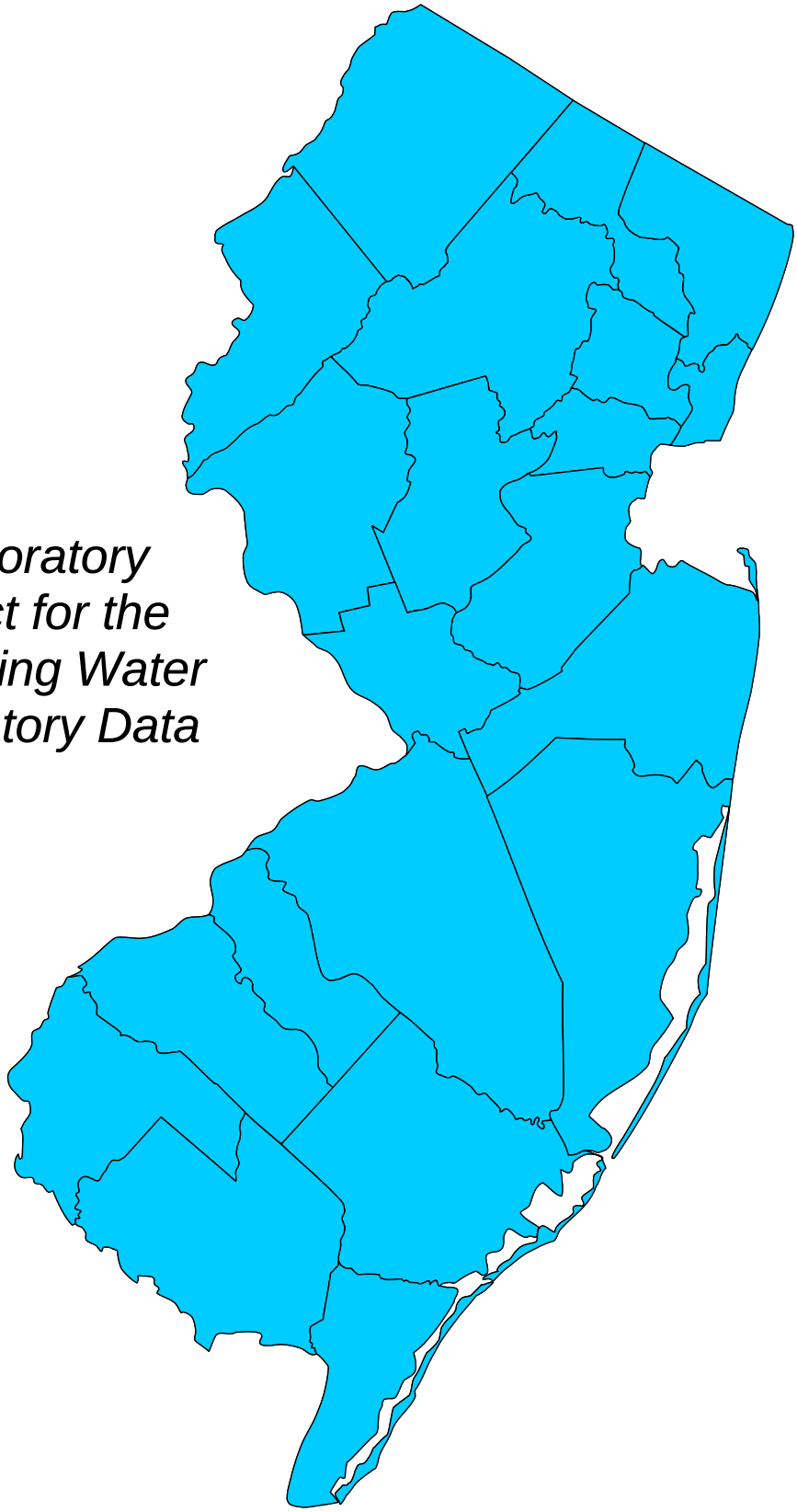
New Jersey Department of Environmental Protection
Site Remediation Program



Professional Laboratory Services Contract for the Analysis of Drinking Water – NJDEP Regulatory Data Report Format
July 2015

Site Remediation Program
Financial Services Element
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APPENDIX 3 - NJDEP REGULATORY DATA REPORT FORMAT

1.0 INTRODUCTION

1.1 This Appendix contains the format used for reporting specific 40 CFR Part 141 methods. It presents instructions and the order in which data shall be reported.

1.2 The Contractor (Laboratory) shall follow all the requirements regarding scaling and presentation of chromatograms, spectra, manual integration requirements, and quantitation reports as specified in this Appendix, the method and any contractual Requirements.

1.3 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 all state contract work and non-contract work. Copies of these forms are located in Section 16.0 of this Appendix. Electronic Copies will also be provided upon request.

1.4 A new section entitled “Original Documentation Section” 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.

1.5 For all other reporting forms, the Contractor shall 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.

1.6 The Microsoft™ Excel Spreadsheet that is used to report the data electronically on the NJDEP-SRP Drinking Water Methods Data Summary Table shall not be used for the reporting forms.

1.7 The Contractor generated forms shall not have labels referring to "CLP", “SOW" and "EPA Sample #. If the Contractor’s reporting software requires inclusion of these labels, the Contractor shall add a statement to the Case Narrative informing the data reviewer to disregard the labels.

1.8 The Contractor shall receive a written approval from the State Contract Manager to using any modified forms in Section 16.0. The State will reject noncompliant forms and data packages.

1.9 The NJDEP Drinking Water Regulatory Report Format is organized to facilitate the preparation and review of the data package. Present each type of analysis in individual sections. For example, when a sample is analyzed by USEPA Method 524.2 (VOA) and Mercury Method 245.1 the laboratory shall present each fraction in separate sections and each section shall contain the Data Summary Information, Sample Data, Standards Data, Raw Data, Instrument Run Logs, Digestion Logs, and Distillation Logs (if applicable) for that fraction. This is in lieu of the various analyses being interspersed together in the summary sections, raw data section, etc.

1.10 Each Sample Delivery Group (20 samples or less) consists of a separate Extended Data Report (Section 6.0) and Summary Data Report (Section 15 and the associated electronic deliverables. Individual Sample Delivery Groups shall not be merged together to create a single data package.

2.0 GENERAL NJDEP DRINKING WATER FORMAT REQUIREMENTS

2.1 The NJDEP Regulatory Report Format is organized to facilitate the preparation and review of the data package. The Contractor shall present each method's data in a separate section from the other methods and shall comply with the requirements of this Appendix in the specified order.

2.2 The Contractor shall submit the following deliverables to the NJDEP or other state users or within the time frame established at the time of engagement.

A. Original Extended Data Report with original chain of custody forms;
B. Original and one copy of the Summary Data Report;
C. Electronic Deliverables; and
D. Acrobat Format (PDF) File of both the Extended and Summary Report on compact disc.

2.3 The deliverable from the Contractor shall consist of both the paper documents and electronic files.

2.4 The Contractor shall clearly label and complete the deliverable in accordance with instructions in this Appendix, and shall arrange the deliverable in the order specified in this Appendix.

2.5 Each batch of samples or sample delivery group (20 field samples or less) shall have a separate set of data packages. If more than one (1) method analysis is required of a sample (for example a sample is analyzed for USEPA Method 524.2 and USEPA Method 504.1 all data shall be present in one (1) data report with separate sections for each method analysis. The only information from each analysis that may be merged together in the front section of the data package is as follows:

A. Title Page;
B. External Chain of Custody;
C. Internal Chain of Custody;
D. Shipping Documentation;
E. Case Narrative;
F. Methodology Review;
G. Sample Data Sheets in Excel; and
H. Method Detection Limit Studies (MDL Study, Detection Limits and MDLV Study).

2.6 The data summary forms, at a minimum, shall include the project number, sample delivery group number, laboratory name, field sample identification number, laboratory sample identification number (if applicable), QC sample name (if applicable), and the time and date of analysis.

2.7 The Contractor shall complete all the required information on the reporting forms and raw data forms as specified by this Appendix.

2.8 The Contractor shall not submit raw QC data, sample preparation, shipping documentation, and standard data in the Summary Data Report.

2.9 The Original Drinking Water Format Extended Data Report shall contain the original chain of custody forms and original documents in the Original Documentation Section (See Section 6.2).

2.10 The Drinking Water Format Summary Data Report shall meet the requirements of this deliverable.

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

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

2.13 If a volatile organic sample, synthetic organic sample, perfluorinated alkyl acid or perchlorate sample is diluted because a parameter concentration exceeded the upper calibration standard, the Contractor shall 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 shall be submitted.

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

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

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

2.17 Electronic Deliverables shall be submitted for each Sample Delivery Group. Each Sample Delivery Group has it own set of Electronic Deliverables and shall be submitted separately. The complete requirements are in Section 3.0 of this Appendix. The required electronic deliverables are as follows:

A. Hzresult Table;
B. Electronic Data Deliverable Format (Sample.Txt);
C. NJDEP- Drinking Water Data Summary Acrobat Format (PDF) File of both the Extended and Summary Report; and
D. Drinking Water Data Summary Table.

3.0 ELECTRONIC DATA FILES DELIVERABLE REQUIREMENTS

3.1 ELECTRONIC FILES BY ELECTRONIC MAIL

The three (3) electronic files generated by the Contractor shall be submitted by electronic mail to the State Contract Manager on the same day that the data package is due to the State. Copies of these files shall also be submitted to the State Contract Manager on CD-ROM as required by Section 3.2 of this Appendix.

3.2 FILES ON COMPACT DISC

The Compact Disc (CD) shall have the laboratory logo and name of the laboratory as a hologram on the disc label. The SDG number shall be on a sticker on the label. The cover slip of cardboard shall document the laboratory name, including a sticker with SDG number. The cover slip shall be sealed shut for delivery to State. The following files shall be included on the CD:

A. Adobe™ Portable Document File (PDF) files of the Extended and the Summary Data Reports (format See Section 4.0);
B. HZresult File;
C. NJDEP-Drinking Water Data Summary Table File; and
D. Electronic Data Deliverable Format (Sample.Txt File).

3.3 NJDEP- DRINKING WATER DATA SUMMARY TABLE

3.3.1 A NJDEP developed Excel Macro program is used on the NJDEP – Drinking Water Data Summary Table generated by the laboratory. The table shall 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 shall be addressed.

3.3.2 Data from other methods shall not be reported with this data.

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

3.3.4 The Contractor shall 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.

3.3.5 The Contractor shall input information that is required in the custom headers and footers of the Microsoft Excel™ worksheet for each sample. If the Contractor needs instructions in formatting the header, the State Contract Manager shall be contacted.

A. The left header information shall be as follows:
    1. Project Name;
    2. Field Sample Identification Number;
    3. Laboratory File Identification Number; and
    4. SDG Number.

B. The right header information shall be as follows:
    1. Project Number;
    2. Sample Date; and
    3. Analysis Date.

C. The left footer information shall be as follows:
    1. Laboratory Name; and

2. Laboratory City/State.

3.3.6 This table in a Microsoft Excel™ spreadsheet lists every target parameter that can be analyzed by in this contract. Only the target parameters required to be analyze by the Contractor shall be included in the file that is submitted to the State.

