboratory Director: Paul A. Batista

for the analysis of NON POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Decar C. Parcolo

Director, Division of Environmental Analysis

Issued: 01 JUL 2006

**Expires:** 30 JUN 2007

## COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of:

18 FEB 2007

M-NY063

#### ADIRONDACK ENVIRONMENTAL SERVICES INC

ALBANY NY

ALUMINUM         EPA 200.7         ALDRIN         EPA 608           ANTIMONY         EPA 200.7         DIELDRIN         EPA 608           ARSENIC         EPA 200.7         DDE         EPA 608           BERYLLIUM         EPA 200.7         DDT         EPA 608           CADMIUM         EPA 200.7         HEPTACHLOR EPOXIDE         EPA 608           CHROMIUM         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           COPPER         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           COPPER         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           MERCURY         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           MERCURY         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           MERCURY         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           MERCURY         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           MERCURY         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           MECURY         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           MECURY         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608           MECURY         EPA 200.7         POLYCHLORINATED BIPHENYLS (WATEF EPA 608
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MANGANESE         EPA 200.7           MERCURY         EPA 245.1           MOLYBDENUM         EPA 200.7           NICKEL         EPA 200.7           SELENIUM         EPA 200.7           SILVER         EPA 200.7           THALLIUM         EPA 200.7           TITANIUM         EPA 200.7           VANADIUM         EPA 200.7           PH         EPA 200.7           PH         EPA 150.1           SPECIFIC CONDUCTIVITY         EPA 120.1           TOTAL DISSOLVED SOLIDS         EPA 160.1           CALCIUM         EPA 200.7           MAGNESIUM         EPA 200.7           SODIUM         EPA 200.7           POTASSIUM         EPA 200.7
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SELENIUM         EPA 200.7           SILVER         EPA 200.7           THALLIUM         EPA 200.7           TITANIUM         EPA 200.7           VANADIUM         EPA 200.7           PH         EPA 150.1           SPECIFIC CONDUCTIVITY         EPA 120.1           TOTAL DISSOLVED SOLIDS         EPA 160.1           CALCIUM         EPA 200.7           MAGNESIUM         EPA 200.7           SODIUM         EPA 200.7           POTASSIUM         EPA 200.7
SILVER         EPA 200.7           THALLIUM         EPA 200.7           TITANIUM         EPA 200.7           VANADIUM         EPA 200.7           ZINC         EPA 200.7           PH         EPA 150.1           SPECIFIC CONDUCTIVITY         EPA 120.1           TOTAL DISSOLVED SOLIDS         EPA 160.1           CALCIUM         EPA 200.7           MAGNESIUM         EPA 200.7           SODIUM         EPA 200.7           POTASSIUM         EPA 200.7
THALLIUM         EPA 200.7           TITANIUM         EPA 200.7           VANADIUM         EPA 200.7           ZINC         EPA 200.7           PH         EPA 150.1           SPECIFIC CONDUCTIVITY         EPA 120.1           TOTAL DISSOLVED SOLIDS         EPA 160.1           CALCIUM         EPA 200.7           MAGNESIUM         EPA 200.7           SODIUM         EPA 200.7           POTASSIUM         EPA 200.7
TITANIUM       EPA 200.7         VANADIUM       EPA 200.7         ZINC       EPA 200.7         PH       EPA 150.1         SPECIFIC CONDUCTIVITY       EPA 120.1         TOTAL DISSOLVED SOLIDS       EPA 160.1         CALCIUM       EPA 200.7         MAGNESIUM       EPA 200.7         SODIUM       EPA 200.7         POTASSIUM       EPA 200.7
VANADIUM         EPA 200.7           ZINC         EPA 200.7           PH         EPA 150.1           SPECIFIC CONDUCTIVITY         EPA 120.1           TOTAL DISSOLVED SOLIDS         EPA 160.1           CALCIUM         EPA 200.7           MAGNESIUM         EPA 200.7           SODIUM         EPA 200.7           POTASSIUM         EPA 200.7
ZINC       EPA 200.7         PH       EPA 150.1         SPECIFIC CONDUCTIVITY       EPA 120.1         TOTAL DISSOLVED SOLIDS       EPA 160.1         CALCIUM       EPA 200.7         MAGNESIUM       EPA 200.7         SODIUM       EPA 200.7         POTASSIUM       EPA 200.7
PH EPA 150.1  SPECIFIC CONDUCTIVITY EPA 120.1  TOTAL DISSOLVED SOLIDS EPA 160.1  CALCIUM EPA 200.7  MAGNESIUM EPA 200.7  SODIUM EPA 200.7  POTASSIUM EPA 200.7
SPECIFIC CONDUCTIVITY EPA 120.1  TOTAL DISSOLVED SOLIDS EPA 160.1  CALCIUM EPA 200.7  MAGNESIUM EPA 200.7  SODIUM EPA 200.7  POTASSIUM EPA 200.7
TOTAL DISSOLVED SOLIDS EPA 160.1 CALCIUM EPA 200.7 MAGNESIUM EPA 200.7 SODIUM EPA 200.7 POTASSIUM EPA 200.7
CALCIUM         EPA 200.7           MAGNESIUM         EPA 200.7           SODIUM         EPA 200.7           POTASSIUM         EPA 200.7
MAGNESIUM EPA 200.7 SODIUM EPA 200.7 POTASSIUM EPA 200.7
SODIUM EPA 200.7 POTASSIUM EPA 200.7
POTASSIUM EPA 200.7
ALKALINITY, TOTAL EPA 310.1
CHLORIDE EPA 325.3
FLUORIDE EPA 340.2
SULFATE EPA 375.4
AMMONIA-N EPA 350.1
PHOSPHORUS, TOTAL EPA 365.2
BIOCHEMICAL OXYGEN DEMAND EPA 405.1
TOTAL ORGANIC CARBON SM 5310C
CYANIDE, TOTAL EPA 335.3
NON-FILTERABLE RESIDUE EPA 160.2
OIL AND GREASE EPA 1664
PHENOLICS, TOTAL EPA 420.1
VOLATILE HALOCARBONS EPA 624
VOLATILE AROMATICS EPA 624
CHLORDANE EPA 608



## The American Industrial Hygiene Association

acknowledges that

# CELEBRATING Thirty Years of AIHA Accrediting Labs Sound Data SMART DECISIONS

1974 - 2004

## Adirondack Environmental Services, Inc.

314 North Pearl Street, Albany, NY 12207-1322

Laboratory ID: 100307

has fulfilled the requirements of the AIHA Laboratory Quality Assurance Programs (LQAP), thereby, conforming to the ISO/IEC 17025 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories*.

The above named laboratory has been accredited by AIHA in the following:

#### **ACCREDITATION PROGRAMS**

$\checkmark$	INDUSTRIAL HYGIENE	Accreditation Expires: 04/01/2008
	ENVIRONMENTAL LEAD	Accreditation Expires:
	<b>ENVIRONMENTAL MICROBIOLOGY</b>	Accreditation Expires:
	FOOD	Accreditation Expires:
	UNIQUE SCOPE	Accreditation Expires:

Specific categories of testing, within each Accreditation Program, for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with LQAP requirements. This certificate is not valid without the attached **Scope of Accreditation**.

Kimberly A. Ruthe, CIH

Chairperson, Analytical Accreditation Board

Himberly Buthe

Donna M. Doganiero, CIH

President, AIHA

Date Issued: 12/15/2004



LABORATORY QUALITY ASSURANCE PROGRAMS

SOUND DATA

#### AIHA

Your Essential Connection: Advancing Occupational and Environmental Health and Safety Globally

2700 Prosperity Ave., Suite 250, Fairfax, VA 22031 U.S.A. (703) 849-8888; Fax (703) 207-3561; www.aiha.org

Laboratory ID: 100307

Issue Date: 12/15/2004

# AIHA Laboratory Quality Assurance Programs SCOPE OF ACCREDITATION

#### Adirondack Environmental Services, Inc.

314 North Pearl Street, Albany, NY 12207-1322

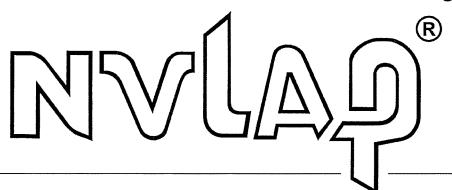
Clients are urged to verify the laboratory's accreditation status for particular categories of testing. A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA website at <a href="http://www.aiha.org/LaboratoryServices/html/lists.htm">http://www.aiha.org/LaboratoryServices/html/lists.htm</a>

The " $\checkmark$ " symbol indicates that the laboratory is approved for that specific field(s) of testing within the Scope Category. A list of current analytical methods covering the scopes for which the laboratory is accredited shall be available to customers and the accreditation body from the laboratory upon request.

### ✓ **IHLAP** Initial Accreditation Date: 04/01/1993

Inorganics  ✓ Ion Chromatography  ✓ Atomic Absorption & Emission  ✓ ICP, DCP, ICP-MS  ☐ Infra-Red (IR)  ✓ UV/VIS  ✓ Gravimetric ☐ Titrimetric ☐ Ion-Selective Electrode (ISE)  XRD	Organics  ✓ GC  ☐ IR  ✓ LC  ✓ GC/MS  ☐ UV/VIS  ☐ Gravimetric	Asbestos Air ✓ Optical Microscopy ✓ Electron Microscopy  Bulk ✓ Optical Microscopy ✓ Electron Microscopy
Compressed Air  ☐ GC ☐ GC/MS ☐ Gravimetric ☐ UV/VIS ☐ IR		

# United States Department of Commerce National Institute of Standards and Technology



## Certificate of Accreditation to ISO/IEC 17025:1999

**NVLAP LAB CODE: 200552-0** 

#### Adirondack Environmental Services Inc.

Albany, NY

is recognized by the National Voluntary Laboratory Accreditation Program for conformance with criteria set forth in NIST Handbook 150:2001 and all requirements of ISO/IEC 17025:1999.

Accreditation is granted for specific services, listed on the Scope of Accreditation, for:

#### **BULK ASBESTOS FIBER ANALYSIS**

2006-01-01 through 2006-12-31

Effective dates



For the National Institute of Standards and Technology



## National Voluntary Laboratory Accreditation Program



#### SCOPE OF ACCREDITATION TO ISO/IEC 17025:1999

#### Adirondack Environmental Services Inc.

314 North Pearl Street Albany, NY 12207-1322 Mr. Thomas K. Hare

Phone: 518-785-0128 Fax: 518-785-5042 URL: http://www.adirondackenvironmental.com

#### **BULK ASBESTOS FIBER ANALYSIS (PLM)**

**NVLAP LAB CODE 200552-0** 

NVLAP Code Designation / Description

18/A01 EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation

Samples

2006-01-01 through 2006-12-31

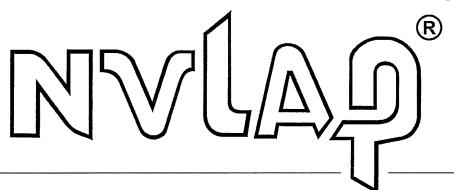
Effective dates

Page 1 of 1

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

## United States Department of Commerce National Institute of Standards and Technology



## Certificate of Accreditation to ISO/IEC 17025:1999

**NVLAP LAB CODE: 200552-0** 

#### Adirondack Environmental Services Inc.

Albany, NY

is recognized by the National Voluntary Laboratory Accreditation Program for conformance with criteria set forth in NIST Handbook 150:2001 and all requirements of ISO/IEC 17025:1999.

Accreditation is granted for specific services, listed on the Scope of Accreditation, for:

#### AIRBORNE ASBESTOS FIBER ANALYSIS

2006-01-01 through 2006-12-31

Effective dates



For the National Institute of Standards and Technology



### National Voluntary Laboratory Accreditation Program



### SCOPE OF ACCREDITATION TO ISO/IEC 17025:1999

#### Adirondack Environmental Services Inc.

314 North Pearl Street Albany, NY 12207-1322 Mr. Thomas K. Hare

Phone: 518-785-0128 Fax: 518-785-5042 URL: http://www.adirondackenvironmental.com

### AIRBORNE ASBESTOS FIBER ANALYSIS (TEM)

**NVLAP LAB CODE 200552-0** 

NVLAP Code Designation / Description

18/A02 U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and

Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as

found in 40 CFR, Part 763, Subpart E, Appendix A.

2006-01-01 through 2006-12-31

Effective dates

Page 1 of 1

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

# State of Connecticut. Department of Public Health Approved Emproumental Laboratory

THIS IS TO CERTIFY THAT THE LABORATORY DESCRIBED BELOW HAS BEEN APPROVED BY THE STATE DEPARTMENT OF PUBLIC HEALTH PURSUANT TO APPLICABLE PROVISIONS OF THE PUBLIC HEALTH CODE AND GENERAL STATUTES OF CONNECTICUT, FOR MAKING THE EXAMINATIONS, DETERMINATIONS OR TESTS SPECIFIED BELOW WHICH HAVE BEEN AUTHORIZED IN WRITING BY THAT DEPARTMENT.

### ADIRONDACK ENVIRONMENTAL SERVICES, INC.

LOCATED AT	314 North Pearl S	treet in		Albany, NY 12207	
AND REGISTERED IN	THE NAME OF		Paul A. Batista		
THIS CERTIFICATE IS BY THE REGISTERED APPROVAL AS FOLLO		I IT TO BE IN CHARG	Paul A. Batista E OF THE LABORATOR	WHO HAS BEEN DESIGN Y WORK COVERED BY THIS CERTIFICA	IATED FE OF
DRINKI	NG WATER, NON-POTA	ABLE WATER/V	VASTEWATER		
	SOLID WASTE/S	SOIL		PAINT CHIPS, SOIL	
	<b>Examination F</b>	or:		Examination For:	
	INORGANIC CHEM	ICALS		LEAD	
	ORGANIC CHEMI	CALS			
	SEE COMPU	TER PRINT-OUT	FOR SPECIFIC TES	STS APPROVED	
THIS CERTIFICATE EX	XPIRES September 30	, 2007 AND IS	REVOCABLE FOR CAUS	SE BY THE STATE DEPARTMENT OF PU	BLIC HEALTH
DATED AT HARTFORI	o, connecticut, this	3 RD	DAY OF	October 2005	
	Registration No.		Ellen	J Blaschinsti	
TO THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF TH	PH- 0583		CHIEF PROIII	ATORV SERVICES RRANCH	



### STATE OF CONNECTICUT

## DEPARTMENT OF PUBLIC HEALTH ENVIRONMENTAL HEALTH SECTION

ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM

# APPROVED ANALYTES REPORT FOR ALL MATRICES

### Adirondack Environmental Svs, Inc.

С	T-APP-NUM	PH-0	0583
314 Nort	LOC/ h Pearl Street	ATION	
Albany		NY	12207-
PHONE	(518)-43	4-4546	
REGISTERE AUTHORIZ	D OWNER/ ED AGENT	Paul A	A. Batista
	DIRECTOR	Paul A	A. Batista
CO DII	RECTOR(S)		

APPROVED BY

JEFFREY C. CURRAN

DATE 10/03/2005 9:39:37 AM

LABORATORY APPROVAL EXPIRATION DATE 09/30/2007

LABORATORY STATUS APPROVED

ANY QUESTIONS CONCERNING THIS DOCUMENT SHOULD BE ADDRESSED TO THE ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM AT (860) 509-7389

	ZINC		
DRINKING WATER (SDWA)	ZINC		
STATUS REPORTED ON 10/03/2005	RESIDUE		
SOC: REGULATED SYNTHETIC ORGANIC CHEMICAL WITH MINIMUM MDL REQUIREMENTS	TOTAL DISSOLVED SOLIDS		
ANALYTE NAME	MISCELLANEOUS		
PHYSICALS	CYANIDE (TOTAL)		
COLOR	CORROSIVITY		
ODOR			
PH			
TEMPERATURE			
CONDUCTIVITY			
MINERALS			
ALKALINITY			
CHLORIDE			
FLUORIDE			
HARDNESS, TOTAL			
HARDNESS, CALCIUM			
SULFATE			
NUTRIENTS			
NITRATE			
NITRITE			
O-PHOSPHATE			
METALS			
ANTIMONY			
ARSENIC			
BARIUM			
BERYLLIUM			
CADMIUM			
CALCIUM			
CHROMIUM			
COPPER			
IRON			
LEAD			
MAGNESIUM			
MANGANESE			
MERCURY			
NICKEL			
SELENIUM			
SILVER			

