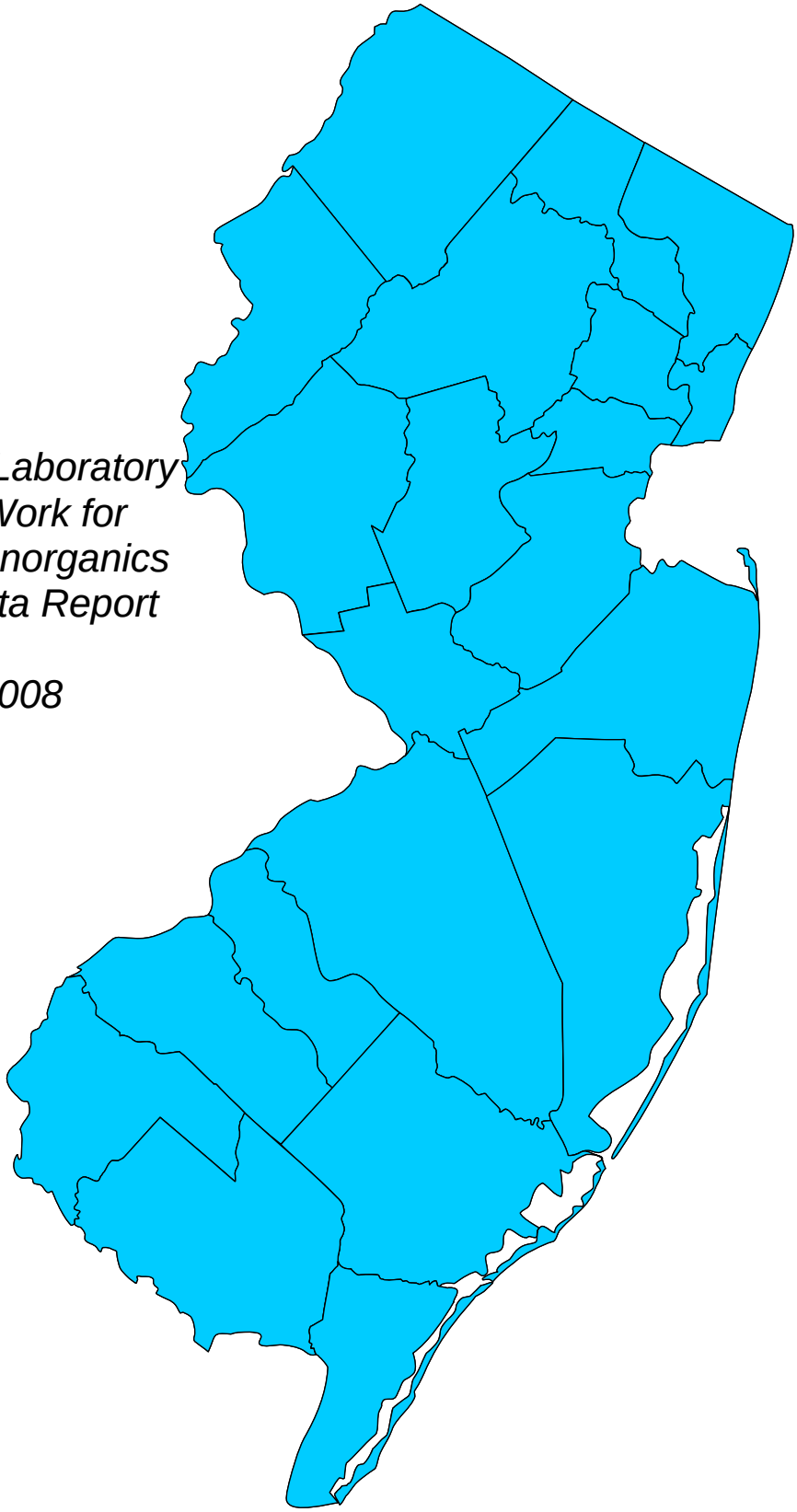
New Jersey Department of Environmental Protection
Site Remediation Program



NJDEP- USEPA Contract Laboratory Program Statement of Work for Organics (SOM01.2) and Inorganics (ILM05.4 and ISM0.X) Data Report Format
Appendix 1 March 2008

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1.0 INTRODUCTION

1.1 This appendix contains the format used for reporting analytical results obtained by conducting analyses under USEPA Contract Laboratory (USEPA CLP) Protocols. It presents instructions and the order in which the data are to be reported.

1.2 This Deliverable is applicable to Responsible Party Laboratories and State Contract Laboratories who are certified for the USEPA Contract Laboratory Protocols by the NJDEP Office of Quality Assurance and is the required deliverable for these methods.

1.3 The Contractor/Laboratory must follow all the requirements regarding scaling and presentation of chromatograms, spectra, manual integration requirements and quantitation reports as specified in the USEPA CLP Protocols and this Appendix.

1.4 The Appendix provides examples of the three reporting forms for this deliverable. The forms are the Title Page, Case Narrative and Methodology Form. These forms are required for the all state contract work and non contract work. Copies of these forms are located in Section 11.0 of this Appendix. Electronic Copies will also be provided upon request.

1.5 The Appendix provides examples of the NJDEP Chain of Custodies forms in Section 11.0. These are required forms for the all state contract work. Responsible Party Laboratories Chain of Custodies forms must contain all the same information. Examples of the Chain of Custody documentation used by NJDEP can be obtained electronically.

1.6 For all other reporting forms, the Contractor/Laboratory must generate the forms from their stand-alone Reporting Form Generation Software (such as Thruput Inc, Thru-Put Systems, Target, The Khemia Company or Environment Information System Corporation) that contains the information required by NJDEP.

1.7 The Microsoft™ Excel Spreadsheet that is used to report the data electronically on the NJDEP-CLP Data Summary Table cannot be used for the reporting forms.

1.8 All Laboratories must receive a written approval from NJDEP-SRP-Office of Data Quality (ODQ) prior to using any modified forms in Section 11.0. The NJDEP shall reject noncompliant forms and data packages.

1.9 A new section entitled “Original Documentation Section” (Section 5.8) shall be used for the submittal of the original documents that are associated with the Sample Delivery Group. The section shall contain various documents containing original signatures, original chain of custodies and shipping documentation.

1.10 The Contractor is required to comply with Exhibit A Section 4.2.3 of both the Organic and Inorganic SOW for all their submissions. This section in both SOWs is entitled “***Task III: Sample Reporting Requirements and Resubmission of Data”.***

1.11 Each Sample Delivery Group (20 samples or less) consists of a separate Extended Data Report (Section 5.0) and Summary Data Report (Section 10.0) and the associated electronic deliverables. Individual Sample Delivery Groups cannot be merged together to create a single data package.

Note: For Responsible Parties that are required to report analytical data by these methods, your contract laboratory must also comply with the sample custody

requirements of the USEPA CLP Program in addition to any State's requirements as specific in the Appendix. Your contract laboratory is required to follow all reporting requirements in this document to comply with the requirements of the NJDEP Technical Requirements for Site Remediation N.J.A.C. 7:26E; Appendix A Section C that requires the internal chain of custody to remain with the samples at all times and bear the name of the person assuming responsibility of the samples and the date.

2.0 GENERAL NJDEP CLP FORMAT REQUIREMENTS

2.1 The Contractor/Laboratory must submit the following deliverables to the NJDEP, other state users or the Responsible Party within the time frame established at the time of engagement.

2.2 The deliverable from the Contractor/Laboratory will consist of both the paper documents and electronic files.

2.3 Clearly label and complete the deliverable in accordance with instructions in this Appendix. Arrange the deliverable in the order specified in this Appendix.

2.4 The Original CLP Format Extended Data Report must contain the original chain of custody forms and original documents in the Original Documentation Section (See Section 5.4).

2.5 The CLP Format Summary Data Report must meet the requirements of this deliverable (See Section 10.0)

2.6 Do not submit raw QC data, sample preparation, shipping documentation, and standard data in the summary data report.

2.7 The original extended data report and data summary reports can be printed single sided or double sided. However, the original chain of custody forms and shipping documentation must be single sided.

2.8 The data summary forms must meet the reporting requirements of the USEPA CLP Protocols as specified in Exhibit B of each SOW.

2.9 Both data reports must be organized and labeled in accordance with instructions in this Appendix and the USEPA CLP Protocols.

2.10 Except where specified in this Appendix, the extended data report must comply with the order and format requirements of the USEPA CLP SOWs.

2.11 The entire document must be legible. The State shall reject data packages containing incomplete or illegible signatures and documentation.

2.12 Except for NJDEP Chain of Custody Forms and NJDEP Forms listed above, the laboratory is required to use USEPA CLP report forms that correspond to the SOW that is being reported. The use of forms from older SOWs is not acceptable.

2.13 For all NJDEP Contract work the ***original*** CLP Format Extended Data Report and CLP Format Summary Data Report and one copy of the CLP Format Summary Data Report must be submitted.

2.14 For Responsible Party work, the ***original*** CLP Format Extended Data Report and the copy of the CLP Format Summary Data Report must be submitted to the State for review.

2.15 Each batch of samples or sample delivery group (20 field samples or less) must have a separate set of data packages.

2.16 If an organic sample is diluted because a parameter concentration exceeded the upper calibration standard, the Contractor/Laboratory is required to report both the undiluted and diluted data sets of both acquisitions. If the parameter concentrations are such that the sample can be analyzed only at a dilution, the sample data set at the appropriate dilution and one data set at a more concentrated dilution must be submitted.