3.3.7 The files shall be named with the Sample Delivery Group Number and end with ".XLS". An example of this form is in Section 16.0 of this Appendix.

3.3.8 A separate Excel worksheet within one Microsoft Excel™ workbook shall be provided for each field sample, field duplicate, laboratory sample spikes, laboratory duplicates and each fraction specific method blank.

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

3.3.10 The Field Sample Identification Number shall be used as the tab name of the sample worksheet.

3.3.11 The Excel worksheet for each fraction shall use the heading specified below for the method/units row. The units shall be inserted after the method name on the row.

3.3.12 Water methods Designations:

A. USEPA Method 524.2;
B. USEPA Method 504.1;
C. USEPA Method 245.1;
D. USEPA Method 537; and
E. USEPA Method 331.0.

3.3.13 The dilution factor for each sample fraction shall be listed on the first row for each fraction (see Section 3.3.11). The dilution factor shall be listed even if the dilution factor is 1.

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

3.3.15 The compound names shall not be changed. The names that shall be used are listed in the table requirements.

3.3.16 The CAS numbers for any target compound shall not be changed from those listed.

3.3.17 The order of the target compounds on the table may be revised. All target compounds shall be presented prior to the non-target compounds.

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

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

3.3.20 If a CAS number exists for a non-target compound, that number shall be inserted in the appropriate column.

3.3.21 The Column Labeled “Q” is for the laboratory applied qualifier based on the SOW requirements.

3.4 ELECTRONIC DATA DELIVERABLE FORMAT (SAMPLE.TXT FILE)

3.4.1 Character fields shall present all alphabetic characters in the upper case. The Contractor shall submit this information electronically to the State, contain the data fields in a plain text file, with a file named “SAMPLE.TXT.", and enter each data field on a separate line concluded by a carriage return line feed combination (ASCII characters 13 and 10).

3.4.2 The State provides a unique site identifier (eight alphanumeric characters) for sampling under this contract.

(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	Water

The file shall 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; and
Sample n Matrix.

3.5 THE ELECTRONIC HZRESULT TABLES

3.5.1 Drinking Water Data shall be reported separately from all other method data in these electronic files.

3.5.2 Additional clarification will be posted on the SRP website as a general notice to all parties. The Contractor and consultants should routinely review the website for additional clarification documents.

3.5.3 Acceptable Formats:

The Contractor is only responsible for the generation of the HZRESULT table and shall routinely check for any updates and revisions to the requirements posted by the NJDEP Site Remediation Program. In particular, the February 2013 or later version of the Site Remediation Program Electronic Data Interchange Manual (SRP-EDI) can be viewed at the URL below. http://www.nj.gov/dep/srp/hazsite/docs/edi/index.htm.

3.5.4 Exceptions and special requirements to the SRP-EDI guidance are specified below:

The SRP-EDI describes format required for a laboratory to prepare a HZRESULT table. Unlike the April 1999 SRP-EDI, which allowed three format options, the February 2013 version calls for the HZRESULT table to be stored as tab-delimited test with a filename hzresult.txt. The format and requirements may be updated in the coming months and years. The SRP electronic data help desk is available at hazsite@dep.state.nj.us or at 609-633-1380 to answer questions about requirements for each table, how to submit a completed HazSite dataset, and why a dataset has been returned to the submitter for corrections;

Currently NJDEP maintains an Electronic Data Submission Application (EDSA) for processing EDDs received by the agency. EDSA includes a checker that automatically examines each dataset for certain common inconsistencies with the requirements of the SRP-EDI. SRP may also evaluate the inconsistency of a dataset with other datasets submitted the same site. NJDEP makes available an external version of EDSA for dataset preparers to check their work prior to submission. This application and other supporting tools are available for downloading at the URL http://www.state.nj.us/dep/srp/hazsite/;

This contract has additional requirements not included in the February 2013 SRP-EDI Manual. The State Contract Manager may require additional data elements beyond those described in this contract; and

The HZRESULT table shall omit results from any sample spiked with target analytes or any other laboratory-generated quality control sample. It shall also omit results for any internal standard, deuterated monitoring compound, or surrogate compound.

3.5.5 Analyte Names:

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

3.5.6 CAS Numbers:

The CAS numbers for the target compounds listed on the NJDEP – Drinking Water Data Summary Table shall be used for this electronic file.

4.0 DELIVERY OF HARDCOPY DATA IN PDF FORMAT

4.1 GENERAL REQUIREMENTS

4.1.1 The Contractor shall provide a complete copy of both hardcopy data reports in Adobe™ Acrobat PDF on a Compact Disc (CD). The Adobe™ Acrobat software used to generate the files shall be the latest version of the software.

4.1.2 The PDF file for Extended Data Report shall be organized in accordance to directions provided in Table 1 located in Section 16.0 of this Appendix.

4.1.3 The PDF file shall be bookmarked as described below for ease of data retrieval and navigation. The data shall be bookmarked using a hierarchal bookmark structure (i.e., an overview or "parent" bookmark, and a subordinate or "child" bookmark nested underneath the "parent" bookmark).

4.1.4 The required hierarchal bookmark structure for the Extended Data Report is shown in Table 1 in Section 16.0 of this Appendix.

4.1.5 The Summary Data Report PDF file is not required to be bookmarked. The Summary Data Report PDF shall follow the order established below and report only the required forms as specified in Section 16.0.

4.1.6 If the sampling event includes more than one (1) analytical method within the same sample delivery group, the hierarchal bookmark structure shall be expanded to the Group Bookmark level for each method (e.g., Group Bookmark → Parent Bookmark → Child Bookmark). Each method shall be considered a Group Bookmark. The Group Bookmark for each method would begin at the QC Summary Level. From the “Title Page” through “Method Detection Limit Studies” the documentation for all the methods can be grouped together.

5.0 NJDEP DRINKING WATER EXTENDED DATA FORMAT REPORT

5.1 GC/MS, LC/ESI/MS, LC/MS/MS Specific Requirements

All three analytical instruments have the same requirements and are present in this one (1) section.

5.1.1 Chromatograms shall display all target compound peaks and internal standard peaks normalized to full scale for all samples, standards and QC samples. The chromatogram shall be normalized to full scale based on the highest target or internal standard.

5.1.2 Data System Printouts - If automated data systems procedures are used for preliminary identification and/or quantitation of the target compounds, the complete data system report shall be included in all sample data packages. For Contractors that do not use the automated data system procedures, a laboratory "raw data sheet" containing the following information shall be included in the sample data package in addition to the chromatograms. The complete data system report shall include all the information listed below:

A. Comparison of compounds found vs. the library entry;
B. Sample identification number;
C. Date and time of analysis;
D. Retention time or scan number of identified target compounds;
E. Ion used for quantitation with measured area;
F. Copy of area table from data system;
G. Instrument identifier (GC/MS, LC/ESI/MS, LC/MS/MS); and
H. Laboratory file identifier.

5.1.3 In all instances where the data system report has been edited, or where manual integrations or quantitation has been performed, the GC/MS or LC/ESI/MS or LC/MS/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 shall automatically mark the integrated area with the letter "M" on the quantitation report. The GC/MS or LC/ESI/MS or LC/MS/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 shall be clearly distinguishable from the baseline. This applies to all compounds and internal standards compounds.

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

5.1.5 Reconstructed ion chromatograms shall be normalized to the largest target or internal standard and shall be labeled with following header information:

A. Field sample identification number;
B. Laboratory data file number;
C. Injection date and time;
D. Instrument identification; and
E. Analyst name.

5.2 GC/LC Specific Requirements

5.2.1 In all instances where the data system report has been edited, or where manual integrations or quantitation has been performed, the GC/LC 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 shall automatically mark the integrated area with the letter "M" on the quantitation report. The GC/LC operator shall verify that each integrated area is properly marked on the quantitation report. In addition, a separate hardcopy printout (presented on one page) of the manual integration shall be included immediately behind its associated chromatogram. The manual integration lines shall be distinguishable from any line that is drawn by the instrument when printed. This applies to all compounds targeted by the method/contract and surrogate compounds.

5.2.2 A printout of retention time and corresponding peak height or peak area shall accompany each chromatogram. The printout shall be labeled with the Sample Identification number. The chromatograms shall be labeled with the following:

A. Sample Identification number for the Standard;
B. Label all standard peaks for all individual compounds either directly out from the peak on the chromatogram or on the printout of retention times on the data system printout if retention times are printed over the peak on the chromatogram;
C. Total nanograms injected for each standard. When total nanograms injected appear on the printout, it is not necessary to include them on the chromatogram;
D. Date and time of injection;
E. GC or LC instrument identifier; and
F. Scaling factor (label the x and y axes using a numerical scale).

5.3 **GC and GC/MS Chromatograms and Quantitation Report Reporting Requirements**

5.3.1 The required information on the Chromatograms and Quantitation Report shall be the same as for the calibration standards, quality control samples, blanks and samples.

5.3.2 Quantitation Report Requirements – GC & GC/MS

A. The Quantitation Report that accompanies the chromatogram shall contain the following information in the top section of the report:

1. Data file identification;
2. Report date;
3. Injection date and time;
4. GC Operator;
5. Instrument identification;
6. Quantitation type;
7. Dilution factor;
8. Calibration File; and
9. Calibration sample Level (for all standards).

B. The Contractor may provide additional information for their use, as needed; and

C. The actual data results shall be reported with the following information:

1. Compound;
2. Concentration Formula;
3. Retention time;
4. Response (peak height or area);
5. On-column amount (ug/L); and
6. Calculated amount (ug/L).

D. If tentatively identified compounds (TICs) are detected, then up to 15 of the highest concentration TICs are to be reported (with retention time and estimated quantitation included).

5.3.3 Chromatograms – General Requirements – GC & GC/MS

A. Chromatograms shall be generated using a form-generation software. Strip chart data is not acceptable;

B. The following information shall be printed on the chromatogram page; and

1. Laboratory sample identification number;
2. Analyst;
3. Injection date and time;
4. Instrument identification;
5. Column phase and diameter; and
6. Data file.

C. The Contractor may provide additional information for their use, as needed;

D. The retention time or peak name shall be printed over the peaks for each detected compound name;

E. When no compounds are identified in a sample, the chromatograms from the analyses of the sample shall use the same scaling factor as was used for the low-point standard of the initial calibration associated with those analyses;

F. Chromatograms shall display compound peaks normalized to full scale for all samples, standards and QC samples;

G. Scaling factor (label the “x” and “y” axis using a numerical scale) shall be provided;

H. If a chromatogram is replotted electronically to meet these requirements, the scaling factor used shall be displayed on the chromatogram; and

I. When a chromatogram shall be rescaled, it shall be done such that the rescaled peak is in the upper range of the y axis. The information at the top of the page that shall be included is the following:

1. Field sample identification number;
2. Data file identification number;
3. Injection date and time;
4. Instrument identification number; and
5. Analyst name.