SODIUM THALLIUM

NON-POTABLE WATER/ WASTEWATER         MAGNESIUM MANCANESE           STATUS REPORTED ON 10/03/2005         MERCURY MOLY PODENIUM MICKEL           ANALYTE NAME         POTASSIUM           PHYSICALS         SELENIUM           COLOR         SILVER           PH         SODIUM           TEMPERATURE         THALLIUM           CONDUCTIVITY         TIN           MITCHALS         VANADIUM           ACIDITY         ZINC           ALKALINITY         ZINC           CHLORIDE         RESIDUE           FLUORIDE         TOTAL RESIDUE (SOLIDS)           HARDNESS, TOTAL         TOTAL DISSOLVED SOLIDS           HARDNESS, CALCIUM         TOTAL SUSPENDED SOLIDS (non-filterable)           SULFATE         DEMANDS           SULFATE         BOD           NUTRIENTS         COD           AMMONIA         TOTAL ORGANIC CARBON           KJELDAHL INTROGEN         MISCELLANEOUS           NITRATE         CYANIDE (TOTAL)           OPHOSPHATE         PHENOLICS           TOTAL PHOSPHOROUS         FOAMING AGENTS (MRAS)           METALS         INORGANIC DISINFECTION BY-PRODUCTS           ALLMINUM         BROMIDE           ANTIMONY         AROCLOR 1242	-	L.EAD
STATUS REPORTED ON 10/03/2005   MARCAUTY   MOLYBDENUM   MICKEL     ANALYTE NAME		MAGNESIUM
MERCURY MOLYBDENUM MOLYBDENUM NICKEL ANALYTE NAME PHYSICALS SELENIUM COLOR PH SODIUM TEMPERATURE THALLIUM CONDUCTIVITY TIN TIN MINERALS VANADIUM ALKALINITY TITANIUM MINERALS ACIDITY ALKALINITY TOTAL RESIDUE FLUORIDE RESIDUE FLUORIDE TOTAL RESIDUE (SOLIDS) TOTAL RESIDUE (SOLIDS) TOTAL SUSPENDED SOLIDS HARDNESS, CALCIUM SULFATE SULFIDE BOD NUTRIENTS COD AMMONIA TOTAL DISSOLVED SOLIDS MITERITE CYANIDE TOTAL ORGANIC CARBON KIELDAHL INTROGEN NITRATE MISCELLANIEOUS NITRITE CYANIDE (TOTAL) OPHOSPHATE PHENOLICS FOAMINO AGENTS (MRAS)  METALS INORGANIC DISINFECTION BY-PRODUCTS BARIUM BRIUM BROMIDE ANTIMONY MISCELLANIEOUS SOLVENTS SOLVENTS BARIUM BROMIDE ANTIMONY MISCELLANIEOUS FOAMINO AGENTS (MRAS)  METALS INORGANIC DISINFECTION BY-PRODUCTS BARIUM BROMIDE BRAYLLIUM BROMIDE ANTIMONY ARSENIC BRIUM ANTIMONY ARSENIC BRAILM BROMIDE ANTIMONY ARSENIC BRAILM ARGUOR 1018/1242 CALCIUM AROCLOR 1221 CHROMIUM AROCLOR 1221 CHROMIUM AROCLOR 1221 CHROMIUM AROCLOR 1232 CHROMIUM AROCLOR 1248 COBALLT COPPER		MANGANESE
MICKEL	STATUS REPORTED ON 10/03/2005	MERCURY
ANALYTE NAME         POTASSIUM           PHYSICALS         SELENIUM           COLOR         SILVER           PH         SODIUM           TEMPERATURE         THALLIUM           CONDUCTIVITY         TIN           MINERALS         VANADIUM           ACIDITY         ZINC           ALKALINITY         "ESIDUE           CHLORIDE         RESIDUE           FLUORIDE         TOTAL RESIDUE (SOLIDS)           HARDNESS, TOTAL         TOTAL DISSOLVED SOLIDS (non-filterable)           HARDNESS, CALCIUM         TOTAL SUSPENDED SOLIDS (non-filterable)           SULFIDE         DEMANDIS           SULFIDE         DEMANDIS           NUTRENTS         COD           AMMONIA         TOTAL ORGANIC CARBON           KIELDAHL NITROGEN         "INTRITE           NITRITE         CYANIDE (TOTAL)           O-PHOSPHATE         PHENOLICS           TOTAL PHOSPHOROUS         FOAMING AGENTS (MBAS)           METALS         INORGANIC DISINFECTION BY-PRODUCTS           ALLUMINUM         BROMIDE           ANTINONY         "INTRICULATION BY-PRODUCTS           ARSENIC         SOLVENTS           BARRIUM         OIL AND GREASE           BERY		MOLYBDENUM
POTASSIUM   POTASSIUM   SELENIUM   SELENIUM   SELENIUM   SELENIUM   SODIUM   TEMPERATURE   THALLIUM   TIN   TITANIUM   TIN   TITANIUM   TIN   TITANIUM   TIN   TITANIUM   TIN   TITANIUM   TIN   TITANIUM   TOTAL RESIDUE   SOLIDS   TOTAL RESIDUE   SOLIDS   TOTAL RESIDUE   SOLIDS   TOTAL SUSPENDED SOLIDS   SOLIDS   TOTAL SUSPENDED SOLIDS (non-filterable)   SULFATE   SOLIDS   TOTAL SUSPENDED SOLIDS (non-filterable)   SULFATE   SOLIDS   TOTAL SUSPENDED SOLIDS (non-filterable)   SULFATE   SOLIDS   TOTAL SUSPENDED SOLIDS (non-filterable)   SULFATE   SOLIDS   TOTAL SUSPENDED SOLIDS (non-filterable)   SOLIFIDE   DEMANDS   SOLIDS   TOTAL SUSPENDED SOLIDS (non-filterable)   SOLIFIDE   DEMANDS   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIFIDE   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS (non-filterable)   SOLIDS		NICKEL
COLOR SILVER PH SODIUM TEMPERATURE THALLIUM CONDUCTIVITY TIN TITANIUM MINERALS VANADIUM ACIOTY ZINC ALKALINITY CHLORIDE RESIDUE FLUORIDE TOTAL RESIDUE (SOLIDS) HARDNESS, TOTAL TOTAL SUSPENDED SOLIDS (non-filterable) SULFATE SULFIDE DEMANDS SULFATE SULFIDE DEMANDS TOTAL ORGANIC CARBON KÆELDAHL NITROGEN NITRITE COD AMMONIA KÆLDAHL NITROGEN NITRITE CYANIDE (TOTAL) O-PHOSPHOROUS PHOSPHOROUS PHOSPHOROUS  METALS INORGANIC DISINFECTION BY-PRODUCTS ALUMINUM ARSENIC BARIUM DIL AND GREASE BERYLLIUM BORON PCBs BORON PCBs BROLL ON BY-PRODUCTS ALUMINUM AROCLOR 1221 CHROMIUM Hexavalent CAGALIT AROCLOR 1224 COPPER		POTASSIUM
PH	PHYSICALS	SELENIUM
TEMPERATURE	COLOR	SILVER
CONDUCTIVITY	PH	SODIUM
TITANIUM   MINERALS	TEMPERATURE	THALLIUM
MINERALS  ACIDITY  ALKALINITY  CHLORIDE  FLUORIDE  FLUORIDE  FLUORIDE  HARDNESS, TOTAL  HARDNESS, CALCIUM  SULFATE  SULFIDE  MONUTRIENTS  AMMONIA  KJELDAHL NITROGEN  NITRATE  NITRATE  NITRATE  O-PHOSPHATE  O-PHOSPHATE  OTAL SULFIDE  METALS  ALUMINUM  BROMIDE  ANTIMONY  ARSENIC  BARIUM  BROMIDE  ANTIMONY  ARSENIC  BARIUM  BOL  ANTIMONY  ARSENIC  BARIUM  BOL  ANTIMONY  ARSENIC  BARIUM  BOL  ANTIMONY  ARSENIC  BARIUM  BOL  ANTIMONY  ARSENIC  BARIUM  BOL  ANTIMONY  ARSENIC  BARIUM  BOL  ANTIMONY  ARSENIC  BARIUM  BOL  ANTIMONY  ARSENIC  BARIUM  BOL  ANTIMONY  ARSENIC  BARIUM  BORON  CADMIUM  AROCLOR 1216  CHROMIUM  AROCLOR 1221  CHROMIUM  CHROMIUM  AROCLOR 1254  COPPER	CONDUCTIVITY	TIN
ACIDITY ALKALINITY CHLORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FLUORIDE FL		TITANIUM
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CHLORIDE         RESIDUE           FLUORIDE         TOTAL RESIDUE (SOLIDS)           HARDNESS, TOTAL         TOTAL DISSOLVED SOLIDS           HARDNESS, CALCIUM         TOTAL SUSPENDED SOLIDS (non-filterable)           SULFATE	ACIDITY	ZINC
FLUORIDE HARDNESS, TOTAL HARDNESS, CALCIUM TOTAL SUSPENDED SOLIDS HARDNESS, CALCIUM TOTAL SUSPENDED SOLIDS (non-filterable) SULFATE SULFIDE DEMANDS SULFITS COD AMMONIA KJELDAHL NITROGEN NITRATE NITRITE O-PHOSPHATE TOTAL PHOSPHOROUS FOAMING AGENTS (MBAS) METALS ALUMINUM ARTIMONY ARSENIC BARIUM BORON CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CADMIUM CALCIUM CAPONIUM CAROLOR 1221 CHROMIUM CHROMIUM AROCLOR 1232 CHROMIUM - Hexavalent COPPER COPPER CADMIUM - Hexavalent COPPER CADMIUM - Hexavalent COPPER CAPONIUM CAPOLOR 1254 COPPER CACCIUM CAPOLOR 1254 COPPER CACCIUM CAPOLOR 1254 COPPER CACCIUM CAPOLOR 1254 COPPER CACCIUM CAPOLOR 1254 COPPER CACCIUM CAPOLOR 1254 COPPER CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR 1256 CAPOLOR	ALKALINITY	
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HARDNESS, CALCIUM	FLUORIDE	TOTAL RESIDUE (SOLIDS)
SULFATE SULFIDE  DEMANDS  BOD  NUTRIENTS  COD  AMMONIA  TOTAL ORGANIC CARBON  KJELDAHL NITROGEN  NITRATE  MISCELLANEOUS  NITRITE  CYANIDE (TOTAL)  O-PHOSPHATE  PHENOLICS  TOTAL PHOSPHOROUS  METALS  INORGANIC DISINFECTION BY-PRODUCTS  ALUMINUM  BROMIDE  ANTIMONY  ARSENIC  SOLVENTS  BARIUM  OIL AND GREASE  BERYLLIUM  BORON  CADMIUM  AROCLOR 1016/1242  CALCIUM  CHROMIUM - Hexavalent  COPER  AROCLOR 1254  COPER		TOTAL DISSOLVED SOLIDS
DEMANDS		
BOD		
NUTRIENTS  AMMONIA  AMMONIA  KJELDAHL NITROGEN  NITRATE  NITRATE  NITRITE  CYANIDE (TOTAL)  O-PHOSPHATE  PHENOLICS  TOTAL PHOSPHOROUS  METALS  ALUMINUM  BROMIDE  ANTIMONY  ARSENIC  BARIUM  BERYLLIUM  BERON  CADMIUM  BORON  CADMIUM  AROCLOR 1016/1242  CHROMIUM  AROCLOR 1232  CHROMIUM - Hexavalent  CODE  MISCELLANEOUS  MISCELLANEOUS  MISCELLANEOUS  MISCELLANEOUS  MISCELLANEOUS  MISCELLANEOUS  MISCELLANEOUS  MISCELLANEOUS  MISCELLANEOUS  PHENOLICS  FOAMING AGENTS (MBAS)  INORGANIC DISINFECTION BY-PRODUCTS  SOLVENTS  OIL AND GREASE  PCBs  AROCLOR 1016/1242  CALCIUM  AROCLOR 1221  CHROMIUM - Hexavalent  COBALT  AROCLOR 1254  AROCLOR 1254  AROCLOR 1254		
AMMONIA  KJELDAHL NITROGEN  NITRATE  NITRITE  O-PHOSPHATE  TOTAL PHOSPHOROUS  ALUMINUM  ARSENIC  BARIUM  BERYLLIUM  BORON  CADMIUM  CADMIUM  BORON  CADMIUM  AROCLOR 1016/1242  CALCIUM  CHROMIUM - Hexavalent  COPPER  TOTAL ORGANIC CARBON  MISCELLANEOUS  CYANIDE (TOTAL)  PHENOLICS  FOAMING AGENTS (MBAS)  INORGANIC DISINFECTION BY-PRODUCTS  BOUVENTS  SOLVENTS  OIL AND GREASE  PCBs  AROCLOR 1016/1242  AROCLOR 1221  CHROMIUM - Hexavalent  COPPER  AROCLOR 1248  COPPER		
NITRATE NITRITE O-PHOSPHATE TOTAL PHOSPHOROUS METALS ALUMINUM ARSENIC BARIUM BORON CADMIUM CADMIUM BORON CADMIUM CADMIUM BORON CADMIUM AROCLOR 1254 CHROMIUM - Hexavalent COPPER  MISCELLANEOUS MISCELLANEOUS MISCELLANEOUS FOAMIDE (TOTAL) PHENOLICS POAMING AGENTS (MBAS) INORGANIC DISINFECTION BY-PRODUCTS BROMIDE MISCELLANEOUS FOAMING AGENTS (MBAS) INORGANIC DISINFECTION BY-PRODUCTS BROMIDE MISCELLANEOUS FOAMING AGENTS (MBAS)  INORGANIC DISINFECTION BY-PRODUCTS BROMIDE MISCELLANEOUS FOAMING AGENTS (MBAS)  INORGANIC DISINFECTION BY-PRODUCTS BROMIDE  ANORGANIC DISINFECTION BY-PRODUCTS  BROMIDE  ANORGANIC DISINFECTION BY-PRODUCTS  BROMIDE  ANORGANIC DISINFECTION BY-PRODUCTS  BROMIDE  ANORGANIC DISINFECTION BY-PRODUCTS  BROMIDE  ANORGANIC DISINFECTION BY-PRODUCTS  AROCLOR 1260  AROCLOR 1260  AROCLOR 1260		
NITRATE  NITRITE  O-PHOSPHATE  TOTAL PHOSPHOROUS  FOAMING AGENTS (MBAS)  METALS  ALUMINUM  ANTIMONY  ARSENIC  BARIUM  BERYLLIUM  BORON  CADMIUM  CALCIUM  CALCIUM  CHROMIUM  CHROMIUM  CHROMIUM  CHROMIUM  AROCLOR 1221  CHROMIUM  COBALT  COPPER  MISCELLANEOUS  PHENOLICS  PHENOLICS  FOAMING AGENTS (MBAS)  INORGANIC DISINFECTION BY-PRODUCTS  BORON  BORON  OIL AND GREASE  CYANIDE  CYANIDE  (TOTAL)  PHONOLICS  PAGNING  AROCLOR 1016/1242  AROCLOR 1211  AROCLOR 1221  AROCLOR 1232  CHROMIUM - Hexavalent  COBALT  AROCLOR 1254  AROCLOR 1254  AROCLOR 1254		
NITRITE CYANIDE (TOTAL)  O-PHOSPHATE PHENOLICS  TOTAL PHOSPHOROUS FOAMING AGENTS (MBAS)  METALS INORGANIC DISINFECTION BY-PRODUCTS  ALUMINUM BROMIDE  ANTIMONY SOLVENTS  BARIUM OIL AND GREASE  BERYLLIUM PCBs  CADMIUM AROCLOR 1016/1242  CALCIUM AROCLOR 1221  CHROMIUM - Hexavalent  COBALT AROCLOR 1254  COPPER		
O-PHOSPHATE TOTAL PHOSPHOROUS FOAMING AGENTS (MBAS)  METALS INORGANIC DISINFECTION BY-PRODUCTS  ALUMINUM ANTIMONY ARSENIC BARIUM OIL AND GREASE  BERYLLIUM BORON CADMIUM CALCIUM CALCIUM CHROMIUM AROCLOR 1016/1242 CHROMIUM CHROMIUM AROCLOR 1221 CHROMIUM CHROMIUM AROCLOR 1232 CHROMIUM AROCLOR 1248 COBALT COPPER AROCLOR 1254 COPPER		CYANIDE (TOTAL)
TOTAL PHOSPHOROUS  METALS  ALUMINUM  ANTIMONY  ARSENIC  BARIUM  BORON  CADMIUM  CALCIUM  CALCIUM  CHROMIUM  COBALT  COPPER  FOAMING AGENTS (MBAS)		
METALS  ALUMINUM  ANTIMONY  ARSENIC  BARIUM  BERYLLIUM  BORON  CADMIUM  CALCIUM  CHROMIUM  CHROMIUM  COBALT  COPPER  INORGANIC DISINFECTION BY-PRODUCTS  BROMIDE  BROMIDE  SOLVENTS  OIL AND GREASE  PCBs  AROCLOR 1016/1242  AROCLOR 1221  AROCLOR 1221  AROCLOR 1232  AROCLOR 1232  AROCLOR 1248  AROCLOR 1254  COPPER		
ALUMINUM ANTIMONY ARSENIC BARIUM BERYLLIUM BORON CADMIUM CALCIUM CHROMIUM CHROMIUM CHROMIUM AROCLOR 1221 CHROMIUM AROCLOR 1232 CHROMIUM - Hexavalent COBALT COPPER BROMIDE SOLVENTS BOLVENTS OIL AND GREASE OIL AND GREASE AROCLOR 1016/1242 AROCLOR 1016/1242 AROCLOR 1248 AROCLOR 1254 AROCLOR 1254 AROCLOR 1260		
ANTIMONY  ARSENIC  BARIUM  OIL AND GREASE  BERYLLIUM  BORON  CADMIUM  CALCIUM  CHROMIUM  CHROMIUM  CHROMIUM  COBALT  COPPER  SOLVENTS  SOLVENTS  AROCLOR 1016/1242  AROCLOR 1016/1242  AROCLOR 1221  AROCLOR 1221  AROCLOR 1232  AROCLOR 1232  AROCLOR 1248  AROCLOR 1254  AROCLOR 1254  AROCLOR 1254	METALS	INORGANIC DISINFECTION BY-PRODUCTS
ARSENIC  BARIUM  OIL AND GREASE  BERYLLIUM  BORON  CADMIUM  CALCIUM  CHROMIUM  CHROMIUM  CHROMIUM - Hexavalent  COBALT  COPPER  SOLVENTS  SOLVENTS  SOLVENTS  SOLVENTS  SOLVENTS  AROCLOR 1016/1242  AROCLOR 1016/1242  AROCLOR 1016/1242  AROCLOR 1221  AROCLOR 1221  AROCLOR 1232  AROCLOR 1248  AROCLOR 1254  AROCLOR 1254  AROCLOR 1260	ALUMINUM	BROMIDE
BARIUM  BERYLLIUM  BORON  CADMIUM  CALCIUM  CHROMIUM  CHROMIUM - Hexavalent  COPPER  OIL AND GREASE  OIL AND GREASE  AROCLOR 1016/1242  AROCLOR 1016/1242  AROCLOR 1242  AROCLOR 1221  AROCLOR 1232  AROCLOR 1232  AROCLOR 1248  AROCLOR 1254  AROCLOR 1254	ANTIMONY	
BERYLLIUM BORON CADMIUM CALCIUM CHROMIUM CHROMIUM - Hexavalent COPPER  PCBs  AROCLOR 1016/1242  AROCLOR 1221  AROCLOR 1232  AROCLOR 1232  AROCLOR 1248  AROCLOR 1254  AROCLOR 1254  AROCLOR 1260	ARSENIC	SOLVENTS
BORON  CADMIUM  CALCIUM  CHROMIUM  CHROMIUM - Hexavalent  COPPER  PCBs  AROCLOR 1016/1242  AROCLOR 1221  AROCLOR 1232  AROCLOR 1232  AROCLOR 1248  AROCLOR 1254  AROCLOR 1254  AROCLOR 1260	BARIUM	OIL AND GREASE
CADMIUM AROCLOR 1016/1242  CALCIUM AROCLOR 1221  CHROMIUM AROCLOR 1232  CHROMIUM - Hexavalent AROCLOR 1248  COBALT AROCLOR 1254  COPPER AROCLOR 1260	BERYLLIUM	
CALCIUM AROCLOR 1221 CHROMIUM AROCLOR 1232 CHROMIUM - Hexavalent AROCLOR 1248 COBALT AROCLOR 1254 COPPER AROCLOR 1260	BORON	PCBs
CHROMIUM - Hexavalent AROCLOR 1232  CHROMIUM - Hexavalent AROCLOR 1248  COBALT AROCLOR 1254  COPPER AROCLOR 1260	CADMIUM	AROCLOR 1016/1242
CHROMIUM - Hexavalent  COBALT  COPPER  AROCLOR 1248  AROCLOR 1254  AROCLOR 1260	CALCIUM	AROCLOR 1221
COBALT AROCLOR 1254 COPPER AROCLOR 1260	CHROMIUM	AROCLOR 1232
COBALT AROCLOR 1254 COPPER AROCLOR 1260	CHROMIUM - Hexavalent	AROCLOR 1248
OSTER		AROCLOR 1254
IRON	COPPER	AROCLOR 1260
	IRON	

### DINOSEB 2,4-D 2,4,5-T 2,4,5- TP (SILVEX) NON-POTABLE WATER\WASTEWATER ORG. ACID EXTRACTABLES (PHENOLS) **BENZIDINES** PHTHALATE ESTERS **NITROSAMINES** ORGANOCHLORINE PESTICIDES NITROAROMATICS & ISOPHORONE POLYNUCLEAR AROMATIC HYDROCARBONS **HALOETHERS** CHLORINATED HYDROCARBONS **VOLATILE ORGANICS** CARBAZOLE* **DIBENZOFURAN***

**HERBICIDES** 

DICAMBA

#### CORROSIVITY SOLID WASTE/SOIL TCLP LEACH (1311) STATUS REPORTED ON 10/03/2005 REACTIVITY **PCBs** ANALYTE NAME AROCLOR 1016/1242 AROCLOR 1221 ENVIRONMENTAL HEALTH & HOUSING AROCLOR 1232 **LEAD IN PAINT** AROCLOR 1248 LEAD IN SOIL AROCLOR 1254 AROCLOR 1260 **PHYSICALS** PH **HERBICIDES** DALAPON **MINERALS DICAMBA SULFIDE** DINOSEB 2,4-D METALS 2,4-DB **ALUMINUM** 2,4,5-T **ANTIMONY** 2,4,5- TP (SILVEX) **ARSENIC BARIUM** SOLID WASTE ORGANICS **BERYLLIUM VOLATILE ORGANICS (SW) CADMIUM** ACID EXTRACTABLES (PHENOLS) (SW) **CALCIUM** 3,3'-DICHLOROBENZIDINE (SW) **CHROMIUM** PHTHALATES (SW) CHROMIUM - Hexavalent NITROSOAMINES (SW) **COBALT** ORGANOCHLORINE PESTICIDES (SW) COPPER NITROAROMATICS & CYCLIC KETONES (SW) **IRON** PAH's (SW) **LEAD** HALOETHERS (SW) **MAGNESIUM** CHLORINATED HYDROCARBONS (SW) **MANGANESE MERCURY NICKEL POTASSIUM SELENIUM** SILVER SODIUM **THALLIUM VANADIUM** ZINC

MISCELLANEOUS
CYANIDE (TOTAL)
IGNITABILITY

END OF SECTION FOR

Adirondack Environmental Svs, Inc.