2.17 Both data reports must be securely bound along the left-hand margin of the report. Staples are not acceptable.

2.18 The extended data report must be sequentially paginated starting with the first page after the Table of Contents.

2.19 Electronic Deliverables are required for each Sample Delivery Group. Each Sample Delivery Group has it own set of Electronic Deliverables and must be submitted separately. The complete requirements are in Section 3.0 below of this Appendix.

3.0 ELECTRONIC DATA FILES DELIVERABLE REQUIREMENTS

3.1 STAGED ELECTRONIC DATA DELIVERABLE (SEDD) REQUIREMENTS

(When Required by the State)

The Staged Electronic Data Deliverable may be required for both the Organics and Inorganics (when the SOW changes from ILM05.4 to next SOW) Statements of Work. The Contractor must have the ability to generate compliant SEDD deliverable in the Stage 3 format. The Stage 3 SEDD is the required SEDD Deliverable for all Data unless specified by the State Contract Manager. Upon completion of the Stage 4 SEDD by the USEPA, Stage 4 will be the required deliverable.

3.2 ELECTRONIC FILES BY ELECTRONIC MAIL

The three electronic files (non SEDD) generated by the Contractor/Laboratory are to be submitted by electronic mail to the State Contract Manager/Responsible Party on the same day that the data package is due to the State/Responsible Party. Copies of these files will also be submitted to the State/Responsible Party on CD-ROM as required by Section 2.19 of this Appendix.

- NJDEP-USEPA CLP Data Summary Table
- The Electronic Data Deliverable Format
- The Electronic HZResult Table

3.3 FILES ON COMPACT DISC

The Compact Disc (CD) must have the laboratory logo and name of the laboratory as a hologram on the disc label. The SDG number must be on a sticker on the label. The

cover slip of cardboard must document the laboratory name, including a sticker with SDG number. The cover slip must be sealed shut for delivery to State/Responsible Party. The following files must be included on the CD.

NJDEP-USEPA CLP Data Summary Table File (Section 3.4)
Electronic Data Deliverable Format (Sample.Txt File) (Section 3.5)
HZresult File (Section 3.6)
Adobe™ Portable Document File (PDF) files of the Extended and the Summary Data Reports (Section 3.7)

3.4 NJDEP- USEPA CLP DATA SUMMARY TABLE

A NJDEP developed Excel Macro program is used on the NJDEP –USEPA CLP Data Summary Table generated by the laboratory. The table must be submitted in this specific format for the program to generate summary information. Any problems detected in the generation of the summary information by NJDEP that require correction by the Laboratory must be addressed.

3.4.1 Data from other methods cannot be reported with this data.

3.4.2 The cell format must be text format. This is known in Visual Basic for Applications (VBA) as "@." This causes each entry to be displayed exactly as entered.

3.4.3 Do not set the Print Area in any worksheet. Incorrectly setting of the Print Area will cause all the sample information not to be printed out.

3.4.4 The Contractor is required to input information that is required in the custom headers and footers of the worksheet for each sample. (Headers and Footers are as defined in the Microsoft™ Excel program.)

- The left header information is as follows:
  - Project Name
  - Field Sample Identification Number
  - Laboratory File Identification Number
  - SDG Number
- The right header information is as follows:
  - Project Number
  - Sample Date
  - Matrix Date
- The left footer information is as follows:
  - Laboratory Name
  - Laboratory City/State

If the Contractor/Laboratory needs instructions in formatting the header, the State Contract Manager must be contacted.

3.4.5 This table in a Microsoft Excel spreadsheet lists every target parameter that can be analyzed by this method. Only the target parameters required to be analyze by the Contractor/Laboratory are to be included in the file that is submitted to the State.

3.4.6 The files must be named with the Sample Delivery Group Number and end with ".XLS". An example of this form is in Section 15.0 of this Appendix.

3.4.7 A separate Excel worksheet within one Microsoft Excel™ workbook must be provided for each field sample.

3.4.8 A separate Excel worksheet must be generated for all diluted samples/fractions for any organic samples from the parent sample even if it contains only one fraction.

3.4.9 The Field Sample Identification Number must be used as the tab name of the sample worksheet.

3.4.10 The worksheet for each fraction is required to use the heading specified below for the method/units row. The units are to be inserted after the method name on the row. The % Solids entry is only required for nonaqueous samples.

- VOA Water methods Designations

  Volatiles SOM01.2VOAAN SIM
  Volatiles SOM01.2VOAAN TRACE
  Volatiles SOM01.2VOAAN TRAC TICs(up to 30 compounds)
  Volatiles SOM01.2VOAANW
  Volatiles SOM01.2VOAANW TICs (up to 30 compounds)

- VOA Soil Methods Designations

  Volatiles SOM01.2VOAANS
  Volatiles SOM01.2VOAAN TICs (up to 30 compounds)

- Semivolatiles Designations (all matrices)

  Semivolatiles SOM01.2SEMIAN SIM
  Semivolatiles SOM01.2SEMIAN
  Semivolatiles SOM01.2SEMIA TICs (up to 30 compounds)

- Pesticides Designations (all matrices)

  Pesticides

- PCBs Designations (all matrices)

  PCBs

- Inorganic Designations (all matrices)

  Mercury
  ICPAES Metals
  ICPMS Metals
  Cyanide

- Solids (%)

  Solids (%)

3.4.11 The dilution factor must be listed on the first row for each fraction (see 3.4.10 above) data in the worksheet for each sample below the method/units row. The dilution factor must be listed even if the dilution factor is 1.

3.4.12 For the QC samples generated by the laboratory such as the LCS, the Laboratory File Name must be used as the tab name of the sample worksheet. The name must also be the same that is used in the Print Setup header information.

3.4.13 The compound names cannot be changed. The names that must be used are listed in the USEPA CLP Protocols. These are the same names used by the NJDEP Laboratory Certification Program for this method.

3.4.14 The CAS numbers for any target compound cannot be changed from those required by the USEPA CLP SOWs.

3.4.15 The order of the target compounds on the table can be revised. All target compounds must be presented prior to the non-target compounds.

3.4.16 No notes are to be included in the table as to the acceptability of any target or non-target compound data.

3.4.17 The non-target compounds are to be reported at the end of the list of compounds for that particular fraction. The retention times are to be reported in the field labeled "Retention Time NT Only" column of the worksheet. Retention times are to be reported in minutes with two decimal places.

3.4.18 If a CAS number exists for a non-target compound, that number is to be inserted in the appropriate column.

3.4.19 The Column Labeled "Q" is for the laboratory applied qualifier based on the SOW requirements.

3.4.20 Compounds included in the total Alkanes results and reported in the Case Narrative are not to be listed on the table.

3.5 ELECTRONIC DATA DELIVERABLE FORMAT (SAMPLE.TXT FILE)

3.5.1 Character fields must present all alphabetic characters in the upper case. Submit this information electronically to the State/Responsible Party. Contain the data fields in a plain text file, with a file named "SAMPLE.TXT." Enter each data field on a separate line concluded by a carriage return line feed combination (ASCII characters 13 and 10).

3.5.2 The State provides a unique site identifier (eight alphanumeric characters) for sampling under this contract. For Responsible party work use the site name.

3.5.3 All Responsible Parties, for the Contract Number entry, use the word "None.".

3.5.4 All Responsible Parties, for the Report Format, use the word "USEPA CLP".

(The format below is an EXAMPLE ONLY).

ELECTRONIC DATA DELIVERABLES FORMAT TABLE			
FIELD NAME	**TYPE**	**LENGTH**	**COMMENT**
Site ID	Character	12	EPA ID for site.*
Site Name	Character	40	DEP site name.*
Initial Date Sampled	Date	10	Format: mm/dd/yyyy
Received at Lab Date	Date	10	Format: mm/dd/yyyy
Analysis Complete Date	Date	10	Format: mm/dd/yyyy
Laboratory	Character	30	Lab Name.
Number of Samples	Integer	3	
Contract Number	Character	6	Contract Number
Report Format	Character	10	Lab deliverable format.
Field ID (For each sample)	Character	15	Unique ID from chain of custody form.
Laboratory ID (For each sample)	Character	15	Unique ID established by the lab.
Date Sampled(For each sample)	Date	10	Format: mm/dd/yyyy
Matrix(For each sample)	Character	10	Aqueous, Nonaqueous, soils, wipe, filter

The file must appear as the following with values in place of the field names and ellipses (**…**) where "n" equals the number of samples:

Site ID
Site Name
Initial Date Sampled
Received at Lab Date
Analysis Complete Date
Laboratory
Number of Samples
Contract Number
Report Form
Sample 1 Field ID
Sample 1 Laboratory ID
Sample 1 Date Sampled
Sample 1 Matrix
Sample 2 Field ID
Sample 2 Laboratory ID
Sample 2 Date Sampled
Sample 2 Matrix
…
Sample n Field ID
Sample n Laboratory ID
Sample n Date Sampled
Sample n Matrix

3.6 THE ELECTRONIC HZSAMPLE AND HZRESULT TABLES

3.6.1 USEPA CLP Data must be reported separately from all other method data in these electronic files.

3.6.2 Additional clarification will be posted on the SRWM website as a general notice to all parties. Laboratories and consultants should routinely review the website for additional clarification documents.

