



Request for Proposal 14-X-23262

For: AIR ANALYSIS FROM HAZARDOUS WASTE SITES

Event	Date	Time
Bidder's Electronic Question Due Date (Refer to RFP Section 1.3.1 for more information.)	1/28/2014	5:00 PM
Proposal Submission Date (Refer to RFP Section 1.3.2 for more information.)	3/7/14	2:00 PM

Dates are subject to change. All changes will be reflected in Addenda to the RFP posted on the Division of Purchase and Property website.

	Status	Category
Small Business Set-Aside	☒ Not Applicable	
	☐ Entire Contract	☐ I
	☐ Partial Contract	☐ II
	☐ Subcontracting Only	☐ III

RFP Issued By

NJ DEP

State of New Jersey
Department of the Treasury
Division of Purchase and Property
Trenton, New Jersey 08625-0230

State of New Jersey
Department of Environmental Protection
Trenton, NJ 08625-0420

Date: 1/14/2014

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1.0 INFORMATION FOR BIDDERS

1.1 PURPOSE AND INTENT

This Request for Proposal (RFP) is issued by the Procurement Bureau, Division of Purchase and Property, Department of the Treasury on behalf of the New Jersey Department of Environmental Protection (NJDEP). The purpose of this RFP is to solicit bids for analytical services to support the Technical Requirements for Site Remediation (Tech Rule) N.J.S.A. 7:26E and to provide permit sampling to maintain compliance with air permits issued by NJDEP Air Quality Permitting Program as Part of the Federal Clean Air Act.

Bidders responding to this RFP shall be qualified under the Regulations Governing Laboratory Certification and Environmental Measurements, N.J.S.A. 7:18 to perform selected air analytical services from hazardous waste sites for the New Jersey Department of Environmental Protection may bid. Attached, as Appendix 4, is a complete list of New Jersey Environmental Laboratory Certifications and NJDEP NELAP Accreditations.

Bidders shall hold all the laboratory certifications/accreditations specified at the time of Bid Proposal submission in order to be eligible for contract award. Bidders submitting bids and not holding all the required certification/accreditations shall be deemed non-responsive. Corporations with multiple laboratories shall submit one bid encompassing all the laboratories under corporate control that will perform work under the contract.

NOTE: All bidders are required to provide prices for USEPA Method 3C and USEPA Method 25C and the three turn around options for each method (see Section 4.4.3 for complete details).

The intent of this RFP is to award a contract to that responsible bidder whose proposal, conforming to this RFP is most advantageous to the State, price and other factors considered. The State, however, reserves the right to separately procure individual requirements that are the subject of the contract during the contract term, when deemed by the Director to be in the State's best interest.

The State of NJ Standard Terms and Conditions will apply to all contracts or purchase agreements made with the State of New Jersey. These terms are in addition to the terms and conditions set forth in this RFP and should be read in conjunction with them unless the RFP specifically indicates otherwise.

The State's obligation hereunder is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the State for the payment of any money shall arise unless funds are made available each year by the Legislature.

Web Site Location: <http://www.state.nj.us/treasury/purchase/bid/summary/14x23262.shtml>

The bid document and all related attachments are downloads and are available at the Treasury website listed above. Please refer to the solicitation number listed on the front page of the documents. Please ensure that all attachments are also downloaded and completed as specified in the RFP:

NOTE: Questions regarding the State of New Jersey Standard Terms and Conditions and exceptions to mandatory requirements shall be posed during the Electronic Question and Answer period and should also contain the bidder's suggested changes.

1.2 BACKGROUND

The NJDEP and other State departments or programs (Contract Users) require analysis of indoor air and air emissions from hazardous waste sites throughout the state. As part of the remediation process, NJDEP is investigating the impact of groundwater contamination on indoor air quality on both a routine and emergency basis. Discharges from hazardous waste sites have impacted the ground water in various areas of New Jersey. In addition, contaminated ground water may impact the indoor ambient air quality of overlaying structures. The vaporized volatile ground water contaminants have the potential to move through the soils and diffuse into subsurface or at-grade structures. Various chemicals stored or used in the structures may also have an adverse impact in the indoor air quality. Depending on the contaminant, there may be immediate or long-term air quality problems within the structures.

NJDEP will, on an as needed basis, collect samples from vents at landfills, air strippers and other treatment systems that generate air emissions. The analytical results from these samples will be used to comply with air permitting requirements, determine contaminants present at the site, or determine the efficiency of a treatment system.

Any Contract User generating environmental samples arising from NJDEP requirements or supporting environmental compliance may use this contract.

The services covered under this RFP are a reprourement of the original Professional Laboratory Analytical Services of Air Samples Collected at Hazardous Waste Sites, 03-X-35135 (A72239) contract presently due to expire on 2/24/2014. The Contractor is TestAmerica–Burlington, Burlington, Vermont. Bidders interested in the current contract specifications and pricing information may review the current contract T #2554 at <http://www.state.nj.us/treasury/purchase/pricelists.shtml>.

The cumulative expenditure to date for the current contract is approximately:

Contractor	Fiscal Year	Number of Orders	Amount of Orders	Invoiced Amount
TestAmerica	09	35	\$146,013.00	\$126,136.75
TestAmerica	10	41	\$194,252.29	\$186,742.75
TestAmerica	11	49	\$209,035.50	\$201,839.10
TestAmerica	12	48	\$173,976.67	\$172,201.67
TestAmerica	13	51	\$239,569.59	\$216,538.34
TestAmerica	14 to date	20	\$209,157.24	\$65,449.74

1.3 METHOD OF OPERATION

The method of operation for using the contract resulting from this RFP is fully detailed in APPENDIX 6 to the RFP.

1.4 KEY EVENTS

1.4.1 ELECTRONIC QUESTION AND ANSWER PERIOD

The Division will electronically accept questions and inquiries from all potential bidders via the web at <http://ebid.nj.gov/QA.aspx>.

Questions should be directly tied to the RFP and asked in consecutive order, from beginning to end, following the organization of the RFP. Each question should begin by referencing the RFP page number and section number to which it relates.

Note: Questions regarding the State of New Jersey Standard Terms and Conditions and exceptions to mandatory requirements shall be posed during this Electronic Question and Answer period and should contain the bidder's suggested changes.

Bidders shall not contact the Using Agency directly, in person, by telephone or by e-mail, concerning this RFP.

The cut-off date for electronic questions and inquiries relating to this RFP is indicated on the cover sheet. Addenda to this RFP, if any, will be posted on the Division's website after the cut-off date.

1.4.2 SUBMISSION OF PROPOSAL

In order to be considered for award, the proposal shall be received by the Procurement Bureau of the Division of Purchase and Property at the appropriate location by the required time. **ANY PROPOSAL NOT RECEIVED ON TIME AT THE LOCATION INDICATED BELOW WILL BE REJECTED. THE DATE AND TIME ARE INDICATED ON THE COVER SHEET. THE LOCATION IS AS FOLLOWS:**

Proposal Receiving Room – 9th Floor
Procurement Bureau
Division of Purchase And Property
Department of the Treasury
33 West State Street, PO Box 230
Trenton, NJ 08625-0230

Directions to the Division of Purchase And Property are available on the Internet at: <http://www.state.nj.us/treasury/purchase/directions.shtml>.

Note: Bidders using US Postal Service regular or express mail services should allow additional time since the US Postal Service does not deliver directly to the Procurement Bureau.

Procedural inquiries concerning this RFP may be directed to RFP.procedures@treas.state.nj.us. This e-mail address also may be used to submit requests to review proposal documents. The State will not respond to substantive questions related to the RFP or any other contract via this e-mail address.

1.4.3 ELECTRONIC BIDDING (EBID)

Not applicable to this procurement

1.4.4 MANDATORY/OPTIONAL SITE VISIT

Not applicable to this procurement

1.4.5 MANDATORY/OPTIONAL PRE-PROPOSAL CONFERENCE

Not applicable to this procurement

1.4.6 PRE-PROPOSAL DOCUMENT REVIEW

Not applicable to this procurement

1.5 ADDITIONAL INFORMATION

1.5.1 ADDENDA: REVISIONS TO THIS RFP

In the event that it becomes necessary to clarify or revise this RFP, such clarification or revision will be by addendum. Any addendum to this RFP will become part of this RFP and part of any contract awarded as a result of this RFP.

ALL RFP ADDENDA WILL BE ISSUED ON THE DIVISION OF PURCHASE AND PROPERTY WEB SITE. TO ACCESS THE ADDENDA, THE BIDDER SHALL SELECT THE PROPOSAL NUMBER ON THE WEB PAGE AT:

<http://www.state.nj.us/treasury/purchase/bid/summary/bid.shtml>.

There are no designated dates for release of addenda. Therefore, interested bidders should check the Division's "Bidding Opportunities" website on a daily basis from the time of RFP issuance through the proposal submission opening.

It is the sole responsibility of the bidder to be knowledgeable of all addenda related to this procurement.

1.5.2 BIDDER RESPONSIBILITY

The bidder assumes sole responsibility for the complete effort required in submitting a proposal in response to this RFP. No special consideration will be given after proposals are opened because of a bidder's failure to be knowledgeable as to all of the requirements of this RFP.

1.5.3 COST LIABILITY

The State assumes no responsibility and bears no liability for costs incurred by a bidder in the preparation and submittal of a proposal in response to this RFP.

1.5.4 CONTENTS OF PROPOSAL

Your proposal can be released to the public during the protest period established pursuant to N.J.S.A. 17:12-3.3, or under the New Jersey Open Public Records Act, N.J.S.A. 47:1A-1 et seq., (OPRA) or the common law right to know. As provided in N.J.S.A. 17:12-1.2(b):

Subsequent to the proposal submission opening, all information submitted by bidders in response to a bid solicitation is considered public information, notwithstanding any disclaimers to the contrary submitted by a bidder, except as may be exempted from public disclosure by OPRA and the common law.

Any proprietary and/or confidential information in your proposal will be redacted by the State. A bidder may designate specific information as not subject to disclosure pursuant to the exceptions to OPRA found at N.J.S.A. 47:1A-1.1, when the bidder has a good faith legal and or factual basis for such assertion. The State reserves the right to make the determination as to what is proprietary or confidential, and will advise the bidder accordingly. The location in the proposal of any such designation should be clearly stated in a cover letter. **The State will not honor any attempt by a bidder to designate its entire proposal as proprietary, confidential and/or to**

claim copyright protection for its entire proposal. In the event of any challenge to the bidder's assertion of confidentiality with which the State does not concur, the bidder shall be solely responsible for defending its designation.

By signing the Signatory Page of this RFP, the bidder waives any claims of copyright protection set forth within the manufacturer's price list and/or catalogs. The price lists and/or catalogs shall be accessible to State using agencies and cooperative purchasing partners and thus have to be made public to allow all eligible purchasing entities access to the pricing information.

1.5.5 PROPOSAL SUBMISSION

On the date and time proposals are due under the RFP, all information concerning the proposals submitted may be publicly announced and those proposals, except for information appropriately designated as proprietary and/or confidential, shall be available for inspection and copying. In those cases where negotiation is contemplated, only the names and addresses of the bidders submitting proposals will be announced and the contents of the proposals shall remain proprietary and/or confidential until the Notice of Intent to Award is issued by the Director.

1.5.6 PRICE ALTERATION IN HARD COPY PROPOSALS

Proposal prices shall be typed or written in ink. Any price change (including "white-outs") shall be initialed. Failure to initial price changes shall preclude a contract award from being made to the bidder.

1.5.7 PROPOSAL ERRORS

In accordance with N.J.S.A. 17:12-2.11, "Proposal Errors," a bidder may withdraw its proposal as described below.

A bidder may request that its proposal be withdrawn prior to the proposal submission opening. Such request shall be made, in writing, to the Supervisor of the Proposal Review Unit. If the request is granted, the bidder may submit a revised proposal as long as the proposal is received prior to the announced date and time for proposal submission and at the place specified.

If, after the proposal submission opening but before contract award, a bidder discovers an error in its proposal, the bidder may make a written request to the Supervisor of the Proposal Review Unit for authorization to withdraw its proposal from consideration for award. Evidence of the bidder's good faith in making this request shall be used in making the determination. The factors that will be considered are that the mistake is so significant that to enforce the contract resulting from the proposal would be unconscionable; that the mistake relates to a material feature of the contract; that the mistake occurred notwithstanding the bidder's exercise of reasonable care; and that the State will not be significantly prejudiced by granting the withdrawal of the proposal. After the proposal submission opening, while pursuant to the provisions of this section, you may request to withdraw your proposal and the Director may, in her discretion, allow you to withdraw it, the Division also may take notice of repeated or unusual requests to withdraw by a bidder and take those prior requests to withdraw into consideration when evaluating the bidder's future proposals.

All proposal withdrawal requests shall include the proposal identification number and the final proposal submission date and be sent to the following address:

Department of the Treasury
Procurement Bureau
PO Box 230
33 West State Street – 9th Floor
Trenton, New Jersey 08625-0230
Attention: Supervisor, Proposal Review Unit

If during a proposal evaluation process, an obvious pricing error made by a potential contract awardee is found, the Director shall issue written notice to the bidder. The bidder will have five (5) days after receipt of the notice to confirm its pricing. If the vendor fails to respond, its proposal shall be considered withdrawn, and no further consideration shall be given it.

If it is discovered that there is an arithmetic disparity between the unit price and the total extended price, the unit price shall prevail. If there is any other ambiguity in the pricing other than a disparity between the unit price and extended price and the bidder's intention is not readily discernible from other parts of the proposal, the Director may seek clarification from the bidder to ascertain the true intent of the proposal.

1.5.8 JOINT VENTURE

Joint ventures are prohibited for purposes of this procurement.

1.5.9 RECIPROCITY FOR JURISDICTIONAL BIDDER PREFERENCE

In accordance with N.J.S.A. 52:32-1.4 and N.J.S.A. 17:12-2.13, the State of New Jersey will invoke reciprocal action against an out-of-State bidder whose state or locality maintains a preference practice for its bidders. For states having preference laws, regulations, or practices, New Jersey will use the annual surveys compiled by the Council of State Governments, National Association of State Purchasing Officials, or the National Institute of Governmental Purchasing to invoke reciprocal actions. The State may obtain additional information as it deems appropriate to supplement the stated survey information.

The bidder may submit information related to preference practices enacted for a local entity outside the State of New Jersey. This information may be submitted in writing as part of the proposal response, including name of the locality having the preference practice, as well as identification of the county and state, and should include a copy of the appropriate documentation, i.e., resolution, regulation, law, notice to bidder, etc. It is the responsibility of the bidder to provide documentation with the proposal or submit it to the Director, Division of Purchase and Property within five (5) working days of the public proposal submission date. Written evidence for a specific procurement that is not provided to the Director within five (5) working days of the public proposal submission date will not be considered in the evaluation of that procurement, but will be retained and considered in the evaluation of subsequent procurements.

1.5.10 PROPOSAL ACCEPTANCES AND REJECTIONS

The Director's right to waive minor elements of non-compliance with proposal specifications and N.J.S.A. 17:12-2.2 which defines causes for automatic proposal rejection, apply to all proposals. In addition, pursuant to N.J.S.A. 52:34-12(a) and N.J.S.A. 52:18A-19, the Director retains the right to reject all proposals if it is in the public interest.

2.0 DEFINITIONS

2.1 GENERAL DEFINITIONS

The following definitions will be part of any contract awarded or order placed as result of this RFP.

Addendum – Written clarification or revision to this RFP issued by the Division of Purchase and Property

Amendment – An alteration or modification of the terms of a contract between the State and the Contractor(s). An amendment is not effective until it is signed by the Director, Division of Purchase and Property.

Bidder – A business entity or corporation operating one or several laboratories submitting a proposal in response to this RFP.

Contract – This RFP, any addendum to this RFP, and the bidder's proposal submitted in response to this RFP, as accepted by the State.

Contractor – The bidder awarded a contract resulting from this RFP

Director – Director, Division of Purchase and Property, Department of the Treasury. By statutory authority, the Director is the chief contracting officer for the State of New Jersey.

Division – The Division of Purchase and Property

Evaluation Committee – A committee established by the Director to review and evaluate proposals submitted in response to this RFP and to recommend a contract award to the Director.

May – Denotes that which is permissible, not mandatory

Project – The undertaking or services that are the subject of this RFP

Request for Proposal (RFP) – This document, which establishes the bidding and contract requirements and solicits proposals to meet the purchase needs of the using Agencies, as identified herein.

Shall or Must – Denotes that which is a mandatory requirement. Failure to meet a mandatory material requirement will result in the rejection of a proposal as non-responsive.

Should – Denotes that which is recommended, not mandatory.

Small business – Pursuant to N.J.S.A. 17:13-1.2, "small business" means a business that meets the requirements and definitions of "small business" and has applied for and been approved by the New Jersey Division of Revenue, Small Business Unit as (i) independently owned and operated, (ii) incorporated or registered in and has its principal place of business in the State of New Jersey; (iii) has 100 or fewer full-time employees; and has gross revenues falling in one of the three following categories: (A) 0 to \$500,000 (Category I); (B) \$500,001 to \$5,000,000 (Category II); and (C) \$5,000,001 to \$12,000,000, or the applicable federal revenue standards established at 13 CFR 121.201, whichever is higher (Category III).

State – State of New Jersey

State Contract Manager (SCM) – The State employee responsible for the approval of all deliverables, i.e., tasks, sub-tasks or other work elements in the Scope of Work, as set forth in Section 3.0.

Subtasks – Detailed activities that comprise the actual performance of a task.

Task – A discrete unit of work to be performed.

Transaction – The payment or remuneration to the Contractor for services rendered or products provided to the State pursuant to the terms of the contract, including but not limited to the following: purchase orders, invoices, hourly rates, firm fixed price, commission payments, progress payments and contingency payments.

Using Agency – A State department or agency, a quasi-State governmental entity, or a Cooperative Purchasing Program participant authorized to purchase products and/or services under a contract procured by the Division.

2.2 CONTRACT-SPECIFIC DEFINITIONS/ACRONYMS

Accuracy – The nearness of a result of the mean ($\bar{x}$) or a set of results to the true value. NJDEP assesses accuracy by means of proficiency samples and percent recoveries.

ACQAO – Alternate Corporate Quality Assurance Officer

AQAO – Alternate Quality Assurance Officer

All-Inclusive Unit Price per Parameter – A unit price per each analytical parameter or group of parameters which shall incorporate all associated costs specified in this Contract. Those costs include, but are not limited to, canister preparation, analysis, quality control, data deliverables, submission of all the required work as specified in Section 3.0 of this contract and final disposal of sample remnants.

CAS – Chemical Abstracts Service

CAS Registry Numbers – Unique numerical identifiers assigned by the Chemical Abstracts Service

COC – Chain of Custody

Container – Leak-free stainless steel 1, 2.7, 3.2 or 6-liter pressure vessel Summa® Containers or equivalent canisters with laboratory preset pressure gauges, flow controllers, critical orifices, stainless steel frits (dust filter) over the orifices, and specially prepared interior surfaces. Some canisters shall be equipped with sample inlets or sampling caps to prevent water droplets from accumulating at the edge of the tubing where they could be pulled into the sampling train. Hard seat metal valves shall be used for the shutoff valves on the canisters. Soft-seated valves shall not be acceptable. Containers are shipped to the Contract Users at subatmospheric pressure.

Chain of Custody Form, DEP-077 NJDEP Internal – This form is used by the laboratory to document the movement of a maximum of twenty (20) samples through the laboratory. The Internal Chain of Custody is initiated by the Sample Custody Officer (SCO) or the Assistant Sample Custody Officer (ASCO) upon breaking of the seal on the Sample Shipping Containers received from the Contract User. The Internal Chain of is considered completed with the generation of the final report and the canister can then be cleaned and recertified for another sampling event.

Chain of Custody Form and Sample Analysis Request Form (with Shipping Container), DEP-095 NJDEP External – This form is used by the laboratory to initiate sample custody of a sample canister during preparation of a Shipping Container by the Sample Custody Officer (SCO) or the Assistant Sample Custody Officer (ASCO). Each set of sample canisters (one set for each sampling point) has its own DEP-095 form or is on a multiple sample form. The Contract User is responsible for completing the sampling information and initiating the External Chain of Custody section upon receipt of the shipping canister from the laboratory. The External Chain of Custody section is completed by the laboratory upon receipt at the laboratory and initiation of the Internal Chain of Custody Form DEP-077.

Chain of Custody Form and Sample Analysis Request Form (without Shipping Container), DEP-096 NJDEP External – This form is used when the Contract User initiates a sampling event without prior receipt of canisters or a shipping container from the laboratory. The Contract User supplies the sample canisters and shipping container. The Contract User is responsible for completing the top section of the form as well as the sampling information. The Contract User is responsible for initiating the External Chain of Custody section for shipment to the laboratory. The External Chain of Custody section is completed by the laboratory upon receipt at the laboratory and initiation of the Internal Chain of Custody Form DEP-077.

Contract User – The operational unit, individual agency, office, or bureau that engages the Contractor for analysis of physical sample, as per the Scope of Work of this contract.

Data Validation – A systematic process for reviewing a body of data against a set of criteria to provide assurance that the data are adequate for the intended use. Data validation consists of data editing, screening, checking, auditing, verifying, certifying and reviewing.

Day – Unless otherwise specified, day shall mean calendar day.

Deliverables – Items defined in the Scope of Work, Section 3.0 and Appendices, as products or proof of services rendered under this contract.

Department – New Jersey Department of Environmental Protection (NJDEP)

Evaluation Committee – A committee established by the Director to review and evaluate bid proposals and to recommend a contract award. The committee for this RFP shall include representatives of the Departments of Environmental Protection and Treasury. There are three (3) voting members, two (2) representing the NJDEP and one (1) from the Department of Treasury.

Existing Data – All non confidential documents on file with the NJDEP including sampling and analysis reports, site investigation and preliminary assessment reports. Existing data may be obtained through the Contract User.

Facsimile – An exact copy or reproduction of a document and/or form

Flame Ionization Detector – FID

Headquarters Laboratory – The Laboratory and specific personnel selected by a Multilaboratory Contractor to Communicate with the State Contract Manager (SCM)

Injection/Run Log – An official record of the introduction of a sample into an analytical instrument

Instrument Blank Analysis – Analysis of uncontaminated air (no results above the reporting limit for any compound in the cited method) analyzed according to the method of analysis

ICOC – Internal Chain of Custody

Invoice – State Payment Voucher Form PBPV1

LCS – Laboratory Control Sample

MDL – Method Detection Limits

MDLV – Method Detection Limit Verification

Multiple Laboratory Contractor – A Contractor having more than one geographically distinct laboratory

Method Blank – An unused, certified canister that has not left the laboratory, that is pressurized with humidified, ultra- pure zero air or nitrogen (NJDEP LL-TO-15 or TO-15) or helium (Methods 3C and 25C) and carried through the analytical procedure as a field sample.

NELAP – National Environmental Laboratory Accreditation Program

NJDEP Environmental Laboratory Certification Program – The NJDEP program that officially certifies laboratories in accordance with N.J.S.A.7: 18-1.1 et seq., entitled Regulations Governing Laboratory Certification and Standards of Performance. This program also issues NJDEP National Environmental Laboratory Accreditation Program (NELAP) accreditations.

Network Laboratories – Laboratories that are considered part of multiple laboratory facilities that legally exist under the control of single or parent corporate entity.

NMOC – Non Methane Organic Carbon

OQA – Office of Quality Assurance

Precision – The measure of agreement of reproducibility of a set of replicate results among themselves without assumption of any prior information as to the true result.

Project – All tasks and Contractor responsibilities delineated in the RFP

Purchase Bureau – A unit within the NJ Department of Treasury, Division of Purchase and Property with the responsibility for issuing bid documents and recommending awardees for the procurement of goods and services for State agencies.

Qualified Data – Data that has passed the quality assurance review performed by the NJDEP or its designated Contractor with stipulations regarding the quantification or quality of the data. The data is considered acceptable for use with qualifications.

Raw Data – Data that includes, but is not limited to, any and all entries made in logs, logbooks and notebooks, and/or analytical data (chromatograms, printouts, etc.) produced prior to any calculation or evaluation by an analyst.

Rejected Data – Data that has failed the quality assurance review conducted by the NJDEP or its designated Contractor.

Room Temperature – RT

Sample – the material removed from a given location at given time.

Sample Custody Officer (SCO) – Responsible for all aspects of sample receipt, log-in, internal security (chain of custody), and distribution of the sample.

Sample Sets – A group of samples submitted at one time for analysis that pertains to a specific monitoring project.

Scope of Work (SOW) – Work to be performed by the Contractor in this contract, as specified in Section 3.

Section – A part of the RFP written by the State of New Jersey.

Shipping Container – The exterior container that is used to ship canisters from the Contractor's laboratory to the State and back.

Signature Certification – A process where the individual signs his/her full name to his/her work. The work is then reviewed by another qualified individual or supervisor and signed in the same manner by that individual that attests to the authenticity of the work. This applies to all data, notebooks, run/injection logs, and printouts not stored in an electronic format.

Single Laboratory – A Contractor performing work under this contract having only one laboratory.

Single Contractor – A Contractor performing work under this contract having only one laboratory. This Contractor is referred to as a Single Laboratory.

SOP – Standard Operating Procedure

SRP – Site Remediation Program

State Payment Voucher – Form PV 393

SWO – Stop Work Order

Total Bid Price – The sum of the bid prices provided by the bidder on the Price Schedules for a task.

UHP – Ultra High Purity

Unit Price Per Bid Line – A unit price per each bid line on the price schedules which shall incorporate associated costs, which includes but is not limited to, shipment of canisters to NJDEP, sample preparation, shipment of samples from NJDEP to the Contractor, analysis, data deliverables, submission of all the required work, as specified in Section 3.

USEPA – United States Environmental Protection Agency

3.0 SCOPE OF WORK – AIR ANALYSIS

The purpose of this contract is to perform Laboratory Analysis of Ambient Air samples for volatile organics in accordance with USEPA Method 3C and 25C with all the modifications specified by this contract and the NJDEP-SRWM Low Level USEPA Method TO-15 (NJDEP- LLTO-15) and or USEPA Method TO-15.

3.1 ENVIRONMENTAL LABORATORY CERTIFICATION REQUIREMENTS

The Contractor shall hold and maintain all the NJDEP Environmental Laboratory Certifications specified in Appendix 4. For each certification, the Contractor shall hold NJDEP Environmental Laboratory Certification or, NJDEP Primary NELAP Accreditation for its laboratories. Information regarding certification may be obtained by contacting the Office of Quality Assurance, PO Box 424, Mail Code 401-02D Trenton, New Jersey, 08625-0424, Phone (609) 292-3950.

The Contractors shall meet and maintain the analytical method requirements regulated by N.J.S.A. 7:18-2.4(a) 4, 2.4(f) 2 - 2.4(f) 4 through 7, and 2.4 (f) 9.

3.2 ANALYTICAL PROTOCOLS

The analytical methods cited in the Scope of Work (SOW) and on the Price Schedules in Attachment A comprise the only acceptable analytical methods. The Contractor shall not substitute or alter analytical methods. Performance of analyses employing similar methods is not acceptable and shall be ineligible for payment. The Contractor shall not add or delete analytes without the approval of the SCM.

3.2.1 REQUIRED PRIMARY OR SECONDARY LABORATORY ACCREDITATION

The Contractor shall perform Laboratory Analysis of Ambient Air for volatile organics in accordance with USEPA Method 3C and 25C with all the modifications specified by this contract and the USEPA TO-15 and NJDEP-SRWM Low Level USEPA Method TO-15 (NJDEP- LLTO-15).

“NJDEP-SRWM Low Level USEPA Method TO-15 (NJDEP- LLTO-15)” (effective March 2007 updated March 2009. Laboratories can only satisfy NJDEP Environmental Laboratory Certification for NJDEP-LLTO-15 by holding NJDEP Environmental Laboratory Certification (NJ ELCP) or NJDEP Primary National Environmental Laboratory Accreditation Program (NELAP) Accreditation or NJDEP Secondary NELAP Accreditation.

USEPA Method 3C – “Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources” Laboratories can only satisfy the certification requirements for USEPA Method 3C by holding either NJDEP NJ ELCP, NJDEP Primary NELAP Accreditation or NJDEP Secondary NELAP Accreditation. For NELAP Accreditation, a mixture of primary and secondary accreditations can be used.

USEPA Method 25C – “Determination of Non Methane Organic Compound (NMOC) in Landfill Gases” Laboratories can only satisfy the certification requirements for USEPA Method 25C by holding NJDEP NJ ELCP, NJDEP Primary NELAP Accreditation or NJDEP Secondary NELAP Accreditation.

USEPA Method TO-15 – Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Containers And Analyzed By Gas Chromatography/ Mass Spectrometry (GC/MS) January 1999 Laboratories can only satisfy NJDEP Environmental Laboratory Certification for USEPA TO-15 by holding NJ ELCP, NJDEP Primary National Environmental Laboratory Accreditation Program (NELAP) Accreditation or NJDEP Secondary NELAP

Accreditation. For NELAP Accreditation, a mixture of primary and secondary accreditations can be used.

The Contractor shall perform analysis in accordance with the requirements specified in this SOW, in accordance with the New Jersey Laboratory Certification regulations N.J.S.A. 7:18-5.4.

3.2.2 REQUIRED METHODS FOR AIR SAMPLE ANALYSIS

Below are the methods that shall be used in the contract for the analysis of all air samples:

- A. A complete copy of the NJDEP-LLTO-15 method and the required deliverables can be downloaded from the NJDEP Vapor Intrusion (VI) web site at <http://www.nj.gov/dep/srp/guidance/vaporintrusion/>;
- B. A complete copy of the USEPA Method TO-15 method and the required deliverables can be downloaded from the USEPA web site at <http://www.epa.gov/ttn/amtic/airtox.html#compendium/>. This contract modifies various sections of the methods to meet program needs within the State;
- C. This RFP references pertinent sections of the USEPA Method 3C. The entire method is downloadable from the USEPA website at <http://www.epa.gov/ttn/emc/promgate.html>. This contract modifies various sections of the methods to meet program needs within the State;
- D. This RFP references pertinent sections of the USEPA Method 25C. The entire method is downloadable from the USEPA website at <http://www.epa.gov/ttn/emc/promgate.html>. This contract modifies sections of the methods to meet program needs within the State;
- E. Samples for NJDEP-LLTO-15 or USEPA Method TO-15 will be collected primarily from indoor ambient air locations or subsurface locations. However, samples may also be collected from landfills vents, air strippers, or other treatment systems that generate air emissions from hazardous waste sites. Samples will not be collected from major industrial sites for monitoring permitted air emissions;
- F. Samples for USEPA Method 3C will be collected primarily from landfill vents. However, samples may be collected from air strippers, or other treatment systems that generate air emissions from hazardous waste sites. Samples will not be collected from major industrial sites for monitoring permitted air emissions;
- G. Samples for USEPA Method 25C will be collected primarily from landfill vents. However, samples may be collected from air strippers, or other treatment systems that generate air emissions from hazardous waste sites. Samples will not be collected from major industrial sites for monitoring permitted air emissions; and
- H. The Contractor shall perform analysis in accordance with the requirements specified in this Scope of Work, in accordance with the New Jersey Laboratory Certification Regulations N.J.S.A. 7:18-5.4.

3.3 STANDARD OPERATING PROCEDURES MANUAL (SOP)

The Contractor shall submit a Standard Operating Procedures (SOP) Manual Certification chart (see Appendix 7) upon commencement of the contract. On this form, the Awardee shall certify that its SOP manual, as it applies to this contract is in compliance with the New Jersey Regulations Governing the Certification of Laboratories and Environmental Measurements N.J.S.A. 7:18. In addition, the Contractor shall certify that other sections of their SOP manual that

are not required by the New Jersey regulations have been modified to conform to the requirements of this contract, as specified in this RFP. If the SCM discovers that those certifications are false, it shall form a basis to suspend or terminate contract award, suspend the Contractor from performing work, and may form a basis to issue a formal complaint concerning the Contractor and potentially terminate the contract.

If the Contractor adds a secondary laboratory to the contract at a later date, SOPs shall also be submitted as part of the approval documentation.

3.3.1 SOP DOCUMENT

The Contractor shall maintain one (1) corporate SOP manual reflecting all activities specified in this RFP. The SOP Manual shall include analytical protocols as specified by the analytical method and shall include any additional restrictions or requirements specified by New Jersey Regulation N.J.S.A. 7:18-5.5 (a) & (b). Individual Laboratory Directors (Managers) and the Corporate Quality Assurance Officers are responsible for ensuring that all corporate facilities employ the same SOP document. The SOP Manual shall include all the information submitted in accordance with this RFP.

3.3.2 SOP MANUAL AVAILABILITY

The SOP Manual shall be available to the SCM during on-site contract compliance inspections or submitted to the SCM upon written request. If during an onsite audit inspection and after a review by the SCM, the Contractor's SOP is found to be non-compliant with either the requirements of N.J.S.A. 7:18 or this contract, the Contractor shall be suspended for all contract work until the deficiencies have been rectified and corrected or approved by the SCM.

Data generated under this contract shall conform to the SOP Manual procedures and outputs and the terms of this contract. If not, the Contractor shall be suspended for all contract work until deficiencies have been rectified and approved by the SCM.

3.3.3 PERSONNEL FAMILIARITY

The Contractor shall be familiar with the portions of the SOP manual that apply to its function(s) and shall be able to demonstrate the application of the SOP to the SCM and the NJDEP Office of Quality Assurance (OQA) during an announced or unannounced inspection of the facility. The Contractor shall have oversight responsibility for the various laboratory operations and the assigned personnel shall be identified by title within the SOPs for their areas of responsibility.

3.3.4 SOP STRUCTURE AND FORMAT

The Contractor shall ensure that the SOP manual contain a section specifying and defining any Contractor specific acronyms and terms. Each section and procedure provided in the SOP manual shall be complete and include all elements and components of the procedure. The SOP manual procedures may not cross reference to other procedures. The SOP manual shall address the following requirements in detail:

- A. The SOP shall be submitted on a Compact Disc (CD) and shall have the laboratory logo and name of the laboratory as a hologram on the disc label. The SOP can be presented in one of the following manners:
 - 1. In Microsoft Word with a defined Table of Contents that is searchable by Section title; or
 - 2. In Adobe Acrobat format with bookmarks for all the required sections.

- B. Any time the Contractor revises a section of the SOP, a complete copy of the SOP shall be submitted on a compact disc.

3.3.5 CHAIN OF CUSTODY PROCEDURES

The Contractor shall ensure that the SOP manual details all aspects of external and internal chain of custody. The SOP manual shall include exhibits and properly completed NJDEP Chain of Custody Forms (DEP Forms 077 and 095C). NJDEP has developed a customized "Air Methods External Chain of Custody/Field Test Data Sheet" (DEP Form 095D) that addresses methods in the RFP. This External Chain of Custody form combines the required information from NJDEP-LLTO-15/USEPA Method TO15 Field Test Data Sheet (FTDS) and creates one form. These forms are found in the appendices of this RFP;

The Contractor shall not use the NJDEP Chain of Custody Forms 095C in combination with the NJDEP-LLTO-15/USEPA Method TO-15 Field Test Data Sheet (FTDS) in lieu of the NJDEP Chain of Custody 095D Form. If this option is chosen, the Contractor shall initiate the Field Test Data Sheet upon shipping of the canisters to the Contract User. The Contract User will complete its section of the Sheet and returns it with the canisters to the Contractor. The Contractor shall send the original form back to the Contract User and include copies of the form in the data report submittals;

The NJDEP Chain of Custody 095D Form does not replace the combined NJDEP Field Test Data Sheet for Methods 3C/25C that is required when samples are collected for these analyses. The Contractor shall initiate the Field Test Data Sheet upon shipping of the canisters to the Contract User. The Contract User will complete its section of the Field Test Data Sheet and returns it with the canisters to the Contractor. The Contractor shall send the original form back to the Contract User and include copies of the form in the data report submittals; and

Contractor laboratories may use bar codes on internal chain of custody documents provided preprinted identification numbers appear on the bar code form. The Contractor shall ensure that the access to the personnel-specific bar coding be password protected. Contractor personnel shall sign custody documents and all signatures shall be full names (first and last names) and be legible. Stamped signatures are not acceptable. The use of computer generated internal chain of custody forms post award are acceptable. The Contractor shall ensure that the date and times are provided and are legible.

3.3.6 CLEAN CONTAINER CERTIFICATION REQUIREMENTS - ALL METHODS

The Contractor shall ensure that the SOP manual accurately presents procedures for method specific and contract required clean canister certification. Method specific clean canister certification procedures are detailed in the requirements for each method in this RFP.

3.3.7 CONTAINER PREPARATION AND SHIPMENT PROCEDURES

The Contractor shall ensure that the SOP manual presents procedures for the preparation of canisters for each method. This SOP manual shall address canister type, packaging, labeling, custody seals, as well as shipment from the Contractor's facility. Container serial numbers shall be used for all canister tracking procedures.

The SOP manual shall address how the sample canisters and flow controllers are linked together and how they are tracked.

3.3.8 CLEAN CONTAINER CERTIFICATION PROCEDURES

The Contractor shall ensure that the SOP manual clearly specifies how canisters are certified clean for each method. The clean canister certification procedures are detailed for each method in the appropriate sections below;

The procedures for choosing which canister is to be used for clean canister certification shall be identified. The tracking procedures for linking a canister used for certification to a particular batch of canisters shall be discussed. The tracking procedures shall be clearly defined linking the laboratory sample identification (ID) numbers, data file numbers, and canister serial number. The use of field ID numbers for the tracking of canisters is prohibited in any data submitted for clean canister certification. The summary submitted by the Contractor shall clearly define the links between canister numbers, laboratory file IDs and data files submitted in support of clean canister certification; and

The canister chosen for the clean canister certification in each batch shall be certified clean prior the shipping of the canisters to the Contract Users. Failure to certify the canister used for batch certification as clean prior to shipping of the canisters to the field will result in automatic rejection of the entire set of canisters associated with the improperly certified canister.

3.3.9 SAMPLE RECEIPT AND LOG-IN PROCEDURES

The Contractor shall ensure that the SOP manual details receipt, examination, and log in of samples received from the Contract Users. The SOP manual shall contain a checklist, insuring that all incoming samples are examined in the same manner and indicate how receipt and login procedures differ from login procedures used for other clients;

The SOP manual shall establish procedures for after hours receipt and insure that access to the samples is restricted to the Sample Custodians. The SOP manual shall bar analysts from access to sample storage facilities. The SOP manual shall indicate that the Sample Custodian is responsible for initiation of internal chain of custody. The SOP manual shall include instructions for completion of all associated forms and documents, as well as exhibits of properly completed forms. If the Contractor operates more than one shift, the SOP manual shall specify that appropriate sample custody personnel will be present during that shift; and

The SOP Manual shall address how the sample canisters and flow controllers are linked together, how they are tracked, and how the canister serial numbers, laboratory sample ID numbers, and field ID numbers are linked and tracked.