### REPORT PROFILE

lab code = ID1176P test code = *

matrix code = *

Report Printed on: 10/03/2005 9:39:37 AM

Printed by:

Report Name:

jeff

APPROVED TESTS_ALT_NEW

Report published from: CERTIFICATION REPORTS screen #3 matrix selection = ALL OR SOME MATRICES SELECTED

certifications approved or provisional on 10/03/2005

THIS IS THE LAST PAGE OF THE REPORT

Report Printed on: 10/03/2005 9:39:37 AM Adirondack Environmental Svs, Inc.

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised July 17, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL BATISTA ADIRONDACK ENVIRONMENTAL SERVICES INC 314 NORTH PEARL STREET ALBANY, NY 12207 NY Lab Id No: 10709 EPA Lab Code: NY00063

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below:

Disinfection By-products		Drinking Water Metals II	
Bromochloroacetic acid	EPA 552.2	Beryllium, Total	EPA 200.7
Dibromoacetic acid	EPA 552.2	Nickel, Total	EPA 200.7
Dichloroacetic acid	EPA 552.2	Thallium, Total	EPA 200.9
Monobromoacetic acid	EPA 552.2	Drinking Water Metals III	
Monochloroacetic acid	EPA 552.2	Calcium, Total	EPA 200.7
Trichloroacetic acid	EPA 552.2	Magnesium, Total	EPA 200.7
Drinking Water Metals I		Potassium, Total	EPA 200.7
Arsenic, Total	EPA 200.7	Sodium, Total	EPA 200.7
Barium, Total	EPA 200.7	Drinking Water Miscellaneous	
Cadmium, Total	EPA 200.7	Butachlor	EPA 507
Chromium, Total	EPA 200.7	Methyl tert-butyl ether	EPA 502.2/ SEE ITEM 198.5
Copper, Total	EPA 200.7	,	EPA 524.2
Iron, Total	EPA 200.7	Propachlor	EPA 508
Lead, Total	EPA 200.9		
Manganese, Total	EPA 200.7	Drinking Water Non-Metals	
Mercury, Total	EPA 245.1	Alkalinity	SM 18-20 2320B
Selenium, Total	EPA 200.9	Calcium Hardness	EPA 200.7
Silver, Total	EPA 200.7	Chloride	EPA 300.0
Zinc, Total	EPA 200.7	Color	SM 18-20 2120B
,		Corrosivity	SM 18-19 2330
Drinking Water Metals II		Cyanide, Free	EPA 335.4
Aluminum, Total	EPA 200.7	Fluoride, Total	EPA 300.0
Antimony, Total	EPA 200.9	Hydrogen Ion (pH)	EPA 150.1

Serial No.: 30517



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 01, 2006 Revised July 17, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL BATISTA ADIRONDACK ENVIRONMENTAL SERVICES INC 314 NORTH PEARL STREET ALBANY, NY 12207 NY Lab Id No: 10709 EPA Lab Code: NY00063

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below:

Drinking Water Non-Metals		Drinking Water Trihalomethanes	
Nitrate (as N)	EPA 300.0	Bromodichloromethane	EPA 502.2
	SM 18-20 4500-NO3 F		EPA 524.2
Nitrite (as N)	EPA 300.0	Bromoform	EPA 502.2
	SM 18-20 4500-NO2 B		EPA 524.2
Orthophosphate (as P)	EPA 300.0	Chloroform	EPA 502.2
Solids, Total Dissolved	SM 18-20 2540C		EPA 524.2
Specific Conductance	SM 18-20 2510B	Dibromochloromethane	EPA 502.2
Sulfate (as SO4)	EPA 300.0		EPA 524.2
Drinking Water Organohalide Pesticion	des	Microextractibles	
Alachlor	EPA 507	1,2-Dibromo-3-chloropropane	EPA 504.1
Aldrin	EPA 508	1,2-Dibromoethane	EPA 504.1
Atrazine	EPA 507	Polychlorinated Biphenyls	
Chlordane Total	EPA 508	PCB Screen	EPA 508
Dieldrin	EPA 508		
Endrin	EPA 508	Volatile Aromatics	
Heptachlor	EPA 508	1,2,3-Trichlorobenzene	EPA 502.2
Heptachlor epoxide	EPA 508		EPA 524.2
Lindane	EPA 508	1,2,4-Trichlorobenzene	EPA 502.2
Methoxychlor	EPA 508		EPA 524.2
Metolachlor	EPA 507	1,2,4-Trimethylbenzene	EPA 502.2
Metribuzin	EPA 507		EPA 524.2
Simazine	EPA 507	1,2-Dichlorobenzene	EPA 502.2
Toxaphene	EPA 508		EPA 524.2

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Volatile Aromatics		Volatile Aromatics	
1,3,5-Trimethylbenzene	EPA 502.2	n-Propylbenzene	EPA 524.2
	EPA 524.2	p-Isopropyltoluene (P-Cymene)	EPA 502.2
1,4-Dichlorobenzene	EPA 502.2		EPA 524.2
	EPA 524.2	sec-Butylbenzene	EPA 502.2
2-Chlorotoluene	EPA 502.2		EPA 524.2
	EPA 524.2	Styrene	EPA 502.2
4-Chlorotoluene	EPA 502.2		EPA 524.2
	EPA 524.2	tert-Butylbenzene	EPA 502.2
Benzene	EPA 502.2		EPA 524.2
	EPA 524.2	Toluene	EPA 502.2
Bromobenzene	EPA 502.2		EPA 524.2
	EPA 524.2	Total Xylenes	EPA 502.2
Chlorobenzene	EPA 502.2		EPA 524.2
	EPA 524.2	Volatile Halocarbons	
Ethyl benzene	EPA 502.2	1,1,1,2-Tetrachloroethane	EPA 502.2
	EPA 524.2		EPA 524.2
Hexachlorobutadiene	EPA 502.2	1,1,1-Trichloroethane	EPA 502.2
	EPA 524.2		EPA 524.2
Isopropylbenzene	EPA 502.2	1,1,2,2-Tetrachloroethane	EPA 502.2
	EPA 524.2		EPA 524.2
n-Butylbenzene	EPA 502.2	1,1,2-Trichloroethane	EPA 502.2
	EPA 524.2		EPA 524.2
n-Propylbenzene	EPA 502.2	1,1-Dichloroethane	EPA 502.2

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Volatile Halocarbons		Volatile Halocarbons	
1,1-Dichloroethane	EPA 524.2	Chloromethane	EPA 502.2
1,1-Dichloroethene	EPA 502.2		EPA 524.2
	EPA 524.2	cis-1,2-Dichloroethene	EPA 502.2
1,1-Dichloropropene	EPA 502.2		EPA 524.2
	EPA 524.2	cis-1,3-Dichloropropene	EPA 502.2
1,2,3-Trichloropropane	EPA 502.2		EPA 524.2
	EPA 524.2	Dibromomethane	EPA 502.2
1,2-Dichloroethane	EPA 502.2		EPA 524.2
	EPA 524.2	Dichlorodifluoromethane	EPA 502.2
1,2-Dichloropropane	EPA 502.2		EPA 524.2
	EPA 524.2	Methylene chloride	EPA 502.2
1,3-Dichloropropane	EPA 502.2		EPA 524.2
	EPA 524.2	Tetrachloroethene	EPA 502.2
2,2-Dichloropropane	EPA 502.2		EPA 524.2
	EPA 524.2	trans-1,2-Dichloroethene	EPA 502.2
Bromochloromethane	EPA 502.2		EPA 524.2
	EPA 524.2	trans-1,3-Dichloropropene	EPA 502.2
Bromomethane	EPA 502.2		EPA 524.2
	EPA 524.2	Trichloroethene	EPA 502.2
Carbon tetrachloride	EPA 502.2		EPA 524.2
	EPA 524.2	Trichlorofluoromethane	EPA 502.2
Chloroethane	EPA 502.2		EPA 524.2
	EPA 524.2	Vinyl chloride	EPA 502.2

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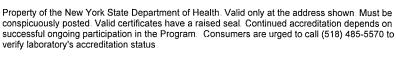
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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

Volatile Halocarbons

Vinyl chloride EPA 524.2

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All approved subcategories and/or analytes are listed below:

#### **Drinking Water Miscellaneous**

Odor

EPA 140.1

Organic Carbon, Total

SM 18-20 5310C

Surfactant (MBAS)

EPA 425.1

UV 254

SM 18-20 5910B

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Acrylates		Benzidines	
Acrolein (Propenal)	EPA 624	3,3' -Dichlorobenzidine	EPA 625
	EPA 8260B		EPA 8270C
Acrylonitrile	EPA 624	Benzidine	EPA 625
	EPA 8260B		EPA 8270C
Amines		Carbamate Pesticides	
1,4-Phenylenediamine	EPA 8270C	Carbaryl	EPA 1978, p.94
1-Naphthylamine	EPA 8270C	Chlorinated Hydrocarbon Pestic	ides
2-Naphthylamine	EPA 8270C	4,4'-DDD	EPA 608
2-Nitroaniline	EPA 8270C	4,4 -000	EPA 8081A
3-Nitroaniline	EPA 8270C	4,4'-DDE	EPA 608
4-Chloroaniline	EPA 8270C	,,	EPA 8081A
4-Nitroaniline	EPA 8270C	4,4'-DDT	EPA 608
5-Nitro-o-toluidine	EPA 8270C	.,	EPA 8081A
Aniline	EPA 8270C	Aldrin	EPA 608
Carbazole	EPA 8270C	, n <u>a</u>	EPA 8081A
Diphenylamine	EPA 8270C	alpha-BHC	EPA 608
Methapyriline	EPA 8270C		EPA 8081A
Pronamide	EPA 8270C	alpha-Chlordane	EPA 8081A
Propionitrile	EPA 8260B	beta-BHC	EPA 608
Pyridine	EPA 8260B		EPA 8081A
	EPA 8270C	Captan	SM 18-20 6630B
		Chlordane Total	EPA 608

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Chlorinated Hydrocarbon Pesticides		Chlorinated Hydrocarbon Pesticides	
Chlordane Total	EPA 8081A	Heptachlor epoxide	EPA 8081A
Chlorobenzilate	EPA 8270C	Isodrin	EPA 8081A
delta-BHC	EPA 608		SM 15, p. S73
	EPA 8081A	Kepone	EPA 8270C
Diallate	EPA 8270C	Lindane	EPA 608
Dichloran	SM 18-20 6630B		EPA 8081A
Dieldrin	EPA 608	Methoxychlor	EPA 8081A
	EPA 8081A		SM 18-20 6630C
Endosulfan I	EPA 608	Mirex	SM 18-20 6630C
	EPA 8081A	PCNB	SM 18-20 6630C
Endosulfan II	EPA 608	Strobane	SM 18-20 6630C
	EPA 8081A	Toxaphene	EPA 608
Endosulfan sulfate	EPA 608		EPA 8081A
	EPA 8081A	Trifluralin	SM 18-20 6630B
Endrin	EPA 608	Chlorinated Hydrocarbons	
	EPA 8081A	1,2,4,5-Tetrachlorobenzene	EPA 8270C
Endrin aldehyde	EPA 608	1,2,4-Trichlorobenzene	EPA 625
	EPA 8081A	Tipi Thomoroponizano	EPA 8270C
Endrin Ketone	EPA 8081A	1-Chloronaphthalene	EPA 8270C
gamma-Chlordane	EPA 8081A	2-Chloronaphthalene	EPA 625
Heptachlor	EPA 608	2 Omoronaphinalone	EPA 8270C
	EPA 8081A	Hexachlorobenzene	EPA 625
Heptachlor epoxide	EPA 608		EPA 8270C

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Chlorinated Hydrocarbons		Haloethers	
Hexachlorobutadiene	EPA 625	4-Bromophenylphenyl ether	EPA 625
	EPA 8270C		EPA 8270C
Hexachlorocyclopentadiene	EPA 625	4-Chlorophenylphenyl ether	EPA 625
	EPA 8270C		EPA 8270C
Hexachloroethane	EPA 625	Bis (2-chloroisopropyl) ether	EPA 625
	EPA 8270C		EPA 8270C
Hexachloropropene	EPA 8270C	Bis(2-chloroethoxy)methane	EPA 625
Pentachlorobenzene	EPA 8270C		EPA 8270C
Chlorophenoxy Acid Pesticides		Bis(2-chloroethyl)ether	EPA 625
2,4,5-T	EPA 8151A		EPA 8270C
-,,,,	SM 18-20 6640B	Mineral	
2,4,5-TP (Silvex)	EPA 8151A	Alkalinity	EPA 310.1
	SM 18-20 6640B	Calcium Hardness	EPA 200.7
2,4-D	EPA 8151A	Chloride	EPA 300.0
	SM 18-20 6640B		EPA 325.3
Dicamba	EPA 1978, p.115	Fluoride, Total	EPA 300.0
	EPA 8151A		EPA 340.2
Dinoseb	EPA 8151A	Hardness, Total	EPA 200.7
Demand		Sulfate (as SO4)	EPA 300.0
Biochemical Oxygen Demand	EPA 405.1		EPA 375.4
Carbonaceous BOD	SM 18-20 5210B	Nitroaromatics and Isophorone	
Chemical Oxygen Demand	EPA 410.4	1,3,5-Trinitrobenzene	EPA 8270C
Chemical Caygon Demand	L1 /1 7 10.7	1,0,0° mintroponzene	LI /\ 02/00

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Nitroaromatics and Isophorone		Nutrient	
1,3-Dinitrobenzene	EPA 8270C	Ammonia (as N)	EPA 350.1
1,4-Naphthoquinone	EPA 8270C	Kjeldahl Nitrogen, Total	EPA 351.3
2,4-Dinitrotoluene	EPA 625	Nitrate (as N)	EPA 300.0
	EPA 8270C		EPA 353.1
2,6-Dinitrotoluene	EPA 625	Nitrite (as N)	EPA 300.0
	EPA 8270C		EPA 354.1
Isophorone	EPA 625	Orthophosphate (as P)	EPA 300.0
	EPA 8270C		EPA 365.2
Nitrobenzene	EPA 625	Phosphorus, Total	EPA 365.2
	EPA 8270C	Organophosphate Pesticides	
Nitrosoamines		Atrazine	EPA 1978,p.25
N-Nitrosodiethylamine	EPA 8270C		EPA 8141A
N-Nitrosodimethylamine	EPA 625	Azinphos methyl	EPA 1978,p.25
	EPA 8270C		EPA 8141A
N-Nitrosodi-n-butylamine	EPA 8270C	Demeton-O	EPA 1978,p.25
N-Nitrosodi-n-propylamine	EPA 625		EPA 8141A
	EPA 8270C	Demeton-S	EPA 8141A
N-Nitrosodiphenylamine	EPA 625		SM 15, p.S51
	EPA 8270C	Diazinon	EPA 1978,p.25
N-nitrosopiperidine	EPA 8270C		EPA 8141A
N-Nitrosopyrrolidine	EPA 8270C	Dimethoate	EPA 8141A
		Disulfoton	EPA 1978,p.25
			EPA 8141A

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Organophosphate Pesticides		Phthalate Esters	
Famphur	EPA 8141A	Di-n-butyl phthalate	EPA 606
	EPA 8270C		EPA 625
Malathion	EPA 1978,p.25		EPA 8270C
	EPA 8141A	Di-n-octyl phthalate	EPA 606
Parathion ethyl	EPA 1978,p.25		EPA 625
	EPA 8141A		EPA 8270C
Parathion methyl	EPA 1978,p.25	Polychlorinated Biphenyls	
	EPA 8141A	PCB-1016	EPA 608
Phorate	EPA 8141A	1 00 1010	EPA 8082
Simazine	EPA 8141A	PCB-1221	EPA 608
Phthalate Esters			EPA 8082
Benzyl butyl phthalate	EPA 606	PCB-1232	EPA 608
	EPA 625		EPA 8082
	EPA 8270C	PCB-1242	EPA 608
Bis(2-ethylhexyl) phthalate	EPA 606		EPA 8082
	EPA 625	PCB-1248	EPA 608
	EPA 8270C		EPA 8082
Diethyl phthalate	EPA 606	PCB-1254	EPA 608
	EPA 625		EPA 8082
	EPA 8270C	PCB-1260	EPA 608
Dimethyl phthalate	EPA 606		EPA 8082
	EPA 625		
	EPA 8270C		

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Polynuclear Aromatics		Polynuclear Aromatics	
3-Methylcholanthrene	EPA 8270C	Fluoranthene	EPA 8270C
7,12-Dimethylbenzyl (a) anthracene	EPA 8270C	Fluorene	EPA 625
Acenaphthene	EPA 625		EPA 8270C
	EPA 8270C	Indeno(1,2,3-cd)pyrene	EPA 625
Acenaphthylene	EPA 625		EPA 8270C
	EPA 8270C	Naphthalene	EPA 625
Anthracene	EPA 625		EPA 8270C
	EPA 8270C	Phenanthrene	EPA 625
Benzo(a)anthracene	EPA 625		EPA 8270C
	EPA 8270C	Pyrene	EPA 625
Benzo(a)pyrene	EPA 625		EPA 8270C
	EPA 8270C	Priority Pollutant Phenols	
Benzo(b)fluoranthene	EPA 625	2,3,4,6 Tetrachlorophenol	EPA 8270C
	EPA 8270C	2,4,5-Trichlorophenol	EPA 8270C
Benzo(ghi)perylene	EPA 625	2,4,6-Trichlorophenol	EPA 604
	EPA 8270C	, , , , , , , , , , , , , , , , , , ,	EPA 625
Benzo(k)fluoranthene	EPA 625		EPA 8270C
	EPA 8270C	2,4-Dichlorophenol	EPA 604
Chrysene	EPA 625	,	EPA 625
	EPA 8270C		EPA 8270C
Dibenzo(a,h)anthracene	EPA 625	2,4-Dimethylphenol	EPA 604
	EPA 8270C	•	EPA 625
Fluoranthene	EPA 625		EPA 8270C

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Priority Pollutant Phenols		<b>Priority Pollutant Phenols</b>	
2,4-Dinitrophenol	EPA 604	Pentachlorophenol	EPA 604
	EPA 625		EPA 625
	EPA 8270C		EPA 8270C
2,6-Dichlorophenol	EPA 8270C	Phenol	EPA 604
2-Chlorophenol	EPA 604		EPA 625
	EPA 625		EPA 8270C
	EPA 8270C	Purgeable Aromatics	
2-Methyl-4,6-dinitrophenol	EPA 604	1,2-Dichlorobenzene	EPA 601
	EPA 625	1,2 District Date 2010	EPA 602
	EPA 8270C		EPA 624
2-Methylphenol	EPA 8270C		EPA 625
2-Nitrophenol	EPA 604		EPA 8021B
	EPA 625		EPA 8260B
	EPA 8270C		EPA 8270C
3-Methylphenol	EPA 8270C	1,3-Dichlorobenzene	EPA 601
4-Chloro-3-methylphenol	EPA 604	The District Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control	EPA 602
	EPA 625		EPA 624
	EPA 8270C		EPA 625
4-Methylphenol	EPA 8270C		EPA 8021B
4-Nitrophenol	EPA 604		EPA 8260B
	EPA 625		EPA 8270C
	EPA 8270C	1,4-Dichlorobenzene	EPA 601
Cresols, Total	EPA 8270C	i, i Biomoroponeono	EPA 602
			L: / \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

Serial No.: 29064



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL BATISTA ADIRONDACK ENVIRONMENTAL SERVICES INC 314 NORTH PEARL STREET ALBANY, NY 12207