5.4 GC/MS Mass Spectra Requirements

For each sample, by each compound identified, the following items shall be included in the data package:

A. Copies of raw spectra and copies of background-subtracted mass spectra of target compounds that are identified in the sample and corresponding background-subtracted target compound standard mass spectra shall be provided. Spectra shall be labeled with Field Sample Number, Laboratory File Identifier, date and time of analysis, and GC/MS instrument identifier. Compound names shall be clearly marked on all spectra;

B. Copies of mass spectra of non-target compounds organic compounds with associated best-match spectra (maximum of three (3) best matches) shall be provided. Spectra shall be labeled with Field Sample Number, Laboratory File Identifier, date and time of analysis, and GC/MS instrument identifier. When applicable and identified, compound names shall be clearly marked on all spectra; and

C. Negative Proof -- A copy of the standard mass spectrum and non-confirmed mass spectra shall be submitted in the data report when GC/MS analysis indicates the presence of a target list compound at a concentration greater than 1 ug/L or the MDL, whichever is less, and examination of the standard mass spectrum and corresponding mass spectrum do not confirm the presence of the compound in the sample.

5.5 LC/ESI/MS Mass Spectra and Quantitation Report Requirements

5.5.1 LC/ESI/MS Quantitation Report Requirements

A. The required information on the Chromatograms and Quantitation Report shall be the same as for the calibration standards, quality control samples, blanks and samples;

B. The Quantitation Report that accompanies the chromatogram shall contain the following information in the top section of the report:

1. Data file identification;
2. Report date;
3. Injection date and time;
4. LC/ESI Operator;
5. Instrument identification;
6. Quantitation type;
7. Dilution factor;
8. Calibration File; and
9. Calibration sample Level (for all standards).

C. The Contractor may provide additional information for their use, as needed; and

D. The actual data results shall be reported with the following information:

1. Compound;
2. Concentration Formula;
3. Retention time;
4. Response (peak height or area);
5. On-column amount; and
6. Calculated amount.

5.5.2 LC/ESI/MS Mass Spectra Requirements

A. For each sample, the following items shall be included in the data package:

1. The mass spectral printouts shall be used for each of the ion: Ion 82.70, 84.70 and 88.70;
2. The Ion shall be listed at the top of each spectra;
3. The x axis and y axis information shall be provided for each spectra;
4. The peaks shall be labeled with the retention time; and
5. The integration marks shall be visible.

B. The following information shall be provided in a table format in the following order:

1. The following Column headings shall be used:
    a. Retention time;
    b. Mass;
    c. Peak Area;
    d. On column concentration (ug/L);
    e. Final Concentration (ug/L);
    f. Int Flag;
    g. Ion Ratio (MRM85:MRM83);
    h. Ion Ratio Limits; and
    i. Ion Flag.

2. The body of the table should list the expected retention time (window of the perchlorate ions);
3. The two perchlorate ions information listed sequentially; and
4. The internal standard 18O- perchlorate shall be listed last.

C. The Contractor may provide additional information for their use, as needed.

5.6 LC/MS/MS Mass Spectra and Quantitation Report Requirements

5.6.1 LC/MS/MS Quantitation Report Requirements

A. The required information on the Mass Spectra and Quantitation Report shall be the same as required for the GC/MS instrumentation for the calibration standards, quality control samples, blanks, and samples;

B. The Quantitation Report that accompanies the chromatogram shall contain the following information in the top section of the report:

1. Data file identification;
2. Report date;
3. Injection date and time;
4. LC/MS/MS Operator;
5. Instrument identification;
6. Quantitation type;
7. Dilution factor;
8. Calibration File; and
9. Calibration sample Level (for all standards).

C. The Contractor may provide additional information for their use, as needed; and

D. The actual data results on the quantitation report page shall be reported with the following information:

1. Compound;
2. Concentration;
3. Retention Time; and
4. Response (peak area of product ion and precursor ion).

5.6.2 LC/MS/MS Mass Spectra Requirements

For each sample, by each compound identified, the following items shall be included in the data package:

A. Copies of the m/e plots shall be provided;

B. The m/e plots shall be labeled with Field Sample Number, Laboratory File Identifier, date and time of analysis, and LC/MS instrument identifier; and

C. Compound names shall be clearly marked on all spectra.

6.0 ORDER OF EXTENDED DATA REPORT AND FORMAT REQUIREMENTS

6.1 GENERAL REQUIREMENTS

6.1.1 The NJDEP Regulatory Report Format is organized to facilitate the preparation and review of the data package. Present each type of analysis in individual sections. For example, when a sample is analyzed by USEPA Method 524.2 (VOA) and Mercury Method 245.1, then the laboratory shall present each fraction in separate sections and each section shall contain the Data Summary Information, Sample Data, Standards Data, Raw Data, Instrument Run Logs, and Digestion Logs (if applicable) for that fraction. This is in lieu of the various analyses being interspersed together in the summary sections, raw data section, etc.

6.1.2 The data package shall follow the order specified below and meet all the requirements specified below.

6.1.3 The Contractor shall present all Drinking Water Reports in separate data reports from other methods and shall comply with the requirements of this Appendix in the specified order.

6.1.4 All data summary forms at a minimum shall include the project number, laboratory name, field sample ID or laboratory sample ID number (if applicable), fraction or analysis being performed and the time and date of analysis.

6.2 ORIGINAL DOCUMENTATION SECTION

6.2.1 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 shall be 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 2 above as the compliant data package.

6.2.2 This section shall not be included in the main Table of Contents listing.

6.2.3 Original documents shall always be used for the following forms:

A. Title Page NJDEP Form A-1A;
B. Case Narrative NJDEP Form A-1C; and
C. Internal Chain of Custody Forms.

6.2.4 External Chain of Custody Forms

If the Sample Delivery Group contains samples from more than one External Chain of Custody form, one of the related data package shall contain the original form. A photocopy of the External Chain of Custody form shall be submitted in this section for the other packages.

6.2.5 Air Bills

The Contractor shall include the original or a legible copy of the airbill in this section. If the airbill was not received, the Contractor shall include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information.

6.2.6 Sample Receipt and Log-In Checklist for Drinking Water Samples

The Sample Receipt and Log-In Checklist may contain information on multiple Sample Delivery Groups for that sampling event. The original form shall be included in one of the related data packages. For the other packages a photocopy of the External Chain of Custody form shall be submitted in this section.

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

A. A cover page labeled Original Documentation shall be used;

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

C. The Header information of the Table of Contents shall be as follows:

1. Laboratory Name;
2. Laboratory Location;
3. Project Number (If no project number is supplied the Contractor shall include the name of the project supplied by the sampler); and
4. Sample Delivery Group Number.

D. The Body of the Table of Contents shall 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); and
6. Sample Receipt and Log-In Checklist.

E. At the end of the Table of Contents the following certification shall be required.

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

6.3 TITLE PAGE

NJDEP Form A-1A shall be required. All areas shall be completed on the form. The required information shall include the following:

A. Name of Agency which sent the samples to the laboratory;
B. NJDEP, or other State agencies' case number or name;
C. Contract number (for state work);
D. Laboratory's name and location;
E. Sample Delivery Group or Batch number;
F. First and last date of sample receipt at the laboratory's facility;
G. Field sample numbers;
H. Laboratory sample numbers;
I. Sample location;
J. Date and time of sample collection;
K. Date of data report;
L. Laboratory Quality Assurance Officer's name and signature; and
M. Laboratory Manager's name and signature.

6.4 TABLE OF CONTENTS

List on this table list, with a page reference, all fraction heading and subtopic headings. Refer to Section 6.2.7 of this document.

6.5 EXTERNAL AND INTERNAL CHAIN OF CUSTODY FORMS

6.5.1 External and internal laboratory chain of custody documents shall be 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 Contract User is required to complete all sections pertaining to sample collection. The Contractor shall properly complete the laboratory portions of these forms. Include all air waybills for each SDG, miscellaneous shipping and receiving records.

6.5.2 When chain of custody documentation is missing or contains errors, the Contractor shall immediately notify the State Contract Manager and/or Contract User submitting the samples.

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

6.5.4 NJDEP Internal Chain of Custody DEP Form-077 is used to document all movements of the sample, or aliquots through the laboratory. The date, time, and the date of relinquishing and accepting of the sample and aliquots by each individual who handled the sample materials shall be shown. 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.

6.5.5 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). The Contractor shall document the internal chain of custody for each sample, or aliquot representing a specific analytical fraction (e.g., volatiles, synthetic organics, mercury, perchlorates 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.

6.5.6 Electronic Internal Chain of Custody (in place of DEP Form-077) shall be acceptable for this Appendix with the following requirements. Prior approval shall be obtained to use an Electronic Internal Chain of Custody System:

A. The system shall be password protected;

B. The Electronic Internal Chain of Custody System shall 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 may add additional fields to meet the needs of their laboratory;

D. The Electronic Internal Chain of Custody System shall comply with all the Internal Chain of Custody requirements of this Section (6.5) in documenting and providing electronic signoff for the movement of samples through the Laboratory;

E. Full names, not initials, shall be used on the Electronic Chain of Custody System;

F. Once approved if it is determined that the Contractor is not following the requirements of this Section, the approval will be withdrawn. The Contractor shall use the hard copy Internal Chain of Custody forms in this case; and

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

6.6 SHIPPING DOCUMENTATION

The Contractor shall provide all the original shipping documents including, but not limited to, the following documents:

6.6.1 Air Bills

The Contractor shall include the original or a legible copy of the airbill in the extended data report. If the airbill was not received, the Contractor shall include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information.

6.6.2 Sample Receipt and Log-In Checklist for Drinking Water Samples

This form is used to document the receipt and inspection of sample containers and samples. One original checklist shall be required for each sampling event of twenty samples or less (only the hardcopy form is required). The form shall contain the following information. The Contractor may add additional fields at their discretion. If more than 20 samples are received at one time, multiple Sample Delivery Groups can be listed on the form and copies included in each data report.

A. Required information at the top of form:

1. Laboratory name;
2. Form name;
3. Client's name;
4. Sample delivery group number;
5. Project name or number;
6. Date and time received;
7. Received by (name of person receiving samples);
8. Log in date;
9. Name and signature of staff member who logged in samples;
10. Signature of project manager;
11. Date signed by project manager;
12. Number of shipping containers received;
13. Samples delivered by (company or person who delivered); and
14. Listing of air bill numbers.

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

1. Shipping Container Information:

    a. There is no evidence to indicate tampering;
    b. Custody seals are present and intact;
    c. Custody seals numbers are present; and
    d. List custody seal numbers.

2. Sample Condition:

    a. Sample containers were received intact.

3. Chain of Custody (COC). The COC shall be present and include the following information for each container:

    a. Sample ID/Sample Description;
    b. Date of sample collection;
    c. Time of sample collection;
    d. Identification of sampler;
    e. Requested test method(s);
    f. Necessary signatures; and
    g. Internal Chain of Custody (ICOC) required (answer is always yes).

4. Sample Integrity Usability:

    a. The sample container matches the COC; and
    b. Samples were received within holding time.

5. Anomalies or Non Conformance Summary (Comment section).

6.7 **CASE NARRATIVE**

6.7.1 The Contractor shall use NJDEP Form A -1C or a laboratory equivalent with the same information as NJDEP Form A -1C.

6.7.2 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 document shall include any technical and administrative problems, corrective actions, and resolution.

6.7.3 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 may be documented on a separate printout attached to the case narrative.