3.3.10 SAMPLE IDENTIFICATION AND STORAGE PROCEDURES

The Contractor shall ensure that the SOP manual includes procedures for the assignment of sample ID numbers, assignment of storage locations, and methods of tracking the sample within the Contractor's facility. The SOP manual may allow the use of stick-on labels with sample identification bar codes applied to NJDEP Chain of Custody forms to identify and transfer samples, provided the stick-on bar code labels have preprinted sample numbers. Authorized Contractor signatures shall appear on all NJDEP Chain of Custody forms documenting storage and transfers. All signatures shall be full names (first and last names) and be legible. Dates and time requirements shall also be documented and be legible;

The SOP Manual shall address how the sample canisters and flow controllers are linked together and how they are tracked. The SOP Manual shall address how the canister serial numbers, laboratory sample ID numbers, and field ID numbers are linked and tracked; and

The SOP Manual shall address that flow controllers shall have serial numbers and how they are linked with the canisters and how they are tracked.

3.3.11 SAMPLE AND LABORATORY CONTAMINATION AVOIDANCE PROCEDURES

The SOP manual shall include procedures to prevent potential cross contamination of samples in the Contractor's possession due to leaks, spills, or accidents within the laboratory. The SOP manual shall present procedures for notifying management of laboratory and/or sample contamination.

3.3.12 REAGENT & STANDARD PURITY, PREPARATION, & STORAGE PROCEDURES

The SOP manual shall meet the requirements of N.J.S.A. 7:18 5.4(a) for reagent and standards purity, preparation, and storage;

Gas standards are required for all target analytes in the contract. The use of the required gas standards from the commercial suppliers shall be addressed in the SOP; and

Original Certificate of Analysis (C of A) from the supplier for each lot shall be maintained in the air portion of the Contractor's facility until the lot is exhausted. Then the certificates shall be sent to the Contractor's Quality Assurance (QA) Office for storage. Copies of specific lot certificates used in the analysis of the samples for a particular Sample Delivery Group shall be included in the analytical data package. See Method Specific Data Reporting Format (Appendices 1-3) for the section requirements.

3.3.13 ANALYTICAL PROCEDURES FOR ANALYSES PERFORMED UNDER THE CONTRACT

The SOP manual shall include a copy of each analytical method, which encompasses all aspects of the method and all requirements of this contract. The requirements of each method shall not be combined together. Each method shall consist of a separate stand-alone document.

3.3.14 METHOD DETECTION LIMIT, MINIMUM DETECTABLE CONCENTRATION, PRECISION & ACCURACY, DETERMINATION PROCEDURES

- A. The SOP manual shall have procedures that comply with N.J.S.A. 7:18-5.5 entitled Quality Control/Quality Assurance Requirements and N.J.S.A. 7:18.5.5 (c)10. The Contractor shall determine Method Detection Limits (MDL)s in accordance with procedures set forth in 40 CFR 136, Appendix B, entitled Definition and Procedures for the Determination of the Method Detection Limit, Revision 1.11. The Contractor shall maintain and make available to the Department's OQA and the SCM any data generated and used for establishing MDLs, precision and accuracy;
- B. This contract requires the MDL determination to be conducted yearly for all methods and current studies shall be reported in the analytical data packages. The year period for the study begins with the date the Contractor's Quality Assurance Officer signs off on the MDL Study. The MDL study shall be completed and approved prior to analysis of samples and can only be associated with samples analyzed after the date of sign off. Each method under this contract has specific reporting requirements for the MDL study. See the requirements for each method as provided below in method specific sections in the contract;
- C. All information except for signatures shall be computer generated or typed. All data shall be reported in the correct units for the method.

The units for Method 3C are % v/v;

The unit for Method 25C is ppmC; and

The units for Method NJDEP-LLTO-15 and USEPA Method TO-15 are ppbv;

- D. The MDL study for each method shall be presented individually. The information required for each method is the same except for the units being reported;
- E. The MDL study that was submitted to NJDEP Office of Quality Assurance shall be submitted as part of this contract; and
- F. 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 is as follows:

Top of Page Information

- Laboratory Name;
- Laboratory Location;
- Matrix Type;
- Effective Date/Expiration data of MDL Study; and
- Instrument ID and Column ID.

Required Columns

- Compound name;
- Data for seven replicates;
- Mean value;
- True Value;
- Percent recovery;
- Standard deviation;
- Method Detection Limits;
- Reporting Limits;
- True Value/MDL Ratio;and
- RL/MDL Ratio.

Top or Bottom of Page Information

- Analyst name and date analyzed;
- Reviewed by name and date;
- Report preparer's name and date prepared; and
- QA Officer name and date signed.

3.3.15 METHOD DETECTION LIMIT VERIFICATION SUMMARY (MDLV)

- A. 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. The year period for the study begins with the date the Contractor's Quality Assurance Officer signs off on the MDL Study. The MDLV study shall be completed and approved prior to analysis of samples and can only be associated with samples analyzed after the date of sign off;

- B. The MDLV Summary for each method shall be presented individually. The information required for each method is the same except for the units being reported. See the method specific sections in the contract:

The units for Method 3C are % v/v;

The unit for Method 25C is ppmC; and

The units for Method NJDEP- LLTO-15 and USEPA Method TO-15 are ppbv;

- C. All information except for signatures shall be computer generated or typed. All data shall be reported in the correct units for the method;
- D. The MDL Summary that was submitted to NJDEP OQA shall be submitted as part of this contract;
- E. The information shall be provided in a Tabular format and all the required data shall be for each analyte and shall be on one page. The information provided for each compound shall include the sections below.

The required format of the Summary is as follows:

Top of Page Information

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

Required Columns

- Analyte name;
- CAS number;
- MDLV source;
- Source study;
- Source instrument;
- Source analysis date;
- MDLV;
- Reporting Limit; and
- QL/MDLV ratio.

3.3.16 REPORTING LIMITS – ALL METHODS

The Contractor shall follow the requirements contained in the Reporting Limit Section of each method located in the RFP.

3.3.17 WATER MANAGEMENT

The Contractor shall provide the water management procedures that it will employ in the analysis of the samples. The Contractor shall implement water management procedures for the analysis of all NJDEP-LLTO-15/USEPA Method TO-15 samples. Prior to the analysis of any samples or standards, the Contractor shall ensure that the proper procedures are in place. Submittal of

samples that exhibit evidence of poor water management in the GC/MS system shall not be submitted to the state for any purpose.

3.3.18 TECHNICAL AND MANAGERIAL REVIEW (DATA VALIDATION) PROCEDURES

The SOP manual prepared by the Contractor shall have sufficient technical and management data validation procedures to comply with the analytical methods. The data validation procedures shall provide specific detail as to how data will be validated and shall specify the responsibilities for all individuals involved in the process.

3.3.19 CONTRACT COMPLIANCE SCREENING PROCEDURES

The SOP manual shall include procedures to ensure compliance with the contractual provisions of this contract, including, but not limited to, procedures on the preparation and delivery of data packages. The SOP manual shall specify that data reports will be prepared and delivered in accordance with the Regulatory Data Report Format cited in Appendices 1-3 and 10 of this contract. The SOP manual shall include a checklist based on Appendices 1-3 and 10 for use by the Document Control Officer and report production personnel. The procedures and checklist shall have provisions for tracking any portion of the package returned to analytical personnel for correction and ensure that the report delivery time specified in this contract are met. It is permissible to use the USEPA CCS Checklist (DC-2) as a model for the Contractor's checklist.

The Contractor shall perform all work under this contract in accordance with an approved Quality Assurance Plan (QAP). The QAP shall specify all the SOP procedures that will guide the Contractor in the performance of work. The QAP shall be submitted by the Contractor to the SCM in accordance with Section 3.3 of this contract. The SCM will review and approve the QAP as a post award submittal. The Contractor shall ensure that the work is performed in accordance with the NJDEP approved QAP or risk contract suspension or termination.

3.4 EQUIPMENT REQUIREMENTS

3.4.1 ELECTRONIC DATA STORAGE DEVICES

The Contractor shall provide data storage devices suitable for long-term, off-line storage of data. The Contractor shall store all raw data and processed electronic analytical data in the appropriate instrument manufacturer's format, uncompressed and with no security codes. The electronically stored data shall include all data needed to completely reconstruct a hard copy and electronic deliverable. The electronic data files shall include, but are not limited to: blanks, spikes, tunes, calibrations, quality control samples, proficiency testing samples, and check samples. The electronic data files shall also include all Contractor generated spectral libraries and quantitation reports as well as the associated raw data files if those files contain data or instrument parameters related to analytical results. The Contractor shall ensure that the electronic data files be sent to the SCM within seven (7) days following a request for it; and

The Contractor shall retain all raw and processed electronic data files in a format retrievable on-line to the data system for ten (10) years. The Contractor shall store the data storage medium under secure and appropriate environmental conditions to preclude the loss of data. The Contractor shall comply with N.J.S.A. 7:18-5-6(a).

3.4.2 LABORATORY NOTEBOOKS

The Contractor shall ensure that the raw data is recorded in bound laboratory notebooks during the analysis of all samples; and

The Contractor shall maintain bound notebooks to record all raw data. The analyst shall sign all entries in this laboratory notebook. The analyst's supervisor shall also sign entries in this notebook. This information includes but is not limited to instrument run logs, canister certification batch assignments, canister preparation and receipt information, and addition of air to bring up to volume documentation. The Contractor shall maintain a bound, paginated laboratory notebook with the analyst's and supervisor's signature for archival storage of all data, except computerized data. The analyst shall sign any computerized printout or chromatogram.

3.4.3 GENERAL INSTRUMENTATION REQUIREMENTS

The Contractor shall meet and maintain the minimum standards for laboratory instrumentation set forth in the "Regulations Governing the Certification Laboratories and Environmental Measurements". General instrument requirements are specified within these regulations at N.J.S.A. 7:18-3.2 through 7:18-3.3 and N.J.S.A. 7:18-5.2(a)1 through 7:18-5.2(a)18. In addition, the equipment requirements specified in the analytical method shall be met and maintained for the duration of the contract. Specific requirements for each method are listed in "section b" of the above regulation;

For archival storage of all data, except computerized data, the Contractor shall maintain a bound, paginated laboratory notebook with the analyst's and supervisor's signature. The Contractor shall sign any computerized printout or chromatogram not maintained in a notebook on the first and last page; and

The Contractor shall purchase gas standards from a commercial supplier in pressurized cylinders certified traceable to a NIST Standard Reference Materials (SRM) or NIST/EPA approved Certified Reference Material (CRM). The Contractor shall certify in the case narrative of each data package that gas standards have been used. The Contractor shall specify its suppliers in the SOP submitted to the OQA for certification. Specific requirements are listed in each method.

3.4.4 METHOD 3C REQUIREMENTS

A. Instrumentation;

1. The required instrumentation is a gas chromatograph (GC) with thermal conductivity detector (TCD). The GC shall adequately regulate temperature in order to give a producible temperature program and shall have a flow controller that maintains a constant column flow rate throughout temperature program operations. The system shall have all required accessories including syringes, analytical columns, and gases; and
2. The Contractor shall specify the column used, and it shall be approved by the NJDEP OQA and the SCM; and

B. Data System;

1. The Contractor shall ensure that a data system be interfaced to the GC/TCD. The data system shall allow the continuous acquisition of data throughout the duration of the chromatographic program and shall permit, at a minimum, the output of time versus intensity (peak height or peak area) data. Also, the data system shall be able to rescale chromatographic data in order to report chromatograms meeting the requirements listed within this contract; and
2. Proof of software ownership or license agreement from the manufacturer shall be provided as part of the bid documents and included in the SOP.

3.4.5 METHOD 25C REQUIREMENTS

A. Instrumentation;

1. A gas chromatogram (GC) equipped with a dual Flame Ionization Detector (FID) shall be the required instrumentation. An oxidation catalyst and reduction catalyst shall be used; and
2. The Contractor can either use the columns specified in the method or use equivalent columns. The Contractor shall demonstrate that the columns are equivalent. Use of different columns shall be approved by the NJDEP OQA and the SCM;

B. Measurements of Catalyst Efficiency; and

Technological changes in analytical instrumentation have led to changes in how laboratories measure catalyst efficiency. Configurations of instrumentation may preset the movement of methane and carbon dioxide through the oxidation catalyst. The Contractor shall measure the reduction catalyst efficiency independent of the oxidation catalyst. The Contractor shall detail procedures in the SOP and the modifications shall be approved by NJDEP OQA and the SCM; and

C. Data System

1. The Contractor shall ensure that a data system be interfaced to the GC/FID. The data system shall allow the continuous acquisition of data throughout the duration of the chromatographic program and shall permit, at a minimum, the output of time vs. intensity (response) data. In addition, the data system shall be able to rescale chromatographic data in order to report chromatograms meeting the requirements listed within this contract; and
2. Proof of software ownership or license agreement from the manufacturer shall be provided as part of the bid documents and included in the SOP.

3.4.6 METHOD NJDEP-LLTO-15/USEPA METHOD TO-15 REQUIREMENTS

The Contractor shall ensure that the Method NJDEP-LLTO-15/USEPA Method TO-15 requirements are followed below:

A. Gas Chromatography/Mass Spectrometry Instrument Performance Check;

The Contractor shall comply with all the GC/MS Instrument Performance Check requirements set forth in the instrument operator's manual, NJDEP-LLTO-15 Method, USEPA Method TO-15, and the Contractor's approved SOP. Post acquisition manipulation of the ion abundances using computer software to achieve tuning criteria is unacceptable. Any sample analyzed in conjunction with a failed tune performance check requires a re-analysis and shall be performed at the Contractor's expense. The Contractor shall comply with the requirements of N.J.S.A. 7:18-5.2(a)8 and N.J.S.A. 7:18-5.2(a) 13;

B. Requirements for GC/MS Analysis;

The Contractor shall maintain a gas chromatograph/mass spectrometer equipped with a computerized MS library search system capable of providing reverse searching for targeted analytes and forward searching for non-targeted analytes. The system shall also be capable of removing background signals from the suspect chemical pollutant spectrum (background

subtraction capability). The Contractor shall also comply with N.J.S.A. 7:18-5.2(a)9 and N.J.S.A. 7:18-5.2(a)13(iii).

C. Gas Chromatography/Time of Flight Mass Spectrometry;

The GC/MS Technology, also known as GC/Time of Flight Mass Spectrometry (TOFMS), is acceptable for this method provided that all the requirements of this Method and the NJDEP performance requirements specified herein are met. However, only with prior approval of the technique by the NJDEP OQA and the SCM and with the following additional specifications can the technique be proposed by the Contractor. This procedure shall not be used for the bid submittal.

1. Fast Chromatography shall not be used under this contract;
2. A separate method detection limit study shall be conducted for each instrument using this technique;
3. If this technique is used for certifying the canisters as clean, the same technique shall be used for the analysis of the canisters. This is required so that the experimental conditions such as scan rate, ramp rate, etc. are the same for both analyses;
4. The data shall be delivered in the same reporting format as quadrupole GC/MS and all labeling requirements of the data package shall be met; and
5. A separate SOP shall be provided for this technique.

D. Mass Spectrometer (MS); and

1. The MS shall be capable of scanning from 35-300 amu every 1 second or less, utilizing 70 volts (nominal) electron energy in the electron impact ionization mode and producing a mass spectrum which meets all the 4-Bromofluorobenzene (BFB) GC/MS performance check technical acceptance criteria in Table 1 of the TO-15 method;
2. To ensure sufficient precision of mass spectral data, the MS scan rate shall allow acquisition of at least five (5) spectra while a sample compound elutes from the GC. The purge-and-trap GC/MS system shall be in a room whose atmosphere is demonstrated to be free of all potential contaminants that will interfere with the analysis. The instrument shall be vented to outside the facility or to a trapping system, which prevents the release of contaminants into the instrument room;
3. The Contractor shall operate the GC/MS in the full SCAN mode only. Selective Ion Monitoring (SIM) Mode is not acceptable under this contract; and
4. Proof of software ownership or license agreement from the manufacturer shall be provided as part of the bid documents and included in the SOP.

E. Data System;

1. A computer system shall be interfaced to the MS that allows the continuous acquisition and storage on machine-readable media of all mass spectra obtained throughout the duration of the chromatographic program;
2. The computer shall have software that allows searching of any GC/MS data file for ions of a specified mass and plotting such ion abundances versus time or scan number. This

type of plot is defined as an Extracted Ion Current Profile (EICP). Software shall also be available that allows integrating the abundance in any EICP between specified time and scan number limits. The data system shall be capable of flagging all data files that have been edited manually by laboratory personnel; and

3. Proof of software ownership or license agreement for the NIST/EPA/NIH Mass Spectral Library with Search Program (Data Version: NIST 11, Software Version 2.0g), Wiley Registry 9th Edition / NIST 2011 Mass Spectral Library from the manufacturer shall be provided as part of the bid documents and included in the SOP.

3.4.7 CONTAINER REQUIREMENTS

The Contractor shall ensure that the container requirements are followed:

A. Limitations on the Number of Days Containers can be out of the Contractor's Facility;

The Contractor shall provide all canisters. After evacuation to -30 Inches of Mercury, all canisters have a finite period before the level of the pressure due to loss that occurs naturally will inhibit the use of the canister in sample collection. Due to the loss of pressure that occurs naturally during the storage of canisters, NJDEP has established a fifteen (15) day time limit that canisters can be out of the Contractor's facility. The fifteen-day (15) time limit begins with the shipment of the Contractor-prepared canisters to the Contract User. The canisters shall be returned to the Contractor after fifteen (15) days whether they were used for sample collection or not;

B. Container Types;

The Contractor shall prepare and supply passivated, leak free, stainless steel canisters for sample collection. These canisters shall be equipped with a Contractor-preset pressure gauge, flow controller, critical orifice with a diameter of 0.0060 inches, and stainless steel frit dust filter over the orifice, and specially prepared interior surfaces for the removal of active sites. The canisters shall be equipped with sample inlets or sampling caps to prevent water droplets from accumulating at the edge of the tubing where they could be pulled into the sampling train. Hard seat metal valves shall be used for the shutoff valves on the canisters. Soft-seated valves shall not be acceptable;

C. Containers cannot be shipped separately to the Contract User by the Contractor since the preparation of the canisters and flow controllers shall occur simultaneously;

D. Containers used for building indoor air sampling and the accompanying ambient sample shall also be equipped with laboratory preset flow controllers and pressure gauges by the Contractor. For all indoor air sampling the routine sample collection time for indoor air samples is either eight (8) hours or twenty-four (24) hours. The minimum collection time shall be eight (8) hours; however, longer times can be specified. Upon engagement of the Contractor, the sample collection time shall be specified;

E. Contractor supplied containers used for landfill vent sampling shall be equipped with pressure gauges, flow controllers (if required to maintain required flow rate) and critical orifices (if required by the permit) to control sampling rates. This will allow the Contract User to check the pressure of each canister prior to sampling and after sampling and record the pressure reading on the NJDEP Method 3C/25C Field Test Data Sheets. Dust filter use is optional and is at the discretion of the Contract User and the Contractor. However dust filters, if they are required, shall be supplied at no additional cost;

- F. For sampling that does not involve landfill vent sampling, soil gas or building interior sampling, the SCM/Contract User will instruct the Contractor to provide critical orifices, flow controllers, dust filters and gauges. The items are the same requirements as needed for the building indoor air sampling. They shall be provided at no additional cost to the State;
- G. Containers shall be shipped by the Contractor to the Contract User at subatmospheric pressure approximating negative 30 inches of mercury;
- H. Contractor shall not use Tedlar bags for the collection of samples under this contract;
- I. Contractor shall provide 6-liter canisters for samples being collected for Method 3C and/or 25C analysis. The use of 1-liter canisters, 2.7-liter and 3.2 -liter canisters shall not be acceptable for these methods;
- J. The Contractor shall provide only 6-liter stainless steel canisters for the collection of building interior samples;
- K. The 1-liter, 2.7-liter and 3.2 -liter stainless steel canisters shall only be acceptable for the collection of soil gas. Soil gas samples can also be collected in 6-liter canisters;
- L. If soil gas samples are being collected for both the NJDEP-LLTO-15/USEPA Method TO-15 and method 3C, 6-liter canisters shall be used;
- M. If soil gas samples are being collected for both the NJDEP-LLTO-15/USEPA Method TO-15 and method 25C, 6-liter canisters shall be used; and
- N. The Contractor shall provide only 6-liter canisters if soil gas samples are being collected for all three methods.

3.4.8 FLOW CONTROLLER/PRESSURE GAUGES REQUIREMENTS

- A. The Contractor shall ensure that pressure gauges are provided on all types of canisters;
- B. The Contractor shall follow the predetermined contract sampling requirements or the Contract User's instructions to preset the flow controllers for the sample collection periods specified and to clearly identify each canister's flow controller preset sample collection time. The Contractor shall record the current and actual temperature and barometric (atmospheric) pressure of the room at the time the canisters (with the controllers) are prepared for shipment;
- C. The Contractor shall ensure that flow controllers are not sent separately to the Contract User from the Containers. Flow controllers and canisters shall be sent together to the Contract User for each sampling event;
- D. The flow controllers shall be flexible enough to collect samples over a variety of time frames. The flow controllers shall be removed for shipment to and from the Contractor;
- E. Contractor preparation of the canisters, flow controllers, gauges, and Contractor's setting the flow controller's sample collection time at either eight (8) hours or twenty-four (24) hours shall be included in the unit price of sample analysis. The State will not pay extra for providing flow controllers setting of flow controllers or preparing canisters;
- F. The Contractor shall set the flow rate to correspond with the required sampling time period required for the building interior sampling and the accompanying background sample (usually an 8-hour or a 24-hour period);

- G. The Contractor shall set the required flow rate in this RFP to 200 ml/min for 6-liter canisters used for soil gas sampling for NJDEP-LLTO-15 method, USEPA Method TO-15, Method 3C sampling and Method 25C sampling. The critical orifice at a diameter of 0.0060 inches presets the flow rate at 200 ml/min, which shall set the minimum fill time of the canister at one-half (1/2) hour. The actual flow rate into the canister will depend on the flow from the sampling point;
- H. The Contractor shall set the required flow rate in this RFP to 200 ml/min for 2.7-liter and 3.2 - liter canisters used for NJDEP-LLTO-15 or USEPA Method TO-15 soil gas sampling. The critical orifice at a diameter of 0.0060 inches presets the flow rate at 200 ml/min. This flow shall set the minimum fill time of the canister at 15 minutes (1/4 hour). The actual flow rate into the canister will depend on the flow from the sampling point;
- I. The Contractor shall set the required flow rate in this RFP to 200 ml/min for 1-liter canisters used for NJDEP-LLTO-15 or USEPA Method TO-15 soil gas sampling. The critical orifice at a diameter of 0.0060 inches presets the flow rate at 200 ml/min. This flow shall set the minimum fill time of the canister at 5 minutes. The actual flow rate into the canister will depend on the flow from the sampling point vent;
- J. The preparation of the 6-liter canisters for the sampling of landfill vents and the required flow rate will be determined by the permit. This information will be provided at the time of engagement to the Contractor by the SCM/Contract User. The majority of the air permits for landfill vent sampling requires a 200 mL/min flow rate with a critical orifice on the canister;
- K. For sampling that does not involve landfill vent sampling, soil gas, or building interior sampling, the SCM/Contract User will provide the requirements to the Contractor at the time of engagement;
- L. If a different flow rate is required for the 6-liter canister being used for indoor sampling, see Sections 1.3.18 and 5.23.E.7 for additional information. This scenario requires additional time for setting up the flow rate and additional cost to the State; and
- M. Failure to Set or Identify the Flow Controller Presets.

Failure to set a flow controller to the proper sample collection time or failure to clearly identify the sample collection presets for each canister or flow controller shall be a basis for the SCM not to pay the Contractor for any costs related to such an unusable or improperly identified canister. The Contractor shall absorb all costs related to such an event including the return shipment of a used or unused canister to the Contract User because of an improper setting of the flow controller voiding the sample analysis.

3.5 METHANE LIMITATIONS ON AIR SHIPPING

3.5.1 SAMPLE EXCEEDS 50%

If during the sampling event, it is determined that the levels of methane in the soil gas or the vent sample exceeds 50%, the canister cannot be returned to the Contractor by Air Shipping unless helium has been added to the canisters by the Contractor prior to shipping to the field. Otherwise, all return shipping to the Contractor shall be by Ground Shipping.

3.5.2 TWO OPTIONS WHEN METHANE IS KNOWN TO EXCEED 50%

The contractor shall exercise either of two options, if prior to the sampling event the level of methane is known to exceed 50%:

Option 1: The SCM/Contract User informs the Contractor that the methane levels in the sample are expected to meet or exceed 50%; the Contractor can add helium to the canister prior to shipping to the field. This will automatically result in a minimum of 2-fold dilution of the final results. The canister then can be returned via Air Shipping to the Contractor since it now meets USDOT Air Shipping Regulations; or

Option 2: The SCM/Contract User informs the Contractor that the methane levels in the sample are expected to meet or exceed 50%; the Contract User will ship all canisters by Ground Shipping.

3.6 STANDARD REQUIREMENTS

See the requirements of each method.

3.7 METHOD DETECTION LIMITS REQUIREMENTS

The Contractor shall follow method specific requirements for each MDL determination, which are provided in the RFP section specific to the method - common elements for each of the MDL determinations are listed below:

- A. All information except for signatures shall be computer generated or typed. All data shall be reported in the correct units for the method;
- B. The Contractor shall calculate all MDLs in accordance with Appendix B of 40 CFR 136. There are specific criteria that the Contractor shall meet regarding the MDL. The MDL is a statistical determination based on the requirements of the Method. The Contractor then determines a level above the Statistical MDL at which they determine with a certain degree of confidence, the reproducibility and reliability of the data. In such instances, the Contractor shall state this value as the Reporting Limit. See the appropriate contract sections for each method;
- C. The Contractor shall determine the MDL yearly for all methods and all instruments used in sample analysis, including clean canister certification. The year period for the study begins with the date the Contractor's Quality Assurance Officer signs off on the MDL Study. Each method specific section lists the reporting requirements for the MDL study;
- D. Copies of the MDL studies shall be submitted to the SCM and are due within one month of the yearly study being signed off by the Contractor's Quality Assurance Officer. The MDL study shall be completed and approved prior to analysis of samples and can only be associated with samples analyzed after the date of sign off. Copies of the MDL Study shall be submitted to the NJDEP OQA upon request;
- E. The Contractor shall submit copies of the MDL studies for all the instruments used in the sample analysis and clean canister certification in each analytical data package;
- F. The MDL study for each method shall be presented individually. The information required for each method is the same except for the units being reported:

The units for Method 3C are % v/v;
The unit for Method 25C is ppmC; and
The units for NJDEP-LLTO-15/USEPA Method TO-15 are ppbv; and

- G. The Contractor shall provide information in a tabular format and all the required data for each analyte shall be on one page. The information provided for each compound shall include the following below:

The Contractor shall follow the required format of the Summary as follows:

Top of Page Information:

- Laboratory Name;
- Laboratory Location;
- Matrix Type;
- Effective Date/Expiration data of MDL Study;
- Instrument ID and Column ID; and
- Indication if Instrument is used for Clean Container Certification.

Required Columns:

- Compound name;
- Data for seven replicates;
- Mean value;
- True Value;
- Percent recovery;
- Standard deviation;
- Method Detection Limits;
- Reporting Limits;
- True Value/MDL Ratio; and
- RL/MDL Ratio.

Top or Bottom of Page Information:

- Analyst name and date analyzed;
- Reviewed by name and date;
- Report preparer's name and date prepared; and
- QA Officer name and date signed.

3.8 METHOD DETECTION LIMIT VERIFICATION SUMMARY (MDLV)

3.8.1 MDLV SUMMARY FOR EACH COMPOUND IN ALL METHODS AND INSTRUMENTS

The Contractor shall ensure that the Method Detection Limit Verification Summary (MDLV) Summary be submitted with the Method Detection Limit Study for each compound in each method. The MDLV shall be completed after the Method Detection Limit Study is completed. All information except for signatures shall be computer generated or typed. All data shall be reported in the correct units for the method.

The Contractor shall ensure that the MDLV determination be conducted yearly for all methods and all instruments used in sample analysis including clean canister certification. The year period for the study begins with the date the Contractor's Quality Assurance Officer signs off on the MDLV Study. The MDLV study shall be completed and approved prior to analysis of samples and can

only be associated with samples analyzed after the date of sign off. Each method specific section lists the reporting requirements for the MDLV study.

The method specific requirements for each MDLV determination are provided in the RFP section specific to the method. However, there are common elements for each of the MDLV determinations that are listed below.

3.8.2 METHOD DETECTION LIMIT VERIFICATION SUMMARY SUBMISSION

The Contractor shall submit copies of the MDLV Summaries to the SCM and are due within one month of the yearly study being signed off by the Contractor's Quality Assurance Officer. The Contractor shall submit copies of the MDLV Study to the NJDEP OQA/SCM upon request. The Contractor shall submit copies of the MDLV Summaries for all the instruments used in the sample analysis and clean canister certification in each analytical data package.

3.8.3 MDLV SUMMARIES FOR EACH METHOD

The Contractor shall present MDLV summaries for each method individually. The information required for each method is the same except for the units being reported.

The units for Method 3C are % v/v;

The unit for Method 25C is ppmC; and

The units for NJDEP-LLTO-15/ USEPA Method TO-15 are ppbv.

3.8.4 INFORMATION PROVIDED IN TABULAR FORMAT

The Contractor shall provide information 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:

A. The Contractor shall follow the required format of the Summary as follows:

Top of Page Information

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

Required Columns

- Analyte name;
- CAS number;
- MDLV source;
- Source study;
- Source instrument;
- Source analysis date;
- MDLV; and
- Reporting Limit.

3.9 CLEAN CONTAINER CERTIFICATION REQUIREMENTS

The Contractor shall assure that all the following are performed regarding clean canister certification requirements for analytical use:

- A. The Contractor shall follow general clean canister certification requirements for each method provided in this section and pertaining to each method in this RFP;
- B. Containers that are used for method blanks and instrument blanks cannot be used for clean canister certification;
- C. Document and track which canisters are associated with each batch certification. A separate logbook page shall be generated documenting the canisters associated with each batch certification. The logbook page shall include the start and stop date/time of cleaning, heating unit type, number of cycles, analyst's name and signature and canister serial numbers. In addition, the laboratory file number from the GC/MS analysis or GC analysis associated with the canister being cleaned shall be listed;
- D. Specify the canister cleaning procedures that are used in their SOP. For each type of canister cleaning procedure (bands, ovens or heating jacket) a separate canister shall be used to demonstrate that the cleaning procedure meets the requirement of the method;
- E. The Contractor shall ensure that all the canisters in a batch shall be cleaned under the same conditions (temperature, time, cycles, etc.). NJDEP has not established a batch maximum for canisters cleaned by a particular cleaning technique. The Contractor shall specify the maximum number of canisters in a cleaning batch in its SOP; and
- F. Utilize the same Reporting Limits for the clean canister certification as for the sample data. The reporting limit criteria are provided in the method specific sections of the Contract.
- G. Clean Container Certification Requirements

The Contractor shall ensure that all the following are performed regarding container certification requirements:

- 1. The canister used for batch certification shall be certified clean prior to the shipment of any canisters to the field for sample collection;
- 2. Follow the requirements of USEPA Method TO-15, Section 3.3 regarding cleaning and certifying canisters;
- 3. Containers that are used for method blanks and instrument blanks shall not be used for clean canister certification;
- 4. Document and track which canisters are associated with each batch certification. A separate logbook page shall be generated documenting the canisters associated with each batch certification. The logbook page shall include the start and stop date/time of cleaning, heating unit type, number of cycles, analyst's name and signature and canister serial numbers. In addition, the laboratory file number from the GC/MS analysis associated with the canister being cleaned shall be listed;
- 5. Utilize the same Reporting Limits for the clean canister certification as for the sample data. Clean canister data less than 0.2 ppbv shall not be reported. The reporting requirements are provided in the sub sections G7 and G8 below;

6. Ensure that tracer gas compounds shall meet the same clean canister requirements as the target compounds in this method;
7. Ensure that Clean Container Certification for 6-Liter Containers for Building Interior, Soil Gas Sampling and Other Types of Sampling (as specified) is as follows:

The contractor shall ensure that the canisters be batch cleaned and certified with the majority of NJDEP-LLTO-15/USEPA Method TO-15 target analytes at a <0.20 ppbv Reporting Limit. Exceptions to the required clean canister certification limit are detailed below:

<i>Compound</i>	<i>Clean Container Certification Level (Maximum)</i>
Acetone	2.0 ppbv
Naphthalene	0.5 ppbv
Tetrahydrofuran	2.0 ppbv
1,4-Dioxane	2.0 ppbv
Tert-Butyl Alcohol	2.0 ppbv
Xylenes (m&p)	0.5 ppbv

8. Clean Container Certification for 1- Liter, 2.7-Liter and 3.2-Liter Containers used for Soil Gas Sampling is as follows:

The canisters shall be batch cleaned and certified with the majority of NJDEP-LLTO-15/USEPA Method TO-15 target analytes at a ≤0.20 ppbv Reporting Limit. Exceptions to the required clean canister certification limit are detailed below.

<i>Compound</i>	<i>Clean Container Certification Level (Maximum)</i>
Acetone	5.0 ppbv
Carbon Disulfide	0.50 ppbv
Methylene Chloride	0.50 ppbv
Methyl Ethyl Ketone	0.50 ppbv
1,2,4-Trichlorobenzene	0.50 ppbv
Naphthalene	5.0 ppbv
Tetrahydrofuran	2.0
Dichlorodifluoromethane	0.50 ppbv
Methyl Methacrylate	0.50 ppbv
1,4-Dioxane	5.0 ppbv
Methyl Isobutyl Ketone	0.50 ppbv
Tert-Butyl Alcohol	5.0 ppbv
Xylenes (m& p)	0.50 ppbv

3.10 USEPA METHOD 3C REQUIREMENTS (FIXED GASES)

3.10.1 ADDITION OF HELIUM FOR AIR SHIPPING REQUIREMENTS

The Contractor shall document the amount of helium added to canisters and document the final pressure prior to shipping to the state if the State requires helium to be added to the canisters

prior to shipping for sample collection due to the level of methane at the site. The Contractor shall document in writing to the Contract User the final pressure prior to shipping to the field so that an adequate sample volume can be collected in the canister. This also establishes the dilution factor that will exist in the canister prior to sample collection and affect the concentration reported in the final results.

3.10.2 MDL REQUIREMENTS

The Contractor shall ensure that all the following are performed regarding MDL requirements:

- A. The Contractor for the four required compounds, methane, oxygen, carbon dioxide, and nitrogen shall choose a spiking level for each compound that will meet the RFP requirements;
- B. All information except for signatures shall be computer generated or typed. All data shall be reported in v/v%. The Contractor shall specify if peak area or height is used in the MDL determination for each gas standard; and
- C. The Contractor for the four required compounds; methane, oxygen, carbon dioxide, and nitrogen shall be required to have compound specific MDLs that are within a range of two to five (2-5) times lower than the Required Reporting Limits in this RFP.

3.10.3 MDLV REQUIREMENTS FOR EACH ANALYTE

The Contractor shall ensure that all the following are performed regarding MDL requirements for each analyte:

- A. The MDLV shall be conducted for each analyte in the MDL Study;
- B. All information except for signatures shall be computer generated or typed. All data shall be reported in v/v%. The Contractor shall specify if peak area or height is used in the MDL determination for each gas standard; and
- C. The Contractor shall calculate the MDLV for each compound using either peak area or peak height option that was used for the MDL determination for that compound.

3.10.4 REPORTING LIMIT REQUIREMENTS

The Contractor shall ensure that all the following are performed regarding reporting limit requirements:

- A. The reporting limit cannot be less than the lowest initial calibration standard used by the Contractor. The sample result shall be reported in % v/v;
- B. The reporting limit for each compound shall be calculated using either peak area or peak height option that was used for the MDL determination for that compound;
- C. The maximum reporting limits for USEPA Method 3C are as follows. The required units are percentage v/v (% v/v); and

<u>Compound</u>	<u>Reporting Limit</u>
Carbon Dioxide	0.05 % v/v;
Methane	0.04 % v/v;
Oxygen	0.05 % v/v; and
Nitrogen	0.5 %v/v.

- D. The compound specific reporting limits used by the laboratory are theoretical and determined during the Method Detection Limit Study and actually independent on any dilutions that are required by the method. All sample specific reporting limits shall be higher because of the methodology requirements of pressurization of the canisters with helium gas prior to analysis.

3.10.5 INJECTIONS OR ACQUISITIONS REQUIREMENTS

The Contractor shall ensure that all the following are performed regarding injections or acquisitions requirements:

- A. All injections including samples, standards, QC samples and blanks shall be done in duplicate and calculated using the average sample peak area or peak height. The injections shall occur in sequence. The results are acceptable when the peak areas or peak height for two consecutive injections agree within 5% of their average;
- B. The Contractor shall use the same procedure (either peak height or peak area) for each compound used for the determination of the MDL, MDLV and Reporting Limit for the reporting of the samples, standards, QC samples and blanks data. If it is determined that the data for the samples, standards, QC samples and blanks are reported differently than the MDL, MDLV and Reporting Limit, the data will be rejected and the Contractor will have to recalculate the data and resubmit. The resubmitted data shall comply with all the requirements of the contract; and
- C. If they do not agree, the Contractor shall run additional samples (in duplicate and in sequence) until consistent area data is obtained. For each sample, standard, QC sample and blanks, the results for both acquisitions shall be presented in the data package.

3.10.6 ANALYTICAL SEQUENCE

The Contractor shall ensure that all the following are performed regarding analytical sequence in the analysis of samples:

- A. All injections including samples, standards, QC samples and blanks shall be done in duplicate and calculated using the average sample peak area or peak height. The injections shall occur in sequence. The results are acceptable when the peak area or peak height for two consecutive injections agree with five (5) percent (%) of their average;
- B. The Contractor shall be required to follow the sequence below in the analysis of the samples:

Initial Calibration Sequence (maximum 24 hours)

Initial Calibration (minimum of five (5) points for each gas);

Initial Calibration Verification Sample Standard;

Method Blank;

Laboratory Control Sample (optional location);

Samples;

Instrument blanks and other blanks, if applicable (optional location); and

Closing Continuing Calibration Verification Standard (within 24 hours of the first acquisition of the Initial Calibration Standard)

Daily Calibration Sequence (maximum 24 hours)

Opening Continuing Calibration Verification Standard;

Method Blank;

Laboratory Control Sample (optional location);

Samples;
Instrument blanks and other blanks (if applicable) (optional location); and
Closing Continuing Calibration Verification Standard (within 24 hours of the first acquisition of the Continuing Calibration Verification Standard);

- C. In a initial calibration sequence, the method blank shall be analyzed immediately after the Initial Calibration Verification Standard and prior to the analysis of any samples, Laboratory Control Samples, other blanks and the Closing Calibration Verification Standard; and
- D. In a continuing calibration sequence, the method blank shall be analyzed immediately after the Opening Continuing Calibration Verification Standard and prior to the analysis of any samples, Laboratory Control Samples, other blanks and the Closing Calibration Verification Standard.