NY Lab Id No: 10709 EPA Lab Code: NY00063

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Purgeable Aromatics		Purgeable Aromatics	
1,4-Dichlorobenzene	EPA 624	Total Xylenes	EPA 602
	EPA 625		EPA 624
	EPA 8021B		EPA 8021B
	EPA 8260B		EPA 8260B
	EPA 8270C	Purgeable Halocarbons	
Benzene	EPA 602	1,1,1,2-Tetrachloroethane	EPA 8021B
	EPA 624	1,1,1,2 10000000000000000000000000000000	EPA 8260B
	EPA 8021B	1,1,1-Trichloroethane	EPA 601
	EPA 8260B	,,,,,	EPA 624
Chlorobenzene	EPA 601		EPA 8021B
	EPA 602		EPA 8260B
	EPA 624	1,1,2,2-Tetrachloroethane	EPA 601
	EPA 8021B	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	EPA 624
	EPA 8260B		EPA 8021B
Ethyl benzene	EPA 602		EPA 8260B
	EPA 624	1,1,2-Trichloroethane	EPA 601
	EPA 8021B	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	EPA 624
	EPA 8260B		EPA 8021B
Styrene	EPA 8260B		EPA 8260B
Toluene	EPA 602	1,1-Dichloroethane	EPA 601
	EPA 624	i, i biomotosulano	EPA 624
	EPA 8021B		EPA 8021B
	EPA 8260B		EPA 8260B
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Purgeable Halocarbons		Purgeable Halocarbons	
1,1-Dichloroethene	EPA 601	2-Chloroethylvinyl ether	EPA 8021B
	EPA 624		EPA 8260B
	EPA 8021B	3-Chloropropene (Allyl chloride)	EPA 8260B
	EPA 8260B	Bromodichloromethane	EPA 601
1,1-Dichloropropene	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B
1,2,3-Trichloropropane	EPA 8021B		EPA 8260B
	EPA 8260B	Bromoform	EPA 601
1,2-Dichloroethane	EPA 601		EPA 624
	EPA 624		EPA 8021B
	EPA 8021B		EPA 8260B
	EPA 8260B	Bromomethane	EPA 601
1,2-Dichloropropane	EPA 601		EPA 624
	EPA 624		EPA 8021B
	EPA 8021B		EPA 8260B
	EPA 8260B	Carbon tetrachloride	EPA 601
1,3-Dichloropropane	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B
2,2-Dichloropropane	EPA 8021B		EPA 8260B
	EPA 8260B	Chloroethane	EPA 601
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260B		EPA 624
2-Chloroethylvinyl ether	EPA 601		EPA 8021B
	EPA 624		EPA 8260B

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Purgeable Halocarbons		Purgeable Halocarbons	
Chloroform	EPA 601	Dichlorodifluoromethane	EPA 8021B
	EPA 624		EPA 8260B
	EPA 8021B	Methylene chloride	EPA 601
	EPA 8260B		EPA 624
Chloromethane	EPA 601		EPA 8021B
	EPA 624		EPA 8260B
	EPA 8021B	Tetrachloroethene	EPA 601
	EPA 8260B		EPA 624
cis-1,2-Dichloroethene	EPA 8021B		EPA 8021B
	EPA 8260B		EPA 8260B
cis-1,3-Dichloropropene	EPA 601	trans-1,2-Dichloroethene	EPA 601
	EPA 624		EPA 624
	EPA 8021B		EPA 8021B
	EPA 8260B		EPA 8260B
cis-1,4-Dichloro-2-butene	EPA 8260B	trans-1,3-Dichloropropene	EPA 601
Dibromochloromethane	EPA 601		EPA 624
	EPA 624		EPA 8021B
	EPA 8021B		EPA 8260B
	EPA 8260B	trans-1,4-Dichloro-2-butene	EPA 8260B
Dibromomethane	EPA 8021B	Trichloroethene	EPA 601
	EPA 8260B		EPA 624
Dichlorodifluoromethane	EPA 601		EPA 8021B
	EPA 624		EPA 8260B

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Purgeable Halocarbons		Semi-Volatile Organics	
Trichlorofluoromethane	EPA 601	2-Methylnaphthalene	EPA 8270C
	EPA 624	4-Amino biphenyl	EPA 8270C
	EPA 8021B	Acetophenone	EPA 8270C
	EPA 8260B	Benzoic Acid	EPA 8270C
Vinyl chloride	EPA 601	Benzyl alcohol	EPA 8270C
	EPA 624	Dibenzofuran	EPA 8270C
	EPA 8260B	Ethyl methanesulfonate	EPA 8270C
Purgeable Organics		Methyl methanesulfonate	EPA 8270C
2-Butanone (Methylethyl ketone)	EPA 8260B	O,O,O-Triethyl phosphorothioate	EPA 8270C
2-Hexanone	EPA 8260B	p-Dimethylaminoazobenzene	EPA 8270C
4-Methyl-2-Pentanone	EPA 8260B	Safrole	EPA 8270C
Acetone	EPA 8260B	Volatile Chlorinated Organics	
Acetonitrile	EPA 8260B	Benzyl chloride	EPA 8260B
Carbon Disulfide	EPA 8260B	Epichlorohydrin	EPA 8260B
Isobutyl alcohol	EPA 8260B	Wastewater Metals I	
o-Toluidine	EPA 8260B	Barium, Total	EPA 200.7
Vinyl acetate	EPA 8260B	Banum, Total	EPA 3005A
Residue			EPA 3010A
Solids, Total	EPA 160.3		EPA 6010B
Solids, Total Dissolved	EPA 160.1	Cadmium, Total	EPA 200.7
Solids, Total Suspended	EPA 160.2		EPA 3005A
			EPA 3010A

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Wastewater Metals I		Wastewater Metals I	
Cadmium, Total	EPA 6010B	Magnesium, Total	EPA 3005A
Calcium, Total	EPA 200.7		EPA 3010A
	EPA 3005A		EPA 6010B
	EPA 3010A	Manganese, Total	EPA 200.7
	EPA 6010B		EPA 3005A
Chromium, Total	EPA 200.7		EPA 3010A
	EPA 3005A		EPA 6010B
	EPA 3010A	Nickel, Total	EPA 200.7
	EPA 6010B		EPA 3005A
Copper, Total	EPA 200.7		EPA 3010A
	EPA 3005A		EPA 6010B
	EPA 3010A	Potassium, Total	EPA 200.7
	EPA 6010B		EPA 3005A
Iron, Total	EPA 200.7		EPA 3010A
	EPA 3005A		EPA 6010B
	EPA 3010A	Silver, Total	EPA 200.7
	EPA 6010B		EPA 3005A
Lead, Total	EPA 200.7		EPA 6010B
	EPA 200.9	Sodium, Total	EPA 200.7
	EPA 3005A		EPA 3005A
	EPA 3010A		EPA 3010A
	EPA 6010B		EPA 6010B
Magnesium, Total	EPA 200.7	Strontium, Total	EPA 200.7

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Wastewater Metals I		Wastewater Metals II	
Strontium, Total	EPA 6010B	Selenium, Total	EPA 3005A
Wastewater Metals II			EPA 3010A
Aluminum, Total	EPA 200.7		EPA 6010B
·	EPA 3005A	Vanadium, Total	EPA 200.7
	EPA 3010A		EPA 3005A
	EPA 6010B		EPA 3010A
Antimony, Total	EPA 200.7		EPA 6010B
	EPA 3005A	Zinc, Total	EPA 200.7
	EPA 6010B		EPA 3005A
Arsenic, Total	EPA 200.7		EPA 3010A
	EPA 3005A		EPA 6010B
	EPA 3010A	Wastewater Metals III	
	EPA 6010B	Cobalt, Total	EPA 200.7
	SM 18-19 3113B		EPA 3005A
Beryllium, Total	EPA 200.7		EPA 3010A
	EPA 3005A		EPA 6010B
	EPA 3010A	Gold, Total	EPA 231.1
	EPA 6010B	Molybdenum, Total	EPA 200.7
Chromium VI	EPA 7196A		EPA 3005A
	SM 18-19 3500-Cr D		EPA 6010B
Mercury, Total	EPA 245.1	Palladium, Total	EPA 253.1
	EPA 7470A	Platinum, Total	EPA 255.1
Selenium, Total	EPA 200.7	Thallium, Total	EPA 200.7

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Wastewater Metals III		Wastewater Miscellaneous	
Thallium, Total	EPA 200.9	Sulfide (as S)	EPA 376.2
	EPA 3005A		EPA 9030B
	EPA 3010A		EPA 9034
	EPA 6010B	Surfactant (MBAS)	EPA 425.1
Tìn, Total	EPA 200.7	Temperature	EPA 170.1
	EPA 6010B		
Titanium, Total	EPA 200.7		
	EPA 6010B		
Wastewater Miscellaneous			
Boron, Total	EPA 200.7		
	EPA 6010B		
Bromide	EPA 300.0		
	EPA 320.1		
Color	EPA 110.2		
Cyanide, Total	EPA 335.3		
	EPA 9012A		
Hydrogen Ion (pH)	EPA 150.1		
	EPA 9040B		
Oil & Grease Total Recoverable	EPA 1664A		
Organic Carbon, Total	SM 18-20 5310C		
Phenols	EPA 420.1		
Specific Conductance	EPA 120.1		

Serial No.: 29064

Sulfide (as S)

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.

EPA 376.1



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**Fuel Oxygenates** 

Ethanol EPA 8015 B

Mineral

Acidity EPA 305.1

**Purgeable Halocarbons** 

Vinyl chloride EPA 8021B

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Acrylates		Chlorinated Hydrocarbon Pesticides	
Acrolein (Propenal)	EPA 8260B	alpha-Chlordane	EPA 8081A
Acrylonitrile	EPA 8260B	beta-BHC	EPA 8081A
Amines		Chlordane Total	EPA 8081A
2-Nitroaniline	EPA 8270C	delta-BHC	EPA 8081A
3-Nitroaniline	EPA 8270C	Dieldrin	EPA 8081A
4-Chloroaniline	EPA 8270C	Endosulfan I	EPA 8081A
4-Nitroaniline	EPA 8270C	Endosulfan II	EPA 8081A
Carbazole	EPA 8270C	Endosulfan sulfate	EPA 8081A
Carbazole	LFA 02/00	Endrin	EPA 8081A
Benzidines		Endrin aldehyde	EPA 8081A
3,3' -Dichlorobenzidine	EPA 8270C	Endrin Ketone	EPA 8081A
Characteristic Testing		gamma-Chlordane	EPA 8081A
Corrosivity	EPA 1110	Heptachlor	EPA 8081A
Ignitability	EPA 1010	Heptachlor epoxide	EPA 8081A
Reactivity	SW-846 Ch7, Sec. 7.3	Lindane	EPA 8081A
TCLP	EPA 1311	Methoxychlor	EPA 8081A
Chloringted Hudgesonker Besticides		Toxaphene	EPA 8081A
Chlorinated Hydrocarbon Pesticides	<b>"</b> DA 0004A	Chlorinated Hydrocarbons	
4,4'-DDD	EPA 8081A	•	
4,4'-DDE	EPA 8081A	1,2,4-Trichlorobenzene	EPA 8270C
4,4'-DDT	EPA 8081A	2-Chloronaphthalene	EPA 8270C
Aldrin	EPA 8081A	Hexachlorobenzene	EPA 8270C
alpha-BHC	EPA 8081A	Hexachlorobutadiene	EPA 8270C
		Hexachlorocyclopentadiene	EPA 8270C

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Chlorinated Hydrocarbons		Metals I	
Hexachloroethane	EPA 8270C	Lead, Total	EPA 6010B
Chlorophenoxy Acid Pesticides		Magnesium, Total	EPA 6010B
2,4,5-T	EPA 8151A	Manganese, Total	EPA 6010B
2,4,5-TP (Silvex)	EPA 8151A	Nickel, Total	EPA 6010B
2,4-D	EPA 8151A	Potassium, Total	EPA 6010B
2,4-DB	EPA 8151A	Silver, Total	EPA 6010B
Dalapon	EPA 8151A	Sodium, Total	EPA 6010B
Dicamba	EPA 8151A	Metals II	
Dinoseb	EPA 8151A	Aluminum, Total	EPA 6010B
Haloethers		Antimony, Total	EPA 6010B
4-Bromophenylphenyl ether	EPA 8270C	Arsenic, Total	EPA 6010B
4-Chlorophenylphenyl ether	EPA 8270C	Beryllium, Total	EPA 6010B
Bis (2-chloroisopropyl) ether	EPA 8270C	Chromium VI	EPA 7196A
Bis(2-chloroethoxy)methane	EPA 8270C	Mercury, Total	EPA 7471A
Bis(2-chloroethyl)ether	EPA 8270C	Selenium, Total	EPA 6010B
		Vanadium, Total	EPA 6010B
Metals I		Zinc, Total	EPA 6010B
Barium, Total	EPA 6010B	Metals III	
Cadmium, Total	EPA 6010B		EDA 6040D
Calcium, Total	EPA 6010B	Cobalt, Total	EPA 6010B
Chromium, Total	EPA 6010B	Molybdenum, Total	EPA 6010B
Copper, Total	EPA 6010B	Thallium, Total	EPA 6010B
Iron, Total	EPA 6010B	Tin, Total	EPA 6010B

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Miscellaneous		Organophosphate Pesticides	
Cyanide, Total	EPA 9012A	Parathion methyl	EPA 8141A
Hydrogen Ion (pH)	EPA 9040B	Phthalate Esters	
	EPA 9045C	Benzyl butyl phthalate	EPA 8270C
Lead in Paint	EPA 6010B	Bis(2-ethylhexyl) phthalate	EPA 8270C
Sulfide (as S)	EPA 9030B	Diethyl phthalate	EPA 8270C
	EPA 9034	Dimethyl phthalate	EPA 8270C
Nitroaromatics and Isophorone		Di-n-butyl phthalate	EPA 8270C
2,4-Dinitrotoluene	EPA 8270C	• •	EPA 8270C
·	EPA 8270C	Di-n-octyl phthalate	EPA 62/00
2,6-Dinitrotoluene	EPA 8270C	Polychlorinated Biphenyls	
Isophorone		PCB-1016	EPA 8082
Nitrobenzene	EPA 8270C	PCB-1221	EPA 8082
Nitrosoamines		PCB-1232	EPA 8082
N-Nitrosodi-n-propylamine	EPA 8270C	PCB-1242	EPA 8082
N-Nitrosodiphenylamine	EPA 8270C	PCB-1248	EPA 8082
Organophosphate Pesticides		PCB-1254	EPA 8082
Azinphos methyl	EPA 8141A	PCB-1260	EPA 8082
Demeton-O	EPA 8141A	Polynuclear Aromatic Hydrocarbons	
Demeton-S	EPA 8141A	Acenaphthene	EPA 8270C
Diazinon	EPA 8141A	Acenaphthylene	EPA 8270C
Disulfoton	EPA 8141A	Anthracene	EPA 8270C
Malathion	EPA 8141A	Benzo(a)anthracene	EPA 8270C
Parathion ethyl	EPA 8141A	Benzo(a)pyrene	EPA 8270C

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Polynuclear Aromatic Hydrocarbor	ns	<b>Priority Pollutant Phenols</b>	
Benzo(b)fluoranthene	EPA 8270C	4-Nitrophenol	EPA 8270C
Benzo(ghi)perylene	EPA 8270C	Pentachlorophenol	EPA 8270C
Benzo(k)fluoranthene	EPA 8270C	Phenol	EPA 8270C
Chrysene	EPA 8270C	Purgeable Aromatics	
Dibenzo(a,h)anthracene	EPA 8270C	1,2-Dichlorobenzene	EPA 8021B
Fluoranthene	EPA 8270C	( ₁ 2-Diomorobenzeno	EPA 8260B
Fluorene	EPA 8270C	1,3-Dichlorobenzene	EPA 8021B
Indeno(1,2,3-cd)pyrene	EPA 8270C	1,0 01011010001120110	EPA 8260B
Naphthalene	EPA 8270C	1,4-Dichlorobenzene	EPA 8021B
Phenanthrene	EPA 8270C		EPA 8260B
Pyrene	EPA 8270C	Benzene	EPA 8021B
Priority Pollutant Phenols		261126116	EPA 8260B
2,4,5-Trichlorophenol	EPA 8270C	Chlorobenzene	EPA 8021B
2,4,6-Trichlorophenol	EPA 8270C		EPA 8260B
2,4-Dichlorophenol	EPA 8270C	Ethyl benzene	EPA 8021B
2,4-Dimethylphenol	EPA 8270C	·	EPA 8260B
2,4-Dinitrophenol	EPA 8270C	Styrene	EPA 8260B
2-Chlorophenol	EPA 8270C	Toluene	EPA 8021B
2-Methyl-4,6-dinitrophenol	EPA 8270C		EPA 8260B
2-Methylphenol	EPA 8270C	Total Xylenes	EPA 8021B
2-Nitrophenol	EPA 8270C		EPA 8260B
4-Chloro-3-methylphenol	EPA 8270C		
4-Methylphenol	EPA 8270C		

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#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL BATISTA ADIRONDACK ENVIRONMENTAL SERVICES INC 314 NORTH PEARL STREET ALBANY, NY 12207

NY Lab Id No: 10709 EPA Lab Code: NY00063

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Purgeable Halocarbons		Purgeable Halocarbons	
1,1,1-Trichloroethane	EPA 8021B	Carbon tetrachloride	EPA 8260B
	EPA 8260B	Chloroethane	EPA 8021B
1,1,2,2-Tetrachloroethane	EPA 8021B		EPA 8260B
	EPA 8260B	Chloroform	EPA 8021B
1,1,2-Trichloroethane	EPA 8021B		EPA 8260B
	EPA 8260B	Chloromethane	EPA 8021B
1,1-Dichloroethane	EPA 8021B		EPA 8260B
	EPA 8260B	cis-1,3-Dichloropropene	EPA 8021B
1,1-Dichloroethene	EPA 8021B		EPA 8260B
	EPA 8260B	Dibromochloromethane	EPA 8021B
1,2-Dichloroethane	EPA 8021B		EPA 8260B
	EPA 8260B	Dichlorodifluoromethane	EPA 8021B
1,2-Dichloropropane	EPA 8021B		EPA 8260B
	EPA 8260B	Methylene chloride	EPA 8021B
2-Chloroethylvinyl ether	EPA 8021B		EPA 8260B
	EPA 8260B	Tetrachloroethene	EPA 8021B
Bromodichloromethane	EPA 8021B		EPA 8260B
	EPA 8260B	trans-1,3-Dichloropropene	EPA 8021B
Bromoform	EPA 8021B		EPA 8260B
	EPA 8260B	Trichloroethene	EPA 8021B
Bromomethane	EPA 8021B		EPA 8260B
	EPA 8260B	Trichlorofluoromethane	EPA 8021B
Carbon tetrachloride	EPA 8021B		EPA 8260B

Serial No.: 29066



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#### **Purgeable Halocarbons**

Vinyl chloride	EPA 8021B
	EPA 8260B
Purgeable Organics	
2-Butanone (Methylethyl ketone)	EPA 8260B
2-Hexanone	EPA 8260B
4-Methyl-2-Pentanone	FPA 8260B

 2-Hexanone
 EPA 8260B

 4-Methyl-2-Pentanone
 EPA 8260B

 Acetone
 EPA 8260B

 Carbon Disulfide
 EPA 8260B

 Vinyl acetate
 EPA 8260B

#### Semi-Volatile Organics

2-Methylnaphthalene	EPA 8270C
Benzoic Acid	EPA 8270C
Benzyl alcohol	EPA 8270C
Dibenzofuran	EPA 8270C

#### **Volatile Chlorinated Organics**

Benzyl chloride EPA 8121

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Chlorinated Hydrocarbon Pesticides	1	Mineral	
Dieldrin	NYS DOH APC-34	Fluoride, Total	40 CFR 60 APP A METH 13 B
Heptachlor	NIOSH 2, VOL. 5 S287		EPA 300.0
Chlorinated Hydrocarbons			EPA 340.2
1,2,4-Trichlorobenzene	40 CFR PART 60 1984 Method 18	Nitrate (as N)	EPA 300.0
Hexachlorobutadiene	40 CFR PART 60 1984 Method 18	Sulfata (as SOA)	EPA 300.0
Hexachloroethane	40 CFR PART 60 1984 Method 18		EPA 375.4
Foots	i	Miscellaneous Air	
Fuels B.T.U.	A CTM DO045 77	Nitrogen Oxide	40 CFR 60 Method 7
Percent Sulfur	ASTM D2015-77	Particulates	40 CFR 60 APP A Method 5
Percent Sulful	ASTM D4294-98	Sulfur Dioxide	40 CFR 60 METH 6
Metals I	•	Daluahlarinatad Binhanula	
Lead, Total	40 CFR PART 50 1984 APP B EPA 200.7 NIOSH 7300	Polychlorinated Biphenyls	EBA 1000
		PCB-1016	EPA, 1980
		PCB-1221	EPA, 1980
		PCB-1232	EPA, 1980
Metals II		PCB-1242	EPA, 1980
Beryllium, Total	40 CFR 61 1984 Method 104	PCB-1248	EPA, 1980
	NIOSH 7300	PCB-1254	EPA, 1980
Mercury, Total	40 CFR 61 Method 101	PCB-1260	EPA, 1980
	NIOSH 6009	Purgeable Aromatics	
Metals III		1,2-Dichlorobenzene	40 CFR PART 60 1984 Method 18
Chromium, Total	40 CFR PART 63 APP.A 306,A,B	•	
·	NIOSH 7300	1,4-Dichlorobenzene	40 CFR PART 60 1984 Method 18
		Benzene	40 CFR PART 60 1984 Method 18

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#### **Purgeable Aromatics**

Chlorobenzene	40 CFR PART 60 1984 Method 18
Ethyl benzene	40 CFR PART 60 1984 Method 18
Toluene	40 CFR PART 60 1984 Method 18
Total Xylenes	40 CFR PART 60 1984 Method 18

#### **Purgeable Halocarbons**

1,1,2,2-Tetrachloroethane	40 CFR PART 60 1984 Method 18
1,1-Dichloroethane	40 CFR PART 60 1984 Method 18
1,1-Dichloroethene	40 CFR PART 60 1984 Method 18
1,2-Dichloroethane	40 CFR PART 60 1984 Method 18
1,2-Dichloropropane	40 CFR PART 60 1984 Method 18
Carbon tetrachloride	40 CFR PART 60 1984 Method 18
Chloroform	40 CFR PART 60 1984 Method 18
Tetrachloroethene	40 CFR PART 60 1984 Method 18

#### **Surface Coating**

Density	ASTM D1475-60	
Percent Solids	ASTM D2697-86	
Percent Water	40 CFR 60 METH 24	
Volatile Content	40 CFR 60 METH 24	
	ASTM D2369-81	

#### **Volatile Chlorinated Organics**

Benzyl chloride 40 CFR PART 60 1984 Method 18 Epichlorohydrin 40 CFR PART 60 1984 Method 18

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CLP PCB/Pesticides
CLP Semi-Volatile Organics
CLP Volatile Organics
CLP Inorganics

Serial No.: 29068

# Attachment F

Laboratory Qualifications for Lancaster Laboratories, Inc.

### COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 16 JAN 2007

M-PA009

LANCASTER LABORATORIES INC

LANCASTER PA

NON POTABLE WATER (CHEMIS	STRY)	Effective Date	16 JAN 2007	Expiration Date	30 JUN 2007
Analytes a	nd Methods				
ANTIMONY	EPA 200.7				
ARSENIC	EPA 200.7				
BERYLLIUM	EPA 200.7				
CADMIUM .	EPA 200.7				
CHROMIUM	EPA 200.7				
COPPER	EPA 200.7				
IRON	EPA 200.7				
LEAD	EPA 200.7				
MANGANESE	EPA 200.7				
MERCURY	EPA 245.1				
NICKEL	EPA 200.7				
SELENIUM	EPA 200.7				
SELENIUM	EPA 270.2				
SILVER	EPA 200.7				
THALLIUM	EPA 200.7				
ZINC	EPA 200.7				
PH	EPA 150.1				
TOTAL DISSOLVED SOLIDS	EPA 160.1				
CALCIUM	EPA 200.7				
SODIUM	EPA 200.7				
ALKALINITY, TOTAL	EPA 310.1				
SULFATE	EPA 375.4				
NITRATE-N	EPA 353.2				
CYANIDE, TOTAL	EPA 335.4				
NON-FILTERABLE RESIDUE	EPA 160.2				
CHLORINE, TOTAL RESIDUAL	EPA 330.4 EPA 601				•
VOLATILE HALOCARBONS VOLATILE HALOCARBONS	EPA 624				
VOLATILE AROMATICS	EPA 624				
CHLORDANE	EPA 608				
CHECKDANE	L174 000				
POTABLE WATER (CHEMISTRY	)	Effective Date	01 JUL 2006	Expiration Date	30 JUN 2007
Analytes a	and Methods				
BARIUM	EPA 200.7		NITRITE-N		EPA 300.0
BERYLLIUM	EPA 200.7		NITRITE-N		EPA 353.2
CADMIUM	EPA 200.7		FLUORIDE		EPA 300.0
CHROMIUM	EPA 200.7	r	SODIUM		EPA 200.7
COPPER	EPA 200.7		SULFATE		EPA 300.0
MERCURY	EPA 245.1		CYANIDE, TOTAL		EPA 335.4
NICKEL.	EPA 200.7		CALCIUM		EPA 200.7
NITRATE-N	EPA 300.0		ALKALINITY, TOTAL		SM 2320B
January 11, 2007	•	* Provision	al Certification	Pag	e 1 of 2

### COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 16 JAN 2007

M-PA009

LANCASTER LABORATORIES INC

LANCASTER PA

POTABLE WATER (CHEMISTRY)		Effective Date	01 JUL 2006	Expiration Date	30 JUN 2007
Analytes and	<u>i Methods</u>				
TOTAL DISSOLVED SOLIDS	SM 2540C				
PH	EPA 150.1				
2,4-D	EPA 515.1				
2,4,5-TP	EPA 515.1				
DALAPON	EPA 515.1				
DINOSEB	EPA 515.1				
PENTACHLOROPHENOL	EPA 515.1				
PICLORAM	EPA 515.1				
ALACHLOR	EPA 525.2				
ATRAZINE	EPA 525.2				
ENDRIN	EPA 525.2				
HEPTACHLOR	EPA 525.2				
HEPTACHLOR EPOXIDE	EPA 525.2			,	
HEXACHLOROBENZENE	EPA 508				
HEXACHLOROBENZENE	EPA 525.2				
HEXACHLOROCYCLOPENTADIENE	EPA 525.2				
LINDANE	EPA 525.2				
METHOXYCHLOR	EPA 525.2				
SIMAZINE	EPA 525.2				
ALDICARB	EPA 531.1				
ALDICARB SULFONE	EPA 531.1				
ALDICARB SULFOXIDE	EPA 531.1				
CARBOFURAN	EPA 531.1				
VYDATE	EPA 531.1				
POLYNUCLEAR AROMATIC HYDROCARB	EPA 525.2				
ADIPATES/PHTHALATES	EPA 525.2				
TRIHALOMETHANES	EPA 524.2				
VOLATILE ORGANIC COMPOUNDS	EPA 524.2				
1,2-DIBROMOETHANE	EPA 504.1				
1,2-DIBROMO-3-CHLOROPROPANE	EPA 504.1				

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DR. TIMOTHY S. OOSTDYK LANCASTER LABORATORIES INC 2425 NEW HOLLAND PIKE LANCASTER, PA 17601-5994 NY Lab Id No: 10670 EPA Lab Code: PA00009

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

D. W. Methylcarbamate Pesticides		Drinking Water Metals I	
3-Hydroxy Carbofuran	EPA 531.1	Cadmium, Total	EPA 200.8
Aldicarb	EPA 531.1	Chromium, Total	EPA 200.7
Aldicarb Sulfone	EPA 531.1	Copper, Total	EPA 200.7
Aldicarb Sulfoxide	EPA 531.1		EPA 200.8
Carbaryl	EPA 531.1	Iron, Total	EPA 200.7
Carbofuran	EPA 531.1	Lead, Total	EPA 200.9
Methomyl	EPA 531.1	. Manganese, Total	EPA 200.7
Oxamyl	EPA 531.1	Mercury, Total	EPA 245.1
Drinking Water Chlorinated Acids		Selenium, Total	EPA 200.9
2,4,5-TP (Silvex)	EPA 515.1	Silver, Total	EPA 200.7
2,4-D	EPA 515.1	Zinc, Total	EPA 200.7
Dalapon	EPA 515.1		EPA 200.8
Dicamba	EPA 515.1	Drinking Water Metals II	
Dinoseb	· EPA 515.1	Aluminum, Total	EPA 200.7
Pentachlorophenol	EPA 515.1	Antimony, Total	EPA 200.8
Picloram	EPA 515.1	Beryllium, Total	EPA 200.7
Drinking Mator Motals I			EPA 200.8
Drinking Water Metals I  Arsenic, Total	EPA 200.7	Nickel, Total	EPA 200.7
Arsenic, Total	EPA 200.7		EPA 200.8
Davison Tatal	EPA 200.7	Thallium, Total	EPA 200.9
Barium, Total	EPA 200.7 EPA 200.8	Drinking Water Metals III	
Ondering Total		Calcium, Total	EPA 200.7
Cadmium, Total	EPA 200.7	Calcium, Total	L- A 200.1

Serial No.: 29045



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All approved analytes are listed below:

Drinking Water Metals III		<b>Drinking Water Non-Metals</b>	
Sodium, Total	EPA 200.7	Nitrite (as N)	EPA 300.0
Drinking Water Miscellaneous			EPA 353.2
Benzo(a)pyrene	EPA 525.2	Solids, Total Dissolved	SM 18-20 2540C
· ···•	EPA 525.2	Specific Conductance	SM 18-20 2510B
Bis(2-ethylhexyl) phthalate		Deinteine Weter Organishalida De	anticida a
Butachlor	EPA 525.2	Drinking Water Organohalide Pe	
Hexachlorobenzene	EPA 508	Alachlor	EPA 507
	EPA 525.2		EPA 525.2
Hexachlorocyclopentadiene	EPA 508	Aldrin	EPA 508
	EPA 525.2		EPA 525.2
Methyl tert-butyl ether	EPA 524.2	Atrazine	EPA 507
Propachlor	EPA 525.2		EPA 525.2
Temperature	SM 18-20 2550B	Chlordane Total	EPA 508
Drinking Water Non-Metals		Dieldrin	EPA 508
-	SM 18-20 2320B		EPA 525.2
Alkalinity		Endrin	EPA 508
Calcium Hardness	EPA 200.7		EPA 525.2
Color	EPA 110.2	Heptachlor	EPA 508
Cyanide, Total	EPA 335.4	пертасто	
Fluoride, Total	EPA 300.0		EPA 525.2
	SM 18-20 4500-F C	Heptachlor epoxide	EPA 508
Hydrogen Ion (pH)	EPA 150.1		EPA 525.2
. ,		Lindane	EPA 508
Nitrate (as N)	EPA 300.0		EPA 525.2
	EPA 353.2	Methoxychlor	EPA 508
	•		

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All approved analytes are listed below:

Drinking Water Organohalide Pestio	cides	Volatile Aromatics	
Methoxychlor	EPA 525.2	1,4-Dichlorobenzene	EPA 524.2
Metolachtor	EPA 525.2	2-Chlorotoluene	EPA 524.2
Metribuzin	EPA 525.2	4-Chlorotoluene	EPA 524.2
Simazine	EPA 507	Benzene	EPA 524.2
	EPA 525.2	Bromobenzene	EPA 524.2
Toxaphene	EPA 508	Chlorobenzene	EPA 524.2
Drinking Water Trihalomethanes		Ethyl benzene	EPA 524.2
Bromodichloromethane	EPA 524.2	Hexachlorobutadiene	EPA 524.2
Bromoform	EPA 524.2	Isopropylbenzene	EPA 524.2
Chloroform	EPA 524.2	n-Butylbenzene	EPA 524.2
Dibromochloromethane	EPA 524.2	n-Propylbenzene	EPA 524.2
Total Trihalomethanes	EPA 524.2	sec-Butylbenzene	EPA 524.2
	_,,,,_	Styrene	EPA 524.2
Microextractibles		tert-Butylbenzene	EPA 524.2
1,2-Dibromo-3-chloropropane	EPA 504.1	Toluene	EPA 524.2
1,2-Dibromoethane	EPA 504.1	Total Xylenes	EPA 524.2
Volatile Aromatics		Volatile Halocarbons	
1,2,3-Trichlorobenzene	EPA 524.2	1,1,1,2-Tetrachloroethane	EPA 524.2
1,2,4-Trichlorobenzene	EPA 524.2	1,1,1-Trichloroethane	EPA 524.2
1,2,4-Trimethylbenzene	EPA 524.2	1,1,2,2-Tetrachloroethane	EPA 524.2
1,2-Dichlorobenzene	EPA 524.2	1,1,2-Trichloroethane	EPA 524.2
1,3,5-Trimethylbenzene	EPA 524.2	1,1-Dichloroethane	EPA 524.2
1,3-Dichlorobenzene	EPA 524.2	1,1-Dichloroethene	EPA 524.2

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All approved analytes are listed below:

#### Volatile Halocarbons

1,1-Dichloropropene	EPA 524.2
1,2,3-Trichloropropane	EPA 524.2
1,2-Dichloroethane	EPA 524.2
1,2-Dichloropropane	EPA 524.2
1,3-Dichloropropane	EPA 524.2
2,2-Dichloropropane	EPA 524.2
Bromochloromethane	EPA 524.2
Bromomethane	EPA 524.2
Carbon tetrachloride	EPA 524.2
Chloroethane	EPA 524.2
Chloromethane	EPA 524.2
cis-1,2-Dichloroethene	EPA 524.2
cis-1,3-Dichloropropene	EPA 524.2
Dibromomethane	EPA 524.2
Dichlorodifluoromethane	EPA 524.2
Methylene chloride	EPA 524.2
Tetrachioroethene	EPA 524.2
trans-1,2-Dichloroethene	EPA 524.2
trans-1,3-Dichloropropene	EPA 524.2
Trichloroethene	EPA 524.2
Trichlorofluoromethane	EPA 524.2
Vinyl chloride	EPA 524.2

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Acrylates		Benzidines	
Acrolein (Propenal)	EPA 603	Benzidine ·	EPA 8270C
	EPA 624	Chlorinated Hydrocarbon Pes	sticides
	EPA 8260B	4.4'-DDD	EPA 608
Acrylonitrile	EPA 603	· <b>·</b> · · · · · · · · · · · · · · · · ·	EPA 8081A
	EPA 624	4.4'-DDE	EPA 608
	EPA 8260B	·,·	EPA 8081A
Amines		4,4'-DDT	EPA 608
1,4-Phenylenediamine	EPA 8270C		EPA 8081A
3-Nitroaniline	EPA 8270C	Aldrin	EPA 608
4-Chloroaniline	EPA 8270C		EPA 8081A
Aniline	EPA 8270C	alpha-BHC	EPA 608
Carbazole	EPA 8270C	•	EPA 8081A
Diphenylamine	EPA 8270C	beta-BHC	EPA 608
Methapyriline	EPA 8270C		EPA 8081A
Pronamide	EPA 8270C	Chlordane Total	EPA 608
Propionitrile	EPA 8260B	•	EPA 8081A
Pyridine	EPA 8270C	delta-BHC	EPA 608
Benzidines	•		EPA 8081A
3,3' -Dichlorobenzidine	EPA 625	Dieldrin	EPA 608
5,5 -Diditiorobetizidine	EPA 8270C		EPA 8081A
3,3'-Dimethylbenzidene	EPA 8270C	Endosulfan I	EPA 608
Benzidine	EPA 625		EPA 8081A
Donziume	L. 11 020	Endosulfan II	EPA 608

Serial No.: 29046



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Chlorinated Hydrocarbon Pesticides		Chlorinated Hydrocarbons	
Endosulfan II	EPA 8081A	2-Chloronaphthalene	EPA 625
Endosulfan sulfate	EPA 608		EPA 8270C
	EPA 8081A	Hexachlorobenzene	EPA 625
Endrin	EPA 608		EPA 8270C
	EPA 8081A	Hexachlorobutadiene	EPA 625
Endrin aldehyde	EPA 608		EPA 8021B
	EPA 8081A		EPA 8260B
Endrin Ketone	EPA 8081A		EPA 8270C
Heptachlor	EPA 608	Hexachlorocyclopentadiene	EPA 625
	EPA 8081A		EPA 8270C
Heptachlor epoxide	EPA 608	Hexachloroethane	EPA 625
	EPA 8081A		EPA 8270C
Lindane	EPA 608	Hexachloropropene	EPA 8270C
	EPA 8081A .	Pentachlorobenzene	EPA 8270C
Methoxychlor	EPA 8081A	Chlorophenoxy Acid Pesticides	
Toxaphene	EPA 608	2,4,5-T	EPA 8151A
	EPA 8081A	2,4,5-TP (Silvex)	EPA 8151A
Chlorinated Hydrocarbons		2,4-D	EPA 8151A
1,2,3-Trichlorobenzene	EPA 8260B	Dalapon	EPA 8151A
1,2,4,5-Tetrachlorobenzene	EPA 8270C	Dicamba	EPA 8151A
1,2,4-Trichlorobenzene	EPA 625	Dinoseb	EPA 8151A
	EPA 8260B		
	EPA 8270C		

Serial No.: 29046



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

DR. TIMOTHY S. OOSTDYK LANCASTER LABORATORIES INC 2425 NEW HOLLAND PIKE LANCASTER, PA 17601-5994 NY Lab Id No: 10670 EPA Lab Code: PA00009

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Demand		Mineral	
Biochemical Oxygen Demand	EPA 405.1	Acidity	EPA 305.1
Carbonaceous BOD	SM 18-20 5210B	Alkalinity	EPA 310.1
Chemical Oxygen Demand	EPA 410.4	Chloride	EPA 300.0
Fuel Oxygenates			EPA 325.3
Ethanol	EPA 8015 B	Fluoride, Total	EPA 300.0
	EPA 8260B		EPA 340.2
Methyl tert-butyl ether			SM 18-20 4500-F C
t-Butyl alcohol	EPA 8015 B	Hardness, Total	EPA 130.2
	EPA 8260B	Sulfate (as SO4)	EPA 300.0
Haloethers			EPA 375.4
4-Bromophenylphenyl ether	EPA 625	No.	
	EPA 8270C	Nitroaromatics and Isophorone	
4-Chlorophenylphenyl ether	EPA 625	1,3,5-Trinitrobenzene	EPA 8270C
	EPA 8270C		EPA 8330
Bis (2-chloroisopropyl) ether	EPA 625	1,3-Dinitrobenzene	EPA 8270C
, ,,,,	EPA 8270C		EPA 8330
Bis(2-chloroethoxy)methane	EPA 625	1,4-Naphthoquinone	EPA 8270C
Dis(2 dinerodinoxy)/methanic	EPA 8270C	2,4,6-Trinitrotoluene	EPA 8330
Bis(2-chloroethyl)ether	EPA 625	2,4-Dinitrotoluene	EPA 625
Bis(2-ciliordethyr)ether	EPA 8270C		EPA 8270C
•	EPA 62/00		EPA 8330
Microextractables		2,6-Dinitrotoluene	EPA 625
1,2-Dibromo-3-chloropropane	EPA 8011		EPA 8270C
1,2-Dibromoethane	EPA 8011		EPA 8330

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Nitroaromatics and Isophorone	•	Nutrient	
2-Amino-4,6-dinitrotoluene	EPA 8330	Ammonia (as N)	EPA 350.2
2-Nitrotoluene	EPA 8330	Kjeldahl Nitrogen, Total	EPA 351.2
3-Nitrotoluene	EPA 8330	Nitrate (as N)	EPA 300.0
4-Amino-2,6-dinitrotoluene	EPA 8330		EPA 353.2
4-Nitrotoluene	EPA 8330	Nitrite (as N)	EPA 300.0
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330		EPA 353.2
Isophorone	EPA 625	Orthophosphate (as P)	EPA 365.3
	EPA 8270C	Phosphorus, Total	EPA 365.1
Nitrobenzene	EPA 625	Organophosphate Pesticides	
	EPA 8270C	Atrazine	EPA 8141A
	EPA 8330	Azinphos methyl	EPA 8141A
Octahydro-tetranitro-tetrazocine	EPA 8330	Demeton-S	EPA 8141A
Nitrosoamines		Diazinon	EPA 8141A
N-Nitrosodiethylamine	EPA 8270C	Disulfoton	EPA 8141A
N-Nitrosodimethylamine	EPA 625	Famphur	EPA 8141A
	EPA 8270C	Malathion	EPA 8141A
N-Nitrosodi-n-butylamine	EPA 8270C	Parathion ethyl	EPA 8141A
N-Nitrosodi-n-propylamine	EPA 625	Parathion methyl	EPA 8141A
	EPA 8270C	Phorate	EPA 8141A
N-Nitrosodiphenylamine	EPA 625	Simazine	EPA 8141A
	EPA 8270C	Phthalate Esters	
N-nitrosopiperidine	EPA 8270C	Benzyl butyl phthalate	EPA 625
N-Nitrosopyrrolidine	EPA 8270C		