6.7.4 If tentatively identified compounds (TICs) are detected, then up to the 15 of the highest concentration TICs are to be noted and referenced to their associated sample numbers. The TIC compounds may be documented on a separate printout attached to the case narrative.

6.7.5 The Contractor shall document all GC/MS instruments and GC columns used for analysis. The Contractor shall list the GC column identifier—brand name, the internal diameter, in mm, the length, in meters, packing/coating material and film thickness. The trap used for volatile analysis shall be described here. The Contractor shall 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.

6.7.6 The Contractor shall document all LC/ESI/MS and LC/MS/MS instruments and chromatographic columns used for analysis. The Contractor shall list the LC column identifier—brand name, the internal diameter, in mm, the length, in meters, packing/coating material, and film thickness. The Contractor shall 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.

6.7.7 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 in the computer–readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his/her designee, as verified by the following signature."

6.7.8 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.

6.8 METHODOLOGY REVIEW

The Contractor shall indicate by Method and Revision number, what analyses were conducted on the samples, and shall use NJDEP Form A-4 – Drinking Water or equivalent (4/2014).

6.9 METHOD DETECTION LIMIT /LIMIT OF DETECTION/DETECTION LIMIT STUDY FORMAT

6.9.1 All information except for signatures shall be computer generated or typed. All data shall be reported in the correct units for the method. Current studies shall be reported in the analytical data packages.

6.9.2 The MDL study for each method shall be presented individually. The information required for each method shall be the same except for the units being reported.

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

A. Required Information at the top of form:

1. Laboratory Name;
2. Laboratory Location;
3. Matrix Type;
4. Effective Date/Expiration date of MDL Study; and
5. Instrument ID and Column ID (column ID for organics, perchlorates and perfluorinated alkyl acids only).

B. Required Columns:

1. Compound name;
2. CAS Number;
3. Data for seven replicates;
4. Mean value;
5. True Value;
6. Percent recovery;
7. Standard deviation;
8. Method Detection Limits;
9. Reporting Limits; and
10. True Value/MDL Ratio.

C. Header or Footer information:

1. Analyst name and date analyzed;
2. Reviewed by name and date;
3. Report preparer's name and date prepared;
4. QA Officer name and date signed;
5. Preparation Method;
6. Preparation Factor;

7. Preparation Date; and
8. Cleanup Method (if applicable).

6.10 METHOD DETECTION LIMIT VERIFICATION SUMMARY (MDLV)

6.10.1 The Verified Method Detection Limit Verification Summary (MDLV Summary) shall be submitted with the Method Detection Limit Study for each method. Current studies shall be reported in the analytical data packages.

6.10.2 The MDLV study for each method shall be presented individually. The information required for each method shall be the same except for the units being reported. See the method specific sections in the contract.

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

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

The required format of the Summary shall be as follows:

A. Required information at the top of form:

1. Date of verification study;
2. Analysis method;
3. Cleanup method (if applicable);
4. Preparation method;
5. Study Identification file name;
6. Matrix;
7. Analysis level;
8. Analyst name; and
9. Approval by QA Officer (name and date).

B. Required Columns:

1. Analyte name;
2. CAS number;
3. MDLV source;
4. Source study;
5. Source instrument;
6. Source analysis date;
7. MDLV;
8. QL;
9. QL/MDLV ratio; and
10. Reporting Limit.

7.0 QUALITY CONTROL DATA SUMMARY

7.1 The Quality Control Data Summary requirements shall be organized by general requirements that apply to all the contract required methods and then by method specific requirements.

7.2 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

7.3 The Contractor shall record all information on laboratory generated forms.

7.4. For methods 524.2, 504.1, and 537, all the compounds shall be listed on each form.

7.5 If more than one form is required to report a particular Quality Control requirement, the forms shall be arranged in chronological order by instrument and date of analysis for that QC requirement.

7.6 For Method 537, all concentrations are reported in ng/L. For Methods 524.2, 5.4, 245.1 and 331.0, all concentrations are reported in ug/L.

7.7 For Method 537, Field Duplicates results are reported as regular sample results since the identification of the Field Duplicates may not be disclosed to the Contractor.

7.8 QUALITY CONTROL DATA SUMMARY REQUIREMENTS- ALL METHODS

7.8.1 Laboratory Fortified Sample Matrix Spike Summary (LFSM, LFSM2, LFSMD, or MS/MSD)

A. If only a LFSM or MS is required by the method or the contract, the following sections shall apply:

1. The method required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent;

2. All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column; and

3. The following columns shall be on the form for each compound if only a LFSM or MS is required:

    a. Amount added;
    b. Amount recovered;
    c. Percent recovery; and
    d. QC limits.

B. If duplicate LFSM/LFSMD or MS/MSD are required by the method or the contract, the following section is required:

1. The method required control limits shall be provided. The percent recovery and Relative Percent Difference shall be calculated for each compound to the nearest whole percent;

2. All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column; and

3. The following columns shall be on the form for each compound:

    a. Amount added;
    b. Amount recovered;
    c. Percent recovery;

d. QC Limits and
e. RPD results.

7.8.2 Laboratory Duplicates Summary (LDUP1/2 or REP1/2)

A. Laboratory Duplicates are a requirement of Methods 524.2, 504.1, 331.0, and 245.1;

B. If the method or contract specifies control limits, the control limits must be provided. If the method or contract does not provide control limits they are not required;

C. The Percent Difference (%D) shall be calculated for each compound to the nearest whole percent;

D. If required by the method or contract for particular method, all Percent Differences (%D) outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column; and

E. The following columns shall be on the form for each compound:

1. Parent samples results;
2. Duplicate samples results;
3. Percent Difference (D); and
4. QC Limits (if applicable).

7.8.3 Method (reagent) Blank Summary (Organics, Perchlorates and Perfluorinated alkyl acids only)

A. The Contractor shall record on this form all samples, dilutions, reanalyses, LFSM(s), laboratory duplicates, fortified blanks and any other QC samples analyzed with the method (reagent) blank; and

B. The following columns shall be on the form. The samples, dilutions, reanalyses, Reporting Limit Laboratory Check Samples (RLLCS) and any other QC samples associated with the method blank shall be listed in this section.

1. Field sample identification number;
2. Laboratory sample identification number; and
3. Time and date of analysis.

C. The actual analytical results for the method blank are reported in another section.

7.8.4 Initial Calibration Verification Standard- All Methods

A. The laboratory File ID shall be included on the form;

B. The method or contract required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent);

C. All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column;

D. The following columns shall be on the form for each compound:

1. Amount added;
2. Amount recovered;
3. Percent recovery; and
4. QC limits.

E. The actual analytical results for the ICV Standard are reported in another section.

7.8.5 Laboratory Control Samples- All Methods

A. The laboratory File ID shall be included on the form;

B. The method or contract required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent);

C. All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column;

D. The following columns shall be on the form for each compound:

1. Amount added;
2. Amount recovered;
3. Percent recovery; and
4. QC limits.

E. The actual analytical results for the LCS are reported in another section.

7.8.6 Quality Control Sample Summary (QCS) – All Methods

A. The laboratory File ID shall be included on the form;

B. The method or contract required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent);

C. All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column;

D. The following columns shall be on the form for each compound:

1. Amount added;
2. Amount recovered;
3. Percent recovery; and
4. QC limits.

E. The actual analytical results for the QCS are reported in another section.

7.8.7 Laboratory Fortified Blank Summary (LFB)

A. The method required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent; and

B. All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column.

7.8.8 Surrogate Summary (Methods 524.2, 504.1, and 537)

A. Surrogates are not required by USEPA Method 504.1. If the Contractor adds the surrogate option to Method 504.1, the requirements of this section shall be met;

B. The Contractor shall record surrogate areas from the initial calibration standard on a laboratory generated form;

C. The percent difference shall be calculated from the calibration standard surrogate area for each sample, blank or continuing calibration standard; and

D. The upper and lower limits shall be provided on the form.

7.8.9 Reporting Limit Check Samples - Method 504.1

A. The deliverable requirements shall apply to Methods 504.1;

B. The laboratory File ID shall be included on the form;

C. The contract required control limits shall be provided. The percent recovery is to be calculated for each compound to the nearest whole percent);

D. All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column; and

E. The actual analytical results for the RLCS are reported in another section.

7.8.10 Reporting Limit Check Samples - Method 245.1

A. The deliverable requirements shall apply to Method 245.1;

B. The laboratory File ID shall be included on the form;

C. The method or contract required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent);

D. All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column; and

E. The actual analytical results for the RLCS are reported in the raw data generated off of the instrument.

7.9 METHOD 524.2 QUALITY CONTROL SUMMARY REQUIREMENTS

7.9.1 Instrument Performance Check Summary

A. The Contractor shall include on the form in the listing format all calibrations, samples, and QC samples associated with each tune. Identification number, date, and time of each injection shall be listed;

B. The GC column and internal diameter shall be listed on the form;

C. The time and date of the analysis of the Instrument Performance Check standard shall be listed on the form;

D. For each required ion, the Contractor shall enter the percent relative abundance in the right hand column of the top table. All relative abundances shall be reported as a number. If the relative abundance is zero the Contractor shall enter "0", not a "-" (dash) or other non-numeric character.

Where calculations are required such as a % of a particular ion as the reporting for certain mass, both numbers shall be provided with the calculated number in parentheses;

E. In the lower table, the Contractor shall list all the samples (including dilutions and reanalyses), standards, blanks, and QC samples analyzed under that instrument performance check. The following fields shall be included in the lower table and completed for each acquisition:

1. Field Sample Number;
2. Lab Sample Number;
3. Date Analyzed; and
4. Time Analyzed.

F. All of summary forms listing samples (including dilutions and reanalyses), standards, blanks and all quality control samples shall contain either an initial calibration sequence or an opening continuing calibration verification standard.

7.9.2 Internal Standard and RT Summary

A. The Contractor shall record internal standard responses and retention times of the internal standards on a laboratory-generated form. The upper and lower limits as required by the method shall be provided on the form. The retention time difference shall be reported from the latest daily 12-hour calibration standard or mean retention time over the initial calibration range;

B. The Contractor shall enter the date and time of the most recent valid calibration. If the most recent valid calibration is an initial calibration, internal standard area response and retention times in the 2 ug/L standard are used for evaluation against the samples;

C. The GC column and internal diameter shall be listed on the form;

D. For each internal standard used the Contractor shall list the internal area response and calculate the upper and lower limits for each internal area response and for the retention time;

E. The internal standard area response limits shall be within 30% from the areas measured in the most recent previous continuing calibration or within 50% from the areas measured during the initial calibration;

F. For each valid calibration, the Contractor shall list each internal standard, the area response and retention time report, and the upper and lower control limits for both the area response and retention time in a table format; and

G. List each sample in a table below the valid calibration internal standard area response information, including dilutions, reanalyses, blanks, and QC samples for that given valid calibration. The Field Sample Identification number should be used to identify each field sample. All entries shall have the internal area response and the retention time for each internal standard listed. If either the internal area response or the retention time for a particular internal standard exceed the specified limits an asterisk "*" shall be placed next to and to the right of the number being reported as a superscript.