3.6.3 The Responsible party must use the HZRESULT Table and merge it with the HZSAMPLE Table to generate the complete file to report to the NJDEP as required by the Technical Requirements for Site Remediation.

A. Acceptable Formats

The Site Remediation Program Electronic Data Interchange Manual (SRP-EDI Manual) contains the required formats for laboratories to submit the HZRESULT table. It allows for any of the three acceptable formats tab-delimited text format (.TXT extension) or FoxPro 2.6 format (.DBF and .FPT extensions), or version 2.X of Lotus 1-2-3 format (.WK1 extension). The 1999 SRP-EDI Manual defines 19 columns that must appear in the HZRESULT table prepared by a laboratory, the length limit and data type of each column, and information required in each. The 1999 SRP-EDI Manual is available for viewing and downloading from the NJDEP web site http://www.state.nj.us/dep/srp/hazsite and in hard copy by calling the NJDEP (609) 292-9418.

NJDEP also distributes checker for the HZRESULT table. The Electronic Data Submission Application (EDSA) checks for certain common inconsistencies with the requirements of the 1999 SRP-EDI Manual. This application and other supporting tools are available for downloading at the NJDEP web site http://www.state.nj.us/dep/srp/hazsite. A CD containing this application and other support tools may be requested from NJDEP by calling (609) 292-9418.

This contract has additional requirements not included in the 1999 SRP-EDI Manual. It requires delivery of the HZRESULT table in tab-delimited format only. It requires the analyte names to follow certain conventions established by NJDEP. It also calls for columns added to the table for data elements not mentioned in the 1999 SRP-EDI Manual. The Contract Administrator may require additional data elements beyond those described in this contract.

The HZRESULT table must omit results from any laboratory-generated quality control samples. It must also omit results for any internal standard, deuterated monitoring compound or surrogate compound.

B. Analyte Names

The names of analytes in the HZRESULT table use the spellings listed in the Approved Certified Parameter List that the NJDEP Office of Quality Assurance issued to the laboratory upon certification/accreditation. These are the same names that are required by the USEPA CLP SOWs.

C. Additional Data Provided by NJDEP

NJDEP will provide to the laboratory specifications for the first three columns that contain the foreign key used to join the HZRESULT table with the sample table. These fields are SRPID, SAMPDATE and SAMPNUM.

D. Required Reporting of Results

The rounding rules required by the USEPA CLP program are to use in the reporting of data on the worksheets.

E. New Requirements for Existing Columns

SAMPNUM in the 3rd HZRESULT column accepts 10 characters, an increase from the 7 allowed in 1999. The Contractor is required to list in this column, the field sample identification number generated by the sampler on the external chain of custody form. The use of the sampler generated field identification sample number provides the only definitive link on the HZRESULT Table for the sampler to the HZSAMPLE Table to identify the sampling information to a particular sample result generated by the Laboratory. If the HZRESULT table includes more than one set of results for a sample, results of each extra data acquisition such as a dilution or a reanalysis require an identifying suffix on the SAMPNUM value to make it unique to that data acquisition. The suffix may be as short as one character.

SAMPLABID (A.K.A. LABID) in the 4th HZRESULT column accepts 20 characters, an increase from the 12 allowed in 1999. If the HZRESULT table includes more than one set of results for a sample, results of each extra data acquisition require an identifying suffix on SAMPLABID value to make it unique to that data acquisition. The suffix for the SAMPLABID should follow the conventions of the laboratory.

DANALYZ in the 5th HZRESULT column must include both the date and time of day of the data acquisition. The date and time character string can range up to 20 characters.

MDL in the 15th HZRESULT column must contain, for each target analyte, the Method Detection Limit from the Method Detection Limit report as the numeric value with the correct units for each matrix.

QUANTLEVEL in the 17th HZRESULT column must state, for each target analyte, the reporting limit number in the correct units for the matrix. That number must be scaled up by the dilution factor if the sample was diluted.

ANLYS_MTHD in the 18th HZRESULT column must use the names specified below:

- VOA water methods Designations

  Volatiles SOM01.2VOAAN SIM
  Volatiles SOM01.2VOAAN TRACE
  Volatiles SOM01.2VOAANW

- VOA Soil Methods Designations

  Volatiles SOM01.2VOAANS

- Semivolatiles Designations (all matrices)

  Semivolatiles SOM01.2SEMIAN SIM
  Semivolatiles SOM01.2SEMIAN

- Pesticides Designations (all matrices)

  Pesticides

- PCBs Designations (all matrices)

  PCBs

- Inorganic Designations (all matrices)

  Mercury
  ICPAES Metals
  ICPMS Metals
  Cyanide

QAQC_SDG (A.K.A. QAQC) in the 19th HZRESULT column must contain the Sample Delivery Group Number. This column accepts 15 characters, an increase from the single character allowed in 1999.

F. Requirements for New Columns.

UNCOR_CONC in the 20th HZRESULT column leave blank. This column accepts 12 characters.

UNCOR_UNIT in the 21st HZRESULT column leave blank. This column accepts 15 characters.

RETEN_TIME in the 22nd HZRESULT column must contain, for any tentatively identified compound, the retention time in minutes to two decimal places of precision. The retention time is required whether or not a CAS registry number is available for the compound.

DILUT_FAC in the 23rd HZRESULT column must report the dilution factor applied to the sample. For results reported from a diluted sample, this column must contain the dilution factor as a number greater than 1. For results reported from an undiluted sample, this column must contain the dilution factor of 1. This column accepts 12 characters.

G. Unless stated in Sections E. and F. above there are no other column changes or clarifications.

3.7 DELIVERY OF HARDCOPY DATA IN PDF FORMAT

3.7.1 The Contractor/Laboratory/ shall provide a complete copy of **both hardcopy** data reports (Extended Data Report and the Summary Data Report) in Adobe™ Acrobat PDF on a Compact Disc (CD). The Adobe™ Acrobat software used to generate the files must be the latest version of the software.

3.7.2 NJDEP has revised the requirements for the Group Bookmark section that USEPA has for the “TR/COCs TR/COC Cover Sheet and SDG Narrative. The following shall replace this required Bookmark.

Group Bookmark	Parent Bookmark	Child Bookmark
General Documentation	Title Page	
	External Chain of Custody	
	Internal Chain of Custody	
	Shipping Documentation	Air bills (If Applicable)
		Sample Receipt and Log In Check List
	Case Narrative	
	Methodology Review	
	Data Sheets in Excel	Copies of the Microsoft Excel Reporting Sheets
	Method Detection Limit Studies	Method Detection Limit Study Summary MDL Verification Summary

3.7.3 DOCUMENTATION OF EXTRACTION LOGS AND INSTRUMENT RUN LOGS-ORGANIC FRACTIONS

Extraction Logs and Instrument Run Logs must be placed at the end of each fraction of the data package. The Book mark shall be as follows.

Group Bookmark	Parent Bookmark	Child Bookmark
Log Book Documentation	Extraction Logs (if applicable)	
	Instrument Run Logs	

3.7.4 For all the other Bookmarks the requirements of the USEPA CLP SOWs must be followed.

3.7.5 The PDF file for Extended Data Report must be organized and bookmarked in accordance to requirements specified in the both the USEPA CLP SOWs and in accordance with the requirements of this section. The entire SDG must be present in the PDF file. The order in which the data is reported (i.e. the organics prior to the inorganics or the inorganics portion prior the organics portion is left the discretion of the Contractor.

3.7.6 The Organic Data PDF format requirements are located in the USEPA CLP SOW SOM01.2 Exhibit B Section 2.8 **entitled "Delivery of Hardcopy Data in PDF Format"**.

3.7.7 The Inorganic Data PDF format requirements are located in the USEPA CLP SOW SOM06.X Exhibit B Section 2.12 **entitled "Delivery of Hardcopy Data in PDF Format"**.

3.7.8 The Summary Data Report PDF file is not required to be bookmarked. The Summary Data Report PDF must follow the order established in this Section and report only the required forms as specified in Section 10.0.

4.0 ADDITIONAL GC/MS MASS SPECTRAL REQUIREMENTS

4.1 MANUAL INTEGRATION DOCUMENTATION

In all instances where the data system report has been edited, or where manual integrations or quantitation has been preformed, the GC/MS Operator shall identify such edits or manual procedures by initialing and dating the changes made to the report and shall include the integration time range. The instrument must automatically mark the integrated area with the letter "M" on the quantitation report. The GC/MS operator shall verify that each integrated area is properly marked on the quantitation report. In addition, a hardcopy printout of the EICP of the quantitation ion displaying the prior to the manual integration and after the manual integration shall be included in the raw data on separate EICP area printouts. The manual integration lines must be clearly distinguishable from the baseline. This applies to all compounds and internal standards compounds.

A separate hardcopy printout (presented on one page) of the manual integration shall be included immediately behind its associated chromatogram. The manual integration lines must be distinguishable from any line that is drawn by the instrument when printed out.

4.2 **NEGATIVE PROOF DOCUMENTATION**

When GC/MS analysis indicates target compound presence at concentrations greater than 1.0 ug/L, 1.0 ug/Kg and examination of the mass spectrum and corresponding the mass spectrum of the standard fails to confirm the presence of the compound, submit a copy of the unconfirmed compound and the applicable standard.

5.0 NJDEP EXTENDED DATA REPORT - CLP FORMAT

5.1 The NJDEP USEPA CLP Report Format is organized to facilitate the preparation and review of the data package. The Contractor/Laboratory must present the all USEPA CLP in separate data reports from other methods and must comply with the requirements of this Appendix in the specified order.