3.10.7 GENERAL ANALYTICAL STANDARD REQUIREMENTS

The Contractor shall ensure that all the following are performed regarding general analytical standard requirements:

- A. The gas standards required for this method shall meet the requirements of 40 CFR Part 60 that requires all gaseous pollutant concentration standards used for calibration and audit of continuous emission monitors (CEM) and ambient air quality analyzers be analyzed according to "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (EPA600/R-97/121)," revised September 1997;
- B. The gas standards shall be in pressurized cylinders certified traceable to a NIST Standard Reference Materials (SRM) or NIST/EPA approved Certified Reference Material (CRM). The Contractor shall certify in the case narrative of each data package that gas standards have been used. The Contractor shall specify their suppliers in the SOP submitted to the OQA for certification;
- C. The Contractor shall use Ultra-High Purity helium for the carrier gas; and
- D. The Contractor shall maintain original Certificates of Analyses (C of A) from the supplier for each lot. The Contractor shall certify in the case narrative of each data package that gas standards have been used. Copies of specific lot C of As used in the analysis of the samples for a particular Sample Delivery Group shall be included in the analytical data package.

3.10.8 SECOND SOURCE FOR STANDARDS

The calibration standards and the Laboratory Control Sample standard can be from the same lot.

3.10.9 GC INITIAL CALIBRATION STANDARD REQUIREMENTS

The Contractor shall conduct the initial calibration using a minimum of five (5) points for each compound. The lowest calibration standard for each compound shall be the same as the reporting limit for the compound. Each gas standard is not required to be in each initial calibration standard mixture;

3.10.10 INITIAL CALIBRATION VERIFICATION SAMPLE STANDARD

The initial Check Verification Sample Standard can be either from a different commercial supplier or from an independent lot from the same commercial supplier (different from the lot used for the Calibration Standards and the Laboratory Control Sample). The standard shall contain all the

compounds of interest. The concentration of the Initial Calibration Verification Sample Standard shall be the midpoint of the calibration range for each compound; and

3.10.11 CONTINUING CALIBRATION VERIFICATION STANDARD (OPENING AND CLOSING)

The Contractor shall ensure that the Continuing Calibration Verification Standard for each of the gases shall be midpoint between the lowest and highest calibration standard. All the gases shall be in one calibration standard.

3.10.12 LABORATORY CONTROL SAMPLE

The Contractor shall ensure that the Laboratory Control Sample (LCS) consist of helium gas spiked with a known concentration of gas compounds. Methane shall be spiked at 4 % v/v and the other compounds (carbon dioxide, oxygen and nitrogen) shall be spiked at 5% v/v. All gas standards shall be in the same LCS standard mixture.

3.10.13 SAMPLE ANALYSIS REQUIREMENTS

The Contractor shall ensure that all the following are performed regarding sample analysis requirements:

A. Initial Calibration Requirements;

1. The Contractor shall use a minimum five (5) standards for each compound in the initial calibration. All standard acquisitions being used for the initial calibration shall be collected at the beginning of the 24-hour sequence prior to the collection of any samples, blanks or LCS. Acquisitions from other 24-hour sequences cannot be used for the initial calibration;
2. The calibration range can be established by the Contractor. The only requirement is that the lowest calibration standard shall be the same as the reporting limit for the compound;
3. Linearity Determination;
 - a. Linear regression shall not be acceptable to determine linearity. Linearity shall be determined by response factors; and
 - b. The linearity of the instrument shall be determined by calculating the Percent Relative Standard Deviation (%RSD) of the response factors (from a five-point or more calibration curve) for each of compounds. All points shall be used in the calculation. Either peak area or peak height can be used to calculate the response factors used in the %RSD equation.

For example:

It is permitted to calculate linearity for methane compound based on peak area and to calculate linearity for oxygen based on peak height;

It is not permitted within a %RSD calculation for an analyte to use the response factor calculated from both peak area and peak height; and

It is not permitted to calculate the response factor for the lowest standard for methane using peak height and calculate the highest standard response factor for methane using peak area;

4. Response Factors of uncorrected component concentration (wet basis) shall be used for instrumental integration. The maximum response factor for each compound is an RSD of 20%;
5. Any samples or required blanks analyzed when initial calibration verification technical acceptance criteria have not been met shall require reanalysis at no additional cost to the State; and
6. The initial calibration verification does not have to be repeated every 24 hours as long as the opening and closing Continuing Calibration Verification Standard % Difference does not exceed +20% for any of the compounds.

B. Initial Calibration Verification Sample Requirements;

The Contractor shall ensure that all the following are performed regarding initial calibration verification sample requirements:

1. The initial calibration verification standard shall be analyzed immediately after the final initial calibration standard is analyzed and prior to the analysis of the associated method blank if samples are analyzed with the initial calibration; and
2. The % Recovery of the Initial Calibration Verification Standard from the required concentration of each compound in the standard (see the required concentration in item 3.10.10. of this section) shall be between $\pm 20\%$ for the Initial Calibration Verification Standard to be acceptable. If the % Recovery of any compound is outside of control limits, the Contractor shall reinject the Initial Calibration Verification Standard. The reinjection shall be the next injection after the failed standard and one of the following actions shall occur:
 - a. If the second injection of the Initial Calibration Verification Standard meets the $\pm 20\%$ criteria, the Contractor will use the second injection as the compliance standard. The failed first injection shall be noted on all run logs and discussed in the case narrative;
 - b. If the second injection of the Initial Calibration Verification Standard fails to meet the $\pm 20\%$ criteria, the Contractor shall halt the analytical sequence and take the required appropriate corrective action that may include re-preparation of standards. Upon completion of the corrective action, the Contractor shall be required to restart the calibration analytical sequence with an initial calibration sequence; and
 - c. If the Contractor fails to analyze the second Initial Calibration Verification Standard as required due to a failed initial injection of the standard and then continues the analytical sequence (either initial or an associated daily sequence), all associated data shall be unacceptable. The Contractor is required to reanalyze all the associated samples and blanks in another analytical sequence that begins with an acceptable calibration sequence and Initial Calibration Verification Standard.

C. Continuing Calibration Verification Standards (Opening And Closing);

The Contractor shall ensure that all the following are performed regarding continuing calibration verification standards:

1. This Contract allows the Contractor to use a continuing calibration verification standard (CCV standard) to open a 24-hour time period for analysis as long as certain criteria are

met. The required analytical sequence is detailed in Section 3.10.6 above. This is known as the Opening Continuing Calibration Verification Standard;

2. The analytical sequence shall end with the injection of a closing CCV standard prior to expiration of the 24 hour time period. If the injection of the acceptable CVV standard occurs after the expiration of the 24-hour time period, the injection is not acceptable and all samples, blanks and LCS analyzed shall be rerun at no cost to the State with a compliant calibration;
3. Opening Continuing Calibration Verification;
 - a. CCV Standards can be used to initiate the twenty-four-(24) hour time period if the % Differences for all the compounds do not exceed +20%. If the % Difference exceeds +20% for any of the compounds, the opening CCV standard is not acceptable. The Contractor can inject the opening CCV standard one more time (duplicate injections in sequence) to obtain a compliant calibration. If a compliant calibration cannot be obtained with the second set of acquisitions, a new initial calibration shall be conducted;
 - b. If the second set of acquisitions meets the contract established requirements, this is considered the compliant calibration and shall be reported and used for reporting of the data;
 - c. All standard acquisitions being used for the opening CCV shall be collected at the beginning of the 24-hour sequence prior to the collection of any samples, blanks or LCS. Acquisitions from other twenty-four-(24) hour sequences cannot be used for the continuing calibration; and
 - d. Any samples or required blanks analyzed when opening CCV technical acceptance criteria that have not been met shall require reanalysis at no additional cost to the State; and
4. Closing Continuing Calibration Verification;
 - a. Closing Continuing Calibration Verification Standards shall be run prior to the end of the twenty-four (24) hour period associated with the Initial Calibration or a compliant Opening Continuing Calibration Verification Standard. The compliant CCV standard (duplicate injections in sequence) shall be injected prior to the completion of the twenty-four (24) hour period. Any closing CCV that is conducted after the expiration of the 24-hour period shall require all samples, QC samples and blanks analyzed within that twenty-four (24) period to be reanalyzed at no additional cost to the State;
 - b. If the % Difference exceeds +20% for any of the gases, the closing CCV standard shall not be acceptable;
 - c. If the closing CCV technical acceptance criteria are not met and there is time remaining in the twenty-four (24) hour sequence, the Contractor can immediately reinject the CCV standard one time (duplicate injections in sequence) to determine if the +20% Difference criteria can be met. If the second set of injections meets the criteria, the second set of data is to be used for the Closing Calibration Verification; and
 - d. If the second set of CCV standards fails, all samples, QC samples, and blanks analyzed within that twenty-four-(24) hour time period shall be reanalyzed at no

additional cost to the State. It may be necessary to change the column, undertake detection maintenance or take other corrective actions to achieve the CCV technical acceptance criteria.

D. Laboratory Control Sample (LCS);

The Contractor shall ensure that all the following are performed regarding laboratory control sample (LCS) requirements:

1. One LCS is required for every 24-hour period. This is the same frequency as the method blank. The Laboratory Control Sample shall be analyzed after the method blank in the sequence and prior to the closing CCV. This requirement shall be met whether the LCS is associated with an initial calibration standard or an opening continuing calibration standard;
2. The duplicate injections (in sequence) of the LCS shall be averaged together to generate the result to compare to the concentration of the LCS standard; and
3. The acceptable % recovery for the LCS for each compound is 60-140%. If the first set of LCS acquisitions fail, the Contractor has the choice of two options.

Option 1 - If there is sufficient sample volume left in the sample canister, the Contractor shall reanalyze the sample with a LCS that is within control limits. This may require the Contractor to cease acquisition of all data, determine the source of the problem and undertake corrective action. Upon completion of the corrective action, start the initial calibration from the first injection; or

Option 2 - If there is not sufficient sample volume left in the sample canister, the Contractor shall immediately in sequence after the non compliant LCS acquire a second set of LCS data (duplicate injections in sequence). If the recoveries are acceptable in the second set of LCS data, the second set of data is to be used for the compliant LCS.

If the LCS is still outside control limits, the LCS is not acceptable. The Contractor shall document the fact on the instrument run log and in the case narrative that insufficient volume remained in the sample canister preventing reanalysis of the sample. The Contractor shall include in the case narrative that all the results are qualified "J" or "UJ" due to recovery being outside of the control limits.

E. Chromatographic Scaling Requirements;

The Contractor shall ensure that all the following are performed regarding chromatographic scaling requirements:

1. Chromatograms shall display all target compound 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;
2. 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;
3. If a chromatogram is replotted electronically to meet these requirements, the scaling factor used shall be displayed on the chromatogram;

4. All target compounds in the chromatograms shall be labeled with the names of compounds or retention times on the peak or on an accompanying printout with retention times and compound names; and
5. Reconstructed ion chromatograms shall be normalized to the largest target or and shall be labeled with following header information:
 - a. Sample identification number;
 - b. Date and time of analysis;
 - c. GC/MS instrument identification -- exact instrument employed;
 - d. Lab file Identifier; and
 - e. Analyst ID.

F. Method Blank;

The Contractor shall ensure that all the following are performed regarding the method blank requirements:

1. The method blank consists of UHP helium air. The method blank can be created directly from the helium gas lines or from a clean canister. There is no acceptable level of any contaminant in the method blank. If contamination is detected in the method blank, the Contractor shall reanalyze all associated samples, QC samples and any instrument blanks at no cost to the state;
2. The duplicate injections (in sequence) of the method blank shall be averaged together to generate the concentration in the method blank. Both acquisitions of the method blank shall be non-detect for the method blank to be considered acceptable;
3. If the method blank is not clean of contamination, all data acquisitions shall cease and the source of contamination shall be determined, corrective action taken and a new method blank canister prepared. The method blank shall be reanalyzed and be free of contaminants for the analysis;
4. If the method blank is created directly from the helium gas lines, it shall be noted on the instrument log;
5. If the Contractor uses the canister option to create the method blank, the canister is required to be a dedicated canister that has never left the Contractor's facility. The serial number of the method blank canister shall be noted on all the clean canister logs and instrument run logs. A canister that has been used for sample collection out in the field cannot be used as method blank canister;
6. One method blank shall be analyzed every 24-hour period. The method blank shall be analyzed immediately after the initial calibration verification sample standard if the method blank is associated with an initial calibration. The method blank associated with an opening CCV shall be analyzed immediately after the Opening CCV and prior to the associated LCS. In both instances, the method blank shall be analyzed prior to the analysis of any samples;
7. The method blank shall be analyzed prior to any closing CCV standard; and
8. If the first set of method blank acquisitions fails, the Contractor has the choice of two options.

Option 1 - Cease acquisition of all data, determine the source of the problem and undertake corrective action. Upon completion of the corrective action, start the initial calibration from the first injection; or

Option 2 - The Contractor immediately in sequence after the non-compliant method blank acquires a second set of data (duplicate injections in sequence). If no contamination is detected in the second set of method blank data, the second set of data is to be used for the compliant method blank. If contamination is detected in the second set of method blank data, the method blank is not acceptable and Option 1 shall be initiated.

G. Instrument Blanks;

1. If the Contractor determines during the analytical sequence that an instrument blank needs to be analyzed for any reason within an analytical sequence, the instrument blank is be created from the same source as the method blank. The sample shall be labeled as an instrument blank and the reason for analyzing the blank documented in the case narrative and the instrument run log;
2. There is no acceptable level of any contaminant. If contamination is detected in the instrument blank, the Contractor shall reanalyze all associated samples, QC samples and any method blanks within the 24-hour sequence at no cost to the State;
3. If the instrument blank is created directly from the helium gas lines, it shall be noted on the instrument log;
4. If the Contractor uses the canister option to create the instrument blank, the instrument blank shall be created from the same canister as the method blank. The canister is required to be a dedicated canister that has never left the Contractor's facility. The serial number of the instrument blank canister shall be noted on all the clean canister logs and instrument run logs. A canister that has been used for sample collection out in the field cannot be used as instrument blank canister;
5. The instrument blank shall be processes simultaneously with and under the same conditions as samples through all steps of the analytical procedure; and
6. If the first set of instrument blank acquisitions fails, the Contractor has the choice of two options.

Option 1 - Cease acquisition of all data, determine the source of the problem and undertake corrective action. Upon completion of the corrective action, start the initial calibration from the first injection; or

Option 2 - The Contractor immediately in sequence after the non-compliant instrument blank acquires a second set of data (duplicate injections in sequence). If no contamination is detected in the second set of instrument blank data, the second set of data is to be used for the compliant instrument blank. If contamination is detected in the second set of instrument blank data, the instrument blank is not acceptable and Option 1 shall be initiated.

3.10.14 CLEAN CANISTER CERTIFICATION REQUIREMENTS

The Contractor shall ensure that a canisterer that is certified as clean for Method 3C shall follow the requirements in Section 3.9 of this RFP. To demonstrate the canister is clean, the Contractor shall submit documentation required in Appendix 1 Section 9.0 in the Data Report for Method 3C.

Additionally, a statement shall be added to the Case Narrative in the Data Report, that the canister was certified by NJDEP LL-TO15/USEPA Method TO-15.; and

The Contractor shall conduct the leak check test required by the method under vacuum. The Contractor shall certify the canister as leak free over a twenty-four (24) hour period using a criterion of maximum decrease in vacuum of 0.5 in Hg.

3.10.15 REPORTING AND ANALYTICAL DATA

The Contractor shall report the data as analyzed. Any correction of the sample data for temperature, barometric pressure, water content and nitrogen content will be done by the data user.

3.10.16 VOLUME OF SAMPLE USED FOR ANALYSIS

The Contractor shall ensure that all the following are performed regarding the volume of sample used for analysis:

- A. The undiluted volume of sample drawn from the canister for analysis shall be standardized by the Contractor at the time of submittal of its SOP. The Contractor be aware of the following requirements in the dilution of State samples and shall address the following requirements in the SOP;
 - 1. Automatic dilution of samples beyond what is required to repressurize the canister prior to analysis as required by the method shall not be permitted, if upon analysis none of the target compounds concentrations in the sample exceed the highest calibration standard. The sample shall be analyzed without the addition of any makeup air (beyond the initial pressurization). The data shall be reported with only the initial pressurization dilution factor applied;
 - 2. If dilutions are required due to concentrations in the samples that exceed the highest calibration standard, the volume drawn from the canister shall be reduced and ultra high purity (UHP) helium shall be used as the makeup gas. All sample data shall be reported with the dilutions factored in and the all the Reporting Limits shall be adjusted for the required dilutions; and
 - 3. Both the undiluted and diluted sample data shall be reported on separate data summary reporting forms with all the accompanying documentation.
- B. If dilutions are required due to concentrations in the samples that exceed the upper calibration of the instrument, the volume drawn from the canister shall be reduced and UHP helium gas shall be used as the makeup air;
- C. The Contractor shall not automatically add UHP helium to the undiluted sample either on the column, in a canister Tedlar bag, or other options to meet their systems requirements without the sample being reported as diluted;
- D. The Contractor shall establish screening procedures for all samples analyzed by this method; and
- E. The Contractor can propose other options for dilution of samples after contract award. The submittal of other options for dilution of samples does not indicate automatic approval to use such procedures. The proposed procedures cannot be used until approved by the SCM. The

specific procedures shall then be included in a revision to the SOPs and be submitted to the SCM for final approval.

3.10.17 SAMPLE DILUTIONS

The Contractor shall ensure that as part of the routine analysis, canisters will be received by the Contractor that will require dilutions to be conducted so that samples results shall be within the calibration range of the instrument. As part of the process, the Contractor shall incorporate the following procedures into their screening procedures of the canisters. The Contractor shall also describe the dilution procedures that they intend to use for this method, as shown below:

- A. If the Contractor shall add UHP helium gas as the makeup air to the sample for the dilution, the source shall be the same as the source that is used for the preparation of the method blanks;
- B. All dilutions shall be made immediately prior to GC analysis of the sample;
- C. The dilution procedures shall be documented in the Case Narrative of the analytical data package;
- D. Contractor procedural dilution of samples beyond the initial pressurization of the canisters shall not be permitted. If the sample is reported with all target analyte results at or below the required Reporting Limits, then the sample shall be analyzed without the addition of any makeup air (beyond the initial pressurization) and without any additional corrections for sample dilutions;
- E. If all the target analyte results in a sample are less than the highest calibration standard in the initial calibration, the sample shall be analyzed without the addition of any makeup UHP helium gas (beyond the initial pressurization) and the data reported without any dilution factor adjustment applied (See item J. in this section below for additional information);
- F. If dilutions are required due to concentrations of any target compound in a sample exceeds the upper calibration standard of the initial calibration, the volume drawn from the canister shall be reduced and UHP helium gas shall be used as the makeup air. All sample data shall be reported with the dilutions factored in and the all the Reporting Limits shall be adjusted for the required dilutions;
- G. The Contractor shall choose a sample specific dilution factor that shall keep the concentration of the largest peak for a target compound in the upper half of the initial calibration range.
- H. The Contractor shall provide screening data in the analytical data packages as required by the current deliverable requirements established by the NJDEP;
- I. If the screening results indicate that the peak response for any target compound in any sample does not exceed the peak response in the highest standard in the initial calibration, the the Contractor shall analyze the sample without being diluted;
- J. If the screening results indicates that the peak response for any target compound in any sample does exceed the peak response in the highest standard in the initial calibration, the Contractor shall chose of one two options;
 - 1. The Contractor shall analyze the sample as undiluted and then analyze the sample at the correct dilution level. The Contractor can use the results of the original analysis to

determine the approximate dilution factor to get the largest analyte peak within calibration range; and

2. The Contractor shall choose the dilution level that shall allow the sample to be analyzed at the most concentrated dilution and meet the requirements of the method. The Contractor shall demonstrate that it has chosen the appropriate level by analyzing the sample at one further dilution.

For both options, the Contractor shall not submit more than two sets of data. The Contractor shall submit both sets of data separately. Both sets of data shall meet the requirements of the method.

- K. Both the undiluted and diluted sample data (or the two dilutions as required by section J. above) shall be reported on separate data summary reporting forms with all the accompanying documentation; and
- L. There are various options available for the dilution of the samples depending on the analytical systems used by the Contractor. The Contractor can propose other options for dilution of samples after contract award. The submittal of other options for dilution of samples does not indicate automatic approval to use such procedures. The proposed procedures cannot be used until approved by the SCM. The specific procedures shall then be included in a revision to the SOP and be submitted to the SCM for final approval. The options can include the following:
 1. Injection of a volume of sample into another certified clean canister and induction of Ultra-High Purity helium gas;
 2. Dilutions conducted directly on the instrument; and
 3. The Contractor can analyze samples collected using Tedlar bags. When tedlar bags are used, absorption and contribution issues shall be determined prior to their use. Tedlar bag blanks shall be analyzed as part of the analytical sequence. These blanks are in addition to the required method blanks shall be clearly identified in the sequence. The blanks shall be analyzed after the method blank and prior to the sample.

3.11 USEPA METHOD 25C REQUIREMENTS (NON METHANE ORGANIC CARBON)

3.11.1 REPORTING OF DATA RESULTS

The Contractor shall report all data as Non Methane Organic Carbon (NMOC) and reported in units of ppmC (parts per million carbon).

3.11.2 METHOD DETECTION LIMIT REQUIREMENTS

The Contractor shall follow the method detection limit requirements listed below:

- A. Required Spiking Level;

The spiking level for the Method Detection Limit Determination for the NMOC by Method 25C shall be 3.0 ppmC;

- B. All information except for signatures shall be computer generated or typed. All data shall be reported in v/v%. The Contractor shall specify if peak area or peak height is used in the MDL determination for each gas standard;

- C. This contract has established the maximum Method Detection Limit (MDL) for Method 25C at 3.0 ppmC; and
- D. The compound specific reporting limits used by the laboratory are theoretical and determined during the Method Detection Limit Study and actually independent on any dilutions that are required by the method. All sample specific reporting limits shall be higher due to the methodology requirements of pressurization of the canisters with helium gas prior to analysis.

3.11.3 METHOD DETECTION LIMIT VERIFICATION REQUIREMENTS

The Contractor shall follow the method detection limit verification requirements listed below:

- A. The MDLV shall be conducted with the MDL Study;
- B. All information except for signatures shall be computer generated or typed. All data shall be reported in ppmC. The Contractor shall specify if peak area or peak height is used in the MDLV determination for NMOC; and
- C. The MDLV for each compound shall be calculated using either peak area or peak height option that was used for the MDL determination for that compound.

3.11.4 REPORTING LIMIT REQUIREMENTS

- A. The required Reporting Limit is 6 ppmC. The reporting limit cannot be less than the lowest initial calibration standard used by the Contractor;
- B. The Contractor shall specify if peak area or peak height is used in the Reporting Limit determination for NMOC; and
- C. The Reporting Limit shall be calculated using the either peak area or peak height that was used for the MDL determination for NMOC.

3.11.5 INJECTIONS OR ACQUISITIONS REQUIREMENTS

The Contractor shall follow the injections of acquisitions requirements listed below:

- A. All injections including samples, standards, QC samples and blanks are to be done in triplicate and calculated using the average sample area or height. The injections shall occur in sequence. The results are acceptable when the peak areas or peak heights for three consecutive injections agree within 15% of their average;
- B. The Contractor shall use the same procedure (either peak height or peak area) used for the determination of the MDL, MDLV, and Reporting Limit for the reporting of the samples, standards, QC samples and blanks data. If it is determined that the data for the samples, standards, QC samples and blanks are reported differently than the MDL, MDLV and Reporting Limit, the data will be rejected and the Contractor will have to recalculate the data and resubmit. The resubmitted data shall comply with all the requirements of the contract; and
- C. The three acquisitions for each calibration level (initial and continuing) are to be averaged together to report the response factor for that level. The average response factor for each level is used to determine the averaged response across the curve, % RSD. For the continuing calibration standards, the response factor and the % D are calculated.

3.11.6 ANALYTICAL SEQUENCE

The Contractor shall follow the analytical sequence requirements listed below:

- A. All injections including samples, standards, QC samples and blanks are to be done in triplicate and calculated using the response of the instrument in the sample concentration calculation. Each injection shall be reported. All injections including samples, standards, QC samples and blanks are to be done in triplicate and calculated using the average sample area or height. The injection shall occur in sequence. The results are acceptable when the peak areas or peak heights for three consecutive injections agree within 15% of their average;
- B. The Contractor is required to follow the sequence below in the analysis of the samples.

Initial Calibration Sequence (24 hours maximum)

Calibration Standard 1 – lowest standard;

Calibration Standard 2 – mid-range standard;

Calibration Standard 3 – highest standard;

Note: the Contractor can analyze other standards between the required standards.

Initial Calibration Verification Standard/LCS (or analyze both individually);

Method Blank;

Samples;

Instrument Blanks and other Blanks – location optional; and

Closing Calibration Verification Standard (within 24 hours of the injection of the lowest initial calibration standard)

Daily Calibration Sequence (24 hours maximum)

Opening Continuing Calibration Verification Standard;

Laboratory Control Sample (optional location);

Method Blank;

Samples;

Instrument blanks and other blanks, if applicable (optional location); and

Closing Continuing Calibration Verification Standard (within 24 hours of the first acquisition of the Continuing Calibration Verification Standard).

3.11.7 GENERAL ANALYTICAL STANDARD REQUIREMENTS

The Contractor shall follow the general analytical standard requirements listed below:

- A. The gas standards required for this method do meet the requirements of 40 CFR Part 60 that requires all gaseous pollutant concentration standards used for calibration and audit of continuous emission monitors (CEM) and ambient air quality analyzers be analyzed according to "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (EPA600/R-97/121)" revised September 1997;
- B. The gas standards are to be in pressurized cylinders certified traceable to a NIST Standard Reference Materials (SRM) or NIST/EPA approved Certified Reference Material (CRM). The Contractor shall certify in the case narrative of each data package that gas standards have been used. The Contractor shall specify their suppliers in the SOP submitted to the OQA for certification;

- C. All standards including calibration standards and laboratory control standards shall be prepared in summa canisters;
- D. The Contractor shall maintain Original Certificates of Analyses (C of A) from the supplier for each lot. The Contractor shall certify in the case narrative of each data package that gas standards have been used. Copies of specific lot C of As used in the analysis of the samples for a particular Sample Delivery Group shall be included in the analytical data package; and
- E. Ultra high purity (UHP) gas cylinders are required for helium and hydrogen gases.

3.11.8 SECOND SOURCE FOR STANDARDS

The Contractor shall ensure that the LCS and ICV standards are the same gas mixture as the calibration mixture but shall be a different lot number.

3.11.9 INITIAL CALIBRATION STANDARDS

- A. The Contractor shall prepare calibration standards from the same stock propane gas standard. The lot number shall be included on the instrument run log; and
- B. A minimum of three calibration standards shall be required. The Contractor can use more than three standards; however, this contract establishes the lowest standard, mid range standard and highest standard. The three required calibration standards are listed below.

<u>Level</u>	<u>NMOC (ppmC)</u>
Low	6
Mid range	750
Highest	3,000

3.11.10 INITIAL CALIBRATION VERIFICATION STANDARD (ICV STANDARD)

The Contractor shall ensure that the Initial Calibration Verification Standard is from a second source. The ICV Standard shall be the same concentration as the mid range standard (750 ppmC used in the initial calibration). It can be made from the same gas mixture as the calibration standards but shall be from a different lot number. The lot number shall be included on the instrument run log. The ICV standard can be from the same lot as the Laboratory Control Sample.

3.11.11 CONTINUING CALIBRATION VERIFICATION STANDARD (OPENING AND CLOSING)

The Contractor shall ensure that the Continuing Calibration Verification Standard is at a concentration equivalent to the middle calibration standard 750 ppmC. The UHP nitrogen is used in the standard. The lot number shall be included on the instrument run log. The separate continuing calibration verification standard or the mid range initial calibration standard can be used.

3.11.12 LABORATORY CONTROL SAMPLE (LCS)

The Contractor shall ensure that the Laboratory Control Sample (LCS) is from a second source. The second source can be from the same calibration mixture as the standards, but shall be from a different lot number. The LCS can be from the same lot as the ICV Standard. The lot number shall be included on the instrument run log. The LCS shall be spiked at the 750 ppmC, which is the same concentration as the required mid range calibration standard.

3.11.13 SAMPLE ANALYSIS REQUIREMENTS

The Contractor shall ensure the following sample analysis requirements are followed:

A. Initial Calibration Requirements;

1. The Contractor is required to use a minimum of three standards for the initial calibration. All standards shall be analyzed in triplicate and in sequence. All standard acquisitions used in the initial calibration shall be collected at the beginning of the 24-hour sequence prior to the collection of any samples, blanks or QC samples. Acquisitions from other 24-hour sequences shall not be used for the initial calibration;
2. The calibration range for method shall be from 6 ppmC to 3,000 ppmC, with the mid range is established at 750 ppmC. The Contractor can analyze additional calibration standards. All standards (required and extra standards) shall be used in the calculation of the % RSD;
3. Linear regression shall not used to determine linearity. Linearity shall be determined by response factors;
4. Any samples or required blanks analyzed when the initial calibration technical acceptance criteria has not been met shall require reanalysis at no additional cost to the State;
5. The three acquisitions (triplicate injections in sequence) for each calibration level shall be averaged together and the % difference shall not to exceed $\pm 15\%$ of the overall mean response of all the calibration points;
6. The % RSD level specified in this contract is higher than the level specified in the method. The higher levels are more practical for environmental laboratories for the initial calibration. The % RSD shall be within 15% of the initial calibration to be acceptable. If the % RSD exceeds 15%, all acquisitions shall be stopped, the problem corrected and the initial calibration repeated;
7. The initial calibration does not have to be repeated every 24 hours as long as the opening and closing continuing calibration verification standard % difference does not exceed $\pm 15\%$; and
8. In the initial calibration, since the ICV Standard and the LCS are conducted at the same concentration, the one set of triplicate injections can be conducted by the Contractor and that injection series will be sufficient to satisfy the requirements of a ICV Standard and the LCS that are required for the initial calibration. The result obtained shall be evaluated individually as the ICV Standard and LCS and meet the requirements of both QC samples. The Contractor, at his discretion, can inject each standard individually in the required order as specified in this RFP.

B. Initial Calibration Verification Sample Standard Requirements;

1. The triplicate injections (in sequence) of the Initial Calibration Verification Standard shall be averaged together to generate the result to compare to the Initial Calibration average. The Initial Calibration Verification Standard shall be analyzed immediately after the final initial calibration standard and prior to the associated method blank if samples are analyzed with the initial calibration;
2. The % Recovery of the Initial Calibration Verification Standard (ICV Standard) from the required concentration of each compound in the standard (see the required concentration

in Section 3.11.9 shall be between ± 30 percent (%) for the Initial Calibration Verification Standard to be acceptable. If the % Recovery is outside of control limits, the Contractor shall reinject the Initial Calibration Verification Standard. The reinjection shall be the next injection after the failed standard and the one of the following actions shall occur:

- a. If the second injection of the Initial Calibration Verification Standard meets the $\pm 30\%$ criteria, the Contractor will use the second injection as the compliance standard. The failed first injection shall be noted on all run logs and discussed in the case narrative;
 - b. If the second injection of the Initial Calibration Verification Standard fails to meet the $\pm 30\%$ criteria, the Contractor shall halt the analytical sequence and take the required appropriate corrective action that may include reparation of the standard. Upon completion of the corrective action, the Contractor shall be required to restart the calibration analytical sequence with an initial calibration sequence; or
 - c. If the Contractor fails to analyze the second Initial Calibration Verification Standard as required due to a failed initial injection of the standard and then continues the analytical sequence (either initial or an associated daily sequence), all associated data shall be unacceptable. The Contractor is required to reanalyze all the associated samples and blanks in another analytical sequence that begins with an acceptable initial calibration sequence and Initial Calibration Verification Standard; and
3. The LCS and the ICV Standard associated with an initial calibration can be the same set of acquisitions. However, the contractual requirements shall be met for both QC samples for the standard to be considered valid for both standards. If the requirements of the ICV Standard are not met, then the set of acquisitions cannot be used for the reporting of the ICV Standard, the Contractor shall analyze a separate ICV Standard.

C. Continuing Calibration Verification Standards;

1. This Contract allows the Contractor to use a continuing calibration verification standard (CCV standard) to open a 24-hour period for analysis as long as certain criteria are met. The required analytical sequence is detailed in Section 3.11.6. This is known as the Opening Continuing Calibration Verification Standard;
2. The analytical sequence shall end with the injection of a closing CCV standard prior to expiration of the 24-hour period. If the injection of the acceptable CCV standard occurs after the expiration of the 24-hour period, the injection is not acceptable and all samples, blanks and LCS analyzed shall be rerun at no cost to the State with a compliant calibration;
3. The % Difference level specified in this contract is higher than the level specified in the method. The higher levels are more practical for environmental laboratories for the initial calibration;
4. The triplicate injections (in sequence) of the Continuing Calibration Verification Standard shall be averaged together to generate the result to compare to the Initial Calibration average;
5. Opening Continuing Calibration Verification;
 - a. Standards can be used to initiate the 24-hour time period if the % Difference for all the compounds do not exceed $\pm 20\%$. If the % Difference exceeds $\pm 20\%$ for any of the compounds, the opening CCV standard is not acceptable. The Contractor can inject

the opening CCV standard one more time (triplicate injections in sequence) to obtain a compliant calibration. If a compliant calibration cannot be obtained with the second set of acquisitions, a new initial calibration shall be conducted;

- b. The second set of acquisitions meet the contract established requirements, this is considered the compliant calibration and shall be reported and used for reporting of the data;
 - c. All standard acquisitions being used for the opening CCV shall be collected at the beginning of the 24-hour sequence prior to the collection of any samples, blanks or LCS. Acquisitions from other 24-hour sequences cannot be used for the continuing calibration; and
 - d. Any samples or required blanks analyzed when opening CCV technical acceptance criteria have not been met shall require reanalysis at no additional cost to the State;
6. Closing Continuing Calibration Verification;
- a. Closing Continuing Calibration Verification Standards shall be run prior to the end of the 24-hour period associated with the Initial Calibration or a compliant Opening Continuing Calibration Verification Standard. The compliant CCV standard (triplicate injections in sequence) shall be injected prior to the completion of the 24-hour period. Any closing CCV that is conducted after the expiration of the 24-hour period shall require all samples, QC samples and blanks analyzed within that 24-hour period to be reanalyzed at no additional cost to the State;
 - b. If the % Difference exceeds 20%, the closing CCV standard shall not be acceptable;
 - c. If the closing CCV technical acceptance criteria are not met and there is time remaining in the 24 hour sequence, the Contractor can immediately reinject the CCV standard one time triplicate injections in sequence) to determine if the 20% difference criteria can be met. If the second set of injections meets the criteria, the second set of data is to be used for the CCV; or
 - d. If the second set of CCV standards fail, all samples, QC samples and blanks analyzed within that 24-hour time period shall be reanalyzed at no additional cost to the State. It may be necessary to change the column, undertake detection maintenance or take other corrective actions to achieve the CCV technical acceptance criteria.

D. Laboratory Control Sample;

- 1. One Laboratory Control Sample (LCS) (triplicate injections in sequence) is required every 24-hour period. The Laboratory Control Sample shall be analyzed after the method blank and prior to the closing calibration verification standard. This requirement shall be met whether the LCS is associated with an initial calibration standards or an opening continuing calibration standard;
- 2. The triplicate injections (in sequence) of the LCS shall be averaged together to generate the result to compare to the concentration of the LCS standard;
- 3. The acceptable % recovery for the LCS is 60-140%. If the first set of LCS acquisitions (triplicate injections) fail, the Contractor has the choice of two options;

Option 1 - If there is sufficient sample volume left in the sample canister, the Contractor shall reanalyze the sample with an LCS that is within control limits. This may require the Contractor to cease acquisition of all data, determine the source of the problem and undertake corrective action. Upon completion of the corrective action, start the initial calibration from the first injection; or

Option 2 - If there is not sufficient sample volume left in the sample canister, the Contractor shall immediately in sequence after the non-compliant LCS, acquire a second set of LCS data (triplicate injections in sequence). If the recoveries are acceptable in the second set of LCS data, the second set of data is to be used for the compliant LCS.

If the LCS is still outside control limits, the LCS is not acceptable. The Contractor shall document the fact on the instrument run log and in the case narrative that insufficient volume remained in the sample canister preventing reanalysis of the sample. The Contractor shall include in the case narrative that all the results are qualified "J" or "UJ" due to recovery being outside of the control limits; and

4. The LCS and the ICV Standard associated with an initial calibration can be the same set of acquisitions. However, the contractual requirements shall be met for both QC samples for the standard to be considered valid for both standards. If the requirements of the LCS are not met, the set of acquisitions cannot be used for the reporting of the LCS Standard, the Contractor shall analyze a separate LCS Standard.

E. Chromatographic Scaling Requirements;

1. Chromatograms shall display all target compound 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;
2. 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;
3. If a chromatogram is replotted electronically to meet these requirements, the scaling factor used shall be displayed on the chromatogram;
4. All target compounds in the chromatograms shall be labeled with the names of compounds or retention times on the peak or on an accompanying printout with retention times and compound names; and
5. Reconstructed ion chromatograms shall be normalized to the largest target or and shall be labeled with following header information:

Sample identification number;
Date and time of analysis;
GC/MS instrument identification -- exact instrument employed;
Lab file Identifier; and
Analyst ID.

F. Method Blank;

1. The method blank consists of UHP helium air. The method blank can be created directly from the helium gas lines or from a clean canister. There is no acceptable level of any contaminant in the method blank. If contamination is detected in the method blank, the

Contractor shall reanalyze all associated samples, QC samples and any instrument blanks at no cost to the state;

2. The triplicate injections (in sequence) of the method blank shall be averaged together to generate the concentration in the method blank. All three acquisitions of the method blank shall be non-detect for the method blank to be considered acceptable;
3. If the method blank is created directly from the helium gas lines, it shall be noted on the instrument log;
4. If the Contractor uses the canister option to create the method blank, the canister is required to be a dedicated container that has never left the Contractor's facility. The serial number of the method blank canister shall be noted on all the clean canister logs and instrument run logs. A canister that has been used for sample collection out in the field cannot be used as method blank canister;
5. One method blank shall be analyzed every 24-hour period. The method blank shall be analyzed immediately after the initial calibration verification sample standard if the method blank is associated with an initial calibration. The method blank associated with an opening CCV shall be analyzed immediately after the Opening CCV and prior to the associated LCS. In both instances, the method blank shall be analyzed prior to the analysis of any samples;
6. The triplicate injections (in sequence) of the method blank shall be averaged together to generate the concentration in the method blank;
7. If the method blank is not clean of contamination, all data acquisitions shall cease and the source of contamination shall be determined, corrective action taken and a new method blank canister prepared. The method blank shall be reanalyzed and be free of contaminants for the analysis;
8. The method blank shall be processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure;
9. If there are samples associated with a failed method blank, all samples shall be reprepared and reanalyzed with a compliant method blank at no cost to the State; and
10. If the first set of method blank acquisitions fail, the Contractor has the choice of two options.