7.10 **METHOD 245.1 (MERCURY)**

7.10.1 Initial and Continuing Calibration Verification Summary

A. The Correlation Coefficient shall be calculated and reported (if applicable);

B. The Initial Calibration Standard Source shall be listed;

C. The Continuing Calibration Verification Standard Source shall be listed;

D. Concentration Units shall be in ug/L;

E. The Method used for analysis shall be listed;

F. For the Initial Calibration Standard (ICV): the Analyte name, True Value, Found Value, and % Recovery shall be reported in a table format; and

G. For the Continuing Calibration Verification Standards (CCV): the Analyte Name, True Value, Found Value, and % Recovery shall be reported in a table format.

7.10.2 Blanks

A. This form is for the reporting of all preparation blank data, initial calibration blank, and continuing calibration blank data;

B. If arsenic is analyzed by direct injection technique there is no preparation blank;

C. Concentration units shall be in ug/L;

D. For all blanks, enter the concentration of each analyte (positive or negative) measured above the IDL or below the negative value of the IDL; and

E. The following information shall be included in a table format:

1. Preparation Blank concentration with any qualifier added in a separate column;
2. Initial calibration blank concentration with any qualifier added in a separate column; and
3. Continuing calibration blank concentration with any qualifier added in a separate column.

7.10.3 Preparation Log Summary

A. laboratory generated form shall be required. A separate form is required for each batch of samples and for each method;

B. The volume used for the preparation and date of preparation shall be listed on the form;

C. All field samples and all Quality Control (QC) preparations (associated with the SDG shall be reported on this form);

D. In addition, for mercury analyses, all prepared calibration standards and QC standards shall also be reported on this form; and

E. This form does not replace the preparation logs used by the analysts.

7.10.4 Analysis Run Log Summary

A. Record the sample analysis run log information on laboratory generated form. This information does not replace the instrument run logs used by the analyst. All information shall be provided;

B. If a percent recovery is required by a QC sample, this information shall be recorded. The run logs shall be grouped by technique used and be in date order;

C. Interspersing of various instrument runs is not acceptable;

D. A run is defined as the totality of analyses performed by an instrument throughout the sequence initiated by, and including, the first calibration standard or tune standard, and terminated by, and including, the CCV and CCB following the last required analytical sample; and

E. All field samples and all QC analyses (including tunes, calibration standards, ICVs, CCVs, ICBs, CCBs, LFBs, RL Check Standard, reagent blanks, duplicates, serial dilutions and LFSMs, associated with the SDG shall be reported on the Run Log. The run shall be continuous and inclusive of all analyses performed on the particular instrument.

7.11 METHOD 331.0 (PERCHLORATES) LABORATORY FORTIFIED SYNTHETIC SAMPLE MATRIX SUMMARY (LFSSM)

7.11.1 The method required control limits shall be provided. The percent recovery is to be calculated for each compound to the nearest whole percent.

7.11.2 All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column.

7.11.3 The following columns shall be on the form for each compound if only a LFSM or MS is required:

A. Amount recovered ug/L);
B. Percent recovery;
C. QC limits; and
D. Amount added (ug/L).

7.12 METHOD 537 (PERFLUORINATED ALKYL ACIDS)

7.12.1 Internal Standard and RT Summary

A. The Contractor shall record internal standard responses and retention times of the internal standards on a laboratory-generated form. The upper and lower limits as required by the method shall be provided on the form. The retention time difference shall be reported from the latest daily 12-hour calibration standard or mean retention time over the initial calibration range;

B. The Contractor shall enter the date and time of the most recent valid calibration;

C. The LC column and internal diameter shall be listed on the form;

D. For each internal standard used the Contractor shall list the internal area response and calculate the upper and lower limits for each internal area response and for the retention time;

E. The internal standard area response limits shall be within 70% -140% from the areas measured in the most recent previous continuing calibration or shall not be more than 50% from the areas measured during the initial calibration;

F. For each valid calibration, the Contractor shall list each internal standard, the area response and retention time report, and the upper and lower control limits for both the area response and retention time in a table format; and

G. List each sample in a table below the valid calibration internal standard area response information, including dilutions, reanalyses, blanks, and QC samples for that given valid calibration. The Field

Sample Identification number should be used to identify each field sample. All entries shall have the internal area response and the retention time for each internal standard listed. If either the internal area response or the retention time for a particular internal standard exceed the specified limits an asterisk “*”shall be place next to the number being reported as a superscript to the right of the number.

8.0 SAMPLE DATA SUMMARY

8.1 GENERAL REQUIREMENTS

8.1.1 The laboratory shall place sample packages in order of increasing sample number considering both letters and numbers.

8.1.2 The Contractor shall record sample data on a laboratory-generated form. A separate form shall be provided for each acquisition.

8.1.3 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

8.1.4 For Perfluorinated Alkyl Acid Method 537 only, the concentration unit is ng/L. All other methods are reported in ug/L.

8.1.5 The following information shall be on each form, in addition to the requirements of Sections 2.6 and 2.7 of this Appendix:

A. Matrix type (Water);
B. Sample volume (ml);
C. Laboratory sample identification number;
D. Laboratory file identification number;
E. Date received;
F. Date analyzed (Organics, Perfluorinated Alkyl Acids and Perchlorates only);
G. Date Extracted (Organics, Perfluorinated Alkyl Acids and Perchlorates only);
H Sulfur Cleanup (Method 331.0 only) [yes or no];
I. Injection Volume (Organics and Perfluorinated Alkyl Acids only) [for VOAs purge volume];
J. Dilution factor (Organics, Perfluorinated Alkyl Acids and Perchlorates only);
H Concentration units (ug/L or ng/L); and
I. The table summarizing the compound results information shall contain the following:

1. CAS Number for all target compounds;
2. Compound name;
3. Concentration reported; and
4. Laboratory qualifier applied.

The Contractor may add additional fields for its own use.

8.1.6 The Contractor shall record quantitative results, UNCORRECTED for blank and method detection limits on a laboratory-generated form in accordance with the requirements listed below.

8.1.7 The Contractor shall report all data to two (2) significant figures on the summary form.

8.1.8 The Contractor shall report all data in ug/L or ng/L concentration units.

8.1.9 The Contractor shall report values less than the reporting limits for a compound for Methods 524.2, 504.1, 331.0, and 245.1. If the compound is detected by the instrument at less than the Reporting Limit, the sample result for that compound is to be reported with a J qualifier (Example 0.40 J ug/L).

8.1.10 The Contractor shall report values less than the Minimum Reporting Limits (MRLs) for a compound for Method 537. Data shall not be reported down to the DL for any compound. If the compound is detected by the instrument at less than the MRL, the sample data for that compound is to be reported with the value and the “J” qualifier.

8.1.11 The Contractor shall not report any data using the Method Detection Limit as the Reporting Limit for any compound for Methods 524.2, 504.1, 331.0, and 245.1. For Method 537, the Contractor shall not report any date using the Detection Limit as the MRL for any compound.

8.1.12 For Methods 504.1, 524.2, 537, and 331.0 the use of the "E" and "D" qualifiers are specified below.

A. The compounds that exceed the upper limit of the initial calibration shall be reported with an "E" qualifier as defined in Section 14.0;

B. All diluted sample results shall be reported on separate form;

C. The compounds whose concentrations that exceeded the upper limit of the initial calibration in the initial analysis and then after dilution are within the calibration range shall be reported with a "D" qualifier as defined in Section 14.0;

D. The compounds that are reported in the diluted sample that did not require dilution shall be reported down to the adjusted reporting limit with the "D" qualifier applied; and

E. The compounds that are reported in the diluted sample and not reported in the undiluted sample shall be reported without a "D" qualifier. Instead qualify the data with the laboratory defined qualifier "X". See Section 14.0 for additional information.

8.2 For Methods 504.1, 537, 524.2, and 331.0 the quantitation reports, associated chromatograms and mass spectra shall be provided for each sample acquisition including each dilution. These documents shall immediately follow the Sample Data Summary Form. The chromatograms, mass spectra and data system reports shall comply with Section 3.0.

8.3 For Method 245.1, the Sample Summary Forms shall be reported in this section. The instrument printouts for each sample are located in the Raw Data Section of the Data Report.

9.0 STANDARD DATA SECTION METHODS 504.1, 524.2, 537, AND 331.0

The Standard Data Sections are organized by general requirements that shall apply to all the contract required methods and then by method specific requirements.

9.1 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

9.2 The Contractor shall record all information on laboratory generated forms.

9.3 For Methods 524.2, 504.1 and 537, all the compounds shall be listed on each form.

9.4 The sequence order shall be chronological and by instrument if more than one instrument is used.

9.5 METHOD 524.2 INITIAL CALIBRATION FORM SUMMARY AND RAW DATA

9.5.1 The Initial Calibration Data Summary report, in addition to the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information at the top of the form:

A. Start calibration date and time;
B. End calibration date and time;
C. Calibration file names;
D. Instrument identification; and
E. Column type and name.

9.5.2 The table summarizing the calibration information shall contain the following:

A. Calibration file name or identifier by level established in the calibration file name above;
B. Relative Response Factor of Standard analyzed;
C. Average Relative Response Factor; and
D. % Relative Standard Deviation.

9.5.3 The quantitation reports and chromatograms for each of the calibration standards associated with the initial calibration shall immediately follow the initial calibration summary form. Spectra are required only for compounds that undergo manual integration.

9.6 METHOD 524.2 CONTINUING CALIBRATION FORM SUMMARY AND RAW DATA

9.6.1 The Continuing Calibration Data Summary report, in addition to the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information in the header of the form.

A. Laboratory file ID;
B. Calibration date and time;
C. Initial Calibration date and time (start and stop);
D. Instrument identification; and
E. Column type and name.

9.6.2 The table summarizing the calibration information shall contain the following:

A. Name of compound;
B. Peak height or peak area (shall be used consistently across the entire sample set);
C. Relative Response Factor of standard analyzed;
D. Average Relative Response Factor;
E. % Difference; and
F. Maximum % Difference allowed by method.

9.6.3 The quantitation report and chromatogram for each calibration standard associated with the continuing calibration standard shall immediately follow each continuing (opening or closing) calibration summary form. Spectra are required only for compounds that undergo manual integration.

9.7 METHOD 504.1 INITIAL CALIBRATION FORM SUMMARY

9.7.1 Complete calibration information shall be provided for both columns.

9.7.2 The Initial Calibration Data Summary report, in addition to the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information at the top of the form:

A. Calibration Dates and time;
B. Column information and instrument information;
C. Peak height or area response for each standard; and
D. The type of curve used and the curve statistics.

9.7.3 Chromatograms and data system printouts shall be included for all standards immediately following the data summary forms.

9.8 METHOD 504.1 CONTINUING CALIBRATION FORM SUMMARY

9.8.1 Complete calibration information shall be provided for both columns.

9.8.2 The Continuing Calibration Data Summary report, in addition to the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information on the form:

A. The maximum % Difference allowable for each compound;
B. Peak height or area response for each standard; and
C. The type of curve used.

9.8.3 Chromatograms and data system printouts shall be included for all standards immediately following the data summary forms.