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Phthalate Esters		Polychlorinated Biphenyls	
Benzyl butyl phthalate	EPA 8270C	PCB-1254	EPA 8082
Bis(2-ethylhexyl) phthalate	EPA 625	PCB-1260	EPA 608
	EPA 8270C		EPA 8082
Diethyl phthalate	EPA 625	Polynuclear Aromatics	
	EPA 8270C	3-Methylcholanthrene	EPA 8270C
Dimethyl phthalate	EPA 625	7,12-Dimethylbenzyl (a) anthracene	EPA 8270C
	EPA 8270C	Acenaphthene	EPA 625
Di-n-butyl phthalate	EPA 625	ŕ	EPA 8270C
	EPA 8270C		EPA 8310
Di-n-octyl phthalate	EPA 625	Acenaphthylene	EPA 625
	EPA 8270C	, ,	EPA 8270C
Polychlorinated Biphenyls			EPA 8310
PCB-1016	EPA 608	Anthracene	EPA 625
	EPA 8082		EPA 8270C
PCB-1221	EPA 608		EPA 8310
	EPA 8082	Benzo(a)anthracene	EPA 625
PCB-1232	EPA 608		EPA 8270C
	EPA 8082		EPA 8310
PCB-1242	EPA 608	Benzo(a)pyrene	EPA 625
	EPA 8082		EPA 8270C
PCB-1248	EPA 608		EPA 8310
	EPA 8082	Benzo(b)fluoranthene	EPA 625
PCB-1254	EPA 608		EPA 8270C

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Polynuclear Aromatics		Polynuclear Aromatics	
Benzo(b)fluoranthene	EPA 8310	Naphthalene	EPA 8270C
Benzo(ghi)perylene	EPA 625		EPA 8310
	EPA 8270C	Phenanthrene	EPA 625
•	EPA 8310		EPA 8270C
Benzo(k)fluoranthene	EPA 625		EPA 8310
	EPA 8270C	Pyrene	EPA 625
•	EPA 8310		EPA 8270C
Chrysene	EPA 625		EPA 8310
	EPA 8270C	Priority Pollutant Phenols	
	EPA 8310	2,4,5-Trichlorophenol	EPA 8270C
Dibenzo(a,h)anthracene	EPA 625	2,4,6-Trichlorophenol	EPA 625
	EPA 8270C	_, ,,	EPA 8270C
	EPA 8310	2,4-Dichlorophenol	EPA 625
Fluoranthene	EPA 625		EPA 8270C
	EPA 8270C	2,4-Dimethylphenol	EPA 625
	EPA 8310		EPA 8270C
Fluorene	EPA 625	2,4-Dinitrophenol	EPA 625
	EPA 8270C		EPA 8270C
	EPA 8310	2,6-Dichlorophenol	EPA 8270C
Indeno(1,2,3-cd)pyrene	EPA 625	2-Chlorophenol	EPA 625
	EPA 8270C	·	EPA 8270C
	EPA 8310	2-Methyl-4,6-dinitrophenol	EPA 625
Naphthalene	EPA 625	2-Methylphenol	EPA 8270C

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Priority Pollutant Phenois		Purgeable Aromatics	
2-Nitrophenol	EPA 625	1,3-Dichlorobenzene	EPA 625
	EPA 8270C		EPA 8021B
4-Chloro-3-methylphenol	EPA 625		EPA 8260B
	EPA 8270C		EPA 8270C
4-Methylphenol	EPA 8270C	1,4-Dichlorobenzene	EPA 601
4-Nitrophenol	EPA 625	•	EPA 602
	EPA 8270C		EPA 624
Pentachlorophenol	EPA 625		EPA 625
	EPA 8151A		EPA 8021B
	EPA 8270C		EPA 8260B
Phenol	EPA 625		EPA 8270C
	EPA 8270C	Benzene	EPA 602
Purgeable Aromatics			EPA 624
1,2-Dichlorobenzene	EPA 601		EPA 8021B
1,2 Bidinologonzono	EPA 602		EPA 8260B
	EPA 624	Chlorobenzene	EPA 601
	EPA 625		EPA 602
	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B
	EPA 8270C		EPA 8260B
1,3-Dichlorobenzene	EPA 601	Ethyl benzene	EPA 602
1,3-Dictioropetizerie	EPA 602		EPA 624
	EPA 624		EPA 8021B
*	LFA VZ4		

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Purgeable Aromatics		Purgeable Halocarbons	
Ethyl benzene	EPA 8260B	1,1,2-Trichloroethane	EPA 8021B
Styrene	EPA 8021B		EPA 8260B
	EPA 8260B	1,1-Dichloroethane	EPA 601
Toluene	EPA 602		EPA 624
	EPA 624		EPA 8021B
	EPA 8021B		EPA 8260B
	EPA 8260B	1,1-Dichloroethene	EPA 601
Total Xylenes	EPA 602		EPA 624
	EPA 624		EPA 8021B
	EPA 8021B		EPA 8260B
	EPA 8260B	1,1-Dichloropropene	EPA 8260B
Purgeable Halocarbons	·	1,2,3-Trichloropropane	EPA 8260B
1,1,1,2-Tetrachloroethane	EPA 8260B	1,2-Dichloroethane	EPA 601
1,1,1-Trichloroethane	EPA 601		EPA 624
1, 1, 1- Monoroctians	EPA 624		EPA 8021B
	EPA 8021B		EPA 8260B
	EPA 8260B	1,2-Dichloropropane	EPA 601
1,1,2,2-Tetrachloroethane	EPA 601		EPA 624
1, 1, 2,2-1 culadinolocularie	EPA 624		EPA 8021B
	EPA 8021B		EPA 8260B
	EPA 8260B	2-Chloroethylvinyl ether	EPA 601
1,1,2-Trichloroethane	EPA 601		EPA 624
1,1,2-Thomoroemane	EPA 624		EPA 8021B
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Purgeable Halocarbons		Purgeable Halocarbons	
2-Chloroethylvinyl ether	EPA 8260B	Chloroethane	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B	Chloroform	EPA 601
Bromochloromethane	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B
Bromodichloromethane	EPA 601		EPA 8260B
	EPA 624	Chloromethane	′ EPA 601
	EPA 8021B		EPA 624
	EPA 8260B		EPA 8021B
Bromoform	EPA 601		EPA 8260B
•	EPA 624	cis-1,2-Dichloroethene	EPA 8260B
	EPA 8021B	cis-1,3-Dichloropropene	EPA 601
	EPA 8260B		EPA 624
Bromomethane	EPA 601		EPA 8021B
	EPA 624		EPA 8260B
	EPA 8021B	Dibromochloromethane	EPA 601
	EPA 8260B		EPA 624
Carbon tetrachloride	EPA 601		EPA 8021B
	EPA 624		EPA 8260B
	EPA 8021B	Dibromomethane	EPA 8260B
	EPA 8260B	Dichlorodifluoromethane	EPA 601
Chloroethane	EPA 601		EPA 8021B
	EPA 624		EPA 8260B
	EPA 8021B	Methylene chloride	EPA 601

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Purgeable Halocarbons		Purgeable Halocarbons	
Methylene chloride	EPA 624	Vinyl chloride	EPA 624
	EPA 8021B		EPA 8021B
	EPA 8260B		EPA 8260B
Tetrachloroethene	EPA 601	Purgeable Organics	
	EPA 624	2-Butanone (Methylethyl ketone)	EPA 8260B
	EPA 8021B	2-Hexanone	EPA 8260B
	EPA 8260B	4-Methyl-2-Pentanone	EPA 8260B
trans-1,2-Dichloroethene	EPA 601	Acetone	EPA 8260B
	EPA 624	Acetonitrile	EPA 8260B
	EPA 8021B	Carbon Disulfide	EPA 8260B
•	EPA 8260B	Isobutyi alcohol	EPA 8260B
trans-1,3-Dichloropropene	EPA 601	o-Toluidine	EPA 8270C
	EPA 624	Vinyl acetate	EPA 8260B
	EPA 8021B		
	EPA 8260B	Residue	
Trichloroethene	EPA 601	Solids, Total	EPA 160.3
	EPA 624	Solids, Total Dissolved	EPA 160.1
	EPA 8021B	Solids, Total Suspended	EPA 160.2
	EPA 8260B	Semi-Volatile Organics	
Trichlorofluoromethane	EPA 601	2-Methylnaphthalene	EPA 8270C
	EPA 624	4-Amino biphenyl	EPA 8270C
	EPA 8260B	Acetophenone	EPA 8270C
Vinyl chloride	EPA 601	Benzoic Acid	EPA 8270C

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Semi-Volatile Organics		Wastewater Metals I	
Benzyl alcohol	EPA 8270C	Cadmium, Total	EPA 7131A
Dibenzofuran	EPA 8270C	Calcium, Total	EPA 200.7
Ethyl methanesulfonate	EPA 8270C		EPA 3005A
Isosafrole	EPA 8270C		EPA 3010A
Methyl methanesulfonate	EPA 8270C		EPA 6010B
O,O,O-Triethyl phosphorothioate	EPA 8270C	Chromium, Total	EPA 200.7
Phenacetin	EPA 8270C		EPA 200.8
Safrole	EPA 8270C		EPA 3005A
Wastewater Metals I			EPA 3010A
Barium, Total	EPA 200.7		EPA 3020A
Danuiti, Iotai	EPA 200.8	Copper, Total	EPA 6010B
	EPA 3005A		EPA 6020
	EPA 3010A		EPA 200.7
	EPA 6010B		EPA 200.8
	EPA 6020		EPA 3005A
Cadmium, Total	EPA 200.7		EPA 3010A
Caumani, Total	EPA 200.8		EPA 6010B
	EPA 213.2	Iron, Total	EPA 200.7
	EPA 3005A		EPA 3005A
			EPA 3010A
	EPA 3010A		EPA 6010B
	EPA 3020A	Lead, Total	EPA 200.7
	EPA 6010B	·	EPA 200.8
	EPA 6020		

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Wastewater Metals I		Wastewater Metals I	
Lead, Total	EPA 239.2	Potassium, Total	EPA 200.7
	EPA 3005A		EPA 3005A
	EPA 3010A		EPA 3010A
	EPA 3020A		EPA 6010B
	EPA 6010B	Silver, Total	EPA 200.7
	EPA 6020		EPA 272.2
	EPA 7421		EPA 3005A
Magnesium, Total	EPA 200.7		EPA 6010B
	EPA 3005A	Sodium, Total	EPA 200.7
	EPA 3010A		EPA 3005A
	EPA 6010B		EPA 3010A
Manganese, Total	EPA 200.7		EPA 6010B
	EPA 200.8	Strontium, Total	EPA 6010B
	EPA 3005A	Wastewater Metals II	
	EPA 3010A	Aluminum, Total	EPA 200.7
	EPA 6010B	, idilinani, Total	EPA 3005A
	EPA 6020		EPA 3010A
Nickel, Total	EPA 200.7		EPA 6010B
	EPA 200.8	Antimony, Total	EPA 200.7
	EPA 3005A	,,, ,	EPA 200.8
	EPA 3010A		EPA 204.2
	EPA 3020A		EPA 3005A
	EPA 6010B	•	EPA 6010B

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Wastewater Metals II		Wastewater Metals II	
Antimony, Total	EPA 6020	Selenium, Total	EPA 3005A
	EPA 7041		EPA 3010A
Arsenic, Total	EPA 200.7		EPA 6010B
	EPA 200.8		EPA 7740
	EPA 206.2	Vanadium, Total	EPA 200.7
	EPA 3005A		EPA 3005A
	EPA 3010A		EPA 3010A
	EPA 6010B		EPA 6010B
	EPA 6020	Zinc, Total	EPA 200.7
	EPA 7060A		EPA 200.8
Beryllium, Total	EPA 200.7		EPA 3005A
	EPA 200.8		EPA 3010A
	EPA 3005A		EPA 6010B
•	EPA 3010A		EPA 6020
	EPA 3020A	Wastewater Metals III	•
	EPA 6010B	Cobalt, Total	EPA 200.7
	EPA 6020	<b>4 4 4 4 4 4 4 4 4 4</b>	EPA 3005A
Chromium VI	EPA 218.6		EPA 3010A
	EPA 7196A		EPA 6010B
Mercury, Total	EPA 245.1	Molybdenum, Total	EPA 200.7
	EPA 7470A	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	EPA 200.8
Selenium, Total	EPA 200.7	•	EPA 3005A
•	EPA 270.2		EPA 6010B

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Wastewater Metals III		Wastewater Miscellaneous	
Thallium, Total	EPA 200.7	Oil & Grease Total Recoverable	EPA 413.1
	EPA 200.8	Organic Carbon, Total	EPA 415.1
	EPA 279.2	Phenois	EPA 420.2
	EPA 3005A	Silica, Dissolved	EPA 370.1
	EPA 3010A	Specific Conductance	EPA 120.1
	EPA 3020A	Sulfide (as S)	EPA 376.1
	EPA 6010B		EPA 376.2
	EPA 6020	Surfactant (MBAS)	EPA 425.1
Tin, Total	EPA 200.7		
	EPA 6010B		
Titanium, Total	EPA 200.7		
	EPA 6010B		
Wastewater Miscellaneous			
Boron, Total	EPA 200.7		
·	EPA 6010B		
Bromide	EPA 300.0		
Color	EPA 110.2		
Cyanide, Total	EPA 335.3		
	EPA 335.4		
	EPA 9012A		
Hydrogen Ion (pH)	EPA 150.1		
	EPA 9040B	•	
Oil & Grease Total Recoverable	EPA 1664A		

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Method Not Specified

Method Not Specified

is hereby APPROVED as an Environmental Laboratory for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved subcategories and/or analytes are listed below:

Amines	•	Purgeable Organics
2-Nitroaniline	Method Not Specified	Carbon Disulfide
3-Nitroaniline	Method Not Specified	Semi-Volatile Organics
4-Chloroaniline	Method Not Specified	Benzoic Acid
4-Nitroaniline	Method Not Specified	Delizoto Atid
Carbazole	Method Not Specified	
Carbamate Pesticides		
Aldicarb	EPA 8318	
Aldicarb Sulfone	EPA 8318	
Carbofuran	EPA 8318	
Chlorinated Hydrocarbon Pesticides		
alpha-Chlordane	Method Not Specified	
gamma-Chlordane	Method Not Specified	
Nitroaromatics and Isophorone		
Methyl-2,4,6-trinitrophenylnitramine	EPA 8330	•
Organophosphate Pesticides		
Demeton-O	EPA 8141A	
Priority Pollutant Phenols		
2-Methylphenol	Method Not Specified	

Method Not Specified

Method Not Specified

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4-Methylphenol

Styrene

**Purgeable Aromatics** 

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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Acrylates		Carbamate Pesticides	
Acrolein (Propenal)	EPA 8260B	Carbofuran	EPA 8318
Acrylonitrile	EPA 8260B	Characteristic Testing	
Amines		Ignitability	EPA 1010
1,2-Diphenylhydrazine	EPA 8270C	Reactivity	SW-846 Ch7, Sec. 7.3
1,4-Phenylenediamine	EPA 8270C	TCLP	EPA 1311
1-Naphthylamine	EPA 8270C	Chlorinated Hydrocarbon Pesti	cides
2-Naphthylamine	EPA 8270C	4,4'-DDD	EPA 8081A
2-Nitroaniline	EPA 8270C	4.4'-DDE	EPA 8081A
3-Nitroaniline	EPA 8270C	4.4'-DDT	EPA 8081A
4-Chloroaniline	EPA 8270C	Aldrin	EPA 8081A
4-Nitroaniline	EPA 8270C	alpha-BHC	EPA 8081A
5-Nitro-o-toluidine	EPA 8270C	alpha-Chlordane	EPA 8081A
Aniline	EPA 8270C	beta-BHC	EPA 8081A
Carbazole	EPA 8270C	Chlordane Total	EPA 8081A
Methapyriline	EPA 8270C	delta-BHC	EPA 8081A
Pronamide	EPA 8270C	Dieldrin	EPA 8081A
Benzidines		Endosulfan I	EPA 8081A
3,3' -Dichlorobenzidine	EPA 8270C	Endosulfan II	EPA 8081A
3,3'-Dimethylbenzidene	EPA 8270C	Endosulfan sulfate	EPA 8081A
Oralization Death tales		Endrin	EPA 8081A
Carbamate Pesticides  Aldicarb	EPA 8318	Endrin aldehyde	EPA 8081A
Aldicarb Sulfone	EPA 8318	Endrin Ketone	EPA 8081A
Aldicato Sunone	LI 7 00 10	-	

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Chlorinated Hydrocarbon Pesticides	ı	Chlorophenoxy Acid Pesticides	
gamma-Chlordane	EPA 8081A	Dicamba	EPA 8151A
Heptachior	EPA 8081A	Dinoseb	EPA 8151A
Heptachlor epoxide	EPA 8081A	MCPA	EPA 8151A
Lindane	EPA 8081A	MCPP	EPA 8151A
Methoxychlor	EPA 8081A	Haloethers	
Pentachloronitrobenzene	EPA 8270C	4-Bromophenylphenyl ether	EPA 8270C
Toxaphene	EPA 8081A	4-Chlorophenylphenyl ether	EPA 8270C
Chlorinated Hydrocarbons		Bis (2-chloroisopropyl) ether	EPA 8270C
1,2,4,5-Tetrachlorobenzene	EPA 8270C	Bis(2-chloroethoxy)methane	EPA 8270C
1,2,4-Trichlorobenzene	EPA 8270C	Bis(2-chloroethyl)ether	EPA 8270C
2-Chloronaphthalene	EPA 8270C	Metals I	
Hexachlorobenzene	EPA 8270C	Barium, Total	EPA 6010B
Hexachlorobutadiene	EPA 8270C	Cadmium, Total	EPA 6010B
Hexachlorocyclopentadiene	EPA 8270C	Jaconiani, rolai	EPA 6020
Hexachloroethane	EPA 8270C	Calcium, Total	EPA 6010B
Hexachloropropene	EPA 8270C	Chromium, Total	EPA 6010B
Pentachlorobenzene	EPA 8270C	<b>4,</b>	EPA 6020
Chlorophenoxy Acid Pesticides	•	Copper, Total	EPA 6010B
2,4,5-T	EPA 8151A		EPA 6020
2,4,5-TP (Silvex)	EPA 8151A	Iron, Total	EPA 6010B
2,4-D	EPA 8151A	Lead, Total	EPA 6010B
Dalapon	EPA 8151A		EPA 6020

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Metals i		Metals II	
Magnesium, Total	EPA 6010B	Zinc, Total	EPA 6010B
Manganese, Total	EPA 6010B		EPA 6020
Nickel, Total	EPA 6010B	Metals III	
	EPA 6020	Cobalt, Total	EPA 6010B
Potassium, Total	EPA 6010B	Molybdenum, Total	EPA 6010B
Silver, Total	EPA 6010B	Thallium, Total	EPA 6010B
Sodium, Total	EPA 6010B	Tin, Total	EPA 6010B
Strontium, Total	EPA 6010B	Titanium, Total	EPA 6010B
Metals II		Miscellaneous	
Aluminum, Total	EPA 6010B	Boron, Total	EPA 6010B
Antimony, Total	EPA 6010B	Cyanide, Total	EPA 9012A
	EPA 6020	Hydrogen Ion (pH)	EPA 9040B
	EPA 7041	, ,	EPA 9045C
Arsenic, Total	EPA 6010B	Oil & Grease Total Recoverable	EPA 9071
	EPA 6020	Phenols	EPA 9066
	EPA 7060A	Specific Conductance	EPA 9050
Beryllium, Total	EPA 6010B	Sulfide (as S)	EPA 9030B
	EPA 6020	, ,	EPA 9034
Chromium VI	EPA 7196A		
Mercury, Total	EPA 7471A	Nitroaromatics and Isophorone	
Selenium, Total	EPA 6010B	1,2-Dinitrobenzene	EPA 8270C
	EPA 7740	1,3,5-Trinitrobenzene	EPA 8330
Vanadium, Total	EPA 6010B	1,3-Dinitrobenzene	EPA 8330