Option 1 - Cease acquisition of all data, determine the source of the problem and undertake corrective action. Upon completion of the corrective action, start the initial calibration from the first injection; or

Option 2 - The Contractor immediately in sequence after the non-compliant method blank acquire a second set of data (triplicate injections in sequence). If no contamination is detected in the second set of method blank data, the second set of data is to be used for the compliant method blank. If contamination is detected in the second set of method blank data, the method blank is not acceptable and Option 1 shall be initiated.

G. Instrument Blanks

1. If the Contractor determines during the analytical sequence that an instrument blank needs to be analyzed for any reason within an analytical sequence, the instrument blank

shall be created from the same source as the method blank. The sample shall be labeled as an instrument blank and the reason for analyzing the blank documented in the case narrative and the instrument run log;

2. There is no acceptable level of any contaminant. If contamination is detected in the instrument blank, the Contractor shall reanalyze all associated samples, QC samples and any method blanks within the 24-hour sequence at no cost to the State. All three acquisitions of the instrument blank shall be non-detect for the instrument blank to be considered acceptable;
3. If the instrument blank is created directly from the helium gas lines, it shall be noted on the instrument log;
4. If the Contractor uses the canister option to create the instrument blank, the instrument blank shall be created from the same canister as the method blank. The canister is required to be a dedicated canister that has never left the Contractor's facility. The serial number of the instrument blank canister shall be noted on all the clean canister logs and instrument run logs. A canister that has been used for sample collection out in the field cannot be used as instrument blank canister;
5. The triplicate injections (in sequence) of the instrument blank shall be averaged together to generate the concentration in the instrument blank;
6. The instrument blank shall be processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure;
7. If the first set of instrument blank acquisitions fail, the Contractor has the choice of two options:

Option 1 - Cease acquisition of all data, determine the source of the problem and undertake corrective action. Upon completion of the corrective action, start the initial calibration from the first injection; or

Option 2 - The Contractor immediately in sequence after the non-compliant instrument blank acquire a second set of data (triplicate injections in sequence). If no contamination is detected in the second set of instrument blank data, the second set of data is to be used for the compliant instrument blank. If contamination is detected in the second set of instrument blank data, the instrument blank is not acceptable and Option 1 shall be initiated.

3.11.14 CLEAN CONTAINER CERTIFICATION REQUIREMENTS

A canister canister that is certified as clean for Method 25C under the requirements in Section 3.9 of this RFP. The NJDEP-LLTO15/ USEPA Method TO-15 requirements of this RFP shall be followed for the canister to be considered clean. To demonstrate the canister container is clean, the Contractor shall submit documentation required in Appendix 1 Section 9.0 in the Data Report for Method 25C. Additionally, a statement shall be added to the Case Narrative in the Data Report, that the canister canister was certified by NJDEP LL-TO15/USEPA Method TO-15.

The Contractor shall conduct the leak check test required by the method under vacuum. The Contractor shall certify the canister container as leak free over a twenty-four (24) hour period using a criterion of maximum decrease in vacuum of 0.5 in Hg.

3.11.15 REPORTING AND ANALYTICAL DATA

The Contractor shall report the data as analyzed. Any correction of the sample data for temperature, barometric pressure, water content and nitrogen content will be done by the Contract User;

3.11.16 VOLUME OF SAMPLE USED FOR ANALYSIS

The Contractor shall ensure that the undiluted volume of sample drawn from the canister for analysis shall be standardized at the time of submittal of its SOP. The Contractor shall be aware of the following requirements in the dilution of State samples and shall address the following requirements in the SOP.

- A. Automatic dilution of samples beyond what is required to repressurize the canister prior to analysis as required by the method shall not be permitted, if upon analysis the concentration of NMOC in the sample does not exceed the highest initial calibration standard. The sample shall be analyzed without the addition of any makeup air (beyond the initial pressurization). The data shall be reported with only the initial pressurization dilution factor applied;
- B. If dilutions are required due to NMOC concentration in the sample that exceed the highest initial calibration standard, the volume drawn from the canister shall be reduced and UHP helium shall be used as the makeup gas. All sample data shall be reported with the dilutions factored in and the all the Reporting Limits shall be adjusted for the required dilutions;
- C. Both the undiluted and diluted sample data shall be reported on separate data summary reporting forms with all the accompanying documentation;
- D. If dilutions are required due to concentration of NMOC in the sample that exceed the highest initial calibration standard, the volume drawn from the canister shall be reduced and UHP helium gas shall be used as the makeup air;
- E. The Contractor shall not automatically add air to the undiluted sample either on the column, in a canister or other options to meet their systems requirements without the sample being reported as diluted;
- F. The Contractor shall establish screening procedures for all samples analyzed by this method; and
- G. The Contractor can propose other options for dilution of samples after contract award. The submittal of other options for dilution of samples does not indicate automatic approval to use such procedures. The proposed procedures cannot be used until approved by the SCM. The specific procedures shall then be included in a revision to the SOP and be submitted to the SCM for final approval.

3.11.17 SAMPLE DILUTIONS

The Contractor shall incorporate the following procedures into their screening procedures of the canisters. As part of the routine analysis, canisters will be received by the Contractor that will require dilutions to be conducted so that samples results shall be within the calibration range of the instrument. The Contractor shall also describe the dilution procedures that they intend to use for this method; and

- A. If the Contractor shall add air to the sample for the dilution, the air source shall be the same as the air source that is used for the preparation of the method blanks, that being UHP helium gas;
- B. All dilutions shall be made immediately prior to GC analysis of the sample;
- C. The dilution procedures shall be documented in the Case Narrative of the analytical data package;
- D. Contractor procedural dilution of samples (beyond the initial pressurization) shall not be permitted. If the sample is reported with that NMOC concentration at or below the required Reporting Limits, then the sample shall be analyzed without the addition of any makeup air (beyond the initial pressurization) and without any additional corrections for sample dilutions;
- E. If the NMOC concentration in a sample is less than the highest initial calibration standard in the sample, the sample shall be analyzed without the addition of any makeup UHP helium gas (beyond the initial pressurization) and the data reported without any dilution factor adjustment applied (see Item 10. in this Section below for additional information.);
- F. If dilutions are required due to NMOC concentration in a sample that exceed the highest initial calibration standard, the volume drawn from the canister shall be reduced and Ultra-High Purity helium gas shall be used as the makeup air. All sample data shall be reported with the dilutions factored in and the all the Reporting Limits shall be adjusted for the required dilutions;
- G. The Contractor shall choose a sample specific dilution factor that shall keep the concentration of the largest peak for a target compound in the upper half of the initial calibration range;
- H. The screening data shall be provided in the analytical data packages as required by the current deliverable requirements established by the NJDEP;
- I. If the screening results indicate that the peak response for any target compound in any sample does not exceed the peak response in the highest standard in the initial calibration, the sample shall be analyzed without being diluted;
- J. If the screening results indicates that the peak response for any target compound in any sample does exceed the peak response in the highest standard in the initial calibration, the Contractor shall chose one of two options;
 - a. The Contractor shall analyze the sample as undiluted and then analyze the sample at the correct dilution level. The Contractor can use the results of the original analysis to determine the approximate dilution factor to get the largest analyte peak within calibration range; or
 - b. The Contractor shall chose the dilution level that shall allow the sample can be analyzed at the most concentrated dilution and meet the requirements of the method. The Contractor shall demonstrate that it has chosen the appropriate level by analyzing the sample at one further dilution.

For both options, the Contractor shall not submit more than two sets of data. The Contractor shall submit both sets of data separately. Both sets of data shall meet the requirements of the method.

- K. Both the undiluted and diluted sample data (or the two dilutions as required by section 10) above) shall be reported on separate data summary reporting forms with all the accompanying documentation; and
- L. There are various options available for the dilution of the samples depending on the analytical systems used by the Contractor. The Contractor can propose other options for dilution of samples after contract award. The submittal of other options for dilution of samples does not indicate automatic approval to use such procedures. The proposed procedures cannot be used until approved by the SCM. The specific procedures shall then be included in a revision to the SOP and be submitted to the SCM for final approval. The options can include the following:
1. Injection of a volume of sample into another certified clean canister and induction of UHP helium gas;
 2. Dilutions conducted directly on the instrument; and
 3. Tedlar bags can be used. When tedlar bags are used, absorption and contribution issues shall be determined prior to their use. Tedlar bag blanks shall be analyzed as part of the analytical sequence. These blanks are in addition to the required method blanks shall be clearly identified in the sequence. The blanks shall be analyzed after the method blank and prior to the sample.

3.11.18 CARBON DIOXIDE PEAK

A carbon dioxide peak shall not be present in any of standards, samples or QC sample acquisitions reported to the State. The presence of a carbon dioxide peak in any standard, samples or QC sample acquisition will require reanalysis of the in accordance with the requirements of this contract. The Contractor shall reanalyze the affected standards, samples, and QC samples at no additional cost to the State.

3.12 NJDEP-LLTO-15 METHOD REQUIREMENTS ADDITIONAL REQUIREMENTS

The Contractor is required to follow the requirements of LL-TO15 method for the analysis of the samples.

3.12.1 NAPHTHALENE COMPOUND

The compound Naphthalene has been added to the list of required compounds and the Contractor shall ensure that the following additional requirements are met:

- A. The Reporting Limit for naphthalene in 6-Liter canisters shall be at 0.5 ppbv;
- B. The Reporting Limits for 1-Liter, 2.7-Liter and 3.2- Liter Containers (Soil Gas Containers) shall be at 5.0 ppbv. The Contractor can use a lower Reporting Limit if it is supported by a Method Detection Limit Study and the Method Detection Limit Verification Study;
- C. The upper concentration spiking limit for the Method Detection Limit Study and Method Detection Limit Verification Study for naphthalene shall be at 0.5 ppbv. A lower concentration of naphthalene in the MDL spiking solution is acceptable;
- D. The naphthalene spiking level for the Low Level Laboratory Control Sample shall be conducted at 0.5 ppbv; and

- E. The low calibration standard for naphthalene is at 0.5ppbv and the high calibration standard is at 40 ppbv.

3.12.2 TRACER COMPOUNDS FOR SOIL GAS

The Contractor shall ensure the following information and requirements regarding use of tracer compounds for soil gas:

- A. The Contractor shall be aware that the Contract User may or may not use a tracer compound to determine if the soil gas collection system at the probe level is free of leaks. Two common tracer compounds are isopropanol and n-butane. In most commercially prepared gas standard cylinders, isopropanol is in the mixture while n-butane may not be in the standard mixture;
- B. The Contract User will notify the SCM that a tracer gas compound is to be used. The SCM will convey this information to the Contractor;
- C. The Contractor has to determine if they can obtain a commercially-prepared gas standard that contains that compound. The Contractor shall obtain laboratory certification from NJDEP OQA for this new tracer compound prior to use by the Contract User; and
- D. If the SCM fails to inform the Contractor that a tracer gas was used and it causes saturation of the GC/MS system and the instrumentation has to be taken out of service, the SCM shall be contacted. The resolution of the situation shall be as follows;
1. The Contractor shall be instructed to analyze the sample at the appropriate dilution that will allow the instrumentation to operate properly. A more concentrated dilution shall not be required. If the dilution analysis meets all the criteria of the contract, the Contractor shall be able to bill for two samples to address the saturation of the instrument and instrumentation taken out of service and the reanalysis of the sample at an appropriate dilution; and
 2. The sample analysis shall be canceled. The Contractor shall be able to bill for one analytical run for this sample.

3.13 USEPA TO-15 METHOD REQUIREMENTS (VOLATILE ORGANICS)

3.13.1 METHOD DETECTION LIMIT FOR ALL CANISTER TYPES

The Contractor shall ensure the following regarding method detection limit for all canister types:

- A. Required Spiking Levels;

For the majority of the compounds, the MDL determination shall be conducted using a spiking solution at 0.20 ppbv concentration. For the other compounds listed below, the MDL determination can be conducted at a higher concentration and they are listed below. The Contractor has the option of using a lower concentration of spiking solution for these compounds. However, it shall not be less than 0.20 ppbv. All data shall be reported in ppbv.

<i>Compound</i>	<i>Spiking Level for MDL Determination</i>
Acetone	0.50 ppbv
Carbon Disulfide	0.50 ppbv
Methylene Chloride	0.50 ppbv
Xylenes (m&p)	0.40 ppbv (equal amount of each isomer)

B. Derived MDL Requirements;

The derived MDL shall be less than the Clean Canister Certification Level of 0.20 ppbv as specified by the method for all compounds except for acetone (2- propanone) and *tert*-butyl alcohol (see below). The maximum MDL for acetone (2-propanone) and *tert*-butyl alcohol have been elevated to address various concerns within the laboratory community. Laboratories may use lower MDLs for these compounds.

<i>Compound</i>	<i>Maximum MDL Exceptions</i>
Acetone	1.0 ppbv
tert-Butyl Alcohol	3.0 ppbv

3.13.2 METHOD DETECTION LIMIT VERIFICATION REQUIREMENTS FOR ALL CANISTER TYPES

The Contractor shall ensure that:

- A. The MDLV study be conducted for each analyte in the MDL Study;
- B. The MDLV study be conducted annually for each instrument used in the clean canister certification and/or analysis of the samples. Separate MDLV reports shall be submitted for each instrument; and
- C. All information except for signatures be computer generated or typed. All data shall be reported in ppbv.

3.13.3 ANALYTICAL SEQUENCE REQUIREMENTS

The Contractor is required to follow the sequence below in the analysis of the samples:

Initial Calibration Sequence

GC/ MS Tuning and Instrument Performance Check;
Initial Calibration (minimum of five points);
Method Blank;
Laboratory Control Sample (LCS) for USEPA TO-15 (optional location);
Samples; and
Instrument blanks and other blanks (if applicable, location optional).

Daily Calibration Sequence

GC/ MS Tuning and Instrument Performance Check;
Daily Calibration Verification Standard;
Method Blank;
Laboratory Control Sample (LCS) [(optional location)];
Samples; and
Instrument blanks and other blanks (if applicable location optional).

3.13.4 GENERAL ANALYTICAL STANDARDS REQUIREMENTS

The Contractor shall ensure that the following general analytical standards requirements are followed:

- A. The Contractor shall use gas standards (not liquid standards) for any analysis conducted using USEPA Method TO-15. Preparation of standard gases from neat liquid standards by the

Contractor personnel is not acceptable. The Contractor shall purchase commercially prepared gas standards from one of the standard suppliers;

- B. The Contractor shall use standard mixtures of target gases in high-pressure cylinders certified traceable to a NIST Standard Reference Materials (SRM) or NIST/EPA approved Certified Reference Material (CRM). The Contractor shall certify in the case narrative of each data package that gas phase standards have been used. The Contractor shall specify their suppliers in the SOP submitted to the OQA for certification. The Contractor shall document in its SOP how they handle the second source for standards and document it in the standards logbooks;
- C. Original Certificates of Analysis (C of A) from the supplier for each lot shall be maintained by the Contractor. Copies of specific lot C of A used in the analysis of the samples for a particular The SDG shall be included in the analytical data package;
- D. The calibration standards and the Laboratory Control Sample standards can be from the same lot;
- E. The tracer gas standards that are analyzable by this method (isopropanol and n-butane) shall meet the same technical criteria compounds as other standards in this method. The tracer gas standards shall be in the same cylinders as the target gases; and
- F. Humidified ultra- pure zero air is the required source for all makeup air, method blanks and instrument blanks.

3.13.5 INITIAL CHECK VERIFICATION SAMPLE STANDARD

The Initial Check Verification Sample Standard shall be either from a different commercial supplier or from an independent lot from the same commercial supplier (different from the lot used for the Calibration Standards and the Reporting Limit Laboratory Control Sample). The standard shall contain all the compounds of interest. Tracer gas standards shall be included in this standard.

3.13.6 INSTRUMENT PERFORMANCE CHECK GAS STANDARD

- A. Bromofluorobenzene (BFB) is the required Instrument Performance Check Gas Standard;
- B. A 50 ng standard is the required concentration; and
- C. BFB shall not be combined with any calibration standard to create a single mixture injection consisting of a calibration standard and the Instrument Performance Check Gas Standard.

3.13.7 INTERNAL STANDARDS

- A. The required internal standards are bromochloromethane, chlorobenzene-d5 and 1,4-difluorobenzene;
- B. The same internal standards shall be added to all calibration standards, blanks, LCSs and samples;
- C. The same concentration of internal standards shall be used for all calibration standards, blanks, LCS and samples; and
- D. The required concentration of each of the internal standards is 10 ppbv.

3.13.8 CALIBRATION STANDARD REQUIREMENTS

A. GC/MS Initial Calibration Requirements; and

1. The Contractor shall conduct the initial calibration using a minimum of five (5) points for each calibration standard. The Contractor can use more than five calibration standards for any compound. For the majority of the compounds the calibration range shall be from 0.20 ppbv to 40 ppbv;
2. The allowable exceptions to the 0.2 ppbv to 40 ppbv requirements are acetone, chloroethane, chloromethane, tertiary butyl alcohol, tetrahydrofuran and 1,4- dioxane. These compounds may not be amenable at the lower calibration levels, and the lowest calibration standard can be raised to a higher concentration. The upper calibration standard for these compounds remains the same and shall not exceed 40 ppbv;
3. Isopropanol and ethanol can be analyzed at the various concentrations chosen by the Contractor. The only requirement is that the lowest calibration standard cannot be less than 0.20 ppbv and the highest standard be less than or equal to 40 ppbv;
4. For the xylene isomers (m&p), the contribution of both isomers is considered equal in the calibration gas standard. To meet the required concentration of each isomer the calibration range for the mixture calibration range shall be from 0.40 ppb to 80 ppbv;
5. Tracer gas standards shall be included in the initial calibration standard and shall be at the same concentration as the other standards, unless that tracer gas compounds is isopropanol, then item 3 in this section shall be followed. If n-butane is used the Contractor shall define the calibration range and have it approved by the New Jersey Environmental Laboratory Certification Program;
6. Each initial calibration standard mixture shall be spiked with the same internal standards as the samples and at the same concentration as the samples; and
7. The required analyte concentration of each compound's lowest and highest initial calibration standards are specified in Table 1 "*Required Concentrations of the Low and High Calibration Standards and Laboratory Control Sample Concentrations*".

B. GC/MS Daily Calibration Verification Standard;

1. All the compounds in the daily calibration verification standard shall be spiked at 10 ppbv. The only exception is that the xylene (m& p) isomer mixture requires spiking at 20 ppbv;
2. Tracer gas standards shall be included in the daily calibration verification standard and shall be spiked at 10 ppbv; and
3. The daily calibration verification standard mixture shall be spiked with the same internal standards as the samples and at the same concentration as the samples.

3.13.9 LABORATORY CONTROL SAMPLE FOR USEPA METHOD TO-15

A. The LCS shall contain all of the target analytes as required in the method;

B. The required compound concentrations of the LCS are specified in Table 1 below;

- C. Tracer gas standards shall be included in the LCS and shall be spiked at same concentration as the lowest initial calibration standard;
- D. The LCS shall be prepared with humidified ultra-pure zero air and in the same manner as the method blank (Method TO-15 Section 10.7). The difference is that the canister is spiked with all compounds to obtain the concentrations as specified in Table 1; and
- E. Each LCS shall be spiked with the same internal standards as the samples and at the same concentration as the samples.

Table 1 for USEPA Method TO-15

**Required Concentrations of the Low and High Calibration Standards
and Laboratory Control Sample Concentrations of USEPA Method TO-15**

Chemical Compound	Low Calibration Standard (ppbv)	High Calibration Standard (ppbv)	LCS Required Conc. (ppbv)
Acetone	0.20 ⁴	40	10 ⁵
Allyl chloride	0.20	40	10
Benzene	0.20	40	10
Bromodichloromethane	0.20	40	10
Bromoform	0.20	40	10
Bromomethane	0.20	40	10
1,3-Butadiene	0.20	40	10
Chlorobenzene	0.20	40	10
Chloroethane	0.20 ⁴	40	10 ⁵
Chloroform	0.20	40	10
Chloromethane	0.20 ⁴	40	10 ⁵
Carbon disulfide	0.20 ⁴	40	10
Carbon tetrachloride	0.20	40	10
2-Chlorotoluene	0.20	40	10
Cyclohexane	0.20	40	10
Dibromochloromethane	0.20	40	10
1,2-Dibromoethane	0.20	40	10
1,2-Dichlorobenzene	0.20	40	10
1,3-Dichlorobenzene	0.20	40	10
1,4-Dichlorobenzene	0.20	40	10
Dichlorodifluoromethane	0.20 ⁴	40	10
1,1-Dichloroethane	0.20	40	10
1,2-Dichloroethane	0.20	40	10
1,1-Dichloroethene	0.20	40	10
1,2-Dichloroethene (cis)	0.20	40	10
1,2-Dichloroethene (trans)	0.20	40	10
1,2-Dichloropropane	0.20	40	10
1,3-Dichloropropene (cis)	0.20	40	10
1,3-Dichloropropene (trans)	0.20	40	10
1,2-Dichlorotetrafluoroethane	0.20	40	10
1,4-Dioxane	0.20 ⁴	40	10 ⁵
Ethanol	0.20 ⁴	40	10 ⁵
Ethylbenzene	0.20	40	10
4-Ethyltoluene	0.20	40	10
N-Heptane	0.20	40	10
1,3- Hexachlorobutadiene	0.20	40	10

Chemical Compound	Low Calibration Standard (ppbv)	High Calibration Standard (ppbv)	LCS Required Conc. (ppbv)
n-Hexane	0.20	40	10
Isopropanol	0.20 ⁴	40	10 ⁵
Methylene chloride	0.20 ⁴	40	10
Methyl ethyl ketone	0.20 ⁴	40	10
Methyl ethyl ketone	0.20 ⁴	40	10
Methyl isobutyl ketone	0.20 ⁴	40	10
Methyl methacrylate	0.20 ⁴	40	10
Methyl tert-butyl ether	0.20	40	10
Styrene	0.20	40	10
Tert-butyl alcohol	0.20 ⁴	40	10 ⁵
1,1,2,2-Tetrachloroethane	0.20	40	10
Tetrachloroethene	0.20	40	10
Tetrahydrofuran	0.20 ⁴	40	10 ⁵
Toluene	0.20	40	10
1,2,4-Trichlorobenzene	0.20	40	10
1,1,1-Trichloroethane	0.20	40	10
1,1,2-Trichloroethane	0.20	40	10
Trichloroethene	0.20	40	10
Trichlorofluoromethane	0.20	40	10
1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	40	10
1,2,4-Trimethylbenzene	0.20 ⁴	40	10
1,3,5-Trimethylbenzene	0.20	40	10
2,2,4-Trimethylpentane	0.20	40	10
Vinyl bromide	0.20	40	10
Vinyl chloride	0.20	40	10
Xylenes (m&p)	0.40 ¹	80 ²	20 ³
Xylenes (o)	0.20	40	10
Naphthalene	0.50 ⁴	40	10

Notes:

1. Low standard concentration is based on the equal contribution of both the m&p isomers of xylene.
2. High standard concentration is based on the equal contribution of both the m&p isomers of xylene.
3. Laboratory control standard concentration is based on the equal contribution of both the m&p isomers of xylene.
4. Low calibration standard can exceed 0.20 ppbv.
5. Laboratory control sample spiking level for this compound may be different due to potential difficulty associated with their analysis shall be equal to the low calibration standard used in the initial calibration.

3.13.10 SAMPLE ANALYSIS REQUIREMENTS

The Contractor shall ensure the following:

A. Instrument Performance Check Requirement;

1. Instrument Performance Check Requirements of this method shall meet the requirements of USEPA Method TO-15 Table 3 "Required BFB Key Ions and Ion Abundance Criteria" and Method Sections 10.4.3 and 10.4.4 for the Instrument Performance Check to be considered acceptable. The use of any other criteria shall be approved by the OQA prior to submittal of any data using the procedure;
2. BFB shall not be combined with any calibration standard to create a single mixture injection consisting of a calibration standard and the Instrument Performance Check Gas Standard;
3. The Instrument Performance Check Standard shall be the first analysis in any 24- hour sequence; and
4. Post-acquisition manipulation of the ion abundances using computer software to achieve tuning criteria is unacceptable. Any sample, blank or quality control sample analyzed in conjunction with a failed tune performance check requires a reanalysis. The Contractor shall comply with the requirements of N.J.S.A. 7:18- 5.2(a)8, 5.2(a) 13.

B. GC/MS Initial Calibration Requirements;

1. The Contractor shall conduct the initial calibration using a minimum of five (5) points for each of the calibration standards;
2. The initial calibration standards shall be analyzed immediately after the compliant Instrument Performance Check analysis and prior to the analysis of the associated method blank if samples are analyzed immediately after the initial calibration. Calibration standards associated with different Instrument Performance Check analysis shall not be merged together to create a compliant initial calibration; and
3. The calculated % RSD for the RRF for each compound in the calibration table shall be less than 30% with at most two exceptions up to a limit of 40%.

C. GC/MS Daily Calibration Verification Standard;

1. The daily calibration standard shall be analyzed in accordance with Method TO-15 Section 10.6;
2. All the compounds in the daily calibration verification standard shall be spiked at 10 ppbv. For xylene (m&p) isomer mixture, the spiking is at 20 ppbv;
3. Tracer gas standards shall be included in the daily calibration verification standard and shall be spiked at 10 ppbv;
4. The daily calibration standard shall be analyzed immediately after the compliant GC/ MS Tuning and Instrument Performance Check analysis and prior to the analysis of the associated method blank;

5. Calibration standards obtained with different GC/MS Tuning and Instrument Performance Check Analysis shall not be merged together to create a compliant daily calibration;
6. The samples associated with the daily calibration standard shall be run after the associated method blank and prior to the closing continuing calibration verification standard;
7. The % Difference for each Relative Response Factor (RRF) of target compound in the daily calibration verification standard shall be within ± 30 percent (%) of the mean Relative Response Factor (mean RRF) in the associated initial calibration in order to proceed with the analysis of samples, blanks and quality control samples;
8. If the injection of the daily Continuing Calibration Verification Standard fails to meet the technical acceptance requirements, laboratory shall halt the analytical sequence (see section (i) below for additional requirements). The laboratory is required to restart the analytical sequence beginning with an initial tune and calibration sequence; and
9. The intent of Section 8 above is to specify that field samples can only be analyzed after a daily (continuing) calibration verification standard (CCVS) has been analyzed successfully. If the laboratory fails its first CCVS, it does have the option of performing a second CCVS analysis. If the second CCVS analysis passes, then field samples may then be run. If the second CCVS fails, the laboratory shall perform any necessary instrument maintenance followed by a full initial calibration that meets method requirements before field samples may be analyzed.

D. Laboratory Control Sample (LCS);

1. The LCS shall contain all the target analytes required in the method. All results for the LCS that are less than the required reporting limits shall be reported in addition to the results that are above the required reporting limits. The required compounds (and their associated concentrations) are specified in Table 1. Tracer gas standards (if used in the soil gas collection) shall be included in the LCS and shall be spiked at same concentration as the lowest initial calibration standard;
2. The LCS shall meet the same technical requirements for area response and retention time for the internal standards as for the method blank as provided for in Method TO-15 Section 10.7.5;
3. The Contractor shall be required to analyze one LCS for USEPA Method TO-15 within the 24-hour Instrument Performance Check and calibration sequence window established by the method. This is the same frequency as the method blank. The LCS shall be analyzed after the method blank in the analytical sequence;
4. The LCS shall be analyzed within the 24 hour window that begins with the injection of the Instrument Performance Check Gas Standard;
5. If a separate Instrument Performance Check and calibration sequence is used for the clean canister certification, a LCS shall be analyzed in the calibration sequence that is used to certify a canister as clean as per the method; and
6. The LCS recovery for each of the compounds shall be within 60-140% of the spiked value for 90% of the compounds for the LCS to be considered acceptable. If less than 90% of the LCS recoveries are within the control limits, all the compounds (detected and non-detected compounds) in the associated sample, a statement shall be added to the case

narrative qualifying all the data in the affected samples. If greater than 90% of the LCS recoveries are within control limits, only the affected compounds and the affected samples shall be listed in the case narrative of the required analytical data package.

E. Chromatographic Scaling Requirements;

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;
2. If a water peak or carbon dioxide peak are present in the sample chromatogram, these peaks shall not be taken into account for scaling. These peaks shall be identified by the analyst on the chromatogram;
3. 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;
4. If a chromatogram is re-plotted electronically to meet these requirements, the scaling factor used shall be displayed on the chromatogram;
5. Only the internal standards in the chromatograms shall be labeled with the names of compounds or retention times on the peak; and
6. Reconstructed ion chromatograms shall be normalized to the largest target or internal standard and shall be labeled with following header information: a) Sample identification number b) Date and time of analysis c) GC/MS instrument identification - exact instrument employed. d) Lab file Identifier; and e) Analyst ID.

F. Water Management;

The Contractor as stated in their SOP shall implement water management procedures for the analysis of all USEPA Method TO-15 samples. Prior to the analysis of any samples or standards, the Contractor shall ensure that the proper procedures are in place. Submittal of samples that exhibit evident of poor water management in the GC/MS system shall not be submitted to the state for any purpose.

G. Spectra Acceptability;

1. For comparison of standard and sample component mass spectra, mass spectra obtained on the Contractor's GC/Mass Spectrometer (MS) shall be required. Once obtained, these standard spectra shall be used for identification purposes, only if the Contractor's GC/MS meets the daily instrument performance requirements for 4-bromofluorobenzene (BFB). These standard spectra may be obtained from the run used to obtain reference RRTs;
2. The guidelines for qualitative verification by comparison of mass spectra are as follows:
 - a. All ions present in the standard mass spectra at a relative intensity greater than 10% (most abundant ion in the spectrum equals 100%) shall be present in the sample spectrum;
 - b. The relative intensities of ions specified in the above paragraph shall agree within $\pm 20\%$ between the standard and sample spectra (e.g., for an ion with an abundance of

50% in the standard spectra, the corresponding sample abundance shall be between 30 and 70%);

- c. Ions greater than 10% in the sample spectrum but not present in the standard spectrum shall be considered and accounted for by the analyst making the comparison. The verification process shall favor false positives. All compounds meeting the identification criteria shall be reported with their spectra; and
- d. If a compound cannot be verified by all of the spectral identification criteria listed above, but in the technical judgment of the mass spectral interpretation specialist, the identification is correct, then the Contractor shall report that identification and proceed with quantitation.

H. Secondary Ion Quantitation;

Quantitation based on secondary ion shall not be routinely allowed in this Contract. Exceptions are allowed only when there are sample matrix interferences with the primary ion. If secondary ion quantitation is performed, the reasons shall be documented in the SDG Narrative. A secondary ion shall not be used unless the Relative Response Factor is calculated using the secondary ion.

I. Manual Integration;

1. It is expected that situations will arise where the automated integration procedures in the GC/MS software provide inappropriate quantitations. This normally occurs when there is compound coelution, baseline noise, or matrix interferences. In these circumstances, the Contractor shall perform a manual integration. Manual integrations are performed by integrating the area of the quantitation ion of the compound. This integration shall only include the area attributable to the specific target compound or internal standard compound. The area integrated shall not include baseline background noise. The area integrated shall also not extend past the point where the sides of the peak intersect with the baseline noise. Manual integration shall not to be used solely to meet Quality Control (QC) criteria, nor shall it to be used as a substitute for corrective action on the chromatographic system. Any instances of manual integration shall be documented in the SDG Narrative; and
2. In all instances where the data system report has been edited, or where manual integration or quantitation has been performed, the GC/MS Operator shall identify such edits or manual procedures by initialing and dating the changes made to the report, and shall include the integration scan range. The GC/MS Operator shall also mark each integrated area with the letter "M" on the quantitation report. In addition, a hardcopy printout of the EICP of the quantitation ion displaying the peak 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.

J. Quantitation Report Presentation;

The quantitation report shall contain all the compounds required in the analysis. The Contractor shall not delete compounds for the report if they were not detected or if the mass spectral identification was not confirmed. The data system printouts shall comply with all any current deliverable requirements specified by the state.

K. Humidified Ultra Pure Zero Air Makeup Air Requirements;

Only humidified ultra pure zero air shall be used as the source of air that is added to a canister for pressure adjustment. It shall be from the same source as the method blank air. Nitrogen gas shall not be used for makeup air.

L. Volume of Sample Used for Analysis;

1. The undiluted volume of sample drawn from the canister for analysis shall be standardized by the Contractor at the time of submittal of its SOP. The Contractor be aware of the following requirements in the dilution of State samples and shall address the following requirements in the SOP;
2. Automatic dilution of samples shall not be permitted. If none of the target compounds in the sample exceed the required concentration of the highest calibration standard, the sample shall be analyzed without the addition of any makeup air and the data reported without any dilution factor adjustment applied;
3. If dilutions are required due to concentrations in the samples that exceed the highest calibration standard, the volume drawn from the canister shall be reduced and ultra-pure humidified zero air shall be used as the makeup air. All sample data shall be reported with the dilutions factored in and the all the Reporting Limits shall be adjusted for the required dilutions;
4. Both the undiluted and diluted sample data shall be reported on separate data summary reporting forms with all the accompanying documentation;
5. The Contractor shall not automatically add air to the undiluted sample either on the column, in a canister, Tedlar bag, or other options to meet their systems requirements without the sample being reported as diluted;
6. The Contractor shall establish screening procedures for all samples analyzed by this method; and
7. The Contractor can propose other options for dilution of samples after contract award. The submittal of other options for dilution of samples does not indicate automatic approval to use such procedures. The proposed procedures cannot be used until approved by the SCM. The specific procedures shall then be included in a revision to the SOP and be submitted to the SCM for final approval.

M. Sample Dilutions;

As part of the routine analysis, canisters will be received by the Contractor that will require dilutions to be conducted so that samples results shall be within the calibration range of the instrument. As part of the process, the Contractor shall incorporate the following procedures into their screening procedures of the canisters. The Contractor shall also describe the dilution procedures that they intend to use for this method.

1. If the Contractor shall add air to the sample for the dilution, the air source shall be the same as the air source that is used for the preparation of the method blanks, that being humidified, ultra-pure zero air;
2. All dilutions shall be made immediately prior to GC/MS analysis of the sample;

3. The dilution procedures shall be documented in the Case Narrative of the analytical data package;
4. Contractor procedural dilution of samples is not permitted. If the sample is reported with all target analyte results at or below the required reporting limits, then the sample shall be analyzed without the addition of any makeup air and without any corrections for sample dilutions. This section does not apply soil gas samples collected in 6-Liter canisters that use the reporting limits for the soil gas samples;
5. If any target analyte results are less than 40 ppbv in the sample, the sample shall be analyzed without the addition of any makeup air and the data reported without any dilution factor adjustment applied (see item 10 in this section below for additional information.);
6. If dilutions are required due to concentrations in the samples that exceed the upper calibration of the instrument, the volume drawn from the canister shall be reduced and ultra-pure humidified zero air shall be used as the makeup air. All sample data shall be reported with the dilutions factored in and the all the Reporting Limits shall be adjusted for the required dilutions;
7. The Contractor shall choose a sample specific dilution factor that shall keep the concentration of the largest peak for a target compound in the upper half of the initial calibration range;
8. The screening data shall be provided in the analytical data packages as required by the current deliverable requirements established by the NJDEP;
9. If the screening results indicate that the peak response for any target compound in any sample does not exceed the peak response in the highest standard in the initial calibration, the sample shall be analyzed without being diluted; and
10. If the screening results indicates that the peak response for any target compound in any sample does exceed the peak response in the highest standard in the initial calibration, the Contractor shall chose of one two options.
 - a. The Contractor shall analyze the sample as undiluted and then analyze the sample at the correct dilution level. The Contractor can use the results of the original analysis to determine the approximate dilution factor to get the largest analyte peak within calibration range;
 - b. The Contractor shall chose the dilution level that shall allow the sample can be analyzed at the most concentrated dilution and meet the requirements of the method. The Contractor shall demonstrate that it has chosen the appropriate level by analyzing the sample at one further dilution; and
 - c. For both options, the Contractor shall not submit more than two sets of data. The Contractor shall submit both sets of data separately. Both sets of data shall meet the requirements of the method.
11. Both the undiluted and diluted sample data (or the two dilutions as required by section 10) above) shall be reported on separate data summary reporting forms with all the accompanying documentation.
12. There are various options available for the dilution of the samples depending on the analytical systems used by the Contractor. The Contractor can propose other options for

dilution of samples after contract award. The submittal of other options for dilution of samples does not indicate automatic approval to use such procedures. The proposed procedures cannot be used until approved by the SCM. The specific procedures shall then be included in a revision to the SOP and be submitted to the SCM for final approval. The options can include the following:

- a. Injection of a volume of sample into another certified clean canister and induction of ultra-pure humidified zero air;
- b. Dilutions conducted directly on the instrument; and
- c. Tedlar bags can be used. When Tedlar bags are used, absorption and contribution issues shall be determined prior to their use. Tedlar bag blanks shall be analyzed as part of the analytical sequence. These blanks are in addition to the required method blanks shall be clearly identified in the sequence. The blanks shall be analyzed after the method blank and prior to the sample.

N. Method Blanks;

1. The Contractor shall follow the requirements of Method TO-15 Section 10.7 regarding method blanks and the requirements of this Contract. Any method blank that deviates from the preparation and technical acceptance requirements specified in the method is not acceptable and shall be rejected. Any analysis that is related to a failed method blank shall also be rejected;
2. Humidified ultra- pure zero air is the required air source for the method blanks and instrument blanks;
3. The method blank canister shall be a dedicated canister that has never left the Contractor's facility. The serial number of the method blank canister shall be noted on all the clean canister logs and instrument run logs;
4. A canister that has been used for sample collection out in the field shall not be used as method blank canister; and
5. A canister that has been designated as a canister that is being certified clean as part of the batch certification process shall not be designated as a method blank.

O. Instrument Blanks;

1. If the Contractor determines during the analytical sequence that an instrument blank needs to be analyzed for any reason within an analytical sequence, the instrument blank shall meet the requirements of Method TO-15 Section 10.7 to be acceptable and the requirements of this Contract. The sample shall be labeled as an instrument blank and the reason for analyzing the blank documented in the case narrative and the instrument run log;
2. Humidified ultra- pure zero air is the required air source for the instrument blanks;
3. The instrument blank canister shall be a dedicated canister that has never left the Contractor's facility. The serial number of the instrument blank canister shall be noted on all applicable instrument run logs;

4. A canister that has been used for sample collection out in the field shall not be used as instrument blank canister;
5. A canister that has been designated as a canister that is being certified clean as part of the batch certification process shall not be designated as an instrument blank; and
6. The instrument blank demonstrates that there was no carryover from the previous sample is to be reported. The Contractor can also report the instrument blank that demonstrates that the system is clean. Instrument blanks analyzed during the instrument decontamination process that exceed the requirements listed in this section do not need to be reported.