5.1.1 This Appendix changes the reporting forms for several of the Reporting forms required by the USEPA CLP SOW. The changes are listed below.

- Traffic Reports/Chain of Custody Records are replaced with External Chain of Custody forms and Internal Chain of Custody Forms
- SDG Cover Sheet is replaced with Title Page
- Sample Log In sheets or Inventory Sheets are replaced with Sample Receipt and Log In Form
- SDG Narrative is replaced with the Case Narrative

5.1.2 None of the changed forms affect the forms that are used to report the actual sample or QC data.

5.1.3 The Original Documentation Section (Section 5.8) must be present immediately after the cover page of the report.

5.2 The entire document must be legible. The State shall reject data packages containing incomplete or illegible signatures and documentation.

5.3 Each batch of samples or sample delivery group (20 field samples or less) must have a separate set of data packages.

5.4 If an organic sample is diluted because a parameter concentration exceeded the upper calibration standard, the Contractor/Laboratory is required to report both the undiluted and diluted data sets of both acquisitions. If the parameter concentrations are such that the sample can be analyzed only at a dilution, the sample data set at the appropriate dilution and one data set at a more concentrated dilution must be submitted.

5.5 The data summary forms must meet the reporting requirements of the USEPA CLP Protocols as specified in Exhibit B of each SOW.

5.6 ORGANICS DATA PACKAGE ORGANIZATION – SAMPLE ANALYSIS DOCUMENTATION

5.6.1 For the submittal of the actual sample analysis documentation, the Contractor is required to follow the requirements of the Organic SOW Exhibit B Section 2.5 for the submittal of the data report.

5.6.2 The analytical documentation for the sample analysis is divided into four units that are each specific to an analytical fraction (Trace Volatiles/SIM, Low/Medium Volatiles, Semivolatiles/SIM, Pesticides, and Aroclors). If analysis by SIM is required, report all data for SIM analysis as a subsection at the end of the applicable fraction. If the analysis of a fraction is not required, then that fraction-specific unit is not required as a deliverable. The Sample Data Package shall include data for the analyses of all samples in one SDG, including: field samples; dilutions; reanalyses; blanks; Laboratory Control Samples (LCSs); and any requested Matrix Spikes and Matrix Spike Duplicates (MS/MSDs). It shall also include the fraction specific extraction logs (if applicable) and instrument run logs.

5.7 INORGANIC DATA PACKAGE ORGANIZATION – SAMPLE ANALYSIS DOCUMENTATION

5.7.1 For the submittal of the actual sample analysis documentation, the Contractor is required to follow the requirements of the Inorganic SOW Exhibit B Section 2.5 for the submittal of the data report.

5.7.2 The Sample Data Package shall include data for analysis of all samples in one SDG, including field and analytical samples, blanks, spikes, duplicates, and Laboratory Control Samples (LCSs).

5.8 ORIGINAL DOCUMENTATION SECTION

5.8.1 In this section, the Contractor shall submit all the documents that contain original signatures and original shipping documentation and the original Sample Receipt and Log in Page. This section is submitted in front of the Extended Data Report. The inclusion of this section allows the Contractor to submit a copy of the PDF file of the Extended Data Report as specified in Section 3.7 above as the compliant data package.

5.8.2 This section is not to be included in the main Table of Contents listing.

5.8.3 <u>REQUIRED ORIGINAL FORMS</u>

Original documents are always required for the following forms:

- Title Page NJDEP Form A-1A
- Case Narrative NJDEP Form A-1C
- Internal Chain of Custody Forms

5.8.4 EXTERNAL CHAIN OF CUSTODY FORMS

If the Sample Delivery Group contains samples from more than one External Chain of Custody form, one of the site specific data reports must contain the original form. For the other reports, a photocopy of the External Chain of Custody form must be submitted in this section.

5.8.5 AIR BILLS

A. Include the original or a legible copy of the air bill in this section. If the air bill contains information on multiple shipping containers, the original form must be included in one of the site specific data reports. For the other reports, a photocopy of the air bill must be submitted in this section.

B. If the air bill was not received, include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information. The hardcopy receipt must be provided in this section.

5.8.6 SAMPLE RECEIPT AND LOG-IN CHECKLIST FOR CLP SAMPLES

The Sample Receipt and Log-In Checklist as specified by Section 5.13.2 can contain information on multiple Sample Delivery Groups for that sampling event. The original form must be included in one of the related data report. For the other reports, a photocopy of the Sample Receipt and Log-In Checklist form must be submitted in this section.

5.8.7 The format and order of documents for this section is specified below.

A. A cover page labeled Original Documentation is required.

B. Table of Contents Page shall contain the following information.

C. The Header information of the Table of Contents is as follows.

- Laboratory Name
- Laboratory Location
- Project Number (If no project number is supplied include the name of the project supplied by the sampler)
- Sample Delivery Group Number

D. The Body of the Table of Contents is to be structured as follows.

Document Name	Number of Pages

1. Sample Listing (Form A-1A)
2. External Chain of Custody Form(s)
3. Internal Chain of Custody Forms(s)
4. Case Narrative (Form A-1C)
5. Air Bills (If Applicable)
6. Sample Receipt and Log-In Checklist

E. At the end of the Table of Contents the following certification is required.

Completed by: _____ _____ _____
(Signature) (Printed Name and Title) (Date)

5.9 Except of the specific sections list below that are required by the State, the order of deliverables follow the requirements of both the Organic and Inorganic Statement of Works. These requirements replace the Traffic Reports, Chain of Custody forms, Cover Sheet and Case Narrative used by the USEPA CLP Programs.

5.10 **TITLE PAGE**

NJDEP Form A-1A is a required form. All areas must be completed on the form. The required information includes the following:

5.10.1 Name of Agency which sent the samples to the laboratory
5.10.2 NJDEP, or other State agencies' case number or name
5.10.3 Contract number (for state work)
5.10.4 Laboratory's name and location
5.10.5 Sample Delivery Group or Batch number
5.10.6 First and last date of sample receipt at the laboratory's facility
5.10.7 Field sample numbers
5.10.8 Laboratory sample numbers
5.10.9 Sample location
5.10.10 Date and time of sample collection
5.10.11 Date of data report
5.10.12 Laboratory Quality Assurance Officer's name and signature
5.10.13 Laboratory Manager's name and signature

5.11 **TABLE OF CONTENTS**

On this table list, with a page reference, all fraction heading and subtopic headings.

5.12 **EXTERNAL AND INTERNAL CHAIN OF CUSTODY FORMS AND SHIPPING DOCUMENTATION FORMS**

5.12.1 External and internal laboratory chain of custody documents are required for all data reports submitted to the State. DEP Form-095 (with Shipping Container) or DEP Form-096 (without Shipping Container) is used for samples submitted by all State agencies. The sampler/Responsible Party is required to complete all sections pertaining to sample collection. The Contractor/Laboratory must properly complete the laboratory portions of these forms. Include all air waybills for each SDG, miscellaneous shipping and receiving records.

5.12.2 All external chain of custody forms used by Responsible Parties must include all the same information as the NJDEP External Chain of Custody forms. All External Chain of Custody forms are initiated by the Laboratory with the documentation of the preparation of the bottles and shipping containers for shipment to the field.

5.12.3 When chain of custody documentation is missing or contains errors, immediately notify the NJDEP/other State agency/Responsible Party submitting the samples.

5.12.4 The Contractor must document the internal chain of custody using DEP Form-077 for all State agencies. **Full name and signatures** are required. All signatures must be legible. The printed name must be the full name of the Contractor's employee and it must be legible. Illegible chain of custody documentation shall result in data rejection.

5.12.5 NJDEP Internal Chain of Custody DEP Form-077 is used to document all movements of the sample, or aliquots through the laboratory. Show the date and time and date of relinquishing and accepting of the sample and aliquots by each individual who handled the sample materials. The chain of custody is terminated when the sample, its aliquots, digestates, distillates, or extracts are returned to permanent storage after analysis, or are depleted. Breaks in chain of custody and illegible chain of custody documentation shall result in data rejection.

5.12.6 Each sample submitted consists of one or more sample aliquots (e.g., portions of a sample collected in separate containers). Distinct sample aliquots are used in the analysis of a specific analytical fraction (e.g., water sample aliquots stored in 40 ml vials with Teflon lined septum screw caps are analyzed for volatiles). Document the internal chain of custody for each sample, or aliquot representing a specific analytical fraction (e.g., volatiles, semi-volatiles, metals, etc.). Internal chain of custody documentation for all sample aliquots for a given analytical fraction may be listed on one (1) form for any given case (group) of samples submitted.

5.12.7 For Responsible Party Laboratories, in accordance with N.J.A.C 7:26E Technical Requirements for Site Remediation Appendix A Section C, the Internal Chain of Custody is to remain with the samples at all times and bear the name of the person assuming responsibility of the samples and the date. Full name and signatures are required. All signatures must be legible. The printed name must be the full name of the Laboratory's employee and it must be legible. Illegible chain of custody documentation will result in data rejection.

5.12.8 Electronic Internal Chain of Custody will be acceptable for this Appendix with the following requirements. Prior approval must be obtained to use an Electronic Internal Chain of Custody System.

A. The system must be password protected.

B. The Electronic Internal Chain of Custody System must at a minimum contain all of the information and fields as the Hard Copy Internal Chain of Custody Form. If the Electronic System does not contain all of the required information it will not be approved.