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Nitroaromatics and Isophorone	•	Nutrients	
1,4-Dinitrobenzene	EPA 8270C	· Nitrate (as N)	EPA 9056
1,4-Naphthquinone	EPA 8270C	Nitrite (as N)	EPA 9056
2,4,6-Trinitrotoluene	EPA 8330	Orthophosphate (as P)	EPA 9056
2,4-Dinitrotoluene	EPA 8270C	Organophosphate Pesticides	
2,6-Dinitrotoluene	EPA 8270C	Azinphos methyl	EPA 8141A
2-Amino-4,6-dinitrotoluene	EPA 8330	Bolstar	EPA 8141A
4-Amino-2,6-dinitrotoluene	EPA 8330	Chlorpyriphos	EPA 8141A
Isophorone	EPA 8270C	Coumaphos	EPA 8141A
Nitrobenzene	EPA 8270C	Demeton-O	EPA 8141A
	EPA 8330	Demeton-S	EPA 8141A
Nitroquinoline-1-oxide	EPA 8270C	Diazinon	EPA 8141A
Octahydro-tetranitro-tetrazocine	EPA 8330	Dichlorvos	EPA 8141A
Nitrosoamines		Disulfoton	EPA 8141A
N-Nitrosodiethylamine	EPA 8270C	EPN	EPA 8141A
N-Nitrosodimethylamine	EPA 8270C	Ethion	EPA 8141A
N-Nitrosodi-n-butylamine	EPA 8270C	Ethoprop	EPA 8141A
N-Nitrosodi-n-propylamine	EPA 8270C	Famphur	EPA 8141A
N-Nitrosodiphenylamine	EPA 8270C	Fensulfothion	EPA 8141A
N-nitrosomethylethylamine	EPA 8270C	Fenthion	EPA 8141A
N-nitrosomorpholine	EPA 8270C	Malathion	EPA 8141A
N-nitrosopiperidine	EPA 8270C	Mevinphos	EPA 8141A
N-Nitrosopyrrolidine	EPA 8270C	NALED	EPA 8141A
		Parathion ethyl	EPA 8141A

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Organophosphate Pesticides		Polynuclear Aromatic Hydrocarbons	
Phorate	EPA 8141A	Acenaphthene	EPA 8270C
Ronnel	EPA 8141A		EPA 8310
Tokuthion	EPA 8141A	Acenaphthylene	EPA 8270C
Trichlorfon	EPA 8141A		EPA 8310
Trichloronate	EPA 8141A	Anthracene	EPA 8270C
Phthalate Esters		•	EPA 8310
Benzyl butyl phthalate	EPA 8270C	Benzo(a)anthracene	EPA 8270C
Bis(2-ethylhexyl) phthalate	EPA 8270C	•	EPA 8310
, , , , , , , , , , , , , , , , , , , ,	EPA 8270C	Benzo(a)pyrene	EPA 8270C
Diethyl phthalate	EPA 8270C		EPA 8310
Dimethyl phthalate	EPA 8270C	Benzo(b)fluoranthene	EPA 8270C
Di-n-butyl phthalate			EPA 8310
Di-n-octyl phthalate	EPA 8270C	Benzo(ghi)perylene	EPA 8270C
Polychlorinated Biphenyls			EPA 8310
PCB-1016	EPA 8082	Benzo(k)fluoranthene	EPA 8270C
PCB-1221	EPA 8082	Chrysene	EPA 8270C
PCB-1232	EPA 8082	·	EPA 8310
PCB-1242	EPA 8082	Dibenzo(a,h)anthracene	EPA 8270C
PCB-1248	EPA 8082		EPA 8310
PCB-1254	EPA 8082	Fluoranthene	EPA 8270C
PCB-1260	EPA 8082		EPA 8310
Polynuclear Aromatic Hydrocarbons		Fluorene	EPA 8270C
7,12-Dimethylbenzyl (a) anthracene	EPA 8270C		EPA 8310
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Polynuclear Aromatic Hydrocarbo	ons	Purgeable Aromatics	
Indeno(1,2,3-cd)pyrene	EPA 8270C	1,2,4-Trimethylbenzene	EPA 8021B
	EPA 8310		EPA 8260B
Naphthalene	EPA 8260B	1,2-Dichlorobenzene	EPA 8260B
	EPA 8270C	1,3,5-Trimethylbenzene	EPA 8021B
	EPA 8310		EPA 8260B
Phenanthrene	EPA 8270C	1,3-Dichlorobenzene	EPA 8260B
	EPA 8310	1,4-Dichlorobenzene	EPA 8260B
Pyrene	EPA 8270C	2-Chlorotoluene	EPA 8260B
	EPA 8310	4-Chlorotoluene	EPA 8260B
Priority Pollutant Phenols		Benzene	EPA 8021B
2,4,6-Trichlorophenol	EPA 8270C		EPA 8260B
2,4-Dichlorophenol	EPA 8270C	Bromobenzene	EPA 8260B
2,4-Dimethylphenol	EPA 8270C	Chlorobenzene	EPA 8260B
2,4-Dinitrophenol	EPA 8270C	Ethyl benzene	EPA 8021B
2-Chlorophenol	EPA 8270C		EPA 8260B
2-Methyl-4,6-dinitrophenol	EPA 8270C	Isopropylbenzene	EPA 8021B
2-Methylphenol	EPA 8270C	n-Butylbenzene	EPA 8260B
2-Nitrophenol	EPA 8270C	sec-Butylbenzene	EPA 8021B
4-Chloro-3-methylphenol	EPA 8270C		EPA 8260B
4-Methylphenol	EPA 8270C	Styrene	EPA 8021B
4-Nitrophenol	EPA 8270C		EPA 8260B
Pentachiorophenol	EPA 8270C	tert-Butylbenzene	EPA 8021B
Phenol	EPA 8270C		EPA 8260B
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Purgeable Aromatics		Purgeable Halocarbons	
Toluene	EPA 8021B	Bromoform	EPA 8260B
	EPA 8260B	Bromomethane	EPA 8021B
Total Xylenes	EPA 8021B	Carbon tetrachloride	EPA 8260B
	EPA 8260B	Chloroethane	EPA 8260B
Purgeable Halocarbons		Chloroform	EPA 8021B
1,1,1,2-Tetrachloroethane	EPA 8260B	•	EPA 8260B
1,1,1-Trichloroethane	EPA 8260B	Chloromethane	EPA 8021B
1,1,2,2-Tetrachloroethane	EPA 8260B	•	EPA 8260B
1,1,2-Trichloroethane	EPA 8260B	cis-1,2-Dichloroethene	EPA 8260B
1,1-Dichloroethane	EPA 8021B	cis-1,3-Dichloropropene	EPA 8260B
i, i-bionoroemane	EPA 8260B	Dibromochloromethane	EPA 8021B
1.1-Dichloroethene	EPA 8260B		EPA 8260B
1,1-Dichloropropene	EPA 8260B	Dichlorodifluoromethane	EPA 8021B
1,2,3-Trichloropropane	EPA 8260B		EPA 8260B
1,2-Dibromo-3-chloropropane	EPA 8260B	Methylene chloride	EPA 8021B
1,2-Dichloroethane	EPA 8260B		EPA 8260B
1,2-Dichloropropane	EPA 8260B	Tetrachloroethene	EPA 8260B
1,3-Dichloropropane	EPA 8260B	trans-1,2-Dichloroethene	EPA 8260B
2,2-Dichloropropane	EPA 8260B	trans-1,3-Dichloropropene	EPA 8260B
2-Chloroethylvinyl ether	EPA 8260B	Trichloroethene	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B	Trichlorofluoromethane	EPA 8260B
Bromochloromethane	EPA 8260B	Vinyl chloride	EPA 8260B
Bromodichloromethane	EPA 8260B		

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		Oani Valalila Oanniaa	
Purgeable Organics		Semi-Volatile Organics	
1,4-Dioxane	EPA 8260B	Phenacetin	EPA 8270C
2-Butanone (Methylethyl ketone)	EPA 8260B	Safrole	EPA 8270C
2-Hexanone	EPA 8260B		
4-Methyl-2-Pentanone	EPA 8260B	•	
Acetone	EPA 8260B		
Acetonitrile	EPA 8260B		
Carbon Disulfide	EPA 8260B		
isobutyl alcohol	EPA 8260B		
Methyl tert-butyl ether	EPA 8260B		
o-Toluidine	EPA 8270C		
Propionitrile	EPA 8260B		
Vinyl acetate	EPA 8260B		
Semi-Volatile Organics			
2-Methylnaphthalene	EPA 8270C		
4-Amino biphenyl	EPA 8270C		•
Acetophenone	EPA 8270C		
Benzoic Acid	EPA 8270C		
Benzyl alcohol	EPA 8270C		,
Dibenzofuran	EPA 8270C		
Ethyl methanesulfonate	EPA 8270C		
Isosafrole	EPA 8270C		
Methyl methanesulfonate	EPA 8270C		

Serial No.: 29048

O,O,O-Triethyl phosphorothioate

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**EPA 8270C** 



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**Amines** 

Diphenylamine

EPA 8270C -

Organophosphate Pesticides

Parathion methyl

EPA 8141A

**Priority Pollutant Phenois** 

2,4,5-Trichlorophenol

**EPA 8270C** 

**Purgeable Organics** 

Ethylene Glycol

**EPA 8260B** 

Semi-Volatile Organics

Aramite

**EPA 8270C** 

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All approved analytes are listed below:

Acrylates		Purgeable Halocarbons	
Acrylonitrile	EPA TO-15	1,1,1-Trichloroethane	EPA TO-14A
Methyl methacrylate	EPA TO-15	1,1,2,2-Tetrachioroethane	EPA TO-15
Purgeable Aromatics		1,1,2-Trichloroethane	EPA TO-14A
1,2,4-Trimethylbenzene	EPA TO-14A		EPA TO-15
1,2-Dichlorobenzene	EPA TO-14A	1,1,2-Trifluoro-1,2,2-Trichloroethane	EPA TO-14A
	EPA TO-15	1,1-Dichloroethane	EPA TO-14A
1,3,5-Trimethylbenzene	EPA TO-14A		EPA TO-15
1,3-Dichlorobenzene	EPA TO-14A	1,1-Dichloroethene	EPA TO-14A
1,4-Dichlorobenzene	EPA TO-14A		EPA TO-15
	EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane	EPA TO-14A
Benzene	EPA TO-14A	1,2-Dichloroethane	EPA TO-14A
	EPA TO-15		EPA TO-15
Chlorobenzene	EPA TO-14A	1,2-Dichloropropane	EPA TO-14A
	EPA TO-15		EPA TO-15
Ethyl benzene	EPA TO-14A	Bromoform	EPA TO-15
<b>,</b>	EPA TO-15	Bromomethane	EPA TO-15
Styrene	EPA TO-14A	Carbon tetrachloride	EPA TO-14A
	EPA TO-15		EPA TO-15
Toluene	EPA TO-14A	Chloroethane	EPA TO-14A
. 0.00.10	EPA TO-15		EPA TO-15
Total Xylenes	EPA TO-14A	Chloroform	EPA TO-14A
i otal Aylonos	EPA TO-15		EPA TO-15
	LI // 10 10	Chloromethane	EPA TO-14A

Serial No.: 29050



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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All approved analytes are listed below:

### Purgeable Halocarbons

Chloromethane	EPA TO-15
cis-1,2-Dichloroethene	EPA TO-14A
	EPA TO-15
cis-1,3-Dichloropropene	EPA TO-15
Dichlorodifluoromethane	EPA TO-14A
Methylene chloride	EPA TO-14A
	EPA TO-15
Tetrachloroethene	EPA TO-14A
	EPA TO-15
trans-1,2-Dichloroethene	EPA TO-15
trans-1,3-Dichloropropene	EPA TO-15
Trichloroethene	EPA TO-14A
	EPA TO-15
Trichlorofluoromethane	EPA TO-14A
Vinyl chloride	EPA TO-14A
	EPA TO-15
Volatile Chlorinated Organics	
Benzyl chloride	EPA TO-14A
	EPA TO-15
Volatile Organics	

Serial No.: 29050

Vinyl acetate

2-Butanone (Methylethyl ketone)

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EPA TO-15 EPA TO-15



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued April 1, 2006

### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

DR. TIMOTHY S. OOSTDYK LANCASTER LABORATORIES INC 2425 NEW HOLLAND PIKE LANCASTER, PA 17601-5994 NY Lab Id No: 10670 EPA Lab Code: PA00009

is hereby APPROVED as an Environmental Laboratory for the category ENVIRONMENTAL ANALYSES ANALYTICAL SERVICES PROTOCOL All approved subcategories and/or analytes are listed below:

CLP PCB/Pesticides
CLP Semi-Volatile Organics
CLP Volatile Organics
CLP Inorganics

Serial No.: 29051

# Attachment G

Laboratory Qualifications for Pace Analytical Services, Inc.





### Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

### certifies

M-PA1457

PACE ANALYTICAL SERVICES INC 5203 TRIANGLE LN EXPORT, PA 15632-0000

Laboratory Director: JAMES H. DODSWORTH

for the analysis of NON POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued:

20 NOV 2006

Expires:

30 JUN 2007

Director, Division of Environmental Analysis

Vacar Q. Parcarlo

# COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of:

20 NOV 2006

M-PA1457

PACE ANALYTICAL SERVICES INC

EXPORT PA

NON POTABLE WATER (CHEMIS	TRY)	Effective Date	06 OCT 2006	Expiration Date	30 JUN 2007
Analytes a	nd Methods				
ALUMINUM	EPA 200.7				
ANTIMONY	EPA 200.7				
ARSENIC	EPA 200.7				
BERYLLIUM	EPA 200.7				
CADMIUM	EPA 200.7				
CHROMIUM	EPA 200.7				
COBALT	EPA 200.7				
COPPER	EPA 200.7				
IRON	EPA 200.7				
LEAD	EPA 200.7				
MANGANESE	EPA 200.7				
MERCURY	EPA 245.1				
MOLYBDENUM	EPA 200.7				
NICKEL	EPA 200.7				
SELENIUM	EPA 200.7				
SILVER	EPA 200.7				
THALLIUM	EPA 200.7				
TITANIUM	EPA 200.7				
VANADIUM	EPA 200.7				
ZINC	EPA 200.7				
PH	EPA 150.1				
TOTAL DISSOLVED SOLIDS	EPA 160.1				
HARDNESS (CACO3), TOTAL	EPA 200.7				
CALCIUM	EPA 200.7				
MAGNESIUM	EPA 200.7				
SODIUM	EPA 200.7				
POTASSIUM	EPA 200.7				
CYANIDE, TOTAL	EPA 335.2				
NON-FILTERABLE RESIDUE	EPA 160.2				
VOLATILE HALOCARBONS	EPA 624				
VOLATILE AROMATICS	EPA 624				
CHLORDANE	EPA 608				
ALDRIN	EPA 608				
DIELDRIN	EPA 608				
DDD	EPA 608				
DDE	EPA 608				
DDT	EPA 608				
HEPTACHLOR	EPA 608				
HEPTACHLOR EPOXIDE	EPA 608				
POLYCHLORINATED BIPHENYLS (WATE	F EPA 608				



### COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Senator William X. Wall Experiment Station

MITT ROMNEY Governor

KERRY HEALEY Lieutenant Governor ROBERT W. GOLLEDGE, Jr. Secretary

> ARLEEN O"DONNELL Commissioner

November 30, 2006

M-PA1457 Mr. James H. Dodsworth Pace Analytical Services, Inc. 5203 Triangle Lane Export, Pennsylvania 15632

Dear Mr. Dodsworth:

Enclosed are a revised Massachusetts environmental laboratory certificate and list of certified parameters for your laboratory. The certificate and certified parameter list reflect the changes in scope of certification that were requested by Ms. Adrinnia Washington in her letter to us that we received on November 22,

If you have any questions regarding the Massachusetts Laboratory Certification Program, please contact this office.

Sincerely,

Ann Marie Allen

Director, Laboratory Certification Office

un man tille

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued September 15, 2006

#### **CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. NILS K. MELBERG
PACE ANALYTICAL SERVICES, INC - GREEN BAY # 2
1795 INDUSTRIAL DRIVE
GREEN BAY, WI 54302

NY Lab Id No: 11887 EPA Lab Code: W101104

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved analytes are listed below:

Acrylates		Purgeable Aromatics	
Acrolein (Propenal)	EPA 624	1,2-Dichlorobenzene	EPA 8260B
	EPA 8260B	1,3-Dichlorobenzene	EPA 624
Acrylonitrile	EPA 624		EPA 8260B
	EPA 8260B	1,4-Dichlorobenzene	EPA 624
Ethyl methacrylate	EPA 8260B		EPA 8260B
Methyl acrylonitrile	EPA 8260B	Benzene	EPA 624
Methyl methacrylate	EPA 8260B		EPA 8021B
Chlorinated Hydrocarbons			EPA 8260B
1,2,3-Trichlorobenzene	EPA 8260B	Chlorobenzene	EPA 624
1,2,4-Trichlorobenzene	EPA 8260B		EPA 8260B
Hexachlorobutadiene	EPA 8260B	Ethyl benzene	EPA 624
Fuel Owner and a			EPA 8021B
Fuel Oxygenates			EPA 8260B
Methyl tert-butyl ether	EPA 8021B	Styrene	EPA 8260B
	EPA 8260B	Toluene	EPA 624
Microextractables			EPA 8021B
1,2-Dibromo-3-chloropropane	EPA 8260B		EPA 8260B
1,2-Dibromoethane	EPA 8260B	Total Xylenes	EPA 624
Polynuclear Aromatics			EPA 8021B
Naphthalene	EPA 8260B		EPA 8260B
Dumaahla Anamatin		Purgeable Halocarbons	
Purgeable Aromatics		1.1.1.2-Tetrachloroethane	EPA 8260B
1,2-Dichlorobenzene	EPA 624	.,.,.,. , oudonorodnate	LI A 0200B

Serial No.: 30870



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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GREEN BAY, WI 54302

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Purgeable Halocarbons		Purgeable Halocarbons	
1,1,1-Trichloroethane	EPA 624	Bromodichloromethane	EPA 624
	EPA 8260B		EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 624	Bromoform	EPA 624
	EPA 8260B		EPA 8260B
1,1,2-Trichloroethane	EPA 624	Bromomethane	EPA 624
	EPA 8260B		EPA 8260B
1,1-Dichloroethane	EPA 624	Carbon tetrachloride	EPA 624
	EPA 8260B		EPA 8260B
1,1-Dichloroethene	EPA 624	Chloroethane	EPA 624
	EPA 8260B		EPA 8260B
1,1-Dichloropropene	EPA 8260B	Chloroform	EPA 624
1,2,3-Trichloropropane	EPA 8260B		EPA 8260B
1,2-Dichloroethane	EPA 624	Chloromethane	EPA 624
	EPA 8260B		EPA 8260B
1,2-Dichloropropane	EPA 624	cis-1,2-Dichloroethene	EPA 8260B
	EPA 8260B	cis-1,3-Dichloropropene	EPA 624
1,3-Dichloropropane	EPA 8260B		EPA 8260B
2,2-Dichloropropane	EPA 8260B	cis-1,4-Dichloro-2-butene	EPA 8260B
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260B	Dibromochloromethane	EPA 624
2-Chloroethylvinyl ether	EPA 624		EPA 8260B
·	EPA 8260B	Dibromomethane	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B	Dichlorodifluoromethane	EPA 8260B
Bromochloromethane	EPA 8260B	Methylene chloride	EPA 624

Serial No.: 30870



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Purgeable Halocarbons
Mothydono oblorido

#### **Purgeable Organics**

ruigeable naiocalboiis		Purgeable Organics	
Methylene chloride	EPA 8260B	Isobutyl alcohol	EPA 8260B
Tetrachloroethene	EPA 624	Methyl iodide	EPA 8260B
	EPA 8260B	Vinyl acetate	EPA 8260B
trans-1,2-Dichloroethene	EPA 624		
	EPA 8260B		
trans-1,3-Dichloropropene	EPA 624	•	
	EPA 8260B		
trans-1,4-Dichloro-2-butene	EPA 8260B		
Trichloroethene	EPA 624		
	EPA 8260B		
Trichlorofluoromethane	EPA 624		
	EPA 8260B		
Vinyl chloride	EPA 624		
	EPA 8260B		
Purgeable Organics			
1,4-Dioxane	EPA 8260B		
2-Butanone (Methylethyl ketone)	EPA 8260B		
2-Hexanone	EPA 8260B		
4-Methyl-2-Pentanone	EPA 8260B		

Serial No.: 30870

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.