P. Internal Standards;

Internal standard responses and retention times in all samples shall be evaluated during, or immediately after, data acquisition. The criteria for evaluation is as follows:

1. As required by Method TO-15 Section 10.3.5 in the note, the following criteria shall be used if the samples are analyzed with the initial calibration;

“If the most recent valid calibration is an initial calibration, internal standard area responses and the retention times in the sample are evaluated against the corresponding internal standard area responses and retention times in the mid level standard (10 ppbv) of the initial calibration.”
2. The retention time for each internal standard shall be within ± 0.33 minutes of the retention time of the internal standard in the most recent valid calibration;
3. If the retention time for any internal standard changes by more than ± 33 minutes from the latest daily (24 hour) calibration standard (or mean retention time over the initial calibration range), the GC/MS shall be inspected for malfunctions, and corrections made as required;
4. If the area response for any internal standard changes by more than $\pm 40\%$ between the sample and the most recent valid calibration, the GC/MS system shall be inspected for malfunctions and corrections made as appropriate. When corrections are made, reanalysis of samples analyzed while the system was malfunctioning shall be necessary;
5. If after reanalysis, the area responses or the retention times for all internal standards are inside the control limits, then the problem with the first analysis is considered to have been within the control of the Contractor. The Contractor shall submit the data the second analysis as the compliant analysis; and
6. If after reanalysis, the area responses or the retention times for all internal standards are still not inside the control limits, a matrix effect may be occurring. This matrix effect shall be considered outside the control of the laboratory. The Contractor shall document in the case narrative and the instrument run logs all corrective actions undertaken prior to the reanalysis of the sample. Therefore, the Contractor shall submit both analyses.

Q. Qualitative Identification of Targeted and Non Target Compounds by GC/MS;

1. The compounds listed as required for TO-15 shall be identified by an analyst experienced in the interpretation of mass spectra by comparison of the sample mass spectrum to the reference mass spectrum. Two criteria shall be satisfied to verify the identifications:

- a. Elution of the sample component at the same GC relative retention time as the standard component; and
 - b. Correspondence of the sample component and standard component mass spectra.
2. For establishing correspondence of the GC relative retention time (RRT) the sample component RRT shall compare within ± 0.06 RRT units of the RRT of the standard component. If samples are analyzed within the same 24-hour time period as the initial calibration standard, use the RRT values from the 10 ppbv standard (or the middle standard of the initial calibration);
3. If co-elution of interfering compounds prohibits accurate assignment for the sample component RRT from the total ion chromatogram, the RRT shall be assigned by using extracted ion current profiles for ions used to obtain reference RRTs;
4. For comparison of standard and sample component mass spectrum, mass spectra obtained on the laboratory's GC/MS are required. Once obtained, these standard spectra may be used for identification purposes only if the Contractor's GC/MS meets the daily instrument performance requirements for BFB. These standard spectra may be obtained from the run used to obtain reference RRT;
5. All ions present in the standard mass spectra at a relative intensity greater than 10 percent (most abundant ion in the spectrum equals 100.0 percent) shall be present in the sample spectrum;
6. The relative intensities of ions specified above shall agree within $\pm 20\%$ between the standard and sample spectra;
7. Ions greater than 10% in the sample spectrum but not present in the standard spectrum shall be considered and accounted for by the analyst making the comparison. The verification process shall favor false positives. All compounds meeting the identification criteria shall be reported with their spectra;
8. Structural isomers that produce very similar mass spectra shall be explicitly identified only if they have sufficiently different GC retention times. Acceptable resolution is achieved if the height from the baseline to the valley between two peaks is less than 25% of the average height of the two peaks. Otherwise, structural isomers are identified as isomeric pairs;
9. If a compound cannot be verified by all the criteria above, but in the technical judgment of the mass spectral interpretation specialist the identification is correct, then the Contractor shall report that identification with comment and proceed with quantitation;
10. For all compounds detected below the NJDEP Reporting Limits (See Table 2), the concentrations shall be reported with the numeric value of the reporting limit with the "U" qualifier. This indicates that compound was not detected at the NJDEP Reporting Limit;
11. For all compounds not detected in the sample, the sample result shall be reported as the numeric value of the reporting limit with the "U" qualifier. This indicates that compound was not detected at the NJDEP Reporting Limit;
12. For samples requiring dilution, the reporting limits for the all compounds shall be adjusted for the dilution that was conducted. Only data reported at or above the adjusted reporting limit are to be reported in the diluted samples. The laboratory is reported to report any

compounds detected in the diluted sample that was detected in the initial analysis above the adjusted reporting limit with the “D” qualifier. Any compounds detected in the diluted sample that were not reported in the initial analysis shall be reported with the “X” qualifier. All non detected results at the elevated reporting limits are to be reported with the “U” qualifier with the adjusted reporting limit. This indicates that compound was not detected at the dilution adjusted reporting limit. Additional information is provided in Appendix 1 Section 6.0 and Appendix Section 14.0 the dilution-adjusted Reporting Limit; and

13. Non-Target Compound identification is required for air analysis. A maximum of 15 Non-Target compounds shall be identified.

3.13.11 TRACER COMPOUNDS FOR SOIL GAS

- A. The Contractor shall be aware that the Contract User may or may not use a tracer compound to determine if the soil gas collection system at the probe level is free of leaks. Two common tracer compounds are isopropanol and n-butane. In most commercially prepared gas standard cylinders, isopropanol is in the mixture while n-butane may not be in the standard mixture;
- B. If the Contract User wants to use n-butane or other recognized compounds as the tracer compound, the Contract User shall contact the SCM to determine if the Contractor can obtain a commercially-prepared gas standard that contain that compound. The Contractor shall have to obtain certification for this new tracer compound prior to use by the Contract User;
- C. The Contract User shall inform the SCM that a tracer gas compound is to be used. The SCM will convey this information to the Contractor. If the SCM fails to inform the Contractor that a tracer gas was used and it causes saturation of the GC/MS system and the instrumentation has to be taken out of service, the SCM shall be contacted. The resolution of the situation shall be as follows:
 1. The Contractor shall be instructed to analyze the sample at the appropriate dilution that will allow the instrumentation to operate properly. A more concentrated dilution shall not be required. If the dilution analysis meets all the criteria of the contract, the Contractor shall be able to bill for two samples to address the saturation of the instrument and instrumentation taken out of service and the reanalysis of the sample at an appropriate dilution; and
 2. The sample analysis shall be canceled. The Contractor shall be able to bill for one analytical run for this sample.

3.13.12 ISPROPANOL AND ETHANOL

- A. High concentrations of isopropanol and ethanol in indoor air samples are causing laboratories to conduct unnecessary dilutions of samples. These two alcohols are present in numerous products found in residences and businesses. Ethanol is also a gasoline additive. This is one source of the elevated levels of the alcohols in the samples;
- B. The Contractor shall not be required to dilute the sample to bring the concentration of the two alcohols compounds within the calibration range of the instrument;
- C. If the Contractor in their submittals to the state for certification has ethanol or isopropanol in their calibration standards, then they shall report the concentration of the compound in the samples and obtain certification. If in the future, the Contractor add either compound to their calibration standards, the Contractor shall report the concentration of that compound in the

samples. Additionally, if in the future the Contractor obtains standards that do not have the compound, they would not report the presence of that compound in the samples;

- D. If the Contractor currently does not have ethanol or isopropanol in the standard mixture, the Contractor shall not be required to obtain standards that contain that compound;
- E. Please be advised if the Contractor does not have ethanol or isopropanol in its standard mixture, and detects either compound in the sample, then it shall be reported as a tentatively identified compound as required by NJDEP LL-TO15 and USEPA Method TO-15; and
- F. If from the Contractor's initial application for certification, the Contractor's use of ethanol or isopropanol changes, the Contractor shall notify the OQA and the SCM. The Contractor shall make an application to either add these compounds to their list of certified parameters or drop the compounds from their list.

3.14 SAMPLE REPORTING LIMITS FOR ALL OF THE CANISTER TYPES FOR NJDEP LL-TO-15 AND USEPA METHOD TO-15

- A. The Contractor shall not report any target data lower than the Reporting Limits established by this method. The Reporting Limits are found at the end of this section Table 2 *"List of Required Compounds, Molecular Weights and CAS Numbers and CONTRACT Required Reporting Limits"*;
- B. For all compounds detected below the Contract Reporting Limits, the concentrations shall be reported with the numeric value of the reporting limit with the "U" qualifier. This indicates that the compound was not detected at the Contract Reporting Limit;
- C. For all compounds not detected in the sample, the sample result shall be reported as the numeric value of the reporting limit with the "U" qualifier. This indicates that the compound was not detected at the Contract Reporting Limit;
- D. For samples requiring dilution, the reporting limits for the all compounds shall be adjusted for the dilution that was conducted. Only data reported at or above the adjusted reporting limit are to be reported in the diluted samples. The Contractor is reported to report any compounds detected in the diluted sample that was detected in the initial analysis above the adjusted reporting limit with the "D" qualifier. Any compounds detected in the diluted sample that were not reported in the initial analysis shall be reported with the "X" qualifier. All non detected results at the elevated reporting limits are to be reported with the "U" qualifier with the adjusted reporting limit. This indicates that compound was not detected at the dilution adjusted reporting limit. Additional information is provided in Appendix 10 Section 6.0 and Appendix 10 Section 14.0, the dilution-adjusted Reporting Limit;
- E. The Contractor has the option of using lower Reporting Limits for the limited compounds that NJDEP has indicated that higher Reporting Limits are acceptable. However, the reporting requirements of this section (no values reported below 0.2 ppbv) shall be met;
- F. Reporting Limits for 6 Liter Canisters (Building Interiors, Soil Gas and other types of sampling [as specified]) is as follows:
 - 1. For the majority of the compounds, the Reporting Limits (RL) have been set at 0.20 ppbv. For the compounds listed below, the reporting limits have been set at a higher level due to the type of compound. The Contractor can use a lower reporting limit for these compounds, however, they cannot be lower than 0.20 ppbv; and

2. When a soil gas sample is collected in a 6-liter canister and the Contractor decides to draw the same volume of air from the canister as it does for a building interior sample, the Contractor shall use the reporting limits in this section:

Compound	Reporting Limit (Maximum)
Acetone	5.0 ppbv
Carbon Disulfide	0.50 ppbv
Chloroethane	0.50 ppbv
Chloromethane	0.50 ppbv
Ethanol	5.0 ppbv
Isopropanol	5.0 ppbv
Methylene Chloride	0.50 ppbv
Methyl Ethyl Ketone	0.50 ppbv
1,2,4-Trichlorobenzene	0.50 ppbv
Tetrahydrofuran	5.0 ppbv
Naphthalene	0.5 ppbv
Dichlorodifluoromethane	0.50 ppbv
Methyl Methacrylate	0.50 ppbv
1,4-Dioxane	5.0 ppbv
Methyl Isobutyl Ketone	0.50 ppbv
tert-Butyl Alcohol	5.0 ppbv
Xylenes (m & p)	0.50 ppbv

G. Reporting Limits for 1-Liter, 2.7-Liter and 3.2- Liter Canisters (Soil Gas Canisters) are as follows:

1. For the majority of the compounds, the Reporting Limits (RL) have been set at 2.0 ppbv. The higher reporting limits factor in the automatic dilution that occurs when 1-liter canisters are used. The dilution shall be conducted with ultra pure humidified zero air. This makeup air is required to be the volume of air for introduction into the instrument. For the compounds listed below, the reporting limits have been set at a higher level due to the type of compound. The Contractor can use a lower reporting limit for these compounds. However, they cannot be lower than 2.0 ppbv;
2. When a soil gas sample is collected in a 6-liter canister and the Contractor decides to draw the same volume of air from the canister as it does from a 1-liter soil gas canister (reduced volume), the Contractor shall use the reporting limits in this section.

<i>Compound</i>	<i>Reporting Limit (Maximum)</i>
Acetone	50.0 ppbv
Carbon Disulfide	5.0 ppbv
Chloroethane	5.0 ppbv
Chloromethane	50.0 ppbv
Ethanol	50.0 ppbv
Isopropanol	50.0 ppbv
Methylene Chloride	5.0 ppbv
Methyl Ethyl Ketone	5.0 ppbv
1,2,4-Trichlorobenzene	5.0 ppbv
Tetrahydrofuran	50.0 ppbv
Dichlorodifluoromethane	5.0 ppbv
Naphthalene	5.0 ppbv
Methyl Methacrylate	5.0 ppbv
1,4-Dioxane	50.0 ppbv
Methyl Isobutyl Ketone	5.0 ppbv
tert-Butyl Alcohol	50.0 ppbv
Xylenes (m&p)	5.0 ppbv

TABLE 2 FOLLOWS ON NEXT PAGE

Table 2

List of Required Compounds, Molecular Weights and CAS Numbers and
CONTRACT Required Reporting Limits

This Table contains the required compounds and their associated molecular weights and CAS numbers. The information in this table shall be used for the reporting of the analytical data to the State. Changes to the compound names, CAS numbers and molecular weights are not allowed for reporting of the data to the State of New Jersey.

Required Compound Name	CAS Number	Molecular Weight	6- Liter Canister Reporting Limits (ppbv)	1, 2.7 & 3.2- Liter Canister Reporting Limits (ppbv)
Acetone	67-64-1	58.08	5.0	50.0
Allyl chloride	107-05-1	76.53	0.20	2.0
Benzene	71-43-2	78.11	0.20	2.0
Bromodichloromethane	75-27-4	163.8	0.20	2.0
Bromoform	75-25-2	252.8	0.20	2.0
Bromomethane	74-83-9	94.94	0.20	2.0
1,3-Butadiene	106-99-0	54.09	0.20	2.0
Chlorobenzene	108-90-7	112.6	0.20	2.0
Chloroethane	75-00-3	64.52	0.50	50.0
Chloroform	67-66-3	119.4	0.20	2.0
Chloromethane	74-87-3	50.49	0.50	50.0
Carbon disulfide	75-15-0	76.14	0.50	5.0
Carbon tetrachloride	56-23-5	153.8	0.20	2.0
2-Chlorotoluene	95-49-8	126.6	0.20	2.0
Cyclohexane	110-82-7	84.16	0.20	2.0
Dibromochloromethane	124-48-1	208.3	0.20	2.0
1,2-Dibromoethane	106-93-4	187.9	0.20	2.0
1,2-Dichlorobenzene	95-50-1	147.0	0.20	2.0
1,3-Dichlorobenzene	541-73-1	147.0	0.20	2.0
1,4-Dichlorobenzene	106-46-7	147.0	0.20	2.0
Dichlorodifluoromethane	75-71-8	120.9	0.50	5.0
1,1-Dichloroethane	75-34-3	98.96	0.20	2.0
1,2-Dichloroethane	107-06-2	98.96	0.20	2.0
1,1-Dichloroethene	75-35-4	96.94	0.20	2.0
1,2-Dichloroethene (cis)	156-59-2	96.94	0.20	2.0
1,2-Dichloroethene (trans)	156-60-5	96.94	0.20	2.0
1,2-Dichloropropane	78-87-5	113.0	0.20	2.0
1,3-Dichloropropene (cis)	10061-01-5	111.0	0.20	2.0
1,3-Dichloropropene (trans)	10061-02-6	111.0	0.20	2.0
1,2-Dichlorotetrafluoroethane	76-14-2	170.9	0.20	2.0

Required Compound Name	CAS Number	Molecular Weight	6- Liter Canister Reporting Limits (ppbv)	1, 2.7 & 3.2- Liter Canister Reporting Limits (ppbv)
1,4-Dioxane	123-91-1	88.12	5.0	50.0
Ethanol ¹	64-17-5	46.07	5.0	50.0
Ethylbenzene	100-41-4	106.2	0.20	2.0
4-Ethyltoluene	622-96-8	120.2	0.20	2.0
n-Heptane	142-82-5	100.2	0.20	2.0
1,3-Hexachlorobutadiene	87-68-3	260.8	0.20	2.0
n-Hexane	110-54-3	86.17	0.20	2.0
Isopropanol ¹	67-63-0	60.10	5.0	50.0
Methylene chloride	75-09-2	84.94	0.50	5.0
Methyl ethyl ketone	78-93-3	72.11	0.50	5.0
Methyl isobutyl ketone	108-10-1	100.2	0.50	5.0
Methyl methacrylate	80-62-6	100.12	0.50	5.0
Methyl tert-butyl ether	1634-04-4	88.15	0.20	2.0
Styrene	100-42-5	104.1	0.20	2.0
Tert-butyl alcohol	75-65-0	74.12	5.0	50.0
1,1,2,2-Tetrachloroethane	79-34-5	167.9	0.20	2.0
Tetrachloroethene	127-18-4	165.8	0.20	2.0
Tetrahydrofuran	109-99-9	72.11	5.0	50.0
Toluene	108-88-3	92.14	0.20	2.0
1,2,4-Trichlorobenzene	120-82-1	181.5	0.50	5.0
1,1,1-Trichloroethane	71-55-6	133.4	0.20	2.0
1,1,2-Trichloroethane	79-00-5	133.4	0.20	2.0
Trichloroethene	79-01-6	131.4	0.20	2.0
Trichlorofluoromethane	75-69-4	137.4	0.20	2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	187.4	0.20	2.0
1,2,4-Trimethylbenzene	95-63-6	120.2	0.20	2.0
1,3,5-Trimethylbenzene	108-67-8	120.2	0.20	2.0
2,2,4-Trimethylpentane	540-84-1	114.2	0.20	2.0
Vinyl bromide	593-60-2	106.9	0.20	2.0
Vinyl chloride	75-01-4	62.50	0.20	2.0
Xylenes (m&p)	179601-23-1	106.2	0.50	5.0
Xylenes (o)	95-47-6	106.2	0.20	2.0
Naphthalene	91-20-3	128.2	0.50	5.0

Notes:

1. Ethanol and Isopropyl alcohol is listed only because labs report data for these compounds, but dilutions are not required. If looking for these compounds, other methods may be required.

3.15 SAMPLE CONTAINER REQUEST FORM

The Contractor shall develop and utilize a Sample Container Request Form for this contract. This form sent to the Contract User and the SCM electronically when the final order for canisters is verified by the State prior to shipment. A copy of the form shall be included in the bottle shipment. The format of the form shall be approved by the SCM upon award of the contract. The Contractor can add extra fields to meet their operational needs. The Contractor shall provide the required form information below:

A. The required information at the top of the form is as follows:

1. State's Client Code;
2. Contract Number;
3. Laboratory Project ID;
4. Site Identification (8 digit code only);
5. Date Needed by State;
6. Date Requested;
7. Laboratory's Project Manager Name;
8. Ship to Location;
9. Name of Recipient;
10. NJDEP Custody seals (yes/no);
11. Chain of Custody Documentation;
12. Extra Packing Material provided (yes/no);
13. Shipping Carrier information; and
14. Special instructions.

B. The required information at the bottom portion of form is as follows:

1. Each type of canister used by the Contractor shall be addressed (by method);
2. Quantity of canisters requested (by method);
3. Flow rate or sampling time requested for each type of canister; and
4. Flow controllers required (yes/no).

3.16 SAMPLE CANISTERS PREPARATION

The Contractor shall prepare sample canisters for sample analysis in accordance with the procedures specified in the QAP SOP and in accordance with the directions provided by the SCM or Contract User. This includes providing appropriate canister types, preservatives if needed, packaging, cooling, labeling, and packing in an appropriate shipping container.

3.17 CHAIN OF CUSTODY

3.17.1 COMPLIANCE

The Contractor shall comply with Sections regarding proper Chain of Custody.

3.17.2 COMMENCEMENT OF CHAIN OF CUSTODY

FOR ALL ENGAGEMENTS, CHAIN OF CUSTODY COMMENCES WHEN THE CONTRACTOR RELEASES OR SHIPS THE CANISTERS TO CONTRACT USERS. The contractor shall complete all the required information on the chain of custody form prior to shipping the canisters.

3.18 CHAIN OF CUSTODY DOCUMENTS (DEP FORMS 095 AND 096)

Copies of these forms are included in Appendices 1, 2, 3 and 10, which are the Data Reporting Format. The Contractor shall record all sample custody transfers on these forms. NJDEP Forms 095, and 077 are available upon award from the SCM below:

Kathleen M. Grimes, Research Scientist I
Site Remediation Program
Financial Services Element
401 East State Street – 6th Floor
Mail Code 401-06I
PO Box 420
Trenton, New Jersey 08625-0420
Phone: (609) 633-2355 Fax: (609) 292-4401
kathleen.grimes@dep.state.nj.us

The Contractor shall monitor the quantity of NJDEP custody forms kept in stock and request resupply as needed.

SPECIAL NOTES:

- A. The Contract User supplies DEP Form 096 to the Contractor when the Contract User initiates custody; and
- B. Contractors providing empty shipping containers to any Contract User will seal empty shipping canisters with custody seals.

3.18.1 CONTRACT USER WEEKLY SAMPLE ALLOCATION TO CONTRACTOR

There is no limit to the number of samples that may be submitted to the Prime Contractor on a weekly basis except for the Forty-eight Hour Turnaround samples (see Section 3.36.1). If the Contract User is planning a sampling event and the SCM discovers that the Prime Contractor cannot accept any additional for that weekly period, the Contract User will be advised to engage the Alternate Contractor.

3.19 SHIPPING

3.19.1 SHIPPING CHAIN OF CUSTODY

The Contractor shall comply with the **Section 3.3.5 Chain of Custody** and any chain of custody requirements in Appendices 1-3 and 10 regarding documentation and the additional Chain of Custody requirements cited below;

- A. Chain of Custody commences with the Contractor release of canisters for shipment to the Contract User;

- B. When releasing canisters to a Contract User, the Contractor has two options when any samples involving Method NJDEP-LL-TO15/USEPA Method TO-15 are being collected:
- Option 1 - Use the NJDEP Chain of Custody Forms DEP-095D only; or
- Option 2 - Use the NJDEP Chain of Custody Forms DEP-095C in combination with the NJDEP Field Test Data Sheet for Method NJDEP-LL-TO15/USEPA Method TO-15.
- C. When releasing canisters to a Contract User, the Contractor has two options when any samples involving Methods 3C and 25C are being collected:
- Option 1 - Use the NJDEP Chain of Custody Forms DEP-095D in combination with the NJDEP Methods 3C/25C Field Test Data Sheet; or
- Option 2 - Use the NJDEP Chain of Custody Forms DEP-095C in combination with the NJDEP Methods 3C/25C Field Test Data Sheet.
- D. The Contractor shall seal all shipping containers to ensure the integrity of the chain of custody of the canisters. The Contractor shall seal the shipping containers with an appropriately numbered custody-sealing device and record the sealing device number on the Chain of Custody Form. The Contractor shall inspect all shipping containers prior to shipping, ensuring that the appropriate canisters are present for each analysis requested.
- E. Copies of these forms are included as each of the method specific Data Report Appendices. The Contractor shall record all sample custody transfers on these forms; and
- F. The actual NCR NJDEP Forms 095C, 095D and 077 will be made available to the Awardee by the SCM. The Contractor shall request additional copies from the SCM as needed.

3.19.2 SHIPPING CONTAINERS

- A. The Contractor shall provide canisters in an appropriate shipping container. The shipping canister shall securely hold the canisters and meet the shipping requirements for the USDOT, the overnight common carrier and the NJDEP Chain of Custody requirements;
- B. The Contractor shall use custody seals on the shipping canisters that contain empty Summa™ Containers that are being sent to the Contract User;
- C. If Methane concentrations are suspected to be above 50%, the requirements of Section 3.5 of this Contract shall be followed;
- D. The Contract User will return samples in the Contractor provided shipping container
- E. This Contract PROHIBITS Contract Users and the Contractor from purchasing insurance to insure return sample shipments to the Contractor. If the Contract User inadvertently or otherwise insures the samples with the common carrier, the Contractor shall request reimbursement from the Contract User for the cost of the insurance;
- F. When engaged by any SCM/Contract User, the Contractor shall include appropriate chain of custody documentation in the shipment containers. Chain of Custody commences when the Contractor ships the canisters to the Contract User;
- G. The Contractor shall seal all shipping containers with an appropriately numbered sealing device. The Contractor shall record the seal number on the appropriate chain of custody

forms. The Contractor shall inspect all shipping containers prior to shipping, ensuring that the appropriate canisters are present for each analysis requested; and

- H. The Contractor shall analyze samples only at an approved laboratory. The Contractor shall analyze samples at the laboratory that shipped the canisters.

3.20 SHIPMENT BY COMMON CARRIER

Empty canisters shall be shipped from the Contractor to the Contract User (at the Contractor's expense) and samples shall be shipped from the Contract User to the Contractor (at the Contractor's expense). NJDEP will not pay the Contractor extra money for the normal shipment of canisters. Normal shipment is detailed below:

- A. Normal shipping is two days from the Contractor's facility and overnight shipment back to the Contractor. The only exception to this requirement is if methane concentrations above 50% are expected;
- B. The Contractor shall provide a mechanism to ship empty canisters and shipping containers to the Contract User or State Contractor via two day shipment by Common Carrier. Additionally, the Contractor shall provide a mechanism to pick up canisters and shipping containers from the Contract User or State Contractors by an overnight Common Carrier. The cost for this base rate normal delivery service is to be included in the price of the analysis;
- C. The Contractor shall ship empty canisters and shipping containers only to official State offices, State warehouses or to State Contractor's offices that have routine pickup and delivery by the Common Carrier. The Contractor can also ship to the Common Carrier's Service Center for pickup by the Contract User as long as there is no additional cost. The Contract User or State Contractor shall specify this delivery option at the time of engagement with the SCM. This does not include the cost of shipping to a work site, since it may involve additional charges imposed by the Common Carrier;
- D. After collection of samples, the Contract User or State Contractor will contact the Contractor's Common Carrier and ship samples, in the Contractor's canisters and shipping containers back to the Contractor. The Contract User or State Contractor shall ship canisters from official State offices, State warehouses or State Contractor's offices that have routine pickup and delivery by the Common Carrier. The Contract User or State Contractor can ship from a Common Carrier's Service Center for delivery to the Contractor as long as there is no additional cost. This does not include the cost of picking up at a work site, since it may involve additional charges imposed by the Common Carrier; and
- E. If Methane concentrations are suspected to be above the 50%, the requirements detailed in Section 3.5 of this Contract shall be followed.

3.21 SHIPMENT OF EMPTY SAMPLE CANISTERS TO THE CONTRACT USER

- A. The Contractor shall ship uncontaminated empty sample canisters in an appropriate shipping canister to the Contract User upon request;
- B. If overnight shipping is requested by the SCM, then an additional charge shall be paid by the State, as per Section 3.19;
- C. The Contractor shall provide a mechanism to ship empty sample canisters to the Contract User by a common carrier using a two (2) day shipping time. The Contractor shall ship

sample canisters only to official State offices, warehouses, work sites or a common carrier service center. Costs for this service are included in the price of analysis;

- D. The Contractor shall provide a mechanism to ship empty sample canisters to the Contract User by an overnight common carrier. The Contractor shall ship sample canisters only to official State offices, warehouses, work sites or a common carrier service center. Costs for this service is not included in the price of analysis;
- E. The Contractor shall allow Contract Users to pick up sample canisters directly from the Contractor at no extra charge to the State; and
- F. In rare incidents, if samples will be delivered with the actual identification of the sample location in lieu of a coded sample number, the Contractor shall be subject to the Conflict of Interest provisions of this RFP.

3.22 SHIPMENT AND PICKUP CHARGES BEYOND NORMAL DELIVERY

The Contractor shall not be responsible for any shipping costs beyond those for normal delivery and pickup charges that are included in the base shipping price from the Common Carrier. These costs shall be defined on the Common Carrier's website. The State shall ensure payment for all extra charges beyond the normal shipping charges to commercial or office locations that have routine pickup and delivery. The extra charges shall be listed on the Common Carrier's website to be considered billable to the state. If the Contractor has a contract with the Common Carrier, that specifies a rate for the extra charges, a current copy of these charges shall be forwarded to the SCM. The SCM will provide a current copy of the charges to the Contract Users.

3.22.1 COST OF THE NON-CONTRACT SHIPPING

The actual cost of the non-contract shipping shall be listed as a separate entry in the cost for the engagement. The Contractor shall bill the State on the same invoice that is used for the sampling event. The required documentation for the payment of the extra shipping costs consist of copies of the Common Carrier's tracking forms listing the package tracking numbers and date of delivery. The actual costs shall be verified using the Common Carrier's website or the previously submitted documentation from the Contractor.

3.22.2 SURFACE TRANSPORTATION

Contractors shipping sample canisters via common carriers that use surface transportation shall ship those sample canisters in an appropriate shipping container.

3.22.3 AIR TRANSPORTATION

Contractors shipping sample canisters via carriers that transport samples via air carrier shall ship those sample canisters in an appropriate shipping container.

3.22.4 MARKINGS AND LABELS

For both surface and air transportation of samples, the Contractor shall provide adequate quantities of appropriate marking and labeling materials, for the return shipment in accordance with the requirements of the aforementioned regulations cited above.

3.22.5 COMPLIANCE WITH THE SHIPPING PLAN (POST AWARD)

The Contractor shall submit a Shipping Plan in accordance with this contract. The Shipping Plan shall identify at a minimum the following:

- A. A statement of the awardee's intent to ship by surface carrier, air carrier or both. The Shipping Plan shall identify the Awardee's intended common carrier;
- B. Examples of any paperwork, labels and placards that shall be attached to the outside of the shipping canister when the Contract User ships the samples back to the Awardee;
- C. The Shipping Plan will include all the details needed by Contract Users, including shipping account numbers that Contract Users will need to ship samples back to the Contractor; and
- D. Directions to Contract Users on packing canisters into a shipping canister and completing required paperwork.

The Shipping Plan shall be approved by NJDEP before a contract award is finalized. All shipping under this contract shall be performed in accordance with the approved Shipping Plan. Failure to provide shipping containers or to provide shipping services that comply with the Shipping Plan may form a basis to suspend the Contractor from performing services under this contract for one month. A second infraction of the Shipping Plan by the Contractor may form a basis to suspend the Contractor from performing services under this contract for three months. A third infraction by the Contractor will form a basis for a Circular PB36 (Contractor complaint). Such actions shall be performed at the discretion of the SCM.

3.22.6 ENGAGEMENT TIME FRAME DOCUMENT

The Contractor shall establish notification time frame for the ordering and cancellation of canisters by SCM for any sampling event. The time frame notification document shall be sent to the SCM within fifteen (15) days for approval after award of the contract. The SCM will provide a copy of this information to the Contract Users.

The engagement time frame document shall be submitted in both hardcopy format and electronically in Microsoft™ word format.

Due to the requirements of the clean canister certification, flow controller setting, documentation requirements and the coordination needed to prepare canisters for shipment to the Contract User, the state is aware that a procedure shall be established that details the time frame for the ordering/cancellation of canisters. The Contractor shall establish a notification time frame for the ordering and cancellation of canisters by SCM for any sampling event. The time frame notification document shall be sent to the SCM within fifteen (15) days for approval after award of the contract. The SCM will provide a copy of this information to the Contract Users.

If the Contractor has to revise the document during the term of the contract, the revised document shall be submitted to the SCM for review and approval. Justification for the revision of the document shall be provided at the time of submittal. Written approval shall be obtained from the SCM prior to implementation of the revision.

The Contractor can without penalty turn down an engagement that does not follow the established notification time frame without penalty and without providing justification. However, written notification shall be made to the SCM that the engagement was not accepted.

The Contractor shall establish three engagement time frames for this contract:

- A. The first is the ordering/cancellation of canisters for 7-day and 14-day turn around time. The cutoff time frame for the 7-day/14-day sampling events shall specify the number of days prior to the proposed sampling event for an order can be placed or canceled;
- B. The second is the ordering/cancellation of canisters for a 48-hour turn around time that involves canisters being ordered for an event that will be initiated within 48 hours or the first work day following a holiday or weekend. The cutoff time frame for this 48-hour sampling event shall specify a time of day for the ordering/cancellation of canisters; and
- C. The third is the ordering/cancellation of canisters for a 48-hour turn around time, which involves canisters being ordered for an event that will be initiated beyond the 48-hour time frame or the first work day following a holiday or weekend. The cutoff time frame for this 48-hour sampling event shall specify the number of days for ordering/cancellation of canisters.

3.23 CONTRACTOR SHIPS CANISTERS TO THE CONTRACT USER

The Contractor shall ship uncontaminated “certified clean” canisters in an appropriate shipping container to the Contract User upon request.

The Contractor shall ship empty canisters and shipping containers only to official State offices, State warehouses or to State Contractor’s offices that have routine pickup and delivery by the Common Carrier. The Contractor can also ship to the Common Carrier’s Service Centers for pickup by the Contract User, as long as there is no additional cost. The Contract User or State Contractor will specify this delivery option at the time of engagement with the SCM. This does not include the cost of shipping to a work site, since it may involve additional charges imposed by the Common Carrier.

The Contractor shall ship the canisters with the inline dust filter/flow controller unit detached from the canisters. The Contract User will attach the dust filter/flow controller to the canister prior to sampling.

The Contractor shall allow Contract Users/State Contractors to pick up canisters directly from the Contractor at no extra charge to the State.

3.24 MISTAKES IN SHIPPING

NJDEP will pay for NJDEP mistakes in shipping (see Section 4 of the RFP for a complete description of payment rules). This includes shipping the Contractor the wrong sample canisters.

3.25 CONTRACTOR RECEIPT OF SAMPLES/ INTERNAL CHAIN OF CUSTODY

The Contractor shall receive the samples and check the contents for the NJDEP External Chain of Custody Forms and if submitted the NJDEP LL-TO15/USEPA Method TO-15 Field Test Data Sheet and the Methods 3C/25C Field Test Data Sheet.

3.25.1 SUBMITTAL OF FORMS TO SCM

Upon completion of the logging in of the samples by the Sample Custodian, the Contractor shall forward to the SCM an electronic copy of the preliminary Form A-1A and the Contractor’s Sample Receipt and Log in Checklist. The requirements of the Contractor’s Sample Receipt and Log in Checklist are in Section 3. The Contractor shall ensure that the documents be sent electronically in an Adobe Acrobat format via internet Email to the SCM within five (5) days of receipt at the Contractor’s facility.

3.25.2 INTERNAL CHAIN OF CUSTODY

- A. The Contractor shall provide storage and internal distribution of the sample. Each time responsibility for the sample changes from one individual to another, the Contractor shall record the changes on the Contractor's own internal Chain of Custody form and sign it, or if electronic chain of custody is used, update the record;
- B. The Contractor shall record the flow of every canister, through the laboratory on an internal chain of custody document;
- C. The Contractor shall, on completion of sample analysis, attach all Chain of Custody documents to the data report and forward the entire report to the State; and
- D. The Contractor shall ensure that all signatures are real and legible. Initials and printed names are not acceptable where signature are required.

3.25.3 SAMPLE RECEIPT AND LOG-IN CHECKLIST FOR ALL SAMPLES

This form is used to document the receipt and inspection of sample canisters. One original checklist is 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. Top of Page Information:

- 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:

Shipping Container Information:

- 1. There is no evidence to indicate tampering;
- 2. Custody seals are present and intact;
- 3. Custody seals numbers are present; and
- 4. List custody seal numbers.

Sample Condition:

1. Sample canisters were received intact.

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

1. Sample ID/Sample Description;
2. Date of sample collection;
3. Time of sample collection;
4. Identification of sampler;
5. Requested test method(s);
6. Necessary signatures; and
7. Internal Chain of Custody (ICOC) required (answer is always yes).

Sample Integrity Usability:

1. The sample canister matches the COC; and
2. Samples were received within holding time.

C. Anomalies or Non Conformance Summary (comment section).

3.25.4 STORAGE AND INTERNAL DISTRIBUTION OF THE SAMPLE

The Contractor shall be responsible for storage and internal distribution of the canisters. Each time responsibility for the sample changes from one individual to another, the Contractor shall record the changes on the NJDEP provided internal Chain of Custody form and sign, date and time the entry.

The Contractor shall record the movement of the canisters through the laboratory on an internal chain of custody document. On completion of sample analysis, the Contractor shall attach all Chain of Custody documents to the data report and forward to the State as part of the analytical data report.

3.26 SAMPLE DELIVERY GROUP

3.26.1 SAMPLE DELIVERY GROUP (SDG) DEFINITION

- A. This contract defines a Sample Delivery Group (SDG) as a unit of no greater than twenty (20) canisters collected at a particular site. The SDG assignment is made upon receipt of the samples at the Contractor's facility. If less than twenty (20) samples are submitted for a particular site, it is considered a single SDG. If more than twenty samples are submitted from a particular site, then the Contractor shall split those samples into separate SDGs of 20 or less and analyze each sample delivery with the appropriate number of QC samples for each group. Samples cannot be combined with other client's samples to create a SDG that consists of a mix of private client samples and State samples;
- B. A SDG is a group of 20 or fewer samples received over a period of up to seven (7) calendar days. Data from all samples in a SDG are due concurrently. All samples within a SDG received within 7 calendar days, excluding Sundays and Government holidays;
- C. Samples from the sampling event shall be assigned to SDGs at the discretion of the Contractor;

- D. Laboratory control samples, method blanks and instrument blanks are considered QC samples and are not included in the sample count for a SDG; and
- E. The SDG assignment made by the Contractor is not related to the analytical sequence. The SDG assignment is strictly used to track the movement of the samples in the Contractor and the production of the analytical data package.

3.27 REQUIRED SAMPLE HOLDING TIMES - ALL METHODS

3.27.1 LIMITATIONS ON THE NUMBER OF DAYS CONTAINERS CAN BE OUT OF THE LABORATORY

All canisters after evacuation to negative thirty (–30) inches of mercury have a finite period before the level of the vacuum pressure loss that occurs naturally will inhibit the use of the canister in sample collection. Due to the loss of vacuum that occurs naturally during the storage of canisters, NJDEP has established a fifteen (15) day time limit that canisters can be out of the laboratory. The fifteen-day time limit begins with the shipment of the canisters to the Contract User. The canisters shall be returned to the Contractor after fifteen 15 days whether they were used for sample collection or not.

3.27.2 SAMPLE HOLDING TIME

This contract specifies a sample holding time of 30 days. Analysis of samples after the holding time shall not be permitted. NJDEP shall not pay the Contractor for samples analyzed after the holding time has expired.

3.27.3 SAMPLE TURNAROUND TIME

This contract requires reporting of analytical data based on the required turn around time for submittal of analytical data to the State. All the three turnaround times are less than the required holding time of 30 days. The Contractor shall follow the turnaround time specified in this contract. See Section 3.50 for the specified turnaround time.

3.28 TEMPERATURE REQUIREMENTS FOR SAMPLE SHIPMENT – ALL METHODS

None of the methods in this Contract have temperature requirements for shipment as stainless steel canisters are used for sample collection.

3.29 PRESSURE AND TEMPERATURE SPECIFICATIONS – CONTAINER PREPARATION

In preparing the canisters for sample collection, the Contractor shall set the flow rate of the flow controllers based on the barometric (atmospheric) pressure and temperature inside the laboratory in order to meet the client's needs. The Contractor shall record the actual temperature and barometric (atmospheric) pressure of the room at the time the canisters (with the flow controllers) are prepared for shipment and returned from the field. Container pressure for shipment from the Contractor shall be set at -30 inches of mercury for all contract methods.