C. The Contractor/Laboratory may add additional fields to meet the needs of their laboratory.

D. The Electronic Internal Chain of Custody System must comply with all the Internal Chain of Custody requirements of Section 5.12 of this Appendix in documenting and providing electronic signoff for the movement of samples through the Laboratory.

E. Full names not initials must be used on the Electronic Chain of Custody System.

F. Once approved if it is determined that the Contractor/Laboratory is not following the requirements of this Section, the approval will be withdrawn. The Contractor/Laboratory will have to use the hard copy Internal Chain of Custody forms.

G. A print out from the system documenting the internal chain of custody must be provided with each Data Report.

5.13 **SHIPPING DOCUMENTATION**

The Contractor/Laboratory must provide all the original shipping documents including, but are not limited to, the following documents:

5.13.1 AIR BILLS

A. Include the original or a legible copy of the air bill in the extended data report. If the air bill contains information on multiple shipping containers, the original form must be included in one of the related data report. For the other reports, a photocopy of the air bill must be submitted in this section.

B. If the air bill was not received, include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information. The hardcopy receipt must be provided in each report.

5.13.2 SAMPLE RECEIPT AND LOG-IN CHECKLIST FOR CLP SAMPLES

A. This form is used to document the receipt and inspection of sample containers and samples. One original checklist is required for each sampling event of twenty samples or less (only the hardcopy form). The form must contain the information required below. The Contractor/Laboratory can add additional fields at their discretion.

B. If more than 20 samples are received at one time, multiple Sample Delivery Groups can be listed on the form. The original form must be included in one of the related data report. For the other reports, a photocopy of the form must be submitted in this section.

C. Required Top of Page Information:

- Laboratory name
- Form name
- Client's name
- Sample delivery group number
- Project name or number
- Date and time received
- Received by (name of person receiving samples)
- Log in date
- Name and signature of staff member who logged in samples
- Signature of project manager
- Date signed by project manager
- Number of shipping containers received
- Samples delivered by (company or person who delivered)
- Listing of air bill numbers

D. The following information must be included in the body of the form. The information must include a yes, no or non-applicable and a comment field for each requirement. The sections are:

Shipping Container Information:

- There is no evidence to indicate tampering
- Custody seals are present and intact
- Custody seals numbers are present
- List custody seal numbers

Sample Condition:

- Sample containers were received intact

Chain of Custody (COC). The COC is present and includes the following information for each container:

- Sample ID/Sample Description
- Date of sample collection
- Time of sample collection
- Identification of sampler
- Requested test method(s)
- Necessary signatures
- Internal Chain of Custody (ICOC) required (answer is always yes)

Sample Integrity Usability:

- The sample container matches the COC
- Samples were received within holding time

Anomalies or Non Conformance Summary (Comment section)

5.14 **METHODOLOGY REVIEW**

Indicate by Method and Revision number, what analyses were conducted on the samples. Use NJDEP Form A-4 – USEPA CLP Analysis (3/2008) or laboratory facsimile.

5.15 **CASE NARRATIVE**

5.15.1 Use NJDEP Form A -1C or a laboratory facsimile.

5.15.2 The document shall contain in narrative form any item not conforming to the requirements of this contract and/or method, including, but not limited to the discussing of failed Quality Assurance or Quality Control criteria, sample matrix effects on the analysis, sample dilutions, and reanalyses. The Contractor's/Laboratory's document shall include any technical and administrative problems encountered, the corrective actions taken, the resolutions and an explanation for all flagged edits (e.g., manual edits) on quantitation lists.

5.15.3 For soil samples collected and pre-weighed in the field for volatiles analysis, the laboratory shall document all discrepancies between sample weights determined in the field and in the laboratory in the Case Narrative. For aqueous samples, the laboratory shall report all samples where headspace or air bubbles are present. The laboratory shall also document how soil samples for volatiles analysis were handled upon receipt (e.g., storage in refrigerator, transferred to closed-system vials and frozen, etc.).

5.15.4 The Contractor shall document in the narrative all instances of manual integrations and an explanation of all flagged edits (e.g. manual edit) on the quantitation reports. The manual integrations can be documented on a separate printout attached to the case narrative.

5.15.5 If tentatively identified compounds (TICs) are being reported, the listing of each alkane compound with retention time and estimated quantitation are a required part of the case narrative. The alkane compounds can be documented on a separate printout attached to the case narrative.

5.15.6 The Contractor must document all GC columns by fraction used for analysis. List the GC column identifier—brand name, the internal diameter, in millimeters (mm), the length, in meters (m), packing/coating material and film thickness. The trap used for volatile analysis must be described here. The trap used for volatile analysis shall be described here. List trap name, when denoted by the manufacturer, its composition (packing material/brand name, amount of packing material, in length, cm). Priority statements on the composition of any part of the column or trap are not acceptable.

5.15.7 The Contractor must document any temperature deviations (>10°C) and the affected samples must be listed.

5.15.8 The Contractor shall also provide, in the Case Narrative, sufficient information, including equations or curves (at least one equation or curve per method), to allow the recalculation of sample results from raw instrument output. The Contractor shall also include a discussion of any flexibility Statement of Work (SOW) modifications as directed by the State Contract Manager.

5.15.9 The Contractor shall list the pH determined for each water sample submitted for volatiles analysis. This information may appear as a simple list or table attached to the SDG Narrative. The purpose of this pH determination is to ensure that all water volatiles samples were acidified in the field. No pH adjustment is to be performed by the Contractor on water samples for volatiles analysis.

5.15.10 The Contractor shall submit in writing all email correspondences or telephone conversations with State or Responsible Party.

5.15.11 The case narrative shall contain the following statement, verbatim:

> **"I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and electronic data has been authorized by the laboratory manager or his/her designee, as verified by the following signature."**

5.15.12 This statement shall be directly followed by an original signature of the laboratory manager or his/her designee, with a typed line below it containing the signer's name and title, and date of signature.

5.16 METHOD DETECTION LIMIT /LIMIT OF DETECTION STUDY FORMAT

5.16.1 The Method Detection Limit Study (MDL) must be submitted with the Method Detection Limit Verification Study (MDLV Study) for all methods. Current studies must be reported in the analytical data packages. The year period for the study begins with the

date the Contractor's Quality Assurance Officer signs off on the MDL Study. The MDL study must be completed and approved prior to analysis of samples and can only be associated with samples analyzed after the date of sign off.

5.16.2 The MDL study for each method must be presented individually. The information required for each method is the same except for the units being reported

5.16.3 The Inorganic and Organic MDL study for each method must be completed and approved prior to analysis of samples and can only be associated with samples analyzed after the date of sign off. The reporting requirements for the MDL Study are listed below.

5.16.4 All information except for signatures must be computer generated or typed. All data shall be reported in the correct units for the method.

5.16.5 The information must be provided in a Tabular format and all the required data must be for each analyte must be on one page. The information provided for each compound must include the following:

The required format of the Summary is as follows:

Top of Page Information

- Laboratory Name
- Laboratory location
- Matrix type
- Effective date/Expiration date of MDL Study
- Instrument ID and Column ID (column ID for organics only)

Required Columns

- Compound name
- CAS number
- Data for seven replicates
- Mean value
- True value
- Percent recovery
- Standard deviation
- Method Detection Limits
- Reporting Limits
- True Value/MDL Ratio

Top or Bottom of Page Information

- Analyst name and date analyzed
- Reviewed by name and date
- Report preparer's name and date prepared
- QA Officer name and date signed
- Preparation method
- Preparation factor
- Preparation date

- Cleanup method

5.17 METHOD DETECTION LIMIT VERIFICATION SUMMARY (MDLV)

5.17.1 The Method Detection Limit Verification Summary (MDLV Summary) must be submitted with the Method Detection Limit Study for all methods. Current studies must be reported in the analytical data packages. The year period for the study begins with the date the Contractor's Quality Assurance Officer signs off on the MDLV Study. The MDLV study must be completed and approved prior to analysis of samples and can only be associated with samples analyzed after the date of sign off.

5.17.2 The MDLV study for each fraction method must be presented individually. The information required for each method is the same except for the units being reported. See the method specific sections in the contract.

5.17.3 The Inorganic and Organic MDLV study for each method must be completed and approved prior to analysis of samples and can only be associated with samples analyzed after the date of sign off. The reporting requirements for the MDLV studies are listed below.

5.17.4 All information except for signatures must be computer generated or typed. All data shall be reported in the correct units for the method.

5.17.5 The information must be provided in a Tabular format and all the required data must be for each analyte must be on one page. The information provided for each compound must include the following:

The required format of the Summary is as follows:

Top of Page Information

- Date of verification study
- Analysis method
- Cleanup method (if applicable)
- Preparation method
- Study Identification file name
- Matrix
- Analysis level
- Analyst name
- Approval by QA Officer (name and date)

Required Columns

- Analyte name
- CAS number
- MDLV source
- Source study
- Source instrument
- Source analysis date
- MDLV
- QL

- QL/MDLV ratio
- Reporting Limit

6.0 EXTRACTION LOGS DOCUMENTATION

6.1 All requirements of the USEPA CLP Organic SOW must be followed.

6.2 All extraction logs must include the Standard Traceability information and entries required by USEPA CLP SOW.

6.3 All extraction logs must detail each step of the extraction procedures and the cleanup procedure required by the fraction. General categories not acceptable.