**EPA 8260B** 

**EPA 8260B** 

**EPA 8260B** 



Acetone

Acetonitrile

Carbon Disulfide

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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MR. NILS K. MELBERG PACE ANALYTICAL SERVICES, INC - GREEN BAY # 2 1795 INDUSTRIAL DRIVE GREEN BAY, WI 54302

NY Lab Id No: 11887 EPA Lab Code: W101104

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below:

Acrylates		Purgeable Aromatics	
Acrolein (Propenal)	EPA 8260B	Chlorobenzene	EPA 8260B
Acrylonitrile	EPA 8260B	Ethyl benzene	EPA 8021B
Ethyl methacrylate	EPA 8260B		EPA 8260B
Methyl acrylonitrile	EPA 8260B	Isopropylbenzene	EPA 8260B
Methyl methacrylate	EPA 8260B	n-Butylbenzene	EPA 8260B
Chlorinated Hydrocarbons		n-Propylbenzene	EPA 8260B
1,2,4-Trichlorobenzene	EPA 8260B	p-Isopropyltoluene (P-Cymene)	EPA 8260B
Hexachlorobutadiene	EPA 8260B	sec-Butylbenzene	EPA 8260B
B	•	Styrene	EPA 8260B
Polynuclear Aromatic Hydrocarbons		tert-Butylbenzene	EPA 8260B
Naphthalene	EPA 8260B	Toluene	EPA 8021B
Purgeable Aromatics			EPA 8260B
1,2,4-Trimethylbenzene	EPA 8021B	Total Xylenes	EPA 8021B
	EPA 8260B		EPA 8260B
1,2-Dichlorobenzene	EPA 8260B	Purgeable Halocarbons	
1,3,5-Trimethylbenzene	EPA 8260B	1,1,2-Tetrachloroethane	EPA 8260B
1,3-Dichlorobenzene	EPA 8260B	1,1,1-Trichloroethane	EPA 8260B
1,4-Dichlorobenzene	EPA 8260B	1,1,2,2-Tetrachloroethane	EPA 8260B
2-Chlorotoluene	EPA 8260B	1,1,2-Trichloroethane	EPA 8260B
4-Chlorotoluene	EPA 8260B	1,1-Dichloroethane	EPA 8260B
Benzene	EPA 8021B	1,1-Dichloroethene	EPA 8260B
	EPA 8260B	1,1-Dichloropropene	EPA 8260B
Bromobenzene	EPA 8260B	1,2,3-Trichloropropane	EPA 8260B

Serial No.: 30900



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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Purgeable Halocarbons		Purgeable Halocarbons	
1,2-Dibromo-3-chloropropane	EPA 8260B	Methylene chloride	EPA 8260B
1,2-Dichloroethane	EPA 8260B	Tetrachloroethene	EPA 8260B
1,2-Dichloropropane	EPA 8260B	trans-1,2-Dichloroethene	ÉPA 8260B
1,3-Dichloro-2-propanol	EPA 8260B	trans-1,3-Dichloropropene	EPA 8260B
1,3-Dichloropropane	EPA 8260B	trans-1,4-Dichloro-2-butene	EPA 8260B
2,2-Dichloropropane	EPA 8260B	Trichloroethene	EPA 8260B
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260B	Trichlorofluoromethane	EPA 8260B
2-Chloroethylvinyl ether	EPA 8260B	Vinyl chloride	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B	Purgeable Organics	
Bromochloromethane	EPA 8260B	1,4-Dioxane	EPA 8260B
Bromodichloromethane	EPA 8260B	2-Butanone (Methylethyl ketone)	EPA 8260B
Bromoform	EPA 8260B	2-Hexanone	EPA 8260B
Bromomethane	EPA 8260B	4-Methyl-2-Pentanone	EPA 8260B
Carbon tetrachloride	EPA 8260B	Acetone	EPA 8260B
Chloroethane	EPA 8260B	Acetonitrile	EPA 8260B
Chloroform	EPA 8260B	Carbon Disulfide	EPA 8260B
Chloromethane	EPA 8260B	Ethyl Acetate	EPA 8260B
cis-1,2-Dichloroethene	EPA 8260B	Isobutyl alcohol	EPA 8260B
cis-1,3-Dichloropropene	EPA 8260B	Methyl tert-butyl ether	EPA 8021B
cis-1,4-Dichloro-2-butene	EPA 8260B	mount to the basis of the	EPA 8260B
Dibromochloromethane	EPA 8260B	Propionitrile	EPA 8260B
Dibromomethane	EPA 8260B	Vinyl acetate	EPA 8260B
Dichlorodifluoromethane	EPA 8260B	- 117, 4001410	LI 7. 3200D

Serial No.: 30900



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MR. NILS K. MELBERG PACE ANALYTICAL SERVICES, INC. - GREEN BAY #1 1241 BELLEVUE STREET GREEN BAY, WI 54302 NY Lab Id No: 11888 EPA Lab Code: WI01103

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved analytes are listed below:

Amines		<b>Chlorinated Hydrocarbons</b>	
2-Nitroanitine	EPA 8270C	Hexachlorocyclopentadiene	EPA 625
3-Nitroanitine	EPA 8270C		EPA 8270C
4-Chloroaniline	EPA 8270C	Hexachloroethane	EPA 625
4-Nitroaniline	EPA 8270C		EPA 8270C
Aniline	EPA 8270C	Demand	
Carbazole	EPA 8270C	Biochemical Oxygen Demand	SM 18-20 5210B
Pyridine	EPA 625	Carbonaceous BOD	SM 18-20 5210B
	EPA 8270C	Chemical Oxygen Demand	EPA 410.4
Benzidines		Haloethers	
3,3' -Dichlorobenzidine	EPA 625	4-Bromophenylphenyl ether	EPA 625
	EPA 8270C		EPA 8270C
Benzidine	EPA 625	4-Chlorophenylphenyl ether	EPA 625
	EPA 8270C	,	EPA 8270C
Chlorinated Hydrocarbons		Bis (2-chloroisopropyl) ether	EPA 625
1,2,4-Trichlorobenzene	EPA 625		EPA 8270C
•	EPA 8270C	Bis(2-chloroethoxy)methane	EPA 625
2-Chloronaphthalene	EPA 625		EPA 8270C
	EPA 8270C	Bis(2-chloroethyl)ether	EPA 625
Hexachlorobenzene	EPA 625		EPA 8270C
	EPA 8270C	Mineral	
Hexachlorobutadiene	EPA 625	Acidity	EPA 305.1
	EPA 8270C	Alkalinity	EPA 310.2

Serial No.: 30872



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved analytes are listed below:

Mineral		Nitrosoamines	
Chloride	EPA 300.0	N-Nitrosodiphenylamine	EPA 8270C
	EPA 9056	Nutrient	
Fluoride, Total	EPA 300.0	Ammonia (as N)	EPA 350.1
	EPA 9056	Kjeldahl Nitrogen, Total	EPA 351.2
Hardness, Total	SM 18-20 2340B	Nitrate (as N)	EPA 300.0
Sulfate (as SO4)	EPA 300.0		EPA 353.2
	EPA 9056		EPA 9056
Nitroaromatics and Isophorone		Nitrite (as N)	EPA 300.0
2,4-Dinitrotoluene	EPA 625		EPA 353.2
	EPA 8270C	·	EPA 9056
2,6-Dinitrotoluene	EPA 625	Phosphorus, Total	EPA 365.4
	EPA 8270C	Phthalate Esters	
Isophorone	EPA 625	Benzyl butyl phthalate	EPA 625
	EPA 8270C		EPA 8270C
Nitrobenzene	EPA 625	Bis(2-ethylhexyl) phthalate	EPA 625
	EPA 8270C	, , , , , ,	EPA 8270C
Nitrosoamines		Diethyl phthalate	EPA 625
N-Nitrosodimethylamine	EPA 625		EPA 8270C
	EPA 8270C	Dimethyl phthalate	EPA 625
N-Nitrosodi-n-propylamine	EPA 625		EPA 8270C
	EPA 8270C	Di-n-butyl phthalate	EPA 625
N-Nitrosodiphenylamine	EPA 625		EPA 8270C

Serial No.: 30872



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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

	Polynuclear Aromatics	
EPA 625	Dibenzo(a,h)anthracene	EPA 8270C
EPA 8270C	Fluoranthene	EPA 625
		EPA 8270C
EPA 625	Fluorene	EPA 625
EPA 8270C		EPA 8270C
EPA 625	Indeno(1,2,3-cd)pyrene	EPA 625
EPA 8270C		EPA 8270C
EPA 625	Naphthalene	EPA 625
EPA 8270C		EPA 8270C
EPA 625	Phenanthrene	EPA 625
EPA 8270C		EPA 8270C
EPA 625	Pyrene	EPA 625
EPA 8270C		EPA 8270C
EPA 625	Priority Pollutant Phenois	
EPA 8270C	2,4,5-Trichlorophenol	EPA 8270C
EPA 625	2,4,6-Trichlorophenol	EPA 625
EPA 8270C		EPA 8270C
EPA 625	2,4-Dichlorophenol	EPA 625
EPA 8270C		EPA 8270C
EPA 625	2,4-Dimethylphenol	EPA 625
EPA 8270C		EPA 8270C
EPA 625	2,4-Dinitrophenol	EPA 625
	EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C  EPA 625  EPA 8270C	EPA 625 EPA 8270C  EPA 625 EPA 8270C  EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C EPA 625 EPA 8270C

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is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Priority Pollutant Phenols		Purgeable Aromatics	
2,4-Dinitrophenol	EPA 8270C	1,3-Dichlorobenzene	EPA 625
2,6-Dichlorophenol	EPA 8270C		EPA 8270C
2-Chlorophenol	EPA 625	1,4-Dichlorobenzene	EPA 625
	EPA 8270C		EPA 8270C
2-Methyl-4,6-dinitrophenol	EPA 625	Residue	
	EPA 8270C	Solids, Total	EPA 160.3
2-Methylphenol	EPA 8270C	Solids, Total Dissolved	EPA 160.1
2-Nitrophenol	EPA 625	Solids, Total Suspended	EPA 160.2
	EPA 8270C	Collab, Fotal Gasportaga	2.00.2
3-Methylphenol	EPA 8270C	Semi-Volatile Organics	
4-Chloro-3-methylphenol	EPA 625	2-Methylnaphthalene	EPA 8270C
	EPA 8270C	Acetophenone	EPA 8270C
4-Methylphenol	EPA 8270C	Benzoic Acid	EPA 8270C
4-Nitrophenol	EPA 625	Benzyl alcohol	EPA 8270C
	EPA 8270C	Dibenzofuran	EPA 8270C
Pentachlorophenol	EPA 625	Wastewater Metals I	
	EPA 8270C	Barlum, Total	EPA 6010B
Phenol	EPA 625		EPA 6020
	EPA 8270C	Cadmium, Total	EPA 6010B
Purgeable Aromatics			EPA 6020
1,2-Dichlorobenzene	EPA 625	Calcium, Total	EPA 6010B
	EPA 8270C	Chromium, Total	EPA 6010B
		•	EPA 6020

Serial No.: 30872



Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007 Issued September 15, 2006

#### CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. NILS K. MELBERG PACE ANALYTICAL SERVICES, INC. - GREEN BAY #1 1241 BELLEVUE STREET GREEN BAY, WI 54302 NY Lab Id No: 11888 EPA Lab Code: WI01103

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER All approved analytes are listed below:

Wastewater Metals I		Wastewater Metals II	
Copper, Total	EPA 6010B	Beryllium, Total	EPA 6020
•	EPA 6020	Chromium VI	EPA 7196A
Iron, Total	EPA 6010B		SM 18-19 3500-Cr D
Lead, Total	EPA 6010B	Mercury, Total	EPA 7470A
	EPA 6020	Selenium, Total	EPA 6010B
Magnesium, Total	EPA 6010B	·	EPA 6020
Manganese, Total	EPA 6010B	Vanadium, Total	EPA 6010B
	EPA 6020		EPA 6020
Nickel, Total	EPA 6010B	Zinc, Total	EPA 6010B .
	EPA 6020		EPA 6020
Potassium, Total	EPA 6010B	Wastewater Metals III	
Silver, Total	EPA 6010B	Cobalt, Total	EPA 6010B
	EPA 6020	John Harris	EPA 6020
Sodium, Total	EPA 6010B	Molybdenum, Total	EPA 6010B
Wastewater Metals II			EPA 6020
Aluminum, Total	EPA 6010B	Thallium, Total	EPA 6010B
	EPA 6020		EPA 6020
Antimony, Total	EPA 6010B	Tin, Total	EPA 6010B
	EPA 6020	Titanium, Total	EPÁ 6010B
Arsenic, Total	EPA 6010B	Wastewater Miscellaneous	
	EPA 6020	Boron, Total	EPA 6010B
Beryllium, Total	EPA 6010B	Bromide	EPA 300.0

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#### **Wastewater Miscellaneous**

Bromide	EPA 9056
Color	EPA 110.2
Cyanide, Total	EPA 335.4
	EPA 9012A
Hydrogen Ion (pH)	EPA 150.1
	EPA 9040B
PhenoIs	EPA 420.2
	EPA 9065
Specific Conductance	EPA 120.1
	EPA 9050
Sulfide (as S)	EPA 376.1
	EPA 9034

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Amines		Haloethers	
1,2-Diphenylhydrazine	EPA 8270C	4-Bromophenylphenyl ether	EPA 8270C
2-Nitroaniline	EPA 8270C	4-Chlorophenylphenyl ether	EPA 8270C
3-Nitroaniline	EPA 8270C	Bis (2-chloroisopropyl) ether	EPA 8270C
4-Chloroaniline	EPA 8270C	Bis(2-chloroethoxy)methane	EPA 8270C
4-Nitroaniline	EPA 8270C	Bis(2-chloroethyl)ether	EPA 8270C
Aniline	EPA 8270C	Metals I	
Carbazole	EPA 8270C	Barium, Total	EPA 6010B
Benzidines			EPA 6020
3,3' -Dichlorobenzidine	EPA 8270C	Cadmium, Total	EPA 6010B
Benzidine	EPA 8270C		EPA 6020
Characteristic Testing		Calcium, Total	EPA 6010B
Corrosivity	EPA 9040B	Chromium, Total	EPA 6010B
Ignitability	EPA 1010		EPA 6020
TCLP	EPA 1311	Copper, Total	EPA 6010B
Chlorinated Hydrocarbons		lean Tatal	EPA 6020
1,2,4-Trichlorobenzene	EPA 8270C	Iron, Total	EPA 6010B
2-Chloronaphthalene	EPA 8270C	Lead, Total	EPA 6010B
Hexachlorobenzene	EPA 8270C	Magnesium Tatal	EPA 6020
Hexachlorobutadiene	EPA 8270C	Magnesium, Total	EPA 6010B
Hexachlorocyclopentadiene	EPA 8270C	Manganese, Total	EPA 6010B
Hexachloroethane	EPA 8270C	Aliabat Tatal	EPA 6020
		Nickel, Total	EPA 6010B
		•	EPA 6020

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Metals I		Metals III	
Potassium, Total	EPA 6010B	Cobalt, Total	EPA 6020
Silver, Total	EPA 6010B	Molybdenum, Total	EPA 6010B
	EPA 6020		EPA 6020
Sodium, Total	EPA 6010B	Thallium, Total	EPA 6010B
Metals II			EPA 6020
Aluminum, Total	EPA 6010B	Tin, Total	EPA 6010B
	EPA 6020	Titanium, Total	EPA 6010B
Antimony, Total	EPA 6010B	Minerals	
	EPA 6020	Bromide	EPA 9056
Arsenic, Total	EPA 6010B	Miscellaneous	
	EPA 6020	Boron, Total	EPA 6010B
Beryllium, Total	EPA 6010B	Cyanide, Total	EPA 9012A
	EPA 6020	Hydrogen Ion (pH)	EPA 9040B
Mercury, Total	EPA 7471A	riyarogen for (pri)	EPA 9045C
Selenium, Total	EPA 6010B	Phenois	EPA 9065
	EPA 6020	Specific Conductance	EPA 9050
Vanadium, Total	EPA 6010B	Sulfide (as S)	EPA 9030B
	EPA 6020	Sunde (as 3)	EPA 9030B EPA 9034
Zinc, Total	EPA 6010B		EPA 9034
	EPA 6020	Nitroaromatics and Isophorone	
Metals III		2,4-Dinitrotoluene	EPA 8270C
Cobalt, Total	EPA 6010B	2,6-Dinitrotoluene	EPA 8270C
		Isophorone	EPA 8270C

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Nitroaromatics and Isophorone	troaromatics and Isophorone Polynuclear Aromatic Hydrocarbons		ıs
Nitrobenzene	EPA 8270C	Benzo(a)pyrene	EPA 8270C
Pyridine	EPA 8270C	Benzo(b)fluoranthene	EPA 8270C
Nitrosoamines		Benzo(ghi)perylene	EPA 8270C
N-Nitrosodimethylamine	EPA 8270C	Benzo(k)fluoranthene	EPA 8270C
N-Nitrosodi-n-propylamine	EPA 8270C	Chrysene	EPA 8270C
N-Nitrosodiphenylamine	EPA 8270C	Dibenzo(a,h)anthracene	EPA 8270C
	217.02.00	Fluoranthene	EPA 8270C
Nutrients		Fluorene	EPA 8270C
Nitrate (as N)	EPA 9056	Indeno(1,2,3-cd)pyrene	EPA 8270C
Nitrite (as N)	EPA 9056	Naphthalene	EPA 8270C
Phthalate Esters		Phenanthrene	EPA 8270C
Benzyl butyl phthalate	EPA 8270C	Pyrene	EPA 8270C
Bis(2-ethylhexyl) phthalate	EPA 8270C	Priority Pollutant Phenols	
Diethyl phthalate	EPA 8270C	2,4,5-Trichlorophenol	EPA 8270C
Dimethyl phthalate	EPA 8270C	2,4,6-Trichlorophenol	EPA 8270C
Di-n-butyl phthalate	EPA 8270C	2,4-Dichlorophenol	EPA 8270C
Di-n-octyl phthalate	EPA 8270C	2,4-Dimethylphenol	EPA 8270C
Polynuclear Aromatic Hydrocarbons		2,4-Dinitrophenol	EPA 8270C
•		•	
Acenaphthene	EPA 8270C	2,6-Dichlorophenol	EPA 8270C
Acenaphthylene	EPA 8270C	2-Chlorophenol	EPA 8270C
Anthracene	EPA 8270C	2-Methyl-4,6-dinitrophenol	EPA 8270C
Benzo(a)anthracene	EPA 8270C	2-Methylphenol	EPA 8270C
		2-Nitrophenol	EPA 8270C

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#### **Priority Pollutant Phenois**

	•		
	3-Methylphenol	EPA 8270C	
	4-Chloro-3-methylphenol	EPA 8270C	
	4-Methylphenol	EPA 8270C	
	4-Nitrophenol	EPA 8270C	
	Pentachlorophenol	EPA 8270C	
	Phenol	EPA 8270C	
	Purgeable Aromatics		
	1,2-Dichlorobenzene	EPA 8270C	
	1,3-Dichlorobenzene	EPA 8270C	
	1,4-Dichlorobenzene	EPA 8270C	
3	emi-Volatile Organics		
	2-Methylnaphthalene	EPA 8270C	
	Acetophenone	EPA 8270C	
	Benzoic Acid	EPA 8270C	
	Benzyl alcohol	EPA 8270C	
	Dibenzofuran	EPA 8270C	

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