3.30 PRESSURE OF CONTAINERS

3.30.1 RECORD NEGATIVE PRESSURE

The Contractor shall check and record the negative or sub-atmospheric pressure of all canisters prior to shipping and upon return receipt. This negative pressure information shall be recorded in a laboratory notebook and reported in the data report. The use of "<" or ">" from the standard

pressure of 30 inches is not acceptable; the actual numeric reading shall be required. The inches of mercury reported shall be to 3 significant figures (eg -2.22 inches of mercury).

3.30.2 PRESSURIZATION CRITERIA

- A. For Method NJDEP- LLTO-15/USEPA Method TO-15, humidified ultra pure zero air or nitrogen shall be used as the source of air that is added to a canister for pressure adjustment. It shall be from the same source as the method blank air. The humidified ultra pure zero air/nitrogen that is added to a canister for pressure adjustment is considered a dilution. This information shall be recorded as required by method specific deliverable requirements. The NJDEP Reporting Limits shall be adjusted for the dilution. For Method NJDEP LL-TO-15/ USEPA Method TO-15 Method, the Reporting Limits requirements for this method cannot be met if makeup air is added to the canister;
- B. For Method 25C, the canisters shall be pressurized to approximately ten (10) pounds per square inch gauge with Ultra High Purity Helium Gas prior to analysis. If helium and/or zero air (Method NJDEP LL-TO-15/ USEPA Method TO-15 Method) is added to the canister prior to analysis, these additions shall be considered dilutions and shall be addressed in the calculation of the dilution factor. The NJDEP Reporting Limits shall be adjusted for the dilution;
- C. For Method 3C, the canisters shall be pressurized to approximately ten (10) pounds per square inch gauge with Ultra High Purity Helium Gas prior to analysis. If helium and/or zero air (Method NJDEP LL-TO-15/ USEPA Method TO-15 Method) is added to the canister prior to analysis, these additions shall be considered dilutions and shall be addressed in the calculation of the dilution factor. The NJDEP Reporting Limits shall be adjusted for the dilution;
- D. When only volatile organics by NJDEP LL-TO15/USEPA Method TO-15 is required, the amount of air added to any canister prior to analysis shall not cause the total amount of air in the canister to exceed 6.5 liters. Ideally, the total amount of air in a canister should not exceed 6 liters. Additionally, if the canister is received at the Contractor's facility at a pressure that does not require air to be added, the addition of makeup air is prohibited. The Contractor SOP shall clearly describe how the pressure of the canister is determined and exactly how the amount of makeup air to be added to canisters is determined;
- E. The Contractor shall ensure that for Methods 25C and 3C the pressurization of canisters meets a method specific level prior to analysis. If the canister is not being analyzed for NJDEP-LLTO-15/USEPA Method TO-15, then the pressurization can occur upon receipt (see Section 3.31 for Order of Analysis requirements);
- F. The Contractor shall make every attempt to analyze the canisters without the addition of make up air for NJDEP-LLTO-15/USEPA Method TO-15. The Contractor shall be aware that automatically adding makeup air to canisters does cause a dilution that shall be taken into account in the determination of the Reporting Limit used by the laboratory;
- G. Adjustment NJDEP-LLTO-15/USEPA Method TO-15 regarding the total sample volume injected on the column to adjust for the addition of makeup air is not acceptable. The volume injected on the column shall not be varied from the initial calibration. The addition of makeup air to canisters may raise the reporting limit used for that individual sample above the acceptable NJDEP Reporting Limits. All non-detected results shall be at the NJDEP established Reporting Limit for a sample unless there is a concentration for a particular compound above 40 ppbv that causes a dilution. There are exceptions for the m & p-xylene isomer mixture, isopropanol and ethanol (see Section 3.14 Table 2 of this contract). The

Contractor is referred to the Sample Dilution Section for additional information on the specific requirements; and

- H. The Contractor SOP shall clearly describe how the pressure of the canister is determined and how the amount of makeup air to be added to canisters is determined.

3.30.3 NEGATIVE PRESSURE OF SAMPLE LESS THAN -10 INCHES OF MERCURY

If a sample canister is received and the negative pressure in the canister is less than -10 inches of Mercury (that being between 0 and -10 inches of Mercury), the Contractor may proceed with the analysis and any required dilution (if necessary) of the sample as specified in method NJDEP-LLTO-15. The Contractor shall follow the requirements below:

- A. After screening of the sample, the screening data indicates that a dilution is not required; the Contractor is required to pull a complete sample volume to place on the column for analysis;
- B. The Contractor is required to report any data that is analyzed with air added as a diluted sample;
- C. If upon review of the data, it is determined that the dilution was not justified, the sample will be rejected and payment withheld;
- D. It is understood that a sample should never be received at zero negative pressure or a pressure equal to atmospheric pressure. The Contractor shall contact the SCM should this occur prior to analysis;
- E. The humidified ultra pure zero air/nitrogen that is added to the canisters to bring the sample up to the method specified pressure shall be from the same source as the method blank air; and
- F. The procedures to correct the negative pressure of the canister shall be documented in the Case Narrative of the Data Report Package. Additionally, when the canister pressure is adjusted, a table entitled Container Dilution Calculations shall be provided in the Data Report Package (see Appendix 1 for the table requirements).

3.30.4 NEGATIVE PRESSURE OF SAMPLE GREATER THAN -10 INCHES OF MERCURY

- A. If the negative pressure in a six (6)- liter sample canister is greater than -10 inches of Mercury upon receipt, then the Contractor shall contact the SCM immediately for permission to analyze the sample. Permission will not be automatic. If permission is not granted to analyze the sample, the Contractor will be eligible for a partial payment in accordance with Section 5.23.6 of this contract;
- B. If a Contractor performs a dilution and analysis on this sample without permission from the SCM, the SCM may not authorize a payment for the analysis, but instead may authorize a partial payment in accordance with Section 5.23.6;
- C. Recent advances in the concentrator units (for example, the Entech 7100A Concentrator) allow laboratories to remove samples from canisters with a negative pressure of higher than – 10 inches of Mercury without having to add makeup air. It is acceptable to use these advanced concentrator units; and
- D. If the negative pressure in any other canister size is greater than minus ten (-10) inches of Mercury upon receipt, the Contractor does not have to contact the SCM for permission to

analyze the sample. The Contractor shall advise the SCM of the negative pressure in the electronic mail notification of sample receipt as required by Section 3.25.1.

3.31 ORDER OF ANALYSIS

When Volatile Organics by Method NJDEP-LL-TO-15/USEPA Method TO-15 is to be analyzed in addition either Method 3C and 25C for vent sampling, there are three options that are available. The first option is at the discretion of the Contract User, the remaining two options are within the control of the Contractor.

Option 1 - The Contract User can collect a separate canister for the analysis of the volatile organics using LL-TO-15/USEPA Method TO-15. This option is recommended if the expected concentrations of the volatiles organics exceeded 800 ppbv for the volatile organic compounds with reporting limits of 0.2 ppbv. The Contract User will pay for a second canister rental and a second flow controller rental; or

Option 2 – The Contractor, upon screening of the sample, shall determine if the concentrations of the volatile organic compounds are significantly high and determines that a large dilution is required; the Contractor has the ability to analyze for the other methods first and conduct the LL-TO15/USEPA Method TO-15/USEPA Method TO-15 method last. If the Contractor decides to analyze for the other methods first and conduct the LL-TO-15/USEPA Method TO-15 analysis last, the Contractor shall protect the integrity of the sample for the LL-TO-15/USEPA Method TO-15 analysis; or

Option 3 – The Contractor, upon screening of the sample determines that the concentrations of the volatile organic compounds low and do not require a large dilution, has the option to analyze the sample using the LL-TO-15 analytical method first or last. If the Contractor decides to analyze for the other methods first and conduct the LL-TO-15/USEPA Method TO-15 analysis last, the Contractor shall protect the integrity of the sample for the LL-TO-15/USEPA Method TO-15 analysis.

3.32 INTERNAL CHAIN OF CUSTODY REQUIREMENTS

- A. The Contractor shall provide storage and internal distribution of the sample. Each time responsibility for the sample changes from one individual to another, the Contractor shall record the changes on the NJDEP provided internal Chain of Custody form and sign, date, and time the entry;
- B. 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;
- C. The Contractor shall ensure that each sample submitted consists of one or more sample aliquots (e.g., portions of a sample collected in separate canisters). Document internal chain of custody for each sample representing a specific method. Internal chain of custody documentation for all methods may be listed on one (1) form for any given case (group) of samples submitted;
- D. The Contractor shall indicate on the chain of custody document all movements of the sample, through the laboratory. Show the date and time of relinquishing and accepting of the sample by each individual who handled the sample materials. Use DEP Forms 077. Terminate chain of custody only when all analyses from the canister is completed or depleted. If the Final Data

Report is generated, the canister can be sent for cleaning and recertification. Illegible chain of custody documentation will result in data rejection;

E. On completion of sample analysis, the Contractor shall attach all Chain of Custody documents to the data report and forward to the State as part of the analytical data report; and

F. Electronic Internal Chain of Custody System;

1. The Contractor will be allowed to use an Electronic Internal Chain of Custody after award for this Contract. The Contractor shall submit documentation on their Electronic Internal Chain of Custody System to the SCM for review and approval. Upon approval by the SCM, the Contractor will be allowed to implement the System. This Electronic Internal Chain of Custody System shall not be used for the Example Data Package that is a Bid Proposal Submission requirement;
2. If during the term of the contract, it is determined that the Contractor is not following the requirements of this Section, the approval shall be suspended. The Contractor will be notified of the suspension in writing by the State Contractor Manager. The Contractor shall be required to use hard copy Internal Chain of Custody forms for a minimum period of six (6) months following the notification. The Contractor shall submit a Corrective Action Plan documenting their internal procedures to correct the problem and how they intend to prevent future violations. If the Corrective Action Plan is found acceptable, the Contractor will be allowed to restart the Electronic Internal Chain of Custody System at the end of the six (6) month period;
3. If the Contractor has a second violation of Internal Chain of Custody requirements, the use of the Electronic Chain of Custody System shall be suspended for the remainder of the Contract. The Contractor shall be required to use the hard copy Internal Chain of Custody Forms for the remainder of the Contract; and
4. The Contractor shall ensure that the Electronic Internal Chain of Custody System shall meet the following requirements:
 - 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;
 - c. The Contractor may add additional fields to meet the needs of their laboratory operations;
 - d. The Electronic Internal Chain of Custody System shall comply with all the Internal Chain of Custody requirements of Appendix 1 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; and
 - f. A print out from the system documenting the internal chain of custody shall be provided with each Data Report.

3.33 SPLITTING SAMPLES BETWEEN LABORATORIES

Splitting of samples between laboratories with some restrictions is allowed for a Multiple Laboratory Contractor.

In general, it is NJDEP's intent to have all samples analyzed in one laboratory. If a Multiple Laboratory Contractor has one laboratory that can analyze all the samples for that engagement, then NJDEP expects the sample to be analyzed in the single laboratory and not split up among several laboratories. However, if none of the Multiple Laboratory Contractor's laboratories can analyze all the samples, then the sample analysis may be split between or among the different Multiple Laboratory Contractor's certified laboratories. When this split occurs, the Multiple Laboratory Contractor shall attempt to split the sample between or among the fewest number of laboratories possible.

At the time of the engagement, the Contractor shall inform the SCM who will inform the Contract User of the problem and the Contract User will agree to split the batch of samples. The splitting shall be done based on a complete Batch (by matrix). The Contractor shall identify which laboratories will receive the sample batches. Samples may be split at the method level.

The individual laboratories designated to analyze the samples shall ship the appropriate number of sample canisters to the Contract User. If multiple laboratories are analyzing the samples, each laboratory shall ship the appropriate canisters to the Contract User.

Coordination of these engagements is handled at the Contractor's Corporate or Headquarters level. There shall be no change in the price of analysis when samples are split between laboratories.

3.34 DATA REPORTING REQUIREMENTS

3.34.1 DATA ARCHIVAL STORAGE

The Contractor shall store all raw data as follows:

A. Bound Laboratory Notebook

1. The laboratory shall maintain a bound notebook to record all raw data; and
2. The Laboratory analyst SHALL sign all entries in this laboratory notebook. The analyst's supervisor SHALL also sign entries in this notebook.

3.34.2 ELECTRONIC DATA STORAGE AND RETRIEVAL SYSTEM

The Contractor shall store GC/MS, GC/EC, and other electronic data in a format retrievable on line to the data system for ten (10) years. The Contractor shall store the data storage medium under secure and appropriate environmental conditions to preclude the loss of data.

3.34.3 CUSTODY SEALS

- A. Custody seals shall be used to seal the shipping containers prior to shipping the canisters to the Contract User; and
- B. Custody seals shall be used to seal the packages used to ship the data reports to the State.

3.35 ORAL REPORTING NOT REQUIRED

This contract does not require oral reporting by the Contractor. At times the SCM may request an oral telephone report on the status of a specific analysis. However, Contractors are not required

to provide an oral telephone report and a refusal to give an oral status report shall not affect a Contractor's standing under this contract.

3.36 DATA REPORTING REQUIREMENTS

3.36.1 REPORT TURN-AROUND TIME/ORAL REPORTING

This contract specifies three time frames for the reporting of analytical data. The turnaround time frames are forty-eight (48) hours, seven (7) calendar days and fourteen (14) calendar days from sample receipt. There is no emergency Turn around Time in the RFP. All emergency sampling is handled under the State's Delegated Purchasing Authority Circular Letter Procedures.

A. Seven (7) and Fourteen (14) Calendar Day Turn Around

Most analysis performed under this contract shall require a seven (7) or fourteen (14) calendar day turn around for the delivery of the results and a full hard copy and electronic copy of the deliverables. The turn around time shall be specified at the time of engagement. The deliverables shall be delivered on the 7th or the 14th day after sample receipt or if that day falls on a weekend or State Holiday, on the next State working day that is not a weekend or holiday;

B. Forty-eight Hour Turn Around

1. For a limited number of samples (not more than twelve (12) per sampling event) the Contractor may be required to analyze samples and deliver a partial data report within 48 hours of sample receipt. In computing the forty eight (48) hour time period as stated in Section 4.4.1.9 Computation of time, Saturday, Sunday and legal holidays shall be excluded in the determination of the 48 hour time period. If the delivery day falls on a weekend or State Holiday, then the delivery day shall be the next State working day that does not fall on a weekend or State Holiday;
2. The canisters available for 48-hour turnaround time canisters have been limited to those that are set for 8 or 24 hour sampling for building interior and ambient sampling or preset for 200 ml/min sampling for soil gas or landfill gas sampling. Other sampling times are not available for 48-hour turnaround sampling unless they are ordered in accordance with Sections 1.18 and 4.4.5.2 of this RFP;
3. The data delivered in 48 hours shall have undergone internal QA/QC and approval by the Contractor's QA Officer or Project Manager prior to release to the SCM. The data must be forwarded via electronic mail to the SCM;
4. Split Deliverables. - For a 48-hour turn around the Contractor shall split the deliverables into two (2) parts. 48 hours after receipt (as specified above) of the sample the Contractor shall deliver the following reduced deliverable which consists of the following parts of a full deliverable as described in each method's appendix. The reduced data shall be converted into an Adobe Acrobat PDF file and sent via Email to the SCM and consists of the following:

Title Page;
Pressure Gauge Readings; and
Container Dilution Calculations.

In addition to the reduced data above the following Microsoft™ Excel electronic file shall be provided to the SCM and the Contract User.

NJDEP-SRWM Air Methods Data Summary Table; and

5. The Contractor shall submit the required hard copy data reports and the remaining electronic deliverables within seven days after receipt of the 48-hour turn around sample. If the seventh day falls on a weekend or State Holiday, then the due date for the full deliverable shall be the next State working day that does not fall on a weekend or State Holiday.
- C. If the secondary laboratory for a Multiple Laboratory Contractor analyzes the samples for a sampling event, the secondary laboratory shall send a complete PDF file of the data packages and a copy of all the electronic deliverables to the Corporate Project Manager at the same time the data is being submitted to the State. The Corporate Headquarters Laboratory has the final responsibility for all submissions under the contract.

3.36.2 HARD COPY OF THE FINAL DATA REPORT DELIVERABLES

- A. NJDEP external chain of custody forms (095C and 095D) perform the additional function of sample analysis request forms. When the state submits samples to the Contractor, the appropriate chain of custody form accompanies each sample. Contract users indicate the analyses on these forms. The Contractor report shall contain data for all samples submitted at the same time for the same project;
- B. Data report deliverables in the final format for each method require documentation as set forth in the method specific appendices. The Contractor shall submit an original final extended data report and original data package summary to the SCM and with one copy of the summary data package for each sample group to the Contract User;
- C. Reduced data package deliverables are unacceptable;
- D. If an approved secondary corporate network laboratory is issuing the data report deliverables and the electronic files as required by the contract, the secondary laboratory shall submit a complete copy of the deliverables electronically to the corporate project manager. This will facilitate the submittal of invoices to the state and the resolution of any problems with the submittals. If the review of the data indicates requires resubmittals of any portion of the deliverables to the state, then the secondary laboratory shall be responsible for the generation of the revisions to both the state and the corporate project manager; and

3.36.3 ELECTRONIC FILES BY ELECTRONIC MAIL

Each method specific data report formats specify the required electronic files that shall be submitted to the SCM and the Contract User by the Contractor when the data packages are shipped to the state (see Appendices 1- 3 & 10 for the specific requirements).

3.36.4 FILES ON COMPACT DISC

Each method specific data report formats specify the required files and format of the files that are to be submitted on compact disc to the SCM with the data packages (see Appendices 1- 3 for the specific requirements).

3.36.5 NJDEP AIR METHODS DATA SUMMARY TABLE CORRECTIONS

In instances when more than one method is required to be reported on an air methods data summary table, there will be a conflict in what date to place at the top of the form for each sample. The following three options exist for the reporting of the tables.

Option 1 – if all three analyses are required, default the analysis date to the NJDEP LL-TO-15/USEPA Method TO-15 analysis analysis date; or

Option 2 – for this option, if only methods 3C and 25C are being reported; the first date of analysis between the two methods; or

Option 3 – this option requires the reporting of each method sample results on separate worksheets.

3.36.6 ELECTRONIC FILES BY ELECTRONIC MAIL

The Data Report Format in all the Appendices of this RFP specifies the required electronic files that the Contractor shall submit to the SCM and the Contract User when the data packages are shipped to the State (see the RFP Appendices for the specific requirements).

3.37 PENALTY FOR LATE DELIVERY

- A. A penalty shall be imposed if data reports are delivered late; and
- B. For example: If two (2) Laboratories are awarded this contract and the prime Contractor has delivered data reports from three sampling events late, the SCM will drop the Contractor to the first alternate Contractor position for engagement purposes and hold it there for the next six (6) months. In turn the first alternate Contractor shall move up to the prime Contractor position.

3.38 CONTRACT KICK-OFF MEETING

The Contractor shall attend a contract kick-off meeting with the SCM and Contract Users within twenty (20) days after contract award. The meeting will be held in the Trenton, NJ. The Contractor's attendance is mandatory and shall be at no cost to the State. The State will not pay the Contractor to attend this meeting. At the meeting, all aspects of the contract will be discussed including but not limited to, shipment of samples, analysis of samples, data reports, quality control and, payment procedures.

At the kick-off meeting the Contractor shall bring his shipping container with canisters and demonstrate the proper unpacking and packing of canisters for return shipment of samples back to the Contractor in accordance with the approved shipping plan.

3.39 OTHER MEETINGS

The SCM may arrange other meetings with the Contractor over the time of the contract to discuss non-compliance with the terms of the contract. The Contract Users will not pay the Contractor for attending these meetings.

3.40 SUPERVISORY AND NONSUPERVISORY PERSONNEL

Single and Multiple Laboratory Bidders shall have sufficient, properly qualified personnel commensurate with the workload and types of analyses needed to comply with Regulations Governing Laboratory Certification and Environmental Measurements, N.J.S.A. 7:18-2.10 and the requirements of this contract.

Some of the personnel required by this contract are also required by the New Jersey Regulations Governing the Certification of Laboratories and Environmental Measurements, N.J.S.A. 7:18-2.10

for the categories known as CAP01 (Atmospheric Inorganic Parameters Non Metals) and CAP03 (Atmospheric Organic Parameters). Contractor personnel shall meet the requirements specified by this contract and the regulations. The Contractor shall have sufficient, qualified personnel to substitute for absent personnel.

The Contractor shall have personnel who can fill the requirements of the Supervisory Personnel identified below. The term "Corporate" applies to Multiple Contractor Laboratories.

<i>SUPERVISORY PERSONNEL CONVERSION CHART</i>		
<u>Section Number</u>	<u>Multiple Laboratory Contractor</u>	<u>Single Laboratory Contractor</u>
A.	Laboratory Director (Manager)	Laboratory Director (Manager)
B.	Assistant Laboratory Director (Assistant Laboratory Manager)	Assistant Laboratory Director (Assistant Laboratory Manager)
C.	Corporate Project Manager	Project Manager
D.	Corporate Quality Assurance Manager	Quality Assurance Manager
E.	Alternate Corporate Quality Assurance Manager	Alternate Quality Assurance Manager
F.	Corporate Document Control Officer	Document Control Officer

A. Laboratory Director (Manager) or Designee;

1. This individual shall have sufficient experience to supervise the day-to-day operations of the entire laboratory. This individual shall perform the duties described in N.J.S.A. 7:18-2.11(a) 1. The Laboratory Manager of the headquarters laboratory shall sign DEP Form A-1A, (see Appendix 1 for the DEP Form A-1A) with the Corporate Quality Assurance Officer (QAO), releasing all data packages; and
2. If an approved secondary network corporate laboratory is used by the Contractor for a sampling event, the Laboratory Manager at the secondary laboratory shall sign DEP Form A-1A for all work conducted by that laboratory.

B. Assistant Laboratory Director (Manager);

1. This individual shall have at least 1 (one) years experience to supervise the day-to-day operations of the entire laboratory. This individual is responsible for performing the duties described in N.J.S.A. 7:18-2.11(a) 1 on an interim basis;
2. The Assistant Laboratory Director (ALD), located at the headquarters laboratory shall sign DEP Form A-1A with the Corporate QAO, releasing all data packages during short term absences of the Laboratory Director. The ALD shall notify the SCM in writing, providing the reason for assumption of duties, and the anticipated duration; and
3. If an approved secondary network corporate laboratory is used by the Contractor for a sampling event, the ALD at the secondary shall sign DEP Form A-1A for all work conducted by that laboratory.

C. Contract Project Manager/Assistant Corporate Project Manager;

1. This individual serves as one of the coordination points of contact with the using agency for any contract issue involving non-quality assurance issues. Responsibilities include, engagements, purchase orders, and other non-quality assurance related correspondence. Multiple Contractor Laboratories shall locate the Project Manager and Assistant Project Manager at the headquarters laboratory; and
2. If an approved secondary network corporate laboratory is used by the Contractor for a sampling event, a Project Manager can be designated at the secondary laboratory. The secondary laboratory Project Manager shall coordinate all activities under this contract with the Project Managers at the headquarters laboratory.

D. Corporate Quality Assurance Officer(CQAO)/Quality Assurance Officer (QAO) or Designee;

1. The Bidder shall have a CQAO or a QAO reporting directly to corporate management. The CQAO/QAO has responsibility for ensuring that all Assistant Quality Assurance Officers (AQAO, see Section 3.4.1), execute corporate quality control and quality assurance protocols in exactly the same manner. This individual is responsible for the duties described in N.J.S.A. 7:18-2.11(a) 3. For Multiple Contractor Laboratories, the CQAO/QAO shall be located at the headquarters laboratory. This individual shall be the point of contact for all quality assurance related issues, including all data validation questions;
2. The CQAO/QAO or Assistant QAO shall signs DEP Form A-1A for all work conducted at the headquarters laboratory;
3. The Assistant QAO is authorized to approve (sign off) internal QA documentation when releasing information to the CQAO;
4. The CQAO can simultaneously serve as the QA Officer of the corporate headquarters laboratory;
5. The CQAO/QAO serves as one of the coordination points of contact with the SCM for all quality assurance issues; and
6. If an approved secondary network corporate laboratory is used by the Contractor for a sampling event, the Quality Assurance Officer at the secondary laboratory shall sign DEP Form A-1A for all work conducted by that laboratory.

E. Alternate Corporate Quality Assurance Officer (ACQAO);

1. The Contractor shall designate an ACQAO or an Alternate Quality Assurance Officer (AQAO);
2. The ACQAO/AQAO may serve in any other QA position. If the ACQAO/AQAO serves as a laboratory supervisor or analyst, he/she shall not review his/her own work;
3. If an approved secondary network corporate laboratory is used by the Contractor for a sampling event, the AQAO at the secondary laboratory shall sign DEP Form A-1A for all work conducted by that laboratory; and
4. This individual shall assist the CQAO and can be designated as the point of contact for all quality assurance related issues, including all data validation questions.

F. Corporate Document Control Officer (CDCO)/Document Control Officer (DCO);

1. The Contractor shall designate a CDCO/DCO reporting to corporate management. The CDCO/DCO has the responsibility for all aspects of the organization, assembly, consistency and shipping of the data packages in the correct format, as required by this contract;
2. The CDCO/DCO has responsibility for supervising the activities of all Assistant Document Control Officers;
3. The CDCO/DCO can serve in any other position in the laboratory; and
4. If an approved secondary network corporate laboratory is used by the Contractor for a sampling event, a DCO can be designated at the secondary laboratory. The secondary laboratory DCO shall coordinate all activities under this contract with the Project Managers at the headquarters laboratory.

G. Sample Custody Officer (SCO);

1. The Contractor shall designate a Sample Custody Officer (SCO) reporting to corporate management. The SCO has responsibility for all aspects of sample receipt, log-in, internal security (chain of custody), and distribution of the sample or extracts, as well as, documentation of the fate of the sample (consumption, destruction, or disposal);
2. The SCO has responsibility for supervising the activities of all Assistant Sample Custodians; and
3. The SCO shall have a minimum of six (6) months experience in the sample receiving_log-in, chain of custody documentation and internal sample transfer.

H. Data Base Manager (DBM);

The Contractor shall designate a Data Base Manager (DBM) reporting to corporate management. The DBM has the responsibility for maintaining archives of electronic data. The DBM has the responsibility of system operation and maintenance, data base integrity, and data and system security.

I. GC/MS Supervisor; and

The GC/MS Supervisor shall meet the requirements of N.J.S.A. 7:18-2.10(a), N.J.S.A. 7:18-2.10(b) 9 and N.J.S.A. 7:18 2.10(b) 4 & 7.

J. GC Supervisor;

The GC Supervisor's duties shall include the requirements of N.J.S.A. 7:18-2.10(a), N.J.S.A. 7:18-2.10(b) 9 and N.J.S.A. 7:18-2.11(a) 2.

3.41 SUBSTITUTION OF NONSUPERVISORY PERSONNEL

The Contractor shall have personnel that can fill the requirements of Non Supervisory Personnel identified below. The Contractor shall have sufficient personnel, having the necessary education, training, technical knowledge and experience for their assigned functions. Contractors shall have sufficient personnel to substitute for absent supervisors.

All personnel shall be responsible for complying with all quality assurance/ quality control requirements that pertain to their organizational/ technical function. Each Contractor staff member shall have a combination of experience and/or education to demonstrate adequate knowledge of their particular function and a general knowledge of laboratory operations, analytical methods, quality assurance/quality control procedures and resource management.

A. Quality Assurance Officer (QAO);

The QAO shall report directly to the Corporate QAO for execution of corporate quality control and quality assurance protocols. This individual will serve as the quality assurance officer for subordinate laboratories for Multiple Laboratory Contractors. This individual is responsible for the duties described in N.J.S.A. 7:18-2.10(a) 3. This individual shall be the point of contact for all quality assurance related issues, including all data validation questions.

B. Assistant Sample Custody Officer (ASCO);

1. The ASCO shall report directly to the Sample Custody Officer (SCO) for the execution of corporate sample custody procedures. The ASCO serves as an additional SCO within the laboratory, or for subordinate laboratories for Multiple Contractor Laboratories. The ASCO is responsible for assisting the SCO; and
2. The ASCO shall have a minimum of three (3) months experience in sample receiving, sample log-in, chain of custody documentation and internal sample transfer.

C. Assistant Document Control Officer (ADCO);

The ADCO shall report directly to the Document Control Officer (DCO) for the execution of corporate document control procedures. The ADCO is responsible for assisting the DCO.

D. GC/MS Operator; and

The GC/MS Operator shall meet the requirements of N.J.S.A. 7:18-2.10(b)8 & 9.

E. GC Operator

The GC Operator shall have a minimum of a Bachelor's degree in chemistry or any other science, formal training in gas chromatography, one (1) year experience in the operation and maintenance of gas chromatogram instruments. The analyst can substitute an additional three (3) years experience in the operation, maintenance, and interpretation of GC data for the BS degree.

3.42 CONFLICT OF INTEREST

The State may be submitting samples for analysis where the State will seek recovery of the costs of the cleanup of specific sites from any and all responsible parties and shall anticipate the possibility of litigation with one or more of these parties. The State will make every effort to encode sample identification so as not to reveal the site name. For samples not encoded in this manner, the following procedure will apply.

For non-encoded samples, in order to avoid a conflict of interest or the appearance of a conflict, all work pursuant to this contract shall conform to the following procedure:

- A. Upon notification of conditions warranting the use of this contract and upon the determination of the Contractor to be engaged, the State will make its best effort, as time and conditions permit, to assemble a listing of responsible parties. The State may upon contacting the Contractor for the engagement, inform the Contractor of the responsible parties and request that the Contractor determine, as time and conditions permit, whether any contractual or other business relationship has occurred during the preceding five (5) years between the Contractor and any of the listed responsible parties; and
- B. Additionally, if, upon being contacted for engagement, the Contractor knows of any contractual or other business relationship occurring during the preceding five (5) years between the Contractor and any person or entity who is or may be a responsible party, the Contractor will immediately convey this information to the State personnel when the Contractor is contacted for the engagement.

For purposes of this provision, a Contractor will be deemed to have had a business relationship with an alleged or known responsible party if he has had such a relationship with a parent, subsidiary, predecessor or successor of such a party, or if he has been engaged by independent legal representatives on behalf of any of such parties as so defined. The State in its sole discretion will determine whether, based upon the particular circumstances of any relationship disclosed by a Contractor, it will enter into or continue a specific engagement.

3.43 FEDERAL REGULATIONS

It is agreed and understood that, as work under this contract may be eligible for Federal EPA funding assistance, all Federal regulation applicable to this work, at the time of any engagement, including those found at 40 CFR 35.6610, shall apply to this contract and supersede any conflicting provisions of this RFP, the Contractor's bid proposal or any formal contract documents.

3.44 CLEAN AIR AND WATER CERTIFICATION

The Contractor shall warrant that it is currently in compliance and shall continue in compliance for the term of this contract with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857 (b)), Section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, the USEPA Regulations (40 CFR, Part 15) and the Resource Conservation and Recovery Act (RCRA) 42 U.S.C. 6901, Subtitle C of October 21, 1976, 40 CFR, Parts 260 through 267, 121 through 124 and Drinking Water 40 CFR 141 promulgated November 19, 1980.

4.0 PROPOSAL PREPARATION AND SUBMISSION

4.1 GENERAL

The bidder is advised to thoroughly read and follow all instructions contained in this RFP, including the instructions on the RFP's signatory page, in preparing and submitting its proposal.

Use of URLs in a proposal should be kept to a minimum and may not be used to satisfy any material term of an RFP. If a preprinted or other document included as part of the proposal contains a URL, a printed (or if a bid is submitted electronically, electronic) copy of the URL page shall be provided and will be considered as part of the proposal. Additional URLs on the copy of the URL page shall not be considered as part of the proposal unless a copy of those URL pages are also provided.

SOLICITATION NUMBER: 14-X-23262

The forms discussed herein and required for submission of a proposal in response to this RFP are available on the web at <http://www.state.nj.us/treasury/purchase/bid/summary/14X23262.shtml> unless noted otherwise.

4.2 PROPOSAL DELIVERY AND IDENTIFICATION

In order to be considered, a proposal shall arrive at the Division in accordance with the instructions on the RFP signatory page accompanying this RFP. Bidders are cautioned to allow adequate delivery time to ensure timely delivery of proposals. **State regulation mandates that late proposals are ineligible for consideration. THE EXTERIOR OF ALL PROPOSAL PACKAGES ARE TO BE LABELED WITH THE PROPOSAL IDENTIFICATION NUMBER AND THE FINAL PROPOSAL SUBMISSION DATE OR RISK NOT BEING RECEIVED IN TIME.**

4.3 EBID VS. NON-EBID SUBMISSION INSTRUCTION

4.3.1 EBID SUBMISSION OF PROPOSAL

Not applicable to this procurement

4.3.2 NON-EBID SUBMISSION OF PROPOSAL

The bidder shall submit the following proposal copies:

One (1) complete ORIGINAL proposal, clearly marked as the "ORIGINAL" proposal.

One (1) complete and exact copy, clearly marked "COPY."

One (1) complete and exact ELECTRONIC copy of the original proposal in PDF file format on disc (CD or DVD) to be viewable and "**read only**" by State evaluators using Adobe Acrobat Reader software.

Copies are necessary in the evaluation of the proposal and for record retention purposes. A bidder failing to provide the requested number of copies will be charged the cost incurred by the State in producing the requested number of copies. The bidder should make and retain a copy of its proposal.

4.4 PROPOSAL CONTENT

The proposal shall include all information necessary to evaluate the bidders' capacity to undertake the entire project. Firms responding to this RFP are required to submit the following proposal components, which shall each be clearly labeled and shall be arranged and presented in the following order:

Volume 1

Forms

Volume 2

Section 1 - Forms (Sections 4.4.1 and 4.4.2)

Section 2 - Technical Proposal (Section 4.4.3) – and Analytical Data Package

Section 3 - Organizational Support and Experience (Section 4.4.4)

Volume 3

Section 4 – Price Schedule (Section 4.4.5)

A. Multiple Laboratory Bidders - Price Schedule;

Multiple Laboratory Bidders with more than one laboratory bidding on this contract shall submit ONLY ONE (1) SET of Price Schedules (Attachment A). The price bid will apply to all of the laboratories certified to perform analysis within a task utilized by the parent company for the analytical services covered by a task. Submittal of multiple sets of Price Schedules will result in the bid being considered non-responsive to the RFP;

B. Analytical Methods and Price Schedules; and

This contract cites specific parameters and corresponding analytical methods. The methods cited are the only acceptable methods. The laboratory may not substitute methods or alter the bid schedules in any manner. This includes adding or deleting analytes from the required lists.

One (1) clearly marked original and one (1) copy of the bid proposal (total of two (2) submissions are required including the Sample Data Reports listed below; and

C. Bid Submission Checklist;

The RFP requires the bidder to submit information and documentation at each stage of the bidding process.

The following documents or their equivalents shall, where applicable, be filled out, signed and submitted at the appropriate stage of the bidding process in order for a bidder to be eligible for contract award. Samples of some of these documents are provided as Attachments to the RFP. Others shall be prepared by the bidder. Failure to fill out or sign the relevant portions of the applicable documents and to submit the documents within the time limits specified in this RFP will result in rejection of that proposal as non responsive to the RFP. Where additional copies of the Attachments are required for the bidder or any subContractors, please photocopy the document or request additional copies from the Purchase Bureau.

1. EXAMPLE DATA REPORTS & ELECTRONIC SUBMITTALS FOR EACH METHOD BID;

- One Original and One Copy Required- USEPA Method 3C

- One Original and One Copy Required- USEPA Method 25C
- One Original and One Copy Required- Method NJDEP-LLTO-15 (if submitting a bid for this method)
- One Original and One Copy Required- USEPA Method TO-15 (if submitting a bid for this method)

2. SOFTWARE DOCUMENTATION REQUIREMENTS

- Data Systems for all methods- Proof of software ownership or license agreement from the manufacturer shall be provided as part of the bid documents and included in the SOP.
- GC/MS- Mass Spectral Library- Proof of software ownership or license agreement for the NIST/EPA/NIH Mass Spectral Library with Search Program (Data Version: NIST 11, Software Version 2.0g), Wiley Registry 9th Edition / NIST 2011 Mass Spectral Library or equivalent mass spectral library that is required for the as the reference library.

3. APPENDICES

- Appendix 1 - NJDEP-LLTO-15-3/2007, 3/2009) FOR AMBIENT AIR NJDEP REGULATORY DATA REPORT FORMAT-APPENDIX 1 MODIFIED FOR CONTRACT NOVEMBER 2013
- Appendix 2- USEPA METHOD 3C FOR THE DETERMINATION OF CARBON DIOXIDE, METHANE, NITROGEN, AND OXYGEN FROM SOIL GAS AND LANDFILL VENTS NJDEP REGULATORY DATA REPORT FORMAT - NOVEMBER 2013
- Appendix 3- USEPA METHOD 25C FOR THE DETERMINATION OF NON METHANE ORGANIC CARBON NJDEP REGULATORY FORMAT – NOVEMBER 2013
- Appendix 4 - New Jersey Environmental Laboratory Certifications
- Appendix 5 - Non-Payment Issues
- Appendix 6 - Data Package Evaluation Checklist
- Appendix 7 - SOP Certification Chart
- Appendix 8 - Personnel Certification Chart
- Appendix 9 - Bid Submission Check List
- Appendix 10 - NJDEP-TO-15 FOR AMBIENT AIR NJDEP REGULATORY DATA REPORT FORMAT-APPENDIX 10 MODIFIED FOR CONTRACT NOVEMBER 2013
- Appendix 11 – Method of Operation

4.4.1 FORMS, REGISTRATIONS AND CERTIFICATIONS REQUIRED WITH PROPOSAL

4.4.1.1 SIGNATORY PAGE

The bidder shall complete, including signature of an authorized representative of the bidder, and submit the Signatory Page accompanying this RFP. If the bidder is a limited partnership, the Signatory Page shall be signed by a general partner. Failure to comply will result in rejection of the proposal.

4.4.1.1.1 MACBRIDE PRINCIPLES CERTIFICATION

The bidder shall certify pursuant to N.J.S.A. 52:34-12.2 that it is in compliance with the MacBride principles of nondiscrimination in employment as set forth in N.J.S.A. 52:18A-89.5 and in conformance with the United Kingdom's Fair Employment (Northern Ireland) Act of 1989, and permit independent monitoring of their compliance with those principles. Please refer to Section 2.5 of the State of NJ Standard Terms and Conditions and N.J.S.A. 52:34-12.2 for additional information about the MacBride principles.

By signing the RFP Signatory Page, or by entering its PIN if submitting an eBid proposal, the bidder/offeror is automatically certifying that either:

- A. The bidder has no operations in Northern Ireland; or
- B. The bidder has business operations in Northern Ireland and is committed to compliance with the MacBride principles.

A bidder/offeror electing not to certify to the MacBride Principles shall nonetheless sign the RFP Signatory Page AND shall include, as part of its proposal, a statement indicating its refusal to comply with the provisions of this Act.