9.9 METHOD 331.0 INITIAL CALIBRATION FORM SUMMARY

9.9.1 Separate forms are required for each curve.

9.9.2 The date(s) and time(s) of initial calibration shall be on listed each form.

9.9.3 The columns shall be listed on the form.

9.9.4 The Initial Calibration Data Summary report, in addition to the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information:

A. Laboratory file ID;
B. Calibration date and time;
C. Initial Calibration date and time (start and stop);
D. Instrument identification; and
E. Column type and name.

9.9.5 The table summarizing the calibration information shall contain the following:

A. Name of compound;

B. Calibration file name or identifier by level established in the calibration file name above;
C. Relative response factors;
D. Curve type;
E. Maximum % Relative Standard Deviation or R^2;
F. Average Relative Response Factor; and
G. % Relative Standard Deviation.

9.9.6 Include any and all curve statistics used.

9.9.7 Chromatograms and data system printouts shall be included for all standards immediately following the data summary forms.

9.10 METHOD 331.0 CONTINUING CALIBRATION VERIFICATION FORM SUMMARY

9.10.1 Separate forms are required for each continuing calibration verification standard.

9.10.2 The date and time of the continuing calibration verification shall be on listed each form.

9.10.3 The column shall be listed on the form.

9.10.4 The Continuing Calibration Verification Data Summary report, in addition to the requirement of the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information at the top of the form:

A. Laboratory file ID;
B. Calibration date and time;
C. Initial Calibration date and time (start and stop);
D. Instrument identification; and
E. Column type and name.

9.10.5 The table summarizing the calibration information shall contain the following:

A. Name of compound;
B. Relative response factors base on peak height or peak area (shall be used consistently across the entire sample set);
C. Curve type;
D. Maximum % Difference;
E. Average Relative Response Factor; and
F. % Difference.

9.10.6 Include any and all curve statistics used.

9.10.7 Chromatograms and data system printouts shall be included for all standards immediately following the data summary forms.

9.11 METHOD 537 INITIAL CALIBRATION FORM SUMMARY AND RAW DATA

9.11.1 The Initial Calibration Data Summary report, in addition to the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information at the top of the form:

A. Start calibration date and time;
B. End calibration date and time;
C. Calibration file names;
D. Instrument identification; and

E. Column type and name.

9.11.2 The table summarizing the calibration information shall contain the following:

A. Calibration file name or identifier by level established in the calibration file name above;
B. Actual concentration, true concentration and percent recovery of actual versus true for all compounds, surrogates and internal standards at each standard calibration level; and
C. Acceptable percent recovery ranges,

9.11.3 The quantitation reports and chromatograms for each of the calibration standards associated with the initial calibration shall immediately follow the initial calibration summary form. Spectra (m/e plots) are required.

9.12 METHOD 537 CONTINUING CALIBRATION FORM SUMMARY AND RAW DATA

9.12.1 The Continuing Calibration Data Summary report, in addition to the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information in the header of the form:

A. Laboratory file ID;
B. Calibration date and time;
C. Initial Calibration date and time (start and stop);
D. Instrument identification; and
E. Column type and name.

9.12.2 The table summarizing the calibration information shall contain the following:

A. Name of compound;
B. Peak area (shall be used consistently across the entire sample set);
C. Actual concentration, true concentration and percent recovery of actual versus true concentrations for all compounds, surrogates and internal standards at each standard calibration level; and
D. Acceptable percent recovery ranges.

9.12.3 The quantitation report and chromatogram for each calibration standard associated with the continuing calibration standard shall immediately follow each continuing calibration summary form. Spectra (m/e plots) are required.

9.13 **INITIAL CALIBRATION VERIFICATION SAMPLE STANDARD FORM- ALL METHODS**

9.13.1 The Initial Calibration Verification Sample Standard (ICV Standard) summary report, in addition to the requirement of the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information at the top of the form:

A. Laboratory file ID;
B. Initial Calibration Verification Sample Standard date and time;
C. Initial Calibration date and time (start and stop);
D. Instrument identification; and
E. Column type and name.

9.13.2 The method required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent (two significant figures). All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column.

9.11.2 The following columns shall be on the form for each compound:

A. Amount added;
B. Amount recovered;
C. Percent recovery; and
D. QC limits.

9.11.3 The quantitation report and chromatograms for each ICV Standard shall immediately follow that ICV Standard summary form. Spectra are required only for compounds that undergo manual integration.

9.12 LABORATORY CONTROL SAMPLE (LCS) SUMMARY – ALL METHODS

9.12.1 The Laboratory Control Sample (LCS) summary report, in addition to the requirement of the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information at the top of the form:

A. Laboratory file ID;
B. Initial Calibration Verification Sample Standard date and time;
C. Initial Calibration date and time (start and stop);
D. Instrument identification; and
E. Column type and name.

9.12.2 The method required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent (two significant figures). All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column.

9.12.3 The following columns shall be on the form for each compound:

A. Amount added;
B. Amount recovered;
C. Percent recovery; and
D. QC limits.

9.12.4 The quantitation report and chromatograms for each LCS shall immediately follow that LCS summary form. Spectra are required only for compounds that undergo manual integration

9.13 QUALITY CONTROL SAMPLE SUMMARY – ALL METHODS

9.13.1 The Quality Control Sample (QCS) summary report, in addition to the requirement of the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information at the top of the form:

A. Laboratory file ID;
B. Initial Calibration Verification Sample Standard date and time;
C. Initial Calibration date and time (start and stop);
D. Instrument identification; and
E. Column type and name.

9.13.2 The method required control limits shall be provided. The percent recovery shall be calculated for each compound to the nearest whole percent (two significant figures). All Percent Recoveries outside of Quality Control (QC) Limits shall be flagged with an asterisk "*" in the QC Limit column.

9.13.3 The following columns shall be on the form for each compound:

A. Amount added;
B. Amount recovered;
C. Percent recovery; and

D. QC limits.

9.13.4 The quantitation report and chromatograms for each QCS shall immediately follow that QCS summary form. Spectra are required only for compounds that undergo manual integration.

9.14 METHOD 331.0 INTERNAL STANDARD AREA AND RT SUMMARY

9.14.1 Record internal standard responses and retention times of the internal standards on a laboratory-generated form.

9.14.2 The Internal Standard Area and Retention Time summary report in addition to the requirement of the requirements of Sections 2.6 and 2.7 of this Appendix shall contain the following information at the top of the form:

A. Enter the date and time of the most recent valid calibration; and

B. The GC column and internal diameter shall be listed on the form.

9.14.3 The upper and lower limits as required by the method shall be provided on the form. The retention time difference shall be reported from the latest daily 12-hour calibration standard or mean retention time over the initial calibration range.

9.14.4 For each internal standard used the Contractor shall list the internal area response and calculate the upper and lower limits for each internal area response and the retention time.

9.14.5 For each valid calibration the Contractor shall list each internal standard, the area response and retention time report, and the upper and lower control limits for both the area response and retention time in a table format.

9.14.6 In a table below the valid calibration internal standard area response information, the Contractor shall list each sample, including dilutions, reanalyses, blanks, and QC samples for that given valid calibration. The Field Sample Identification number should be used to identify each field sample. All entries shall have the internal area response and the retention time for each internal standard listed. If either the internal area response or the retention time for a particular internal standard exceed the specified limits an asterisk "*" shall be place next to the number being reported as a superscript to the right of the number.

9.15 PEAK ASYMMETRY FACTOR REPORTING FORM

9.15.1 This laboratory form is required every time a calibration curve is generated.

9.15.2 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

9.1.3 The reported widths of the front and back halves of each peak used in the calculation must be included summary for each compound.

9.15.4 The form must contain the peak asymmetry factor for each peak and compound that determined by the Contractor as required by the method.

9.15.5 The associated Initial Calibration information must be provided on the form and must contain the following information at the top of the form:

A. Start calibration date and time;
B. End calibration date and time;

C. Calibration file names;
D. Instrument identification; and
E. Column type and name.

9.15.6 The peaks and the associated data used to demonstrate compliance are to be submitted must be submitted following the summary reporting form.

9.16 ANALYTICAL SEQUENCE SUMMARY METHODS 504.1, 537, AND METHOD 331.0

9.16.1The sequence order shall be chronological and by instrument if more than one instrument is used.

9.16.2 The Analytical Sequence Summary shall include all the acquisitions associated with the sample batch.

A. The Initial Calibration acquisitions;
B. The Initial Calibration Verification Sample Standard acquisitions;
C. Any Opening Continuing Calibration Verification Standard acquisition conducted prior to the analysis of the samples;
D. Any Closing Continuing Calibration Verifications Standards as required by the method;
E. All sample acquisitions;
F. Any acquisition between the initial CCCS and compliant Closing Continuing Calibration Verification Standard;
G. All associated batch QC sample acquisitions;
H. Any Quarterly QCS samples; and
I. Any Ending Calibration Verification Standards as required by the method.

9.16.3 The Analytical Sequence Summary report, in addition to the requirement of the requirements of Sections 2.6 and 2.7 of this Appendix, shall contain the following information at the top of the form:

A. Start and end calibration date(s);
B. Instrument identification; and
C. Column type.

9.16.4 In a tabular format the following information shall be provided for each acquisition:

A. Sample number;
B. Laboratory Sample ID; and
C. Time and date of each injection.

10.0 RAW QC DATA PACKAGE

10.1 METHODS 245.1 (MERCURY)

10.1.1 For each reported value, the Contractor shall include in the sample data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to Initial Precision and Recovery and Method Detection Limit (MDL) studies.

10.1.2 Raw data shall contain all instrument readouts used for the sample results. Each exposure or instrumental reading shall be provided, including those readouts that may fall below the MDL. Raw data shall not be corrected for dilutions or volume adjustments. All Mercury (CVAA) instruments shall provide legible hardcopy of the direct real-time instrument readout (i.e. strip charts, printer tapes, etc.) or a printout of the unedited instrument data output file. A photocopy of the instruments direct sequential readout shall be included.

10.1.3 All raw data shall include absorbances or concentrations units for Mercury.

10.1.4 Corrections to the Contractor's data reporting forms and raw data shall be made by drawing single lines through the errors and entering the correct information. Information shall not be obliterated or rendered unreadable. Corrections and additions to information shall be signed (or initialed) and dated.

10.1.5 Raw data shall be labeled with Sample ID numbers and appropriate codes to unequivocally identify:

A. Calibration standards, including source and preparation date;

B. Initial and Continuing Calibration Blanks (ICB/CCB) and Reagents Blanks (Preparation Blanks) [PB];

C. Fortified Blanks;

D. Diluted and undiluted samples (by NJDEP sample number) and all weights, dilutions and volumes used to obtain the reported values. If the volumes and dilutions are consistent for all samples in a given batch or group of samples, a general statement outlining these parameters shall be sufficient;

E. Initial Calibration Verification (ICV) and Instrument Performance Check (IPC) standards, Quality Control Samples, MDL/MCL check sample;

F. Laboratory Duplicates;

G. RL Check Standard;

H. Fortified Sample Matrix Samples (indicating standard solutions used, final spike concentrations and volumes involved. If spike information (source, concentration, volume) is consistent for a given batch, a general statement outlining these parameters shall be sufficient;

I. Fortified Matrix Spikes (indicating standard solutions used, final spike concentrations, and volumes involved). If spike information (source, concentration, volume) is consistent for a given batch or group of samples, a general statement outlining these parameters shall be sufficient;

J. Instrument used, any instrument adjustment, data corrections or other apparent anomalies on the measurements record, including all data voided or data not used to obtain reported values and a brief written explanation; and

K. Time and date of each analysis. Instrument run logs can be submitted if they contain this information. If the instrument does not automatically provide times of analysis, these shall be manually entered on all raw data.