6.4 The top of page information must identify the following information.

Name of form	Analyst
Extraction method	Spike analyst
Client name	Spike witness
SDG number	Extraction date
Start time	Stop time

6.5 The body of the form in addition to detailing each step of the extraction must include columns for laboratory ID number, bottle code, sample size, pH of sample, and comments.

6.6 The laboratory name can either be at the top or bottom of the page.

6.7 All blanks and QC samples associated with the field samples must be listed.

6.8 Copies of the actual logbook page(s) must be provided.

6.9 All log book pages shall be sequentially numbered and maintained in chronological order.

6.10 Each log book entry shall be dated with the month/day/year (01/01/2007) and signed (no initials) by the individual(s) responsible for performing the recorded activity at the time the activity is noted.

7.0 DIGESTION LOG REQUIREMENTS

7.1 The following logs shall be submitted as appropriate for each preparation procedure: digestion logs for ICP-AES, ICP-MS, mercury preparations, and distillation logs for cyanide. These logs shall include: (1) date; (2) sample weights and volumes, with initial sample weight/volume and final volume clearly indicated; (3) sufficient information to unequivocally identify which QC samples (i.e., LCS, PB) correspond to each batch digested; (4) comments describing any significant sample changes or reactions which occur during preparation shall be entered in the log and noted in the SDG Narrative; (5) indication of pH less than or equal to 2 or greater than or equal to 12, as applicable; (6) any dilutions used in preparing PE samples; and (7) identification of the sample preparer(s) [signature(s)].

7.2 All requirements of the USEPA CLP Inorganic SOW must be followed.

7.3 All digestion and distillation logs must include the Standard Traceability information and entries required by USEPA CLP SOW.

7.4 The following information must also be included on the digestion and the distillation logs.

Start time and stop time	Initial and final temperatures (if applicable)
Block ID number (if applicable)	Spike analyst
MS spike analyst	MS spike witness
Chloride test (if applicable)	Sulfide test (if applicable)

7.5 If the same form is used to for the documentation of the instrument log, the analysis date and time and the analyst must be listed.

7.6 Copies of the actual logbook page(s) must be provided.

7.7 All log book pages shall be sequentially numbered and maintained in chronological order.

7.8 Each log book entry shall be dated with the month/day/year (01/01/2007) and signed (no initials) by the individual(s) responsible for performing the recorded activity at the time the activity is noted.

7.9 The laboratory name can either be in the header of the footer.

8.0 INSTRUMENT RUN LOG - ORGANICS

8.1 Copies of the actual logbook page(s) must be provided. The name (instrument type and fraction) of the run log must be included in the name of the page. [example: GC/MS VOA Instrument Run Log].

8.2 All requirements of the USEPA CLP Organic SOW must be followed.

8.3 All Instrument logs must include the Standard Traceability information and entries required by USEPA CLP SOW.

8.4 GC/MS Instrument Performance check section is required at the top of the page and must include information on the Tune standard, RF Summary, Internal Standard Response, RT& Ratios Updated, and if the Batch MS/MSD was not performed due to insufficient volume.

8.5 Instrument Information is required in the at the top of the page and must include instrument type and model, instrument ID, Column type and purge volume (for volatiles) or injection volume for extractables.

8.6 General information required in the at the top of the page is the sequence identification, batch ID, Test method, ICAL date, start date, start time, end date and end time.

8.7 All log book pages are instrument specific.

8.8 The laboratory name can either be in the header of the footer.

8.9 All log book pages shall be sequentially numbered and maintained in chronological order.

8.10 The Instrument run log for the associated initial calibration must be included.

8.11 Each log book entry shall be dated with the month/day/year (01/01/2007) and signed(no initials) by the individual(s) responsible for performing the recorded activity at the time the activity is noted.

8.12 If manual integration is conducted on an acquisition, it must be noted in the comment section.

8.13 GC/MS instrument run log must contain the following sections

8.13.1 Sequence Information must have the following columns: injection time, Laboratory ID/File name, bottle code, SDG number, Weight/vol in mls(volatiles only),dilution factor (extractables) and Operator.

8.13.2 Individual Sample review must have the following columns: surrogate standard/internal standards, result concentration, primary analyst.

8.13.3 Comment section (for any comments by analyst)

8.14 GC instrument run logs must have the following columns on the page: injection number, laboratory ID, bottle code, filename/batch, SDG, matrix, dilution factor, QC check, integrated by and comments.

8.15 For all instrument run log pages, the bottom of the page must be signed (signature, no initials) and dated by the analyst recording the activity(if a single entry is made on the page) or by the last individual recording information on the page(if multiple entries are on the page).

9.0 FRACTION SPECIFIC SUBMITTALS

The Contractor is required to follow all the requirements of the USEPA CLP SOW for the generation of the fraction specific submittals except where additional requirements have been specified by this Appendix.

10.0 NJDEP CLP FORMAT SUMMARY DATA REPORT

10.1 If analysis by SIM is required, report all data for SIM analysis as a subsection at the end of the applicable fraction.

10.2 The NJDEP CLP Format Summary Data Report will consist of documentation required by sections listed below. The documentation includes summary reporting forms for the sample data, laboratory control sample, method blanks, instrument blanks (if applicable), and initial and continuing calibration data.

10.3 GENERAL DOCUMENTATION

- External Chain of Custody forms
- Methodology Review
- Case Narrative
- Method Detection Limit Summary (all applicable fractions and matrices)

- Method Detection Limit Verification Summary (all applicable fractions and matrices)

10.4 VOLATILE ORGANICS FRACTION (TRACE, LOW/MEDIUM AND SIM)

- Deuterated Monitoring Compounds Recovery Summary
- Matrix Spike/Matrix Spike Duplicate Recovery Summary
- Method Blank Summary
- GC/MS Instrument Performance Summary
- Internal Standard Area and Retention Time Summary
- VOA Sample Data (Target and Tentatively Identified Compounds summary data reporting forms only)
- Initial Calibration Data Summary- reporting forms only
- Continuing Calibration Verification Data Summary – reporting forms only

10.5 SEMI VOLATILE ORGANICS FRACTION (LOW/MEDIUM AND SIM)

- Deuterated Monitoring Compounds Recovery Summary
- Matrix Spike/Matrix Spike Duplicate Recovery Summary
- Method Blank Summary
- GC/MS Instrument Performance Summary
- Internal Standard Area and Retention Time Summary
- SVOA Sample Data (Target and Tentatively Identified Compounds summary data reporting forms only)
- PAHs/Pentachlorophenol Analysis Data Sheet for SIM Component (Target Compounds only)
- Initial Calibration Data Summary - reporting forms only
- Continuing Calibration Verification Data Summary – reporting forms only

10.6 PESTICIDES FRACTION

- Surrogate Summary
- Matrix Spike/Matrix Spike Duplicate Summary
- Laboratory Control Sample Summary
- Method Blank Summary
- Target Compound Results (summary data reporting forms only)
- Initial Calibration of Single Component (summary forms only)
- Toxaphene Initial Calibration (summary forms only)
- Analyte Resolution Check Summary
- Performance Evaluation Mixture Summary (summary forms only)
- Initial Standard Mixture A (summary forms only)
- Initial Standard Mixture B (summary forms only)
- Initial Standard Mixture C (summary forms only)
- Calibration Verification Summary Forms (all required summary forms)
- Analytical Sequence Form
- Florisil Cartridge Check Form
- Gel Permeation Calibration Verification Form
- Identification Summary for Single Component Analytes

10.7 AROCLORS FRACTION

- Surrogate Summary
- Matrix Spike/Matrix Spike Duplicate Summary
- Laboratory Control Sample Summary
- Method Blank Summary
- Target Compound Results (summary reporting forms only)
- Initial Calibration of Aroclors (summary forms only)
- Calibration Verification Summary Forms (summary forms only)
- Analytical Sequence Form
- Identification Summary for Multicomponent Analytes

10.8 **INORGANIC FRACTION (ILM05.4)**

- Inorganic Analysis Data Sheets
- Initial and Continuing Calibration Verification (summary forms only)
- CRQL Check Standard (summary forms only)
- Blanks (summary forms only)
- ICP-AES Interference Check Sample (summary forms only)
- ICP-MS Interference Check Sample (summary forms only)
- Matrix Spike Sample Recovery (summary forms only)
- Post-Digestion Spike Sample Recovery (summary forms only)
- Duplicates (summary forms only)
- Laboratory Control Sample (summary forms only)
- ICP-AES and ICP Standards -MS Serial Dilutions (summary forms only)
- Method Detection Limits (Annually)
- ICP-AES Interelement Correction Factors (Annually)
- ICP-AES and ICP- MS Linear Ranges (Quarterly)
- Preparation Log
- Analysis Run Log
- ICP-MS Tune (summary forms only)
- ICP-MS Internal Standard Relative Intensity Summary

10.9 **INORGANIC FRACTION (ISM0.X) – UPCOMING SOW**

- Inorganic Analysis Data Sheets
- Initial and Continuing Calibration Verification (summary forms only)
- Blanks (summary forms only)
- ICP-AES Interference Check Sample (summary forms only)
- ICP-MS Interference Check Sample (summary forms only)
- Matrix Spike Sample Recovery (summary forms only)
- Post-Digestion Spike Sample Recovery (summary forms only)
- Duplicates (summary forms only)
- Laboratory Control Sample (summary forms only)
- ICP-AES and ICP Standards -MS Serial Dilutions (summary forms only)
- Critical Level and Limit of Detection (Quarterly)
- ICP-AES Interelement Correction Factors (Annually)
- Limit of Quantitation (Quarterly)
- Preparation Log
- Analysis Run Log
- ICP-MS Tune (summary forms only)

- ICP-MS Internal Standard Relative Intensity Summary
- Initial Calibration Summary
- Internal Standard Association- MS

10.10 Clearly label and complete the deliverable in accordance with instructions in this Appendix. Arrange the deliverable in the order specified in this Appendix.