4.4.1.1.2 NO SUBCONTRACTOR CERTIFICATION

This proposal prohibits use of any subContractors. By signing the RFP Signatory Page, the bidder is *automatically* certifying that no subContractors will be utilized in the performance of contract work:

4.4.1.1.3 NON-COLLUSION

By submitting a proposal, the bidder certifies as follows:

- A. The price(s) and amount of its proposal have been arrived at independently and without consultation, communication or agreement with any other Contractor, bidder or potential bidder;
- B. Neither the price(s) nor the amount of its proposal, and neither the approximate price(s) nor approximate amount of this proposal, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before the proposal submission;
- C. No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal or other form of complementary proposal;

- D. The proposal of the firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal; and
- E. The bidder, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract.

4.4.1.1.4 NEW JERSEY BUSINESS ETHICS GUIDE CERTIFICATION

The Treasurer has established a business ethics guide to be followed by State Contractors in their dealings with the State. The guide provides further information about compliance with Section 2.8 of the State of New Jersey Standard Terms and Conditions. The guide can be found at:

http://www.state.nj.us/treasury/purchase/ethics_guide.shtml

By signing the RFP signatory page, or by entering a pin if submitting an e-bid proposal, the bidder is automatically certifying that it has read the guide, understands its provisions and is in compliance with its provisions.

4.4.1.2 OWNERSHIP DISCLOSURE FORM

Pursuant to N.J.S.A. 52:24.2, in the event the bidder is a corporation, partnership or sole proprietorship, **the bidder shall complete the accompanying RFP Form, Ownership Disclosure Form. A current completed Ownership Disclosure Form shall be received prior to or accompany the proposal.** Failure to submit the form will preclude the award of a contract.

4.4.1.2.1 CERTIFICATION OF NON-INVOLVEMENT IN PROHIBITED ACTIVITIES IN IRAN

Pursuant to N.J.S.A. 52:32-58, the bidder shall certify that neither the bidder, nor one of its parents, subsidiaries, and/or affiliates (as defined in N.J.S.A. 52:32-56(e)(3)), is listed on the Department of the Treasury's List of Persons or Entities Engaging in Prohibited Investment Activities in Iran and that neither is involved in any of the investment activities set forth in N.J.S.A. 52:32-56(f). If the bidder is unable to so certify, the bidder shall provide a detailed and precise description of such activities.

4.4.1.3 DISCLOSURE OF INVESTIGATIONS AND ACTIONS INVOLVING BIDDER

The bidder shall provide a detailed description of any investigation, litigation, including administrative complaints or other administrative proceedings, involving any public sector clients during the past five (5) years including the nature and status of the investigation, and, for any litigation, the caption of the action, a brief description of the action, the date of inception, current status, and, if applicable, disposition. The bidder shall use the Disclosure of Investigations and Actions Involving Bidder form for this purpose.

4.4.1.4 SUBCONTRACTOR UTILIZATION PLAN

Not applicable to this procurement

4.4.1.5 SMALL BUSINESS REGISTRATION FOR SET-ASIDE CONTRACTS

Not applicable to this procurement

4.4.1.6 BID SECURITY

Not applicable to this procurement

4.4.1.7 PRICING

The bidder shall submit its pricing on the State supplied Price Schedule Sheet.

4.4.1.8 USEPA REQUIREMENTS

The bidder understands that work under this contract may now or in the future be funded in whole or in part by the United States Federal Environmental Protection Agency (EPA) pursuant to an assistance agreement with the State. As such, the bidder agrees that its responsibilities hereunder shall be performed consistent with any EPA requirements for work funded by the EPA and that all applicable EPA standards of performance for work of this type are hereby incorporated by reference.

4.4.1.9 COMPUTATION OF TIME

When the RFP or contract refers to a period of time in terms of days, the day of the act or event from which the designated period begins to run is not to be included. The last day of the period so computed is to be included, unless it is a Saturday, Sunday or legal holiday, in which event the period runs until the end of the next day which is neither a Saturday, Sunday nor legal holiday. In computing a period of time of less than seven days, Saturday, Sunday and legal holidays shall be excluded.

4.4.2 FORMS REQUIRED BEFORE CONTRACT AWARD THAT SHOULD BE SUBMITTED WITH THE PROPOSAL

4.4.2.1 BUSINESS REGISTRATION

In accordance with N.J.S.A. 52:32-44(b), a bidder and its named subContractors shall have a valid Business Registration Certificate ("BRC") issued by the Department of Treasury, Division of Revenue prior to the award of a contract. To facilitate the proposal evaluation and contract award process, the bidder should submit a copy of its valid BRC and those of any named subContractors with its proposal. Refer to Section 2.1 of the State of NJ Standard Terms and Conditions.

Any bidder, inclusive of any named subContractors, who does not have a valid business registration at the time of the proposal submission opening or whose BRC was revoked prior to the submission of the proposal should proceed immediately to register its business or seek re-instatement of a revoked BRC. Bidders are cautioned that it may require a significant amount of time to secure the re-instatement of a revoked BRC. The process can require actions by both the Division of Revenue and the Division of Taxation. For this reason, a bidder's early attention to this requirement is highly recommended. The bidder and its named subContractors may register with the Division of Revenue, obtain a copy of an existing BRC or obtain information necessary to seek re-instatement of a revoked BRC online at: <http://www.state.nj.us/treasury/revenue/busregcert.shtml>.

A bidder otherwise identified by the Division as a responsive and responsible bidder, inclusive of any named subContractors, but that was not business registered at the time of submission of its proposal shall be so registered and in possession of a valid BRC by a deadline to be specified in writing by the Division. A bidder who fails to comply with this requirement by the deadline specified by the Division will be deemed ineligible for contract award. Under any circumstance,

the Division will rely upon information available from computerized systems maintained by the State as a basis to verify independently compliance with the requirement for business registration.

A bidder receiving a contract award as a result of this procurement and any subContractors named by that bidder will be required to maintain a valid business registration with the Division of Revenue for the duration of the executed contract, inclusive of any contract extensions.

4.4.2.2 REQUIRED ENVIRONMENTAL LABORATORY CERTIFICATIONS/ ACCREDITATIONS

At the time of the bid opening, the laboratory shall have the NJDEP Environmental Laboratory Certifications or New Jersey Primary NELAP Accreditations or New Jersey Secondary NELAP Accreditations as specified in Appendix 4. Each bidder shall identify the laboratories that will be performing work.

NJDEP issues Environmental Laboratory Certification under the authority of the Regulations Governing Laboratory Certification and Measurements, NJAC 7:18. NJDEP also issues NJDEP Primary NELAP Accreditation for Environmental Laboratories and these accreditations may be substituted for NJDEP Environmental Laboratory Certifications. If a bidder has any question concerning NJDEP Environmental Laboratory Certification or NELAP Accreditation needed to perform analytical work, he should contact:

New Jersey Department of Environmental Protection
NJDEP - OQA
401 East State Street
P.O. Box 420, Mail Code 401-02D
Trenton, New Jersey 08625-0420
Phone: (609) 292-3950
Fax: (609) 777-1774

“NJDEP-SRWM Low Level USEPA Method TO-15 (NJDEP- LLTO-15)” (effective March 2007 updated March 2009)” Laboratories can only satisfy NJDEP Environmental Laboratory Certification for NJDEP-LLTO-15 by holding NJDEP Environmental Laboratory Certification (NJ ELCP) or NJDEP Primary National Environmental Laboratory Accreditation Program (NELAP) Accreditation or NJDEP Secondary NELAP Accreditation. For NELAP Accreditation, a mixture of primary and secondary accreditations can be used.

USEPA Method 3C – “Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources” Laboratories may satisfy the certification requirements for USEPA Method 3C by holding either NJDEP NJELCP, NJDEP Primary NELAP Accreditation or NJDEP Secondary NELAP Accreditation. For NELAP Accreditation, a mixture of primary and secondary accreditations can be used.

USEPA Method 25C – “Determination of Non Methane Organic Compound (NMOC) in Landfill Gases” Laboratories may satisfy the certification requirements for USEPA Method 25C by holding NJDEP NJ ELCP, NJDEP Primary NELAP Accreditation or NJDEP Secondary NELAP Accreditation.

USEPA Method TO-15 – “Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/ Mass Spectrometry (GC/MS) January 1999” Laboratories can only satisfy NJDEP Environmental Laboratory Certification for USEPA TO-15 by holding NJ ELCP, NJDEP Primary National Environmental Laboratory Accreditation Program (NELAP) Accreditation or NJDEP Secondary NELAP Accreditation.

At the time of Bid Proposal submission, each laboratory for multiple Laboratory Bidder shall hold all of the required certifications. Bidders will satisfy the laboratory certification/ accreditation requirements if its laboratory (or in the case of a Multiple Laboratory Bidder, laboratories) hold a mix of the following:

NJDEP Environmental Laboratory Certification;
NJDEP Primary NELAP Accreditation; and
NJDEP Secondary NELAP Accreditation.

Laboratories that are in the applied status as of the date and time of Bid Opening, are not eligible for contract award, and will be rejected as non-responsive to the RFP.

4.4.2.3 REQUIREMENTS FOR THE SAMPLE DATA REPORT

All bidders shall submit a Single Sample Data Report and electronic deliverables (with each method as a separate section) that proves the bidder can perform the work required for Methods 3C, 25C, USEPA TO-15 and/or NJDEP-LLTO15. The bidder depending on whether they are bidding either on USEPA TO-15 or NJDEP-LLTO-15 or submitting bids on both, shall deliver a sample data report for that method. The Sample Data Report shall be prepared as if it was a deliverable under this contract. Appendix 6 provides the Evaluation Committee's checklist that will be used to evaluate the sample data report and determine if the Sample Data Report is responsive to the bid submission requirements. Bidders should review Appendix 6 and compare it to the Sample Data Report being submitted.

The example data package from a Multiple Laboratory Bidder shall be for the purpose of this bid from one laboratory. This example data package shall be from the laboratory which is actually submitting the bid. This laboratory shall be the designated corporate contact for the contract. If awarded a contract, other corporate laboratories can be added to the contract following the procedures set forth in this RFP.

All analytical data packages submitted for the bid proposal shall meet the following requirements:

- A. The Sample Data Package proposal submitted shall be in the full Regulatory Reporting Format for each of the methods and in compliance with all the requirements of this RFP, including External and Internal Chain of Custodies. This includes all electronic deliverables (data files and PDF files) as required by each method. See the method specific appendices (Appendices 1-3 and 10) for the requirements;
- B. For each of the methods an original (single sided) and one (1) double sided copy of the sample data package shall be submitted. All documents shall consist of the Extended Data Report and the Summary Data Package Report. Each report shall be submitted as separate documents. All documents shall be securely bound along the left margin. For each method, four documents shall be submitted (two Extended Data Reports and two Summary Data Package Reports). Two compact disks containing identical copies of all the electronic files and the PDF files shall be submitted;
- C. Electronic Internal Chain of Custody is not acceptable for the Example Data Reports. The NJDEP Internal Chain of Custody Forms are required for all Example Data Reports Submissions.

Types of Samples required for Example Data Reports for Bid Proposal

- 1. This bid limits the type of samples that can be submitted as part of the bid proposal for evaluation. The samples submitted for the example data package shall be real

environmental samples. Sample collected from inside the laboratory, PT samples, audit samples or made from standards used in the laboratory are not acceptable for submission under this bid. The laboratory cannot collect the sample from its premises for this contract;

2. Real environmental samples from indoor air sample events or landfill vent sampling can be collected by the laboratory for the purpose of bidding. The External Chain of Custody and the Case Narrative shall clearly state that this sample is collected for the purpose of submitting an example data package. The laboratory cannot collect the sample from its premises for this contract;
3. Analytical data generated from previous sampling events of an indoor air sampling event and/or landfill vent sampling are acceptable. If the data was not generated for NJDEP, only the client's name can be blacked or whited out. The actual laboratory and field identification number shall not be eliminated. In this case, the original Chain of Custody (both External and Internal) shall be submitted with the data. In addition, if during the generation of this data package the NJDEP Chain of Custody was not utilized, then the laboratory shall fill in the NJDEP Chain of Custody Forms to show how it would have been completed as part of the example and submit it with the data package;
4. The types of samples that can be submitted by a Bidder who collects a sample for purpose of bidder are as follows:
 - a. The analytical data submitted for Method NJDEP-LLTO-15/USEPA Method TO-15 method shall be from an indoor air sampling event. Submittal of an ambient sample or a soil gas sample is not acceptable and will cause automatic rejection of the data package;
 - b. There are two choices for the environmental sample for the USEPA Method 3C and 25C example data package;

Option 1 - An environmental sample collected from a landfill gas vent; or

Option 2 - The Bidder using the same canister that was collected for the indoor air sample and analyze the contents of the canister for the other two methods. The analyses for Method 3C and 25C shall occur after the Method NJDEP-LLTO-15/USEPA Method TO-15 analysis is completed.

5. The types of samples that can be submitted by a Bidder from previous sampling events of an indoor air sampling event and/or landfill vent sampling are as follows.
 - a. The analytical data submitted for Method NJDEP-LLTO-15/USEPA Method TO-15 shall be from an indoor air sampling event. Submittal of an ambient sample or a soil gas sample is not acceptable and will cause automatic rejection of the data package; and
 - b. There are two choices for the environmental sample for the USEPA Method 3C and 25C example data package.

Option 1 - An environmental sample collected from a landfill gas vent; or

Option 2 - The Bidder has determined that a client from a previous indoor air sample requested all three analyses from one canister. This sample can be submitted as

long as the analyses for Method 3C and 25C had occurred after the Method NJDEP-LLTO-15/USEPA Method TO-15 analysis is completed.

EXAMPLE DATA REPORTS & ELECTRONIC SUBMITTALS FOR EACH METHOD BID

The sample data report(s) submitted with the proposal are specified below and are based on the analysis of required sample type listed above.

- One Original and One Copy Required- USEPA Method 3C
- One Original and One Copy Required- USEPA Method 25C
- One Original and One Copy Required- Method NJDEP-LLTO-15 (if submitting a bid for this method)
- One Original and One Copy Required- USEPA Method TO-15 (if submitting a bid for this method)

Analytical data generated from previous sampling events. If the data was not generated for NJDEP, only the client's name can be blacked or whited out. The actual laboratory and field identification number shall not be eliminated. In this case, the original Chain of Custody (both External and Internal) shall be submitted with the data. In addition, if during the generation of this data package the NJDEP Chain of Custody was not utilized, the laboratory shall fill in the NJDEP Chain of Custody Form as part of the example and submit it with the data package. All the other required forms as specified in Appendices 1-3 and 10 are required.

NOTE: The sample data submitted from previous sampling events shall be analyzed in accordance with the methods required by this RFP (see Appendix 4 for the required methods).

4.4.2.4 SERVICES SOURCE DISCLOSURE CERTIFICATION FORM

Pursuant to N.J.S.A. 52:34-13.2, prior to an award of contract, the bidder is required to submit a completed source disclosure form. The bidder's inclusion of the completed Services Source Disclosure Form with the proposal is requested and advised.

4.4.3 TECHNICAL PROPOSAL

In this section, the bidder shall describe its approach and plans for accomplishing the work outlined in the Scope of Work section, i.e., Section 3.0.

Successful execution of this contract requires complete understanding of and certification in USEPA Method 3C and USEPA Method 25C. All bidders are required to provide prices for USEPA Method 3C and USEPA Method 25C, and the three turn-around options for each method.

All bidders are required to provide pricing for canister rental and flow controller rental.

Bidders shall provide prices each of the turnaround times (48 hour, 7 day and 14 day) listed for each of the methods they are bidding on.

For method NJDEP LLTO-15 and USEPA Method TO-15, the following pricing structure exists:

- A. The bidder can provide pricing for both methods;

- B. The bidder can provide a price for only method NJDEP LLTO-15;
- C. The bidder can provide a price for only method USEPA TO-15; and
- D. Bidders shall provide prices each of the turn-around times (48 hour, 7 day, and 14 day) listed for each of the methods they are bidding on.

Note: If Bidder submits any terms and conditions that conflict with the terms of the RFP or the New Jersey Standard Terms and Conditions in its proposal, those conflicting terms will be deemed null and void. The bidder shall set forth its understanding of the requirements of this RFP and its ability to successfully complete the contract. This section of the proposal should minimally contain the information identified below.

4.4.3.1 MANAGEMENT OVERVIEW

The bidder shall set forth its overall technical approach and plans to meet the requirements of the RFP in a narrative format. This narrative should demonstrate to the State that the bidder understands the objectives that the contract is intended to meet, the nature of the required work and the level of effort necessary to successfully complete the contract. This narrative should demonstrate to the State that the bidder's general approach and plans to undertake and complete the contract are appropriate to the tasks and subtasks involved.

Mere reiterations of RFP tasks and subtasks are strongly discouraged, as they do not provide insight into the bidder's ability to complete the contract. The bidder's response to this section should be designed to demonstrate to the State that the bidder's detailed plans and approach proposed to complete the SOW are realistic, attainable and appropriate and that the bidder's proposal will lead to successful contract completion.

4.4.3.2 CONTRACT MANAGEMENT

The bidder should describe its specific plans to manage, control and supervise the contract to ensure satisfactory contract completion according to the required schedule. The plan should include the bidder's approach to communicate with the SCM including, but not limited to, status meetings, status reports, etc.

4.4.3.3 CONTRACT SCHEDULE

The bidder should include a contract schedule. If key dates are a part of this RFP, the bidder's schedule should incorporate such key dates and should identify the completion date for each task and sub-task required by the SOW. Such schedule should also identify the associated deliverable item(s) to be submitted as evidence of completion of each task and/or subtask.

The bidder should identify the contract scheduling and control methodology to be used and should provide the rationale for choosing such methodology. The use of Gantt, PERT or other charts is at the option of the bidder.

4.4.3.4 MOBILIZATION AND IMPLEMENTATION PLAN

It is essential that the State move forward quickly to have the contract in place. Therefore, the bidder shall include as part of its proposal a 90 day mobilization and implementation plan, beginning with the date of notification of contract award of 90 days.

The mobilization and implementation plan should include the following elements:

- A. A detailed timetable for the mobilization and implementation period of 90 days. This timetable should be designed to demonstrate how the bidder will have the contract up and operational from the date of notification of award;
- B. The bidder's plan for the deployment and use of management, supervisory or other key personnel during the mobilization and implementation period. The plan should show all management, supervisory and key personnel that will be assigned to manage, supervise and monitor the bidder's mobilization and implementation of the Contract within the period of 90 days. In order to fully implement the Contract by the required start date, the Bidder shall submit its plan for recruitment of staff, both staff required during mobilization and implementation, and staff necessary to provide all services required by the RFP, including identification of other contract sites where staff may be temporarily reallocated from to assist with this transition;

NOTE: The bidder should clearly identify management, supervisory or other key staff that will be assigned only during the mobilization and implementation period.

- C. The bidder's plan for the recruitment and training of staff required to provide all services required by the RFP on the contract start date at the end of the mobilization and implementation period covering 90 days and the timetable for training of newly acquired personnel who will perform testing on a daily basis.
- D. The bidder's plan for the purchase and distribution of equipment, inventory, supplies, materials, etc. that will be required to fully implement the contract on the required start date.

4.4.4 ORGANIZATIONAL SUPPORT AND EXPERIENCE

The bidder should include information relating to its organization, personnel, and experience, including, but not limited to, references, together with contact names and telephone numbers, evidencing the bidder's qualifications, and capabilities to perform the services required by this RFP. Supervisory and non supervisory personnel qualifications are described below:

Supervisory Personnel

- A. Laboratory Director (Manager) or Designee;
- B. Assistant Laboratory Director (Manager);
- C. Contract Project Manager/Assistant Corporate Project Manager;
- D. Corporate Quality Assurance Officer/Quality Assurance Officer or Designee; and
- E. Alternate Corporate Quality Assurance Officer;
 - 1. Besides his/her other duties, the ACQAO/AQAO may serve in any other QA position.
- F. Corporate Document Control Officer/Document Control Officer;
- G. Sample Custody Officer (SCO);
 - 1. The Contractor shall designate a Sample Custody Officer (SCO) reporting to corporate management.

- H. Data Base Manager (DBM);
- J. GC/MS Supervisor; and
- K. GC Supervisor.

Substitution of Supervisory Personnel:

- L. Quality Assurance Officer (QAO);
- M. Assistant Sample Custody Officer;
- N. Assistant Document Control Officer;
- O. GC/MS Operator; and
- P. GC Operator.

This section of the proposal shall minimally contain the information identified below.

4.4.4.1 LOCATION

The bidder should include the address of the bidder's office where responsibility for managing the contract will take place. The bidder should include the telephone number and name of the individual to contact.

4.4.4.2 ORGANIZATION CHARTS

- A. **Contract-Specific Chart.** The bidder should include a contract organization chart, with names showing management, supervisory and other key personnel, nonsupervisory or other key personnel) to be assigned to the contract. The chart should include the labor category and title of each such individual; and
- B. **Chart for Entire Firm.** The bidder should include an organization chart showing the bidder's entire organizational structure. This chart should show the relationship of the individuals assigned to the contract to the bidder's overall organizational structure.

4.4.4.3 RESUMES

Detailed resumes should be submitted for all personnel to be assigned to the contract who are not in the New Jersey OQAdatabase. Resumes should emphasize relevant qualifications and experience of these individuals in successfully completing contracts of a similar size and scope to those required by this RFP.

A. Resumes Should Include The Following:

1. The individual's previous experience in completing each similar contract;
2. Beginning and ending dates for each similar contract;
3. A description of the contract demonstrating how the individual's work on the completed contract relates to the individual's ability to contribute to successfully providing the services required by this RFP; and

4. With respect to each similar contract, the name and address of each reference together with a person to contact for a reference check and a telephone number.

4.4.4.4 EXPERIENCE WITH CONTRACTS OF SIMILAR SIZE AND SCOPE

The bidder should provide a comprehensive listing of contracts of similar size and scope that it has successfully completed, as evidence of the bidder's ability to successfully complete the services required by this RFP. Emphasis should be placed on contracts that are similar in size and scope to the work required by this RFP. A description of all such contracts should be included and should show how such contracts relate to the ability of the firm to complete the services required by this RFP. For each such contract, the bidder should provide two names and telephone numbers of individuals for the other contract party. Beginning and ending dates should also be given for each contract.

4.4.4.5 FINANCIAL CAPABILITY OF THE BIDDER

In order to provide the State with the ability to judge the bidder's financial capacity and capabilities to undertake and successfully complete the contract, the bidder should submit certified financial statements which include a balance sheet, income statement and statement of cash flow, and all applicable notes for the most recent calendar year or the bidder's most recent fiscal year. If certified financial statements are not available, the bidder should provide either a reviewed or compiled statement from an independent accountant setting forth the same information required for the certified financial statements, together with a certification from the Chief Executive Officer and the Chief Financial Officer, that the financial statements and other information included in the statements fairly present in all material respects the financial condition, results of operations and cash flows of the bidder as of, and for, the periods presented in the statements. In addition, the bidder should submit a bank reference.

If the information is not supplied with the proposal, the State may still require the bidder to submit it. If the bidder fails to comply with the request within seven (7) business days, the State may deem the proposal non-responsive.

A bidder may designate specific financial information as not subject to disclosure when the bidder has a good faith legal/factual basis for such assertion. A bidder may submit specific financial documents in a separate, sealed package clearly marked "Confidential-Financial Information" along with the proposal.

The State reserves the right to make the determination to accept the assertion and shall so advise the bidder.

4.4.5 SUBMISSION OF COMPLETE PRICE SCHEDULE/SHEET BY CONTRACTOR

The bidder shall submit its pricing using the format set forth in the State-supplied price sheet/schedule(s) accompanying this RFP. The bidder shall fully complete and submit all price schedules. Failure to submit all information required will result in the proposal being considered non-responsive. Each bidder is required to hold its prices firm through issuance of contract.

Below is a list of items and procedures that shall be costed in the State-supplied price sheet/schedule(s) as well as a list of Costs excluded in a Line Item Unit Price:

- A. Unit Price – General; and

The bidder shall fully complete and submit all price schedules. The bid will be deemed non responsive where prices were not provided. The bidder should also review RFP Section Prices and Payments before completing the price schedules;

B. Unit Price;

1. Costs Included in a Line Item Unit Price

The following work items and cost items are included in every line item unit price:

- a. Containers and flow controllers are separate line item unit prices;
- b. Shipping containers;
- c. Uninsured shipment of containers to NJDEP in compliance with NJDOT regulations;
- d. Normal shipping costs as defined by the third party carrier (Delivery from Contractor and Return Shipment to Contractor facility). See Sections 3.20 and 4.4.5.G for additional information;
- e. Two day shipping of canisters out to Contract User and overnight delivery back to the Contractor;
- f. Shipping costs if canisters are delivered/picked up by the Contractor's Representative under chain of custody;
- g. Paperwork associated with sample shipping including decals, placards, declaration statements, common carrier information and any other items a Contract User will need to ship samples back to the Contractor;
- h. All Chain of Custody paperwork;
- i. Uninsured shipment of samples back to the Contractor in compliance with NJDOT regulations;
- j. Shipping containers for non-hazardous contents that are leak free and satisfy the requirements of the Contractor's common carrier;
- k. QA/QC items associated with sample shipment;
- l. All internal operations, labor, equipment, materials, supplies, overhead, direct, indirect, other direct costs and profits associated with the performance of the work of this contract;
- m. All aspects of sample analysis, including the method detection limit determinations as required by this RFP. Container and flow controller rental cost are not include in this unit price;
- n. All internal QA/QC work associated with sample analysis required by the USEPA methods, NJDEP Method and the Scope of Work, including, but not limited to method blanks, instrument and laboratory control samples;
- o. Blank Analysis - Method blank samples and instrument blank samples are considered to be part of the normal QA/QC procedures of analyzing a sample and therefore

analyzing method blanks and instrument blanks will be considered part of the cost of analyzing samples. The SCM will not authorize payment to the Contractor for the extra money to analyze method blanks and instrument blank samples. Method blank and instrument blank sample analysis shall not appear on an invoice or payment voucher;

- p. Preparation and delivery of an original final data report and original data package summary and with one copy of the summary data package for each sample group to the SCM and the Contract User;
- q. Preparation and delivery of electronic deliverables;
- r. Sample remnant disposal; and
- s. Any other aspect of work stated directly or implied that the Contractor shall do to perform the work of this contract.

4.4.5.2 CONTAINER PREPARATION INCLUDED IN SAMPLE COLLECTION COST

- A. Preparation of the canisters and all accessory parts for the canister as required by this contract, providing flow controllers, and setting the flow controller's sample collection time for 6 liter canisters at either 8 hour or 24 hour are included in the unit price of sample analysis;
- B. Preparation of the canisters and all accessory parts as required by this contract, providing flow controllers, and setting the flow controller's sample collection time for 1-liter, 2.7-liter and 3.2-liter canisters for the collection of the soil gas samples at 200 mL/min. are included in the unit price of sample analysis;
- C. Preparation of the canisters and all accessory parts as required by this contract, providing flow controllers, and setting the flow controller's sample collection time for six (6)-liter canisters at landfill vent sampling are included in the unit price of sample analysis;
- D. Preparation of the canisters and all accessory parts as required by this contract, providing flow controllers, and setting the flow controller's sample collection time for 6-liter canisters at all other types of sampling are included in the unit price of sample analysis;

1. Costs Excluded in a Line Item Unit Price;

The following work items are specifically excluded from a line item unit price and the Contractor will be eligible for extra payment for these items. Any aspect of work under this contract not specifically excluded below is included in every line item unit price.

- a. If the Contract User requires a collection time period for the 6-liter canisters different from the standard 8-hour or 24-hour time frame, then this is a billable outside the terms and conditions of this contract. This procedure cannot be used for 1- liter, 2.7-liter or 3.2-liter canisters. The cost shall be negotiated with the SCM and written preapproval is required;
- b. The recalibration, recertification and two-way shipping costs of unused sample canisters as supported by invoices;
- c. Shipping insurance ordered by a Contract User;

- d. Costs of sample canister recalibration, recertification and associated shipping costs if samples are received that cannot be analyzed for reasons such as incomplete sample collection, damage to canisters and the like;
 - e. One reanalysis of a sample due to the internal standard area responses being outside of control limits in the initial analysis;
 - f. One dilution analysis of a sample;
 - g. Overnight shipping of Containers to the Contract User. The unit cost is based on a two-day shipping of the properly prepared canisters from the Contractor to the Contract User;
 - h. The shipping costs beyond those for normal delivery and pickup charges that are included in the base shipping price from the Common Carrier. These costs shall be defined on the Common Carrier's website or in the contract the Contractor has with the Common Carrier; and
 - i. Delivery of a second Sample Data Report set or partial set, if requested by the SCM.
2. Canistner and Flow Controller Rental Pricing;
- a. Canistner rental and flow controller rental costs shall be price separately under this bid and will be paid as a separate line item. Each sampling point shall include the cost of one canister rental and one flow controller rental cost regardless if the one method, two methods, or three methods are analyzed from the canister;
 - b. A flow controller is required for every canister;
 - c. If due to high concentration of volatile organics at the sampling point, a decision is made by the Contract User to collect two canisters to separate the LL-TO-15 analysis from Method 3C and/or Method 25C, the cost of two canisters rental and flow controllers shall be included for each sampling point;
 - d. The unit price for the flow controller is for a controller set at 200 ml/min flow rate. All other flow rates are not covered by this unit price (see Section 3.4.8 for additional information); and
 - e. Shipping surcharge if samples shall be shipped with a hazardous designation in accordance with USDOT regulations. Surcharges include incremental costs for shipping samples as hazardous that are imposed by the common carrier and additional costs for shipping containers that meet the USDOT hazardous shipping package requirements, special canisters, placards and incremental labor time.

E. Payment for Dilutions;

If the Contractor is required to dilute and reanalyze a sample, the method and contract requires the submittal of two complete sets of analytical data, one for the first analysis and another for the analysis of the diluted sample. The Contractor is eligible for payment for both analyses based on the contract price. To be eligible for payment for analysis of the diluted sample, the Contractor shall demonstrate that the first analysis of the sample complied with the method and that the method required dilution and reanalysis of the sample. Only the method specific analytical cost line is to be used for the determination of the actual costs. The canister and flow controller rental cost are not be included in the cost determination.

Reanalysis of a sample is required when the initial analysis is outside the calibration range of the instrument. NJDEP will pay the Contractor extra money to dilute and reanalyze the sample. The amount paid to dilute and reanalyze will be the contract price for the analysis. To be eligible for this extra payment, the Contractor shall demonstrate that the dilution and reanalysis was conducted in accordance with the method and Section 3.0 of this contract. NJDEP will authorize payment for one dilution and reanalysis. NJDEP will not pay for a more than one dilution and reanalysis on the same sample.

For Example: An undiluted sample is analyzed for volatile organics and the concentration of tetrachloroethylene (PCE) exceeds the upper calibration range of the instrument. The Contractor dilutes the sample and reanalyzes the diluted sample in accordance with the analytical method. In this case, the laboratory dilutes the sample by a factor of 10, reanalyzes the diluted sample, and the concentration of PCE is now within the calibration range of the instrument. If the dilution and reanalysis of the sample is considered acceptable by NJDEP, the Contractor is eligible to receive two payments: 1) a payment for the original analysis and 2) a second payment for the dilution and reanalysis of the sample. Payment for the dilution and reanalysis will be the same as the original analysis;

F. Payment for Internal Standard Reanalysis;

If the Contractor is required to reanalyze a sample due to internal standard area responses being outside of control limits, the method and contract requires the submittal of two complete sets of analytical data, one for the first analysis and another for the second analysis. The Contractor is eligible for payment for both analyses based on the contract price. To be eligible for payment for the second analysis, the Contractor shall demonstrate that the first analysis of the sample complied with the method, that internal standard area responses were outside of the control limits, and that the method required reanalysis of the sample. Only the method specific analytical cost line is to be used for the determination of the actual costs. The canister and flow controller rental cost are not be included in the cost determination.

Reanalysis of a sample is required when the internal standard area responses in the initial analysis is outside the control limits established by the method. NJDEP will pay the Contractor extra money to reanalyze the sample when this occurs. The payment for reanalysis will be the same as the original analysis. To be eligible for the extra payment, the Contractor shall demonstrate that the initial analysis and reanalysis was conducted in accordance with the method and Section 3.0 this contract. NJDEP will authorize the reanalysis but will not pay for more than one reanalysis of the same sample;

G. Shipping Costs beyond Normal Delivery that is included in Unit Price;

The Contractor shall not be responsible for any shipping costs beyond those for normal delivery and pickup charges that are included in the base shipping price from the Common Carrier. These costs shall be defined on the Common Carrier's website. The State shall be responsible for the payment for all extra charges beyond the normal shipping charges to commercial or office locations that have routine pickup and delivery. The extra charges shall be listed on the Common Carrier's website to be considered billable to the State. If the Contractor has a contract with the Common Carrier, that specifies a rate for the extra charges, a current copy of these charges shall be forwarded to the SCM. The SCM shall provide a current copy of the charges to the Contract Users.

If the Contract User wants delivery or pickup of shipment of samples that require additional costs beyond normal delivery, he/she shall be aware of the additional charges. The Contract

User will inform the SCM at the time of notification of the engagement that they need shipping beyond the normal delivery. The extra cost will be factored into cost of the engagement.

The actual cost of the non-contract shipping shall be listed as a separate entry in the cost for the engagement. The Contractor shall bill the Contract User on the same invoice that is used for the sampling event. The required documentation for the payment of the extra shipping costs consist of copies of the Common Carrier's tracking forms listing the package tracking numbers and date of delivery. The actual costs shall be verified using the Common Carrier's website or the previously submitted documentation from the Contractor.

The following charges are the responsibility of the State not the Contractor if the Common Carrier routinely charges for these options. The charges shall be clearly documented on the Common Carrier's website for review by the State or if the Contractor has a contract with the Common Carrier, that specifies a rate for the extra charges, a current copy of these charges shall be forwarded to the SCM;

1. First AM Delivery (either to Contract User or Contractor);
2. Saturday Pickup (either from the Contract User or Contractor);
3. Saturday Delivery (either at the Contract User's location or the Contractor);
4. Carrier Pickup charges from a non Routine Delivery/Pickup location;
5. Any other additional charges imposed by the Common Carrier due to delivery or pickup request by the Contract User;
6. Fuel Surcharges;
7. Overnight Delivery to the Contract User; and
8. Any new charges imposed by the Common Carrier at a later date;

H. Price Clarifications;

Any price exceptions or modifications submitted with the bid may result in the bid being considered non-responsive to the RFP, and may result in the bidder being ineligible for contract award;

I. Contract Unit Pricing;

The term of this contract is three years. Bidders may supply different unit prices for each of the contract years on the price schedules. Contract year one will commence on the effective date of the contract and continue for twelve (12) months. Unit pricing for contract year two and three will commence in twelve month intervals after the expiration of year one. Any purchase order issued to the Contractor during any contract year will be reimbursed at the rates effective for that contract year. See Bid Schedule Form 1 for the Price Schedule;

Failure to provide a Unit Price for any line item shall result in a determination that the bid is non-responsive;

J Contract User Sampling Times Outside The Established 8 Hours Or 24 Hours For 6-Liter Containers And Not Included In Unit Price - (Indoor Air Only);

1. If the Contract Users requires a collection different from the standard 8-hour or 24-hour time frame for indoor air sampling only, this is a billable item outside the terms and conditions of this contract. This procedure cannot be used for 1-liter, 2.7-liter, or 3.2-liter canisters. The following procedures are required:

2. Contract User will make a written request to the SCM for a varied sampling time. The time will be specified in the request, as is the number of required 6-liter canisters. The request will be a minimum of seven (7) working days (not including weekends and holidays) prior to when the sample canisters are expected from the Contractor;
3. The Contractor will be contacted the SCM to determine if the Contractor can prepare flow controllers and canisters at the requested flow rate and sampling time frame. The Contractor shall submit a cost for this procedure. The Contractor can decline to do this procedure and suffer no penalty under the contract;
4. The cost of this calibration shall be provided in writing by the Contractor to the SCM and the Contract User. If approved by the Contract User, a written approval will be transmitted back to the SCM. The cost of this recalibration is outside the contract and will be paid separately by the Contract User; and
5. The Contractor shall be given a minimum of three (3) days, not including weekends and holidays, to properly calibrate and set the flow controllers for the specified time frame.

K. Multiple Laboratory Bidders - Price Schedule; and

Multiple Laboratory Bidders with more than one laboratory bidding on this contract shall submit ONLY ONE (1) SET of the Price Schedule (see Bid Schedule Form 1). The price bid will apply to all of the laboratories certified to perform analysis within a task utilized by the parent company for the analytical services covered by a task. Submittal of multiple sets of Price Schedules will result in the bid being considered non-responsive to the RFP; and

L. Analytical Methods and Price Schedules;

This contract cites specific parameters and corresponding analytical methods. The methods cited are the only acceptable methods. The laboratory may not substitute methods or alter the bid schedules in any manner. This includes adding or deleting analytes from the required lists.

4.4.5.3 C.O.D. TERMS

Cash On Delivery (C.O.D.) terms are not acceptable as part of a proposal and will be cause for rejection of a proposal.

4.4.5.4 CASH DISCOUNTS

Bidders are encouraged to offer cash discounts based on expedited payment by the State. The State will make efforts to take advantage of discounts, but discounts will not be considered in determining the lowest proposal.

- A. Discount periods shall be calculated starting from the next business day after the using agency has accepted the goods or services, received a properly signed and executed invoice and, when required, a properly executed performance security, whichever is latest; and
- B. The date on the check issued by the State in payment of that invoice shall be deemed the date of the State's response to that invoice.

4.4.6 COOPERATIVE PURCHASING

Not Applicable to This Procurement

5.0 SPECIAL CONTRACTUAL TERMS AND CONDITIONS

5.1 PRECEDENCE OF SPECIAL CONTRACTUAL TERMS AND CONDITIONS

The contract awarded as a result of this RFP shall consist of this RFP, addenda to this RFP, the Contractor's proposal, and any best and final offer, and the Division's Notice of Award.

Unless specifically stated within this RFP, the Special Contractual Terms and Conditions of the RFP take precedence over the State of NJ Standard Terms and Conditions accompanying this RFP.

In the event of a conflict between the provisions of this RFP, including the Special Contractual Terms and Conditions and the State of NJ Standard Terms and Conditions, and any addendum to this RFP, the addendum shall govern.

In the event of a conflict between the provisions of this RFP, including any addendum to this RFP, and the bidder's proposal, the RFP and/or the addendum shall govern.

5.2 CONTRACT TERM AND EXTENSION OPTION

The term of the contract shall be for a period of three (3) years. The anticipated "Contract Effective Date" is provided on the signatory page accompanying this RFP. If delays in the procurement process result in a change to the anticipated Contract Effective Date, the bidder agrees to accept a contract for the full term of the contract.