10.2 **METHOD 524.2 INSTRUMENT PERFORMANCE DATA**

10.2.1 Record sample data on a laboratory-generated form. A separate form shall be provided for each acquisition.

10.2.2 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

10.2.3 The sequence order shall be chronological and by instrument if more than one instrument is used.

10.2.4 Instrument Performance Data shall be arranged in chronological order by instrument for each 24-hour period, for each GC/MS system utilized. Table 3 of the method lists the required BFB key ions and ion abundance criteria. If different criteria are used, it shall have been pre-approved by the NJDEP Office of Quality Assurance.

10.2.5 Bar graph spectrum shall be labeled as per Section 3.0 of this Appendix.

10.2.6 Mass listing shall be labeled as per Section 3.0 of this Appendix.

10.2.7 Reconstructed total ion chromatogram shall be labeled as per Section 3.0 of this Appendix.

10.3 **BLANK DATA (INCLUDES METHOD BLANKS, FORTIFIED BLANKS, REAGENT BLANKS, SYNTHETIC BLANKS AND INSTRUMENT BLANKS)**

10.3.1 The deliverable requirements apply to Methods 504.1, 524.2, 537, and 331.0 only.

10.3.2 The Contractor shall record sample data on a laboratory-generated form. A separate form shall be provided for each acquisition.

10.3.3 The sequence order shall be chronological and by instrument if more than one instrument is used.

10.3.4 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

10.3.5 Blank data shall be arranged by type of blank (method blanks, fortified blanks instrument blanks) and shall be in chronological order by instrument and date of analysis.

10.3.6 Tabulated results shall be provided on a laboratory-generated form for the target compounds that is the same form used for the sample data.

10.3.7 The quantitation reports associated chromatograms and mass spectra shall be provided for each sample acquisition including dilutions. For each acquisition, these documents shall immediately follow the Sample Data Summary form for the method blank. The chromatograms, mass spectra and data reports shall be labeled as required by Section 3.0 of this Appendix.

10.3.8 The Contractor shall report values less than the reporting limits for a compound. If the compound is detected by the instrument at less than the Reporting Limit, the sample data for that compound is to be reported with the “J” qualifier (Example 0.1 J ug/L).

10.3.9 The Blank Data summary shall comply with Section 8.0 of this Appendix.

10.3.10 For Method 524.2, Tentatively Identified Compounds detected in any blank shall be reported in accordance with Section 8.0 of this Appendix.

10.4 METHOD 504.1 REPORTING LIMIT CHECK SAMPLES (RLLCS)

10.4.1 The deliverable requirements apply to Method 504.1 only, since for Methods 200.8 and 245.1, the data are reported in the raw data submittal.

10.4.2 The sequence order shall be chronological and by instrument if more than one instrument is used.

10.4.3 The Contractor shall record sample data on a laboratory-generated form. A separate form shall be provided for each acquisition.

10.4.4 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

10.4.5 The Reporting Limit Check Sample summary shall comply with Section 8.0 of this Appendix.

10.4.6 The RLLCS reconstructed ion chromatograms and data system reports for each QC sample shall be provided.

10.4.7 The chromatograms and data system reports (if applicable) shall be labeled as required by Section 3.0 of this Appendix.

10.5 FORTIFIED SAMPLE MATRIX/FORTIFIED SAMPLE MATRIX DUPLICATE SAMPLE DATA

10.6.1 The deliverable requirements apply to Methods 504.1, 524.2, 537, and 331.0 only.

10.5.1 The sequence order shall be chronological and by instrument if more than one instrument is used.

10.5.2 The Contractor shall record sample data on a laboratory-generated form. A separate form shall be provided for each acquisition.

10.5.3 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

10.5.4 The Fortified Sample Matrix/Fortified Sample Matrix Duplicate Sample Data summaries shall comply with Section 8.0 of this Appendix.

10.5.5 The Contractor shall provide Spike Data reconstructed ion chromatograms and data system reports for each QC sample. Except for method 537, mass spectra are <u>not</u> required unless manual integration has been conducted on a compound.

10.6 LABORATORY DUPLICATES/REPLICATES

10.6.1 The deliverable requirements apply to Methods 504.1, 524.2, and 331.0 only.

10.6.1 The sequence order shall be chronological and by instrument if more than one instrument is used.

10.6.2 The Contractor shall record sample data on a laboratory-generated form. A separate form shall be provided for each acquisition.

10.6.3 All reporting forms shall comply with the requirements of Sections 2.6 and 2.7 of this Appendix.

10.6.4 Laboratory Duplicates/Replicates summaries shall comply with Section 8.0 of this Appendix.

10.6.5 For Method 524.2, Tentatively Identified Compounds detected in any laboratory duplicate/replicate shall be reported in accordance with Section 8.0 of this Appendix.

10.6.6 The Contractor shall provide Duplicate Sample data reconstructed ion chromatograms and data system reports for each QC sample. Mass spectra are not required unless manual integration has been conducted on a compound.

10.7 SCREENING DATA

10.7.1 The deliverable requirement applies to Methods 504.1, 537, 524.2 and 331.0 only.

10.7.2 If the laboratory screens the samples prior to analysis, all screening data shall be included in this section. The Contractor shall include all instrument output, including strip charts from screening activities.

11.0 EXTRACTION LOGS DOCUMENTATION

11.1 All extraction logs shall include the Standard Traceability information and entries.

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

11.3 The top of page information shall identify the following information:

A. Name of form;
B. Analyst;
C. Extraction method;
D. Spike analyst;
E. Client name;
F. SDG number;
G. Extraction date;
H. Start time; and
I. Stop time.

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

11.5 The laboratory name may either be at the top or bottom of the page.

11.6 All blanks and QC samples associated with the field samples shall be listed.

11.7 Copies of the actual logbook page(s) shall be provided.

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

11.9 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.

12.0 PREPARATION LOG REQUIREMENTS

12.1 The following log shall be submitted for the mercury preparations. 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., Fortified blank, RLLCS, PB, REPs) 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)].

12.2 All digestion and preparation logs shall include the Standard Traceability information.

12.3 The following information shall also be included on the digestion and the distillation logs:

A. Start time and stop time;
B. Initial and final temperatures (if applicable);
C. Block ID number (if applicable);
D. Spike analyst;
E. MS spike analyst;
F. Chloride test (if applicable); and
G. Sulfide test (if applicable).

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

12.5 Copies of the actual logbook page(s) shall be provided.

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

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

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

13.0 INSTRUMENT RUN LOG – ORGANICS

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

13.2 All Instrument logs shall include the Standard Traceability information.

13.3 GC/MS Instrument Performance check section that shall be included on the top of the page shall 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.

13.4 Instrument Information that shall be included on the top of the page shall include instrument type and model, instrument ID, Column type and purge volume (for volatiles) or injection volume for extractables.

13.5 General information that shall be included on the page is the sequence identification, batch ID, Test method, ICAL date, start date, start time, end date and end time.

13.6 All log book pages shall be instrument specific.

13.7 The laboratory name may either be in the header of the footer.

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

13.9 The Instrument run log for the associated initial calibration shall be included.

13.10 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.

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

13.12 GC/MS instrument run log shall contain the following sections and sequence information shall have the following columns: injection time, Laboratory ID/File name, bottle code, SDG number, vol in mls (volatiles only), dilution factor (extractables) and Operator.

13.13 LC/ESI/MS and LC/MS/MS instrument run log shall contain the following sections and sequence information shall have the following columns: injection time, Laboratory ID/File name, bottle code, SDG number, volume injected, dilution factor (extractables) and Operator.

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

13.15 The Contractor shall also include a comment section (for any comments by analyst).

13.16 GC instrument run logs shall 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.

13.17 For all instrument run log pages, the bottom of the page shall 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).

14.0 DATA QUALIFIERS

The methods do not specify the use of data qualifiers. However, NJDEP has identified the data qualifiers that shall be used to report the data.

14.1 ORGANIC DATA QUALIFIERS

U- This flag indicates the compounds were analyzed for but not reported. The RL shall be adjusted if dilutions are required.

B- This flag is used when an analyte or a tentatively identified compound is found in the associated method blank as well as the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The combination of flags “BU” or “UB” is expressly prohibited.

E- This flag indicates a compound whose concentration exceeds the upper calibration level of the calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample shall be diluted and reanalyzed according to the requirements of the method. All compounds with a response greater than the upper level of the calibration range shall have the concentration flagged with an “E” on the Sample Data Summary Reporting Form.

D- If a sample is reanalyzed at a higher dilution factor the DL suffix is appended to the sample number on the Sample Data Summary Reporting Form for the more diluted sample, and all reported concentrations on that form shall be flagged with a “D” flag. This flag alerts data users that any discrepancies between the reported concentrations maybe due to dilution of the sample. An example of this is when the concentration of an analyte exceeds the upper calibration range.

Note 1: The “D” flag is not applied to compounds that are not detected in the original sample analysis.

Note 2: Separate Sample Data Summary Reporting Forms are required for reporting the original analysis and the more diluted sample analysis. The results shall not be combined on a single reporting form.

J- This flag indicates an estimated concentration for Tentatively Identified Compounds (TICs) where a 1:1 response is assumed. For Method 537 only this flag is used to indicate an estimated concentration when a concentration is reported below the MRL. For all other methods, this flag is used to indicate an estimated concentration when the concentration is reported below the RL.

N- This flag indicates presumptive evidence of a compound. This flag shall be used only for Tentatively Identified Compounds, where the identification is based on a mass spectral library search and shall be used in combination with the “J” flag. It is applied to all Tentatively Identified Compounds results. For generic characterization of a TIC, such as chlorinated hydrocarbon, or for an "unknown" (no matches $\geq$ 85%), the "N" flag is not used.

X- Other specific flags may be required to properly define the results. If used the flags shall be fully described with the description in the case narrative. Begin by using “X”. If more than one flag is required, use “Y” and “Z” as needed. If more than five qualifiers are required for a sample result, use the X flag to represent a combination of several flags. The laboratory-defined flags are limited to “X”, “Y”, and “Z”.

14.1 **INORGANIC DATA QUALIFIERS**

E - The reported value is estimated due to the presence of interference.

N - Spiked sample recovery not within control limits.

*- Duplicate analysis not within control limits.

D- The reported value is from a dilution.

15.0 NJDEP REGULATORY FORMAT SUMMARY REPORT FORMAT

15.1 The entire document shall be legible. Contract Users shall reject data packages containing illegible signatures or documentation.

15.2 The Contractor shall submit an original data package summary report, one hardcopy summary report, and one (1) copy on CD, as noted in Sections 2.2 and 3.2.

15.3 Each Batch of Samples or Sample Delivery Group (20 field samples or less) shall have a separate summary package set. If more than one analysis is required of a sample (i.e. sample is analyzed for mercury and volatile organics), all data shall be present in one data set.