10.11 Do not submit raw QC data, sample preparation, shipping documentation, and standard data in the summary data report.

11.0 **FORMS**

Note: No page numbers exist for this section.

Internal Chain of Custody Form (NJDEP Form-95C)

External Chain of Custody Form (NJDEP Form-77)

Internal Chain of Custody Form (NJDEP Form-95C)

Title Page – NJDEP Form A-1A

Case Narrative - NJDEP Form A -1C

Methodology Summary NJDEP Form A-4

New Jersey Department of Environmental Protection
External Chain of Custody and Sample Analysis Request Form
(With Shipping Container)

Laboratory Information

Name of Laboratory: _____ *Individual Preparing Sample Bottles and Shipping Container(s)*

Address: _____ Name: _____

_____ Title: _____

Time/Date Sample Shipping Container Sealed: _____ Laboratory Affixed Seal Number: _____

NJDEP Information

Division: _____ Bureau: _____ Phone: ( ) _____ Job Number: _____

Requested Analysis

NJDEP Field Sample Number	*Time/Date* Sampling Start	Time/Date Sampling Stop	Parameter	Method	Preserv.	Container Volume	Container Quantity	Matrix

Preservative Added: (Check One) ☐ Laboratory ☐ Field ☐ Unpreserved

Contract Number: _____ Task Number: _____ Report Format: _____

External Chain of Custody

Relinquished	Received	Time/Date	Reason For Change of External Custody
XXXXXXXXXXXXXXXX			Break Seal/Sample

Individual Resealing Shipping Container: Name: _____ Title: _____

Time/Date Sample Shipping Container Resealed: _____ NJDEP Affixed Seal Number: _____

Time/Date Sample Shipping Container Opened: _____

Time/Date Internal Chain of Custody Initiated on NJDEP Form 077 (Internal Chain of Custody): _____

Distribution: ☐ – Original (Sent With Report) ☐ – Contractor Spare, Retain With Report File
☐ – Sample Custodian ☐ – NJDEP Sampling Personnel

New Jersey Department of Environmental Protection
External Chain of Custody and Sample Analysis Request Form
(Without Shipping Container)

Laboratory Information

Name of Laboratory: _____ *Individual Preparing Sample Bottles and Shipping Container(s)*

Address: _____ Name: _____

_____ Title: _____

Time/Date Sample Shipping Container Sealed: _____ Laboratory Affixed Seal Number: _____

NJDEP Information

Division: _____ Bureau: _____ Phone: ( ) _____ Job Number: _____

Requested Analysis

NJDEP Field Sample Number	*Time/Date* Sampling Start	Time/Date Sampling Stop	Parameter	Method	Preserv.	Container Volume	Container Quantity	Matrix

Preservative Added: (Check One) ☐ Laboratory ☐ Field ☐ Unpreserved

Contract Number: _____ Task Number: _____ Report Format: _____

External Chain of Custody

Relinquished	Received	Time/Date	Reason For Change of External Custody
XXXXXXXXXXXXXXXX			Break Seal/Sample

Individual Resealing Shipping Container: Name: _____ Title: _____

Time/Date Sample Shipping Container Resealed: _____ NJDEP Affixed Seal Number: _____

Time/Date Sample Shipping Container Opened: _____

Time/Date Internal Chain of Custody Initiated on NJDEP Form 077 (Internal Chain of Custody): _____

Distribution: ☐ – Original (Sent With Report) ☐ – Contractor Spare, Retain With Report File
☐ – Sample Custodian ☐ – NJDEP Sampling Personnel

New Jersey Department of Environmental Protection

Internal Chain of Custody

Instructions: Use 1 form for each 20 samples of aliquot.

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample
Laboratory: ______________________ Location: ______________________
Name: ______________________ Title: ______________________
Field Sample Seal No.: ______________ Date Broken: ____/____/____ Military Time Seal Broken: ______________
Case No.: ______________ Analytical Parameter/Fraction: ______________________

Sample No.	Aliquot/Extract No.

Sample No.	Aliquot/Extract No.

Date	Time	Relinquished By	Received By	Purpose of Change of Custody
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	
		SIGNATURE PRINTED NAME	SIGNATURE PRINTED NAME	

Distribution: White – Original (Sent With Report)   Yellow – Contractor Archive   Pink – Sample Custodian – Interim Copy

ANALYTICAL DATA PACKAGE FOR THE
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON NEW JERSEY 08625

AGENCY/DIVISION	***BUREAU/OFFICE***
PROJECT NO:	***CONTRACT NO:***
LABORATORY NAME	***LABORATORY LOCATION***
SDG OR BATCH NO:	***NJDEP CERTIFICATION #***
DATE OF FIRST SAMPLE RECEIPT:	***DATE OF LAST SAMPLE RECEIPT***

AGENCY SAMPLE NUMBER	***LABORATORY SAMPLE NUMBER***	***SAMPLE LOCATION***	***DATE/TIME OF COLLECTION***

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and electronic data has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

LABORATORY MANAGER (TYPED)	***DATE***
LABORATORY MANAGER (SIGNATURE)	
QUALITY ASSURANCE OFFICER (TYPED)	***DATE***
QUALITY ASSURANCE OFFICER (SIGNATURE)	

ANALYTICAL DATA PACKAGE FOR THE *NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION* *TRENTON NEW JERSEY 08625*	
AGENCY/DIVISION	*BUREAU/OFFICE*
PROJECT NO:	*CONTRACT NO:*
LABORATORY NAME	*LABORATORY LOCATION*
SDG OR BATCH NO:	*NJDEP CERTIFICATION #*
DATE OF FIRST SAMPLE RECEIPT:	*DATE OF LAST SAMPLE RECEIPT*

Methodology Summary for USEPA Contract Laboratory Program Contract

Laboratory:	***Project No:***
Location:	***SDG No:***

Name	***Required Methodology***	***Indicate Method***
Volatile Organics Trace Aqueous	*USEPA CLP SOM01.2*	
Volatile Organics SIM Aqueous	*USEPA CLP SOM01.2*	
Volatile Organics Low/Medium Aqueous	*USEPA CLP SOM01.2*	
Volatile Organics Low/Medium Non Aqueous	*USEPA CLP SOM01.2*	
Semivolatile Organics Low/Medium Aqueous	*USEPA CLP SOM01.2*	
Semivolatile Organics Low/Medium Non Aqueous	*USEPA CLP SOM01.2*	
Semivolatile Organics- SIM Aqueous	*USEPA CLP SOM01.2*	
Semivolatile Organics- SIM Non Aqueous	*USEPA CLP SOM01.2*	
Pesticides Aqueous	*USEPA CLP SOM01.2*	
Pesticides Non Aqueous	*USEPA CLP SOM01.2*	
Aroclors Aqueous	*USEPA CLP SOM01.2*	
Aroclors Non Aqueous	*USEPA CLP SOM01.2*	
Inorganics Trace Metals- Inductively Couple Plasma-AES - Aqueous	*USEPA CLP ILM5.4*	
Inorganics Trace Metals- Inductively Couple Plasma-AES Non Aqueous	*USEPA CLP ILM05.4*	
Inorganics Trace Metals- Inductively Couple Plasma-MS Aqueous	*USEPA CLP ILM05.4*	
Inorganics Trace Metals- Inductively Couple Plasma-MS Non Aqueous	*USEPA CLP ILM05.4*	
Mercury Analysis Aqueous CVAA Manual Technique	*USEPA CLP ILM05.4*	
Mercury Analysis Aqueous CVAA Automated Technique	*USEPA CLP ILM05.4*	
Mercury Analysis Non Aqueous CVAA Manual Technique	*USEPA CLP ILM05.4*	
Total Cyanides Analysis Aqueous Conventional Distillation	*USEPA CLP ILM05.4*	
Total Cyanides Analysis Aqueous Midi Distillation	*USEPA CLP ILM05.4*	
Total Cyanides Analysis Non Aqueous Conventional Distillation	*USEPA CLP ILM05.4*	
Total Cyanides Non Aqueous-Midi Distillation	*USEPA CLP ILM05.4*	

Project Name: Project Number:
Field ID Number Sampling Date:
Laboratory ID Number: Matrix:

Analyte	CAS Number	Laboratory Reported Conc.	Q	QA Reported Conc.	Retention Time NT only	QA Decision	Footnotes
Volatiles							
Dichlorodifluoromethane	75-71-8						
Chloromethane	74-87-3						
Vinyl Chloride	75-01-4						
Bromomethane	74-83-9						
Chloroethane	75-00-3						
Trichlorofluoromethane	75-69-4						
1,1-Dichloroethene	75-35-4						
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1						
Acetone	67-64-1						
Carbon Disulfide	75-15-0						
Methyl Acetate	79-20-9						
Methylene Chloride	75-09-2						
trans-1,2-dichloroethene	156-60-5						
tert-Butyl Methyl Ether	1634-04-4						
1,1-Dichloroethane	75-34-3						
cis-1,2-Dichloroethene	156-59-2						
2-Butanone	78-93-3						
Bromochloromethane	74-97-5						
Chloroform	67-66-3						
1,1,1-Trichloroethane	71-55-6						
Cyclohexane	110-82-7						
Carbon Tetrachloride	56-23-5						
Benzene	71-43-2						
1,2-Dichloroethane	107-06-2						
1,4-Dioxane	123-91-1						
Trichloroethene	79-01-6						
Methylcyclohexane	108-87-2						
1,2-dichloropropane	78-87-5						
Bromodichloromethane	75-27-4						
cis-1,3-Dichloropropene	10061-01-5						
4-Methyl-2-pentanone	108-10-1						
Toluene	108-88-3						
trans-1,3-Dichloropropene	10061-02-6						
1,1,2-Trichloroethane	79-00-5						
Tetrachloroethene	127-18-4						
2-Hexanone	591-78-6						

Analyte	CAS Number	Laboratory Reported Conc.	Q	QA Reported Conc.	Retention Time NT only	QA Decision	Footnotes
Dibromochloromethane	124-48-1						
1,2-Dibromoethane	106-93-4						
Chlorobenzene	108-90-7						
Ethylbenzene	100-41-4						
o-Xylene	95-47-6						
m,p-Xylene	179601-23-1						
Styrene	100-42-5						
Bromoform	75-25-2						
Isopropylbenzene	98-82-8						
1,1,2,2-Tetrachloroethane	79-34-5						
1,3-Dichlorobenzene	541-73-1						
1,4-Dichlorobenzene	106-46-7						
1,2-Dichlorobenzene	95-50-1						
1,2-Dibromo-3-chloropropane	96-12-8						
1,2,4-Trichlorobenzene	120-82-1						
1,2,3-Trichlorobenzene	87-61-6						
SIM Volatile Compounds							
1,2-Dibromoethane	106-93-4						
1,2-Dibromo-3-chloropropane	96-12-8						
Volatile Tentatively Identified Compounds (upto 30 compounds)							
Semivolatiles							
1,4-Dioxane	123-91-1						
Benzaldehyde	100-52-7						
Phenol	108-95-2						
bis-(2-Chloroethyl)ether	111-44-4						
2-Chlorophenol	95-57-8						
2-Methylphenol	95-48-7						
2,2-oxybis(1-Chloropropane)	108-60-1						
Acetophenone	98-86-2						
4-Methylphenol	106-44-5						
N-Nitroso-di-n-propylamine	621-64-7						
Hexachloroethane	67-72-1						
Nitrobenzene	98-95-3						
Isophorone	78-59-1						

Analyte	CAS Number	Laboratory Reported Conc.	Q	QA Reported Conc.	Retention Time NT only	QA Decision	Footnotes
2-Nitrophenol	88-75-5						
2-4-Dimethylphenol	105-67-9						
bis(2-Chloroethoxy)methane	111-91-1						
2-4-Dichlorophenol	120-83-2						
Naphthalene	91-20-3						
4-Chloroaniline	106-47-8						
Hexachlorobutadiene	87-68-3						
Caprolactam	105-60-2						
4-Chloro-3-methylphenol	59-50-7						
2-Methylnaphthalene	91-57-6						
Hexachlorocyclopentadiene	77-47-4						
2,4,6-Trichlorophenol	88-06-2						
2,4,5-Trichlorophenol	95-95-4						
1,1'-Biphenyl	92-52-4						
2-Chloronaphthalene	91-58-7						
2-Nitroaniline	88-74-4						
Dimethylphthalate	131-11-3						
2,6-Dinitrotoluene	606-20-2						
Acenaphthylene	208-96-8						
3-Nitroaniline	99-09-2						
Acenaphthene	83-32-9						
2,4-Dinitrophenol	51-28-5						
4-Nitrophenol	100-02-7						
Dibenzofuran	132-64-9						
2,4-Dinitrotoluene	121-14-2						
Diethylphthalate	84-66-2						
Fluorene	86-73-7						
4-Chlorophenylphenylether	7005-72-3						
4-Nitroaniline	100-01-6						
4,6-Dinitro-2-methylphenol	534-52-1						
N-Nitroso-di-n-phenylamine	86-30-6						
1,2,4,5-Tetrachlorobenzene	95-94-3						
4-Bromophenylphenylether	101-55-3						
Hexachlorobenzene	118-74-1						
Atrazine	1912-24-9						
Pentachlorophenol	87-86-5						
Phenanthrene	85-01-8						

Analyte	CAS Number	Laboratory Reported Conc.	Q	QA Reported Conc.	Retention Time NT only	QA Decision	Footnotes
Anthracene	120-12-7						
Carbazole	86-74-8						
Di-n-butylphthalate	84-74-2						
Fluoranthene	206-44-0						
Pyrene	129-00-0						
Benzaldehyde	100-52-7						
3,3-Dichlorobenzidine	91-94-1						
Benzo(a)anthracene	56-55-3						
Chrysene	218-01-9						
bis(2-Ethylhexyl)phthalate	117-81-7						
Di-n-octylphthalate	117-84-0						
Benzo(b)fluoroanthene	205-99-2						
Benzo(k)fluoroanthene	207-08-9						
Benzo(a)pyrene	50-32-8						
Indeno(1,2,3-cd)pyrene	193-39-5						
Dibenzo(a,h)anthracene	53-70-3						
Benzo(g,h,I)perylene	191-24-2						
2,3,4,6-Tetrachlorophenol	58-90-2						
SIM Semivolatile Compounds							
1,4-Dioxane	123-91-1						
Naphthalene	91-20-3						
2-Methylnaphthalene	91-57-6						
Acenaphthylene	208-96-8						
Acenaphthene	83-32-9						
Fluorene	86-73-7						
Pentachlorophenol	87-86-5						
Phenanthrene	85-01-8						
Anthracene	120-12-7						
Fluoranthene	206-44-0						
Pyrene	129-00-0						
Benzo(a)anthracene	56-55-3						
Chrysene	218-01-9						
Benzo(b)fluoroanthene	205-99-2						
Benzo(k)fluoroanthene	207-08-9						
Benzo(a)pyrene	50-32-8						
Indeno(1,2,3-cd)pyrene	193-39-5						

Analyte	CAS Number	Laboratory Reported Conc.	Q	QA Reported Conc.	Retention Time NT only	QA Decision	Footnotes
Dibenzo(a,h)anthracene	53-70-3						
Benzo(g,h,I)perylene	191-24-2						
Semi-Volatile Tentatively Identified Compounds (upto 30 compounds)							
Pesticides							
alpha-BHC	319-84-6						
beta-BHC	319-85-7						
delta-BHC	319-86-8						
gamma-BHC	58-89-9						
Heptachlor	76-44-8						
Aldrin	309-00-2						
Heptachlor epoxide	1024-57-3						
Endosulfan I	959-98-8						
Dieldrin	60-57-1						
4,4'-DDE	72-55-9						
Endrin	72-20-8						
Endosulfan II	33213-65-9						
4,4'-DDD	72-54-8						
Endosulfan sulfate	1031-07-8						
4,4-DDT	50-29-3						
Methoxychlor	72-43-5						
Endrin ketone	53494-70-5						
Endrin aldehyde	7421-93-4						
alpha-Chlordane	5103-71-9						
gamma-Chlordane	5103-74-2						
Toxaphene	8001-35-2						
Aroclors							
Aroclor-1016	12674-11-2						
Aroclor-1221	11104-28-2						
Aroclor-1232	11141-16-5						
Aroclor-1242	53469-21-9						
Aroclor-1248	12672-29-6						
Aroclor-1254	11097-69-1						
Aroclor 1260	11096-82-5						
Aroclor 1262	37324-23-5						
Aroclor 1268	11100-14-4						
Inorganics ICP-AES							

Analyte	CAS Number	Laboratory Reported Conc.	Q	QA Reported Conc.	Retention Time NT only	QA Decision	Footnotes
Aluminum	7429-90-5						
Antimony	7440-36-0						
Arsenic	7440-38-2						
Barium	7440-39-3						
Beryllium	7440-41-7						
Cadmium	7440-43-9						
Calcium	7440-70-2						
Chromium	7440-47-3						
Cobalt	7440-48-4						
Copper	7440-50-8						
Iron	7439-89-6						
Lead	7439-92-1						
Magnesium	7439-95-4						
Manganese	7439-96-5						
Nickel	7440-02-0						
Potassium	7440-09-7						
Selenium	7782-49-2						
Silver	7440-22-4						
Sodium	7440-23-5						
Thallium	7440-28-0						
Vanadium	7440-62-2						
Zinc	7440-66-6						
Inorganics ICP-MS							
Antimony	7440-36-0						
Arsenic	7440-38-2						
Barium	7440-39-3						
Beryllium	7440-41-7						
Cadmium	7440-43-9						
Chromium	7440-47-3						
Cobalt	7440-48-4						
Copper	7440-50-8						
Lead	7439-92-1						
Manganese	7439-96-5						
Nickel	7440-02-0						
Selenium	7782-49-2						
Silver	7440-22-4						
Thallium	7440-28-0						
Vanadium	7440-62-2						
Zinc	7440-66-6						
Mercury/Cyanides							
Mercury	7439-97-6						
Cyanide	57-12-5						