15.4 Single side-print the ORIGINAL data package summary. Include all chain of custody documents and chromatograms. All copies shall be double sided.

15.5 Clearly label and complete the deliverable in accordance with instructions in this section.

15.6 The Contractor shall arrange the deliverable in the order specified below or in an order that is consistent with laboratory operations by method.

15.7 The Contractor shall not submit raw QC data, sample preparation, shipping documentation, and standard data in the Summary Data Report. Only summary forms shall be reported in the Summary Report Package, unless stated below in the method requirements.

15.8 GENERAL DOCUMENTATION

15.8.1 External Chain of Custody forms
15.8.2 Methodology Review
15.8.3 Case Narrative
15.8.4 Method Detection Limit Summary (all applicable fractions and matrices)
15.8.2 Method Detection Limit Verification Summary (all applicable fractions and matrices)

15.9 METHOD 524.2 REQUIREMENTS

15.9.1 Surrogate Compounds Recovery Summary
15.9.2 Laboratory Replicates Summary
15.9.3 Laboratory Fortified Sample Matrix Spike Summary
15.9.4 Laboratory Fortified Blank Summary
15.9.5 Method Blank Data Summary
15.9.6 Initial Calibration Verification Standard Summary
15.9.7 Quality Control Sample Summary
15.9.8 Laboratory Control Sample Summary
15.9.9 Matrix Spike/Matrix Spike Duplicate Recovery Summary
15.9.10 Method Blank Data Summary Report Form Summary
15.9.11 GC/MS Instrument Performance Summary
15.9.12 Internal Standard Area and Retention Time Summary
15.9.13 VOA Sample Data (Target and Tentatively Identified Compounds summary data reporting forms only)
15.9.14 Initial Calibration Data Summary
15.9.15 Continuing Calibration Verification Summary

15.10 METHOD 504.1 REQUIREMENTS

15.10.1 Surrogate Compounds Recovery Summary (if reported)
15.10.2 Laboratory Replicates Summary

15.10.3 Laboratory Fortified Sample Matrix Spike Summary
15.10.4 Fortified Blank Data Summary
15.10.5 Initial Calibration Verification Standard Summary
15.10.6 Quality Control Sample Summary
15.10.7 Laboratory Control Sample Summary
15.10.8 Matrix Spike/Matrix Spike Duplicate Recovery Summary
15.10.9 Laboratory Replicates Summary
15.10.10 Reporting Limit Check Sample Summary
15.10.11 Method Blank Summary
15.10.12 Sample Data Summary Data Forms
15.10.13 Initial Calibration Data Summary
15.10.14 Continuing Calibration Verification Data Summary
15.10.15 Method Blank Data Summary Report Form Summary
15.10.16 Analytical Sequence Form

15.11 PERCHLORATE FRACTION

15.11.2 Perchlorate Data Summary Forms
15.11.3 Laboratory Synthetic Sample Matrix Blank Summary
15.11.4 Fortified Sample Matrix Spike and Spike Duplicate Sample Recovery Summary
15.11.5 Laboratory Fortified Blank Summary
15.11.6 Laboratory Fortified Synthetic Sample Matrix Method
15.11.7 Blank Data Summary
15.11.8 Initial Calibration Summary Verification Standard Summary
15.11.9 Quality Control Sample Summary
15.11.10 Laboratory Control Sample Summary
15.11.11 Continuing Calibration Verification Summary
15.11.12 Internal Standard Area and Retention Time Summary
15.11.13 Analytical Sequence Form
15.11.14 Method Blank Data Summary Report Form Summary

15.12 MERCURY REQUIREMENTS

15.12.1 Inorganic Analysis Data Sheets
15.12.2 Initial and Continuing Calibration Verification Summary
15.12.3 Reporting Limit Check Sample Summary
15.12.4 Blanks Summary
15.12.5 Laboratory Fortified Blank Summary
15.12.5 Fortified Sample Matrix Spike and Spike Duplicate Sample Recovery Summary
15.12.6 Laboratory Duplicates Summary
15.12.7 Initial Calibration Summary Verification Standard Summary
15.12.8 Quality Control Sample Summary
15.12.9 Laboratory Control Sample Summary
15.12.10 Preparation Log
15.12.11 Analysis Run Log

15.13 PFAA REQUIREMENTS

15.13.1 Surrogate Compounds Recovery Summary
15.13.2 Laboratory Replicates Summary
15.13.3 Laboratory Fortified Sample Matrix Summary
15.13.4 Laboratory Fortified Blank Summary
15.13.5 Reagent (Method) Blank Data Summary
15.13.6 Initial Calibration Verification Standard Summary

15.13.7 Quality Control Sample Summary
15.13.8 Laboratory Control Sample Summary
15.13.9 Laboratory Fortified Sample Matrix Duplicate Summary with RPD data.
15.13.10 Method Blank Data Summary Report Form Summary
15.13.11 Internal Standard Area and Retention Time Summary
15.13.12 Initial Calibration Data Summary
15.13.13 Continuing Calibration Verification Summary
15.13.14 Peak Asymmetry Factor Calculation Summary

16.0 FORMS

Internal Chain of Custody Form -NJDEP Form-095 (With Shipping Container)

Internal Chain of Custody Form -NJDEP Form-096 (Without Shipping Container)

External Chain of Custody Form -NJDEP Form-077

Title Page – NJDEP Form A-1A

Case Narrative - NJDEP Form A-1C

Methodology Summary NJDEP Form A-4

TABLE 1

EXTENDED DATA PACKAGE HIERARCHAL BOOKMARK STRUCTURE

Group Bookmark	***Parent Bookmark***	***Child Bookmark***
General Documentation	*Title Page*	
	External Chain of Custody Forms	
	Internal Chain of Custody Forms	
	Shipping Documentation	*Airbills (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* *Verified MDL Summary*
Method 524.2	*QC Summary Data*	*Surrogate Recovery Summary*
		Laboratory Replicates Samples Summary
		Fortified Sample Matrix Spike Summary
		Laboratory Fortified Blank Summary
		Method Blank Summary
		Quality Control Sample Summary
		Laboratory Control Sample Summary
		Instrument Performance Check
		Internal Standard and RT Summary
	Sample Data	*Samples by increasing alphanumeric field sample number order (with supporting raw data).*
	Standards Data	*Initial Calibration Data Summary*
		Initial Calibration Verification Standard Summary
		Continuing Calibration Summary(ies) including Closing CCV
		Chromatograms and Data System Printouts (See note below)
	Raw QC Data	*GC/MS Tune Performance Data*
		Blank Data – all types
		Fortified Matrix Spike Sample Data
		Laboratory Replicates Sample Data
		Quality Control Sample Data
		Laboratory Control Sample Data
		Screening Data (if applicable)
		Analysis Run Logs
Method 504.1	*QC Summary Data*	*Surrogate Recovery Summary (if applicable)*
		Laboratory Replicates Samples Summary
		Fortified Sample Matrix Spikes Summary
		Reporting Limit Check Sample Summary
		Laboratory Fortified Blank Summary
		Method Blank Summary

		Quality Control Sample Summary
		Laboratory Control Sample Summary
	Sample Data	*Samples by increasing alphanumeric field sample number order (with supporting raw data).*
	Standards Data	*Initial Calibration Data Summary*
		Resolution Check Solution Data
		Initial Calibration Verification Standard Summary
		Continuing Calibration Summary(ies) including Closing CCV
		Chromatograms and Data System Printouts (See note below)
	Raw QC Data	*Blank Data – all types*
		Fortified Matrix Spike Sample Data
		Laboratory Duplicate Sample Data
		Quality Control Sample Data
		Laboratory Control Sample Data
		Screening Data(if applicable)
		Extraction Logs
		Analysis Run Logs
Method 331.0	*Sample Data*	*Samples by increasing alphanumeric field sample number order (with supporting raw data)*
	Quality Control and Calibration Summaries	*Laboratory Fortified Sample Matrix Spikes Summary*
		Laboratory Fortified Blank Summary
		Laboratory Fortified Synthetic Matrix Sample Summary
		Method Blank Summary
		Initial Calibration Verification Standard Summary
		Quality Control Sample Summary
		Laboratory Control Sample Summary
		Initial Calibration Summary Report Form
		Calibration Verification Report Form
		Internal Standard Area and Retention Time Summary
		Analytical Sequence
	Supportive Documentation Raw Data	*Initial Calibration Data Summary*
		Retention Time Window Summary
		Initial Calibration Curve and raw data
		Initial Calibration Verification Standard Data
		Internal Standard Compounds and Retention Time Summary Printout
		Chromatograms and Quantitation Reports
		Manual Integration Summary Printouts
		Analysis Run Logs Print off instrument
Method 245.1	*Sample Data*	*Samples by increasing alphanumeric field sample number order (no raw data)*
	QC Summary Data	*Initial Calibration and Continuing Calibration Summary Report forms*

		Initial Calibration Verification Standard Summary
		Reporting Limit Check Sample Summary
		Blanks Summary
		Laboratory Fortified Blank Summary
		Fortified Sample Matrix Spike and Spike Duplicate Sample Recovery Summary
		Laboratory Duplicates Summary
		Quality Control Sample Summary
		Laboratory Control Sample Summary
		Preparation Log
		Analysis Run Log
	Raw Data	*All Instrument printouts*
		Preparation log documentation
Method 537	*Sample Data*	*Samples by increasing alphanumeric field sample number order (no raw data)*
	QC Summary Data	*Initial Calibration and Continuing Calibration Summary Report forms*
		Reporting Limit Check Sample Summary
		Blanks Summary
		Laboratory Fortified Blank Summary
		Fortified Sample Matrix Spike and Spike Duplicate Sample Recovery Summary
		Laboratory Duplicates Summary
		Initial Calibration Verification Standard Summary
		Quality Control Sample Summary
		Laboratory Control Sample Summary
		Preparation Log
		Analysis Run Log
	Raw Data	*All Instrument printouts*
		Preparation log documentation
Last Page of Document		

Note: The quantitation reports and chromatograms for each of the calibration standards associated with the initial calibration shall immediately follow the initial calibration summary form. Spectra are only required for compounds that undergo manual integration.

The quantitation report and chromatograms for each ICV Sample Standard shall immediately follow that ICV Sample Standard summary form. Spectra are only required for compounds that undergo manual integration.

The quantitation report and chromatogram for each calibration standard associated with the continuing calibration standard shall immediately follow each continuing (opening or closing) calibration summary form. Spectra are only required for compounds that undergo manual integration.

Form-095- 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		Matrix
						Volume	Quantity	

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
XXXXXXXXXXXXXXX			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

Form-096- 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
XXXXXXXXXXXXXXX			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*

Form A-1A- 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)	

FORM A-1C- 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**

Form A-4- Methodology Summary for NJDEP Drinking Water Contract

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

Name	**Required Methodology**	**Indicate Method**
Volatile Organics	USEPA Method 524.2 version 4.1	
Synthetic Organics	USEPA Method 504.1	
Mercury	USEPA Method 245.1	
Perfluorinated Alkyl Acids	USEPA Method 537	
Perchlorate Ion	USEPA Method 331.0 Revision 1.0	