The contract may be extended for all or part of two (2) one-year periods. The Contractor shall be so notified of the Director's intent at least thirty (30) days prior to the expiration date of the existing contract. The Contractor shall respond within fifteen (15) days of the receipt of such notification indicating agreement with the extension. If the extension proposed by the Director is acceptable to the Contractor, notice of extension will be given to the Contractor by the Director in writing at the same terms, conditions, and pricing at the rates in effect in the last year of the contract or rates more favorable to the State.

5.3 CONTRACT TRANSITION

In the event that a new contract has not been awarded prior to the contract expiration date, as may be extended herein, it shall be incumbent upon the Contractor to continue the contract under the same terms and conditions until a new contract can be completely operational. At no time shall this transition period extend more than 180 days beyond the expiration date of the contract.

5.4 CONTRACT AMENDMENT

Any changes or modifications to the terms of the contract shall be valid only when they have been reduced to writing and signed by the Contractor and the Director.

5.5 CONTRACTOR RESPONSIBILITIES

The Contractor shall have sole responsibility for the complete effort specified in the contract. Payment will be made only to the Contractor. The Contractor shall perform the following:

A. The Contractor communicates with both the State Project Manager and Contract User;

- B. The Contractor coordinates all engagements with the SCM and/or the Contract User. The Contractor shall inform the SCM of their weekly sample capacity;
- C. The Contractor shall provide the SCM with written notification of any engagement refusal by telefax and letter. Notification shall detail the reasons for engagement refusal. Refusal of more than two (2) consecutive engagements may result in temporary suspension until the Contractor can demonstrate the ability to perform under the contract;
- D. The Contractor shall resolve minor problems and disputes through the SCM and/or the Contract Users;
- E. The Contractor shall respond to all questions and requests for information from the SCM and/or Contract User;
- F. The Contractor shall provide written notification to the SCM within 48 hours of receipt of any adverse action taken against the Contractor by any Federal, State, or Municipal entities affecting or with the potential for affecting the Contractor and its ability to perform services under this contract;
- G. The Contractor shall provide written notification to the SCM and the New Jersey Environmental Laboratory Certification Program within five (5) calendar days of initiating steps to merge with, or be acquired by another laboratory. The Contractor shall provide written notification of the completion of any merger, or acquisition within five (5) calendar days. Contact the New Jersey Department of the Treasury for required information. Failure to provide such notification will result in a contract suspension until such times as written information is provided. N.J.S.A. 7:18 2.13 also sets forth requirements for notification to the NJDEP;
- H. The Contractor shall submit a SOP certification chart and copies of all Method SOPs in accordance with Section 3.0 of this contract. The Contractor shall perform all subsequent work in accordance with the approved Method SOPs;
- I. The Contractor shall submit a Post Award Sample Engagement Shipment Notification Time Frame Schedule to the SCM in accordance with Section 3.0 of this Contract;
- J. The Contractor shall submit the Personnel Position Identification Certification Chart to the SCM within fifteen (15) days of award. The Contractor shall submit a new chart for the addition of any secondary corporate network laboratory;
- K. The Contractor shall submit all personnel changes to the SCM within fifteen (15) days of personnel assignment. The notification shall include all required contract documentation supporting the change and a revised Personnel Position Identification Certification Chart; and
- L. The Contractor is responsible for the professional quality, technical accuracy and timely completion and submission of all deliverables, services or commodities required to be provided under the contract. The Contractor shall, without additional compensation, correct or revise any errors, omissions, or other deficiencies in its deliverables and other services. The approval of deliverables furnished under this contract shall not in any way relieve the Contractor of responsibility for the technical adequacy of its work. The review, approval, acceptance or payment for any of the services shall not be construed as a waiver of any rights that the State may have arising out of the Contractor's performance of this contract.

5.6 SUBSTITUTION OF STAFF

Contractors shall have sufficient personnel to substitute for absent supervisors. If, during the course of the contract, the Contractor finds that he cannot provide Contractor personnel proposed in the bid proposal, the Contractor may provide substitute personnel with approval from the State. The Contractor shall forward a request to substitute staff to the SCM for consideration and approval. This request for approval shall be made in writing and shall include the following:

- A. Explain the reason(s) why the original person(s) cannot be provided;
- B. Demonstrate that the qualifications of the substitution are equal to or better than the originally proposed person(s);
- C. Warrant that the substitution will be provided at no additional cost to the State; and
- D. Include a resume and any other information which was required by this RFP for the original person(s).

No substitute personnel are authorized to begin work until the Contractor has received written approval to proceed from the SCM.

If it becomes necessary for the Contractor to substitute any management, supervisory or key personnel, the Contractor shall identify the substitute personnel and the work to be performed. The Contractor shall provide detailed justification documenting the necessity for the substitution. Resumes shall be submitted evidencing that the individual(s) proposed as substitute(s) have qualifications and experience equal to or better than the individual(s) originally proposed or currently assigned.

5.7 SUBSTITUTION OR ADDITION OF SUBCONTRACTOR(S)

Not applicable to this procurement

5.8 OWNERSHIP OF MATERIAL

All data, technical information, materials gathered, originated, developed, prepared, used or obtained in the performance of the contract, including, but not limited to, all reports, surveys, plans, charts, literature, brochures, mailings, recordings (video and/or audio), pictures, drawings, analyses, graphic representations, software computer programs and accompanying documentation and print-outs, notes and memoranda, written procedures and documents, regardless of the state of completion, which are prepared for or are a result of the services required under this contract shall be and remain the property of the State of New Jersey and shall be delivered to the State of New Jersey upon thirty (30) days notice by the State. With respect to software computer programs and/or source codes developed for the State, the work shall be considered "work for hire", i.e., the State, not the Contractor or subContractor, shall have full and complete ownership of all software computer programs and/or source codes developed. To the extent that any of such materials may not, by operation of the law, be a work made for hire in accordance with the terms of this Contract, Contractor or subContractor hereby assigns to the State all right, title and interest in and to any such material, and the State shall have the right to obtain and hold in its own name and copyrights, registrations and any other proprietary rights that may be available.

Should the bidder anticipate bringing pre-existing intellectual property into the project, the intellectual property shall be identified in the proposal. Otherwise, the language in the first paragraph of this section prevails. If the bidder identifies such intellectual property ("Background

IP") in its proposal, then the Background IP owned by the bidder on the date of the contract, as well as any modifications or adaptations thereto, remain the property of the bidder. Upon contract award, the bidder or Contractor shall grant the State a non-exclusive, perpetual royalty free license to use any of the bidder/Contractor's Background IP delivered to the State for the purposes contemplated by the contract.

5.8.1 STATE PATENT RIGHTS AND COPYRIGHTS

Subject to Federal regulations and/or to any special agreements with the State, any discovery, invention or other material developed by the Contractor in the course of his duties under this contract is subject to patent and copyright in the name of the State.

5.8.2 FEDERAL PATENT AND COPYRIGHT REGULATIONS

The State intends to apply for Federal reimbursement of the costs of this contract. Therefore, Federal requirements regarding inventions and discoveries are hereby made part of this Contract. The Contractor is hereby notified, pursuant to the provisions of 40 CFR 35.6595 (a) (3) that the USEPA has copyright provisions stated in 40 CFR 35.6450 and 40 CFR 31.34.

5.9 SECURITY AND CONFIDENTIALITY

5.9.1 DATA CONFIDENTIALITY

All financial, statistical, personnel, customer and/or technical data supplied by the State to the Contractor are confidential. The Contractor shall secure all data from manipulation, sabotage, theft or breach of confidentiality and be in compliance with the NJDEP Certification Program. The Contractor is prohibited from releasing any financial, statistical, personnel, customer and/or technical data supplied by the State that is deemed confidential. The following shall not be considered confidential information of the State and shall not be subject to the provisions of this Section 5.9.1: Any information that (a) was in Contractor's possession before receipt from the State; (b) is independently developed or acquired by or for Contractor without use of the State's proprietary information; (c) is rightfully received by Contractor from a third party without a duty of confidentiality; (d) was disclosed by the State to a third party not under an obligation of confidentiality; or (e) is or becomes available to the public through no fault of Contractor. Contractor will not release any confidential information to a third party without the consent of the State unless required in order to comply with judicial or administrative process. Prior to releasing the State's confidential information in response to judicial process, the Contractor shall give the State advanced written notice of the subpoena, if not legally prohibited, and provide the State the opportunity to object to the required disclosure. Any other use, sale, or offering of this data to a third party without the State's consent in any form by the Contractor, or any individual or entity in the Contractor's charge or employ, will be considered a violation of this contract and may result in contract termination and the Contractor's suspension or debarment from State contracting. In addition, such conduct may be reported to the State Attorney General for possible criminal prosecution. The Contractor shall be liable to the State for a breach of confidentiality subject to the insurance requirements set forth in this RFP.

5.9.2 FINANCIAL LIABILITY ASSOCIATED WITH BREACH OF CONTRACT

The Contractor shall assume total financial liability incurred by the Contractor associated with any breach of confidentiality.

5.10 NEWS RELEASES

The Contractor is not permitted to issue news releases pertaining to any aspect of the services being provided under this contract without the prior written consent of the Director.

5.11 ADVERTISING

The Contractor shall not use the State's name, logos, images, or any data or results arising from this contract as a part of any commercial advertising without first obtaining the prior written consent of the Director.

5.12 LICENSES AND PERMITS

The Contractor shall obtain and maintain in full force and effect all required licenses, permits, and authorizations necessary to perform this contract. The Contractor shall supply the SCM with evidence of all such licenses, permits and authorizations. This evidence shall be submitted subsequent to the contract award. All costs associated with any such licenses, permits and authorizations shall be considered by the bidder in its proposal.

5.13 CLAIMS AND REMEDIES

5.13.1 CLAIMS

All claims asserted against the State by the Contractor shall be subject to the New Jersey Tort Claims Act, N.J.S.A. 59:1-1, et seq., and/or the New Jersey Contractual Liability Act, N.J.S.A. 59:13-1, et seq.

5.13.2 REMEDIES

Nothing in the contract shall be construed to be a waiver by the State of any warranty, expressed or implied, of any remedy at law or equity, except as specifically and expressly stated in a writing executed by the Director.

5.13.3 REMEDIES FOR FAILURE TO COMPLY WITH MATERIAL CONTRACT REQUIREMENTS

In the event that the Contractor fails to comply with any material contract requirements, the Director may take steps to terminate the contract in accordance with the State of NJ Standard Terms and Conditions, authorize the delivery of contract items by any available means, with the difference between the price paid and the defaulting Contractor's price either being deducted from any monies due the defaulting Contractor or being an obligation owed the State by the defaulting Contractor as provided for in the State administrative code, or take any other action or seek any other remedies available at law or in equity.

5.14 LATE DELIVERY

The Contractor shall immediately advise the SCM of any circumstance or event that could result in late completion of any task or subtask called for to be completed on a date certain.

5.15 RETAINAGE

See Section 5.23.

5.16 ADDITIONAL WORK AND/OR SPECIAL PROJECTS

The Contractor shall not begin performing any additional work or special projects without first obtaining written approval from both the SCM and the Director.

In the event of additional work and/or special projects, the Contractor shall present a written proposal to perform the additional work to the SCM. The proposal should provide justification for the necessity of the additional work. The relationship between the additional work and the base contract work shall be clearly established by the Contractor in its proposal.

The Contractor's written proposal shall provide a detailed description of the work to be performed broken down by task and subtask. The proposal should also contain details on the level of effort, including hours, labor categories, etc., necessary to complete the additional work.

The written proposal shall detail the cost necessary to complete the additional work in a manner consistent with the contract. The written price schedule shall be based upon the hourly rates, unit costs or other cost elements submitted by the Contractor in the Contractor's original proposal submitted in response to this RFP. Whenever possible, the price schedule should be a firm, fixed price to perform the required work. The firm fixed price should specifically reference and be tied directly to costs submitted by the Contractor in its original proposal. A payment schedule, tied to successful completion of tasks and subtasks, shall be included.

Upon receipt and approval of the Contractor's written proposal, the SCM will forward same to the Director for the Director's written approval. Complete documentation from the Using Agency, confirming the need for the additional work, will be submitted. Documentation forwarded by the SCM to the Director will include all other required State approvals, such as those that may be required from the State of New Jersey's Office of Management and Budget and NJOIT.

No additional work and/or special project may commence without the Director's written approval. In the event the Contractor proceeds with additional work and/or special projects without the Director's written approval, it shall be at the Contractor's sole risk. The State shall be under no obligation to pay for work performed without the Director's written approval.

5.17 MODIFICATIONS AND CHANGES TO THE STATE OF NJ STANDARD TERMS AND CONDITIONS

"The indemnification provisions set forth in the State of NJ Standard Terms and Conditions, Section 4.1 shall prevail."

5.18 LICENSES, PERMITS AND CERTIFICATES

5.18.1 MAINTENANCE OF LICENSES

In signing and submitting a bid proposal, the bidder warrants that he has and shall maintain, during the term of this contract, all licenses, certifications, authorizations, or any documents required by the Federal government, State government, County and Municipal governments, and international authorities, wherever necessary, to perform this contract.

5.18.2 ADVERSE NOTIFICATION

The Contractor shall promptly notify the State of any disciplinary action or change in the status with regard to any license, permit or other authorization required by law or this RFP.

5.18.3 NOTICE OF USEPA DISCIPLINARY ACTION

The Contractor shall promptly notify the State at any time prior to or after the award of this contract in the event the Contractor receives any communication from the Assistant Administrator for Enforcement, USEPA or its designee, indicating that any facility which he proposes to use for the performance of the contract is under consideration to be listed on the USEPA List of Violating Facilities or any similar New Jersey list of violating facilities or that such facility is the subject of an enforcement action by any law, regulation or condition of the facility's permit. As a result of such notification, the State may determine to reject that facility for use under this contract.

5.18.4 NON COMPLIANCE WITH LABORATORY STANDARDS

Throughout the duration of the contract, the laboratory of any Contractor providing laboratory services pursuant to this contract shall continuously be in compliance with the standards for laboratory services. If the State becomes aware, either through inspections or another source of information, that the laboratory of the Contractor is not in compliance with said standards, such non-compliance shall be sufficient grounds to permit the State to reject the bid, decline engagement of the Contractor after award, suspend work with the Contractor after engagement, and/or terminate this contract with the Contractor.

- A. Laboratory Certification: It is important to note that in accordance with NJDEP regulations as published in the New Jersey Administrative Code 7:18 (N.J.S.A. 7:18), the laboratory that analyzes samples collected under this contract shall be certified by the New Jersey Environmental Laboratory Certification Program. The list of required certifications that relate to each task is attached as Appendix 4;

The following is from N.J.S.A. 7:18-1.4(a and (b):

“N.J.S.A. 7:18-1.4 Certification Program Requirements

1. A laboratory that analyzes samples for the purpose of establishing compliance with any regulatory program shall obtain and maintain certification as a certified environmental laboratory in accordance with this chapter. An analysis performed by a laboratory that is not a certified environmental laboratory does not establish compliance with any regulatory program; and
2. When analyzing regulatory samples, a certified environmental laboratory shall perform only those methods for which it has received certification or has received approval to use as Alternate Test Procedures (ATPs) pursuant to N.J.S.A. 7:18-2-20.”

- B. NELAP and Laboratory Certification;

New Jersey participates in the National Environmental Laboratory Accreditation Program (NELAP). NELAP provides a voluntary mechanism for participating States to cross-recognize each other's laboratory certifications. For this RFP, at the time of the bid opening every bidding laboratory shall have the NJDEP Environmental Laboratory Certifications or New Jersey Primary NELAP Accreditations, or New Jersey Secondary NELAP Accreditations as specified in Appendix 4. Each bidder shall identify the laboratories that will be performing work. See Section 3.2.1 for the requirements.

Laboratories that or are in the applied status as of the date and time of the Bid Opening, are not eligible for contract award, and will be rejected as both non-responsible and non-responsive to the bid submission requirements.

At no time will laboratory certification in another State alone satisfy the laboratory certification requirements of this contract. The NJDEP OQA will answer questions regarding laboratory certification and accreditation. You may contact that office at:

NJDEP - OQA
401 East State Street
PO Box 420, Mail Code 401-02D
Trenton, New Jersey 08625-0420
Phone: (609) 292-3950
Fax: (609) 777-1774

5.19 COPYRIGHT AND PATENT LIABILITY

The Contractor warrants that he will hold and save the State of New Jersey, its officers, agent, servants and employees, harmless from liability of any nature or kind, for or on account of the use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in the performance of this contract. This is in addition to and in no way limits any other indemnification provision in the contract.

5.20 INDEMNIFICATION BY THE CONTRACTOR

The Contractor shall defend, indemnify, protect, and save harmless the State, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or alleged to arise out of any act, error, or omission in the performance of this contract resulting from the negligence, gross negligence, willful misconduct, intentional tort, fraud, bad faith, or criminal behavior of the Contractor, his agents, servants, employees and subContractors. The Contractor shall, at his own expense, appear, defend and pay all charges for attorneys and all costs and other expenses arising from such suit or claim incurred in connection therewith. If any judgment shall be rendered against the State for which indemnification is provided under this paragraph, the Contractor shall, at his own expense, satisfy and discharge the same. The State shall, as soon as practicable after a claim has been made against it, give written notice thereof to the Contractor, along with full and complete particulars of the claim. If the suit is brought against the State or any of its agents, servants, and employees, the State shall expeditiously forward or have forwarded to the Contractor every demand, complaint, notice, summons, pleading or other process received by the State or its representatives.

It is expressly agreed and understood that any approval by the State of services performed and/or reports, plans or specifications provided by the Contractor shall not operate to limit the obligations of the Contractor assumed in this section or in the other provisions of this contract.

5.21 INSURANCE - PROFESSIONAL LIABILITY INSURANCE

Section 4.2 of the State of NJ Standard Terms and Conditions regarding insurance is modified with the addition of the following section regarding Professional Liability Insurance:

“d. Professional Liability Insurance: The Contractor shall carry Errors and Omissions, Professional Liability Insurance and/or Professional Liability Malpractice Insurance sufficient to protect the Contractor from any liability arising out the professional obligations performed pursuant to the requirements of the contract. The insurance shall be in the amount of not less than \$2,000,000 and in such policy forms as shall be approved by the State. If the Contractor has claims-made coverage and subsequently changes carriers during the term of the contract, it shall

obtain from its new Errors and Omissions, Professional Liability Insurance and/or Professional Malpractice Insurance carrier an endorsement for retroactive coverage.”

5.22 PROJECT SCHEDULE, CHANGE ORDERS, TERMINATION AND EXTENSIONS

The Contractor shall perform all work required by the RFP according to the schedules contained in the RFP, his bid, and any subsequent schedules and agreements between the parties. The Contractor understands and agrees that the term and scope of the contract shall also be governed by the following provisions.

5.22.1 WORK SCHEDULES

The period of performance for this contract shall be three (3) years. All laboratory analysis performed in accordance with the SOW shall be completed within the schedule outlined in Section 3.0, unless a work stoppage order, a suspension of work, authorized work delay, or a change order resulting in an extension of the schedule is issued by the State.

5.22.2 DELAY BY CONTRACTOR

- A. The Contractor is responsible for completing the Scope of Work (Section 3.0) according to the approved project work schedules. Any unauthorized delay may subject the Contractor to contract termination;
- B. The State may authorize an extension of either the schedule for individual tasks within the project or the schedule for the whole project on a day to day basis for delays caused by events which could not reasonably be anticipated and which are beyond the control of the Contractor. Such causes include, but are not limited to, actions by employees or other Contractor's employed by the State, unanticipated work changes ordered by the State, strikes, lockouts, fire, delays caused by common carriers, unavoidable casualties, work stoppage orders and work suspension orders;
- C. The Contractor shall request authorization for a schedule extension promptly when he learns of the potential cause for delay and in any case, written confirmation and justification of the delay shall be submitted within five (5) days of the event which caused the delay. The Contractor shall submit any request for extension to the SCM; and
- D. Any extension of a task schedule within the overall project schedule shall be approved in writing by NJDEP. Any extension of the project schedule shall be approved as a written change order by both NJDEP and the Director.

5.22.3 WORK STOPPAGE ORDER

- A. The State ContractManager and/or the Director may, at any time, direct the Contractor to stop work and not complete a specific analysis being performed under this contract. Such a Work Stoppage Order shall be made orally by the State and followed up with written notice;
 - 1. In cases where the SCM orally directs the Contractor to immediately stop all work or portions of work for cause, it shall be the Contractor's responsibility to note on the analysis sheets the name of the State employee who contacted the laboratory and issued the oral Work Stoppage Order with the date and time of such notification. The reason for the order shall be stated orally by the State employee who contacted the Contractor and shall be confirmed in writing. The Contractor shall provide the State with all analytical data derived

from the sample up to the time of the notification and a description of the costs incurred, to be used to derive an equitable adjustment; and

2. The primary reasons for issuance of a Work Stoppage Order include but are not limited to, the NJDEP's discovery of the use of improper sampling techniques, failure of the laboratory to maintain required certifications and permits, failure of the laboratory to pass a laboratory audit, and discovery that the sample holding times have been exceeded. The above examples shall not be used to limit the right of the State to issue a Work Stoppage Order for reasons other than what is listed above;
- B. The State may order the Contractor in writing to suspend, delay or interrupt all or any part of the work performed under this contract for such period of time as the State may determine to be appropriate for the convenience of the State; and
 - C. Where the Work Stoppage is not the result of the Contractor's fault, the Contractor may be eligible to file a request for additional compensation for delay caused by the State as described in Section 5.13.

5.22.4 CONTRACT MODIFICATION

- A. Any modifications of the price, Scope of Work or terms and conditions of the contract shall be done by written contract modification approved by the Director;
- B. The Director may at any time, without notice to any surety, issue a written contract modification which changes the work within the general scope of this contract, including but not limited to changes:
 1. In the specifications (including changes in methodology, parameters, etc.);
 2. In the time, method or amount of performance of the work; and
 3. In the facilities, equipment, materials, or services which will be furnished by the State.
- C. The Director may recognize as a contract modification any other written order (including a direction, instruction, interpretation or determination) which has been authorized by the Director and which the Director determines has caused a change in the work, provided the Contractor has given the State timely written notice within five (5) days of the State's written order stating the date, circumstances and source of the State's order and why the Contractor regards the order as a change in the work. The Contractor shall justify the claim through submission of an Analysis and Documentation of Claim within thirty (30) days of the alleged contract modification;
- D. The Director may also authorize a contract modification where the Contractor encounters a delay caused or approved by the State or where the NJDEP has asked the Contractor to perform emergency services which could not await the execution of written authorization from the Director;
- E. If any contract modification under this clause causes an increase or decrease in the Contractor's cost or the time required to perform any part of the work under this contract, the Director shall make an equitable adjustment of the price and/or schedule for the contract;
- F. Except as provided in this clause, no order, statement or conduct of the State shall be treated as a contract modification or entitle the Contractor to an equitable adjustment;

- G. No request by the Contractor for any equitable adjustment shall be allowed if made after final payment for work under this contract;
- H. Except for emergency services specifically authorized as such by the NJDEP, no services beyond the contract's requirements for which the Contractor expects additional compensation should be furnished without the written authorization of the Director;
- I. No contract modification or claim by the Contractor will be processed until the State's Contract and Modification and Proposal Form (DWM 042) has been completed, signed and submitted by the Contractor; and
- J. Methodology Changes and Added Parameters

If during the course of the contract period NJDEP decides to change a required methodology or decides to add new parameters and methodologies, the Contractor shall be notified and shall be allowed to make an equitable adjustment to their price. The mechanism for enacting such changes to the Unit Prices shall be as follows:

1. All NJDEP Offices, Bureaus and Divisions shall communicate their need for changed methodologies or new parameters to the SCM;
2. The SCM will communicate the needed change to all NJDEP Contract Users and the Purchase Bureau in the Treasury Department. The SCM shall also notify all affected Contractors in writing of the needed change in methodology or added parameters. Contractors will be allowed at least two (2) weeks to provide pricing for the new methodologies and/or parameters;
3. Following receipt of responses from the Contractors, the SCM shall transmit a request to add the new pricing to the Department of the Treasury, Purchase Bureau. Following Purchase Bureau approval, the SCM shall notify all users and the Contractors that the new unit prices are in effect for the duration of the contract;
4. This procedure shall be used only to change analytical methodologies or to add new parameters and analytical methodologies. This section shall not be used to change the basic Scope of Work or add new types of work to the Term Contract; and
5. Once the new parameters of changed methodologies are added to the contract, they shall be considered in the RFP engagement procedures.

5.22.5 SUSPENSION AND TERMINATION

- A. This contract may be suspended or terminated:
 1. In whole or in part by the State in the event of a material default or substantial failure of the Contractor to fulfill the contract;
 2. In whole by the Contractor in the event of substantial failure by the State to fulfill its contract obligations;
 3. In whole or in part by the State for its convenience.
- B. Suspension or termination may be affected only after giving the other party:
 1. No less than ten (10) days written notice by certified mail; and,

2. An opportunity for consultation.

C. Suspension;

The SCM may suspend Contractors or individual laboratories of Multiple Laboratory Contractors from receiving engagements to provide services under this contract on a task basis. Suspensions can occur due to, but not limited to the following:

1. Failure to pass an announced or unannounced inspection of the laboratory performed in accordance with the Regulations Governing Laboratory Certification and Standards of Performance, N.J.S.A. 7:18;
2. Failure to acknowledge correspondence, or rectify deficiencies arising from announced or unannounced compliance inspections;
3. Failure to acknowledge correspondence or rectify deficiencies arising from deficiencies in the data deliverables;
4. Failure to perform the Contractor Responsibilities specified in Section 3.0 and other sections of this RFP;
5. Failure to maintain the required NJDEP Laboratory Certifications;
6. Suspension of a Single Laboratory Contractor
 - a. Suspension of a Single Laboratory Contractor for a parameter will result in suspension of the Contractor for the specific task affected. The Contractor may still be eligible for work awarded in unrelated tasks; and
 - b. The suspension remains in effect until the suspended laboratory remedies the deficiencies;
7. Suspension of a Multiple Laboratory Contractor; and
 - a. Suspension differs for this type of Contractor. Suspension of a specific laboratory for a parameter will result in the suspension of that specific laboratory for the specific task affected. However, other laboratories of the Multiple Laboratory Contractor may remain active and the suspended laboratory will remain eligible for work in awarded but unrelated tasks; and
 - b. Suspension of the specific laboratory remains in effect until the Contractor remedies the laboratory's deficiencies.
8. If a Contractor is suspended or decertified under the NJDEP Laboratory Certification Program N.J.S.A. 7:18-1.1 et seq., the Single Laboratory Contractor or affected laboratory of a Multiple Laboratory Contractor shall not be engaged for the affected task until the suspension is withdrawn or until certification is regained.

D. Termination;

1. Upon termination, the State shall determine an equitable adjustment of the contract price as follows:

- a. If termination for default is effected by the State, an equitable adjustment in the price provided for in this Contract shall be made for work successfully completed prior to termination, but (a) no amount shall be allowed for anticipated costs or profit on unperformed services or other work, (b) no amount shall be allowed for termination settlement costs incurred by the Contractor relating to commitments which had become firm prior to the termination, and (c) any payment due to the Contractor at the time of termination may be reduced to cover any additional costs to the State because of the Contractor's default; and
 - b. If termination for default is effected by the Contractor or if termination for convenience is effected by the State, an equitable adjustment for any termination shall provide payment to the Contractor for services rendered and expenses incurred prior to the termination, and for termination settlement costs reasonably incurred by the Contractor relating to commitments which had become firm prior to the termination. The equitable adjustment shall include a reasonable profit for services or other work performed.
2. Upon receipt of a termination notice, the Contractor shall:
 - a. Promptly discontinue all affected work (unless the notice directs otherwise), and;
 - b. Deliver or otherwise make available to the State all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by the Contractor in performing this contract, whether completed or in process.
 3. Upon termination, the State may take over the work and award another contract to complete the work;
 4. If after termination for failure of the Contractor to fulfill contractual obligations, it is determined that the Contractor had not failed to fulfill the contractual obligations, the termination shall be deemed to have been for the convenience of the State;
 5. The State may terminate this contract in whole (entire contract) for material fault or substantial failure of the Contractor to meet the terms and conditions of this contract. Material faults and substantial deficiencies include but are not limited to the following:
 - a. Failing to rectify personnel and or Quality Assurance Plan deficiencies;
 - b. Refusing NJDEP OQApersonnel entry during announced or unannounced compliance inspections performed in accordance with the Regulations Governing Laboratory Certification and Standards of Performance N.J.S.A. 7:18; and
 - c. Breaching Chain of Custody on a recurring basis [more than two (2) occasions].

5.23 PAYMENT

All State Agencies using this contract are required to provide the contract with the purchase orders and payment voucher document set. If the Contractor does not receive a complete set upon engagement, the Contractor shall contact the SCM regarding the failed submittal. The SCM will contact the Engagement Manager and have the missing documents sent to the Contractor.

- A. This contract requires Contractors to submit two New Jersey Payment Vouchers with Vendor Invoices (and supporting documentation) to the State. One is for 80% of the amount due and a second is for 20% of the amount due. The SCM or Contract User will verify that the correct

Purchase Order was used, sample and dilutions/reanalyses numbers are correct, and that all calculations based on analytical data that was submitted to the State in the data reports is correct. When verified, the entire package will be forwarded for processing and payment. If errors are detected, the Contractor will be directed to resolve the errors and may be required to submit revised invoices;

- B. The State may determine that the data package is not compliant after the 80% Payment Voucher/Vendor Invoice has been paid. In this case, the SCM may withhold payment of the 20% retainage and may seek reimbursement from the Contractor for all or part of the 80% payment, depending on the extent of the noncompliance. Reimbursement will take the form of a letter from the SCM to the Contractor requesting a reimbursement from the Contractor. The Contractor should then reimburse the SCM by check made out to the Treasurer, State of New Jersey;

See below for specific payment details. Also, see Appendix 5 for a complete discussion of reasons why NJDEP will not pay for delivered data reports;

- C. If a Contractor receives a request for reimbursement of the 80% payment and fails to reimburse State within 60 days, the SCM will drop the Contractor to the Alternate Contractor position. That in turn will cause the Alternate Contractor to become the Prime Contractor. The SCM will notify the Contractors, other State Agencies using the Contract and Contract Users of this change. New engagements will then go to the new Prime Contractor.

At such time as the Contractor reimburses the State for the 80% payment or portion thereof, the SCM will return the Contractor to his prior position in the engagement order and so notify the Contractors, other State Agencies using the Contract and Contract Users.

Failure to reimburse State for more than 120 days may result in the SCM issuing a Stop Work Order (SWO) to the Contractor suspending the Contractor from all work under the contract and issuing a formal complaint to the Department of the Treasury that may result in contract termination.

A suspended Contractor may not perform any work under this contract until the suspension is lifted;

- D. General Requirements for submittal of Payment Vouchers and Vendor Invoices (Electronic and Non Electronic Invoices);
 - 1. All payment vouchers and vendor invoices submitted shall indicate the name of the contract and the name and address of the Contractor. The invoice should then identify the job number, the samples (including dilutions and reanalyzed samples) analyzed by sample numbers, the unit price for analysis, the required analysis, unused shipping canisters cost, extra shipping charges and the total amount;
 - 2. The supporting documentation required from the Contractor is a copy of the Case Narrative, copies of any correspondence that directed the Contractor regarding sample analysis or cancellation of analysis and a NJDEP Form A-1A. The Form A-1A can be revised by the Contractor to list all the dilutions or reanalyses that were conducted. The affected fractions shall also be noted on the form;
 - 3. Payment for unused canisters (including the canister rental and flow controller rental costs) cancelled analysis, and shipping costs not included in the unit price are not subject to the 20% retainage. These costs shall be billed on the 80% invoice at the 100% level. These costs will be approved and paid with the 80% invoice for payment. The following

information shall be provided on the 80% invoice or on supporting documentation attached to these Payment Vouchers. These costs are as follows:

- a. If a canister is returned unused and the 10% charge is applied then it shall be listed separately from the analyses conducted. The canister rental and flow controller rental charge for the unused canister is listed separately from the costs the canisters associated with samples that were analyzed;
 - b. If the SCM directs the Contractor to stop work on a sample after the analysis has been initiated, then the Contractor is eligible for full payment. These samples shall be listed separately from the completed analyses. A copy of the instructions from the SCM shall be included in the supporting documentation;
 - c. If a non-routine sample collection time has been approved for the sampling event and additional costs had been approved by the SCM, then the canisters using this different flow rate shall be listed separately. Also the negotiated costs for the non routine flow rates shall be listed separately from the canisters. A copy of the instructions from the SCM shall be included in the supporting documentation; and
 - d. If Any extra shipping costs incurred by the Contractor based on the shipping requests of the Contract User and/or Using agency shall be listed as a separate entry. If supporting documentation is required to be submitted, it shall be added to the 80% invoice. Shipping charges are not prorated for any invoice.
4. The following information shall be provided on the 80% Payment Voucher/vender invoice and the 20% retainage Payment Voucher/vender invoice or on supporting documentation attached to these Payment Vouchers:
- a. Each sample shall be listed individually by the Contract Users field sample number. The Contractor's internal sample number shall follow the Contract Users sample identification number. A copy of the Form A-1A shall be submitted with the documentation;
 - b. For each sample, the Payment Voucher shall specify if the sample was a 48 hour, a seven (7) day or fourteen (14) day Turn Around Time (TAT), the line number and analysis name specified on the Price Schedule;
 - c. Next to each billable fraction analyzed should appear the contract price as specified on the price schedules;
 - d. The number of dilutions and reanalyses shall be listed separately on the invoice from the actual samples. Dilutions shall be listed separately from reanalyses;
 - e. The Contractor shall add the following sample suffixes to the Contract User's sample numbers to differentiate related sample analysis;

XXXXX	The five Xs represent a DEP Sample Number
XXXXXDL	The DL suffix indicates that the analytical results are a result of dilution to DEP sample XXXXX.
XXXXXRE	The RE suffix indicates that the analytical results are a result of reanalysis due to internal standard response deficiency in the initial analysis to DEP sample XXXXX.

5. In order for an invoice to be complete it shall be delivered with all appropriate and required attachments. An invoice is complete if it is submitted on a State of New Jersey Payment Voucher Form, is filled out correctly, and has all required information and attachments;
 6. In some special instances, the Contractor will be eligible for an analysis. When a sample analysis is properly cancelled by a Contract User, the following information shall be submitted with the Payment Voucher/Vendor Invoice for which a partial payment is requested:
 - a. The Contract User's Sample Number followed by the Contractor's internal sample identification number;
 - b. If the sample analysis was cancelled prior to the initiation of analysis of the sample fraction, only the numbers of cancelled samples are to be listed;
 - c. The line number and analysis name specified on the Price Schedule shall be specified for each fraction that the Contractor is requesting partial payment;
 - d. The contract price for the analysis noted in the Price Schedules shall be shown multiplied by the percentage of partial payment authorized in this contract. The calculated total amount requested for partial payment shall then be shown; and
 - e. All correspondence from the SCM and any Contract User that provided instructions to the Contractor regarding cancellation of the sample analysis.
 7. There may be other circumstances where this contract allows partial payment (i.e. reimbursement of transportation insurance mistakenly ordered by a Contract User). The Contract User, the SCM and the Contractor shall all agree that the Contractor is eligible for such payment and the SCM shall tell the Contractor what documentation is needed to support a payment voucher and vendor invoice.
- E. All analysis work performed under this contract will be subject to a 20% retainage. The retainage will be paid after the Contract User evaluates the data package, validates the data and performs all QA/QC reviews on the data package to assure that it complies with the contract or after one year, whichever comes first. Payment of the retainage may be withheld permanently for cause.

The Contractor shall submit a separate payment voucher/vendor invoice package to receive payment for the retainage. Therefore, this contract requires the Contractor to submit two payment voucher/vendor invoice packages for each billing, one for 80% of the amount due and another for the 20% retainage.

The 20 % Retainage will not be made for the following items:

1. If a canister is returned unused by the Contract User;
2. If the SCM directs the Contractor to stop work on a sample after the analysis has been initiated, then the Contractor is eligible for full payment. These samples will be listed separately from the completed analyses. A copy of the instructions from the SCM shall be included in the supporting documentation;
3. If a Contract User collects samples, ships the canisters to the Contractor and then cancels the analysis through the SCM subsequent to the Contractor's receipt of the canisters but before the Contractor performs any analysis;

4. If the Contract User delivered samples that cannot be analyzed because of incomplete sample collection that leads to a residual vacuum being outside specifications (-10 in Hg) and approval not to analyze is given by the SCM after consultation with the site specific project team;
5. If chain of custody non-compliance by the Contract User is determined by the State and the State decides to terminate the analysis prior to the initiation of sample analysis;
6. For any other actions by the Contract User or transporter action that causes the sample, upon delivery, to be non-compliant;
7. If a non-routine sample collection time has been approved for the sampling event and additional costs had been approved by the SCM, then the canisters using this different flow rates shall be listed separately. Also the negotiated costs for the non-routine flow rates shall be listed separately from the canisters. A copy of the instructions from the SCM shall be included in the supporting documentation;
8. Any extra shipping costs incurred by the Contractor based on the shipping requests of the Contract User and/or Using agency shall be listed as a separate entry. If supporting documentation is required to be submitted, it shall be added to both copies of the invoice. Shipping charges are not prorated for any invoice; and
9. If canisters are returned unused by the Contract User or the analysis is cancelled for any of the above reasons as specified in this Section I above, the canister rental and flow controller rental for the unused canister is not subject to retainage.

5.23.1 PROCEDURES FOR PAYMENT - (PAYMENT VOUCHERS AND INVOICES)

Payment under this contract will be based on completion of specific engagements issued under this contract and approval by the SCM of any deliverable work products. No payments shall be made to the Contractor for expenses other than those shown on the price schedule or otherwise allowed under this contract unless a contract modification is issued. Any invoice for compensation pursuant to a contract modification, delay claim or other request for additional compensation beyond the contract amount shall be accompanied by documentation sufficient and adequate for the SCM to recognize and accept the invoice. Payment will be conditioned on the following:

- A. Two (2) New Jersey Payment Vouchers/Vendor Invoices packages shall be submitted upon delivery of the related data reports and associated electronic deliverables. One (1) payment voucher/vendor invoice set shall be completed for eighty percent (80%) of the total amount due and the second payment voucher/vendor invoice set for retainage shall be completed for twenty percent (20%) of the amount due. The exception is for the extra costs specified in Section 5.23) that allow 100% of these costs to be billed on the 80% invoice. All such Payment Vouchers/Vendor Invoices rendered by the Contractor to the NJDEP or other State Using Agencies shall be paid as follows:
 1. Upon receipt of each final data report, the SCM shall assure that the data report was delivered and contains all the major components;
 2. The Contract User is required to review the 80% invoice, and if the data is not validated the 20% invoice also, to verify that the sample and dilutions/reanalyses numbers are correct, and that all calculations in the Payment Voucher/Vendor Invoice and associated

documentation are correct. When verified, the Payment Voucher/Vendor Invoice and associated documentation will be forwarded for processing and payment. If errors are detected, the Contractor will be directed to resolve the errors and may be required to submit revised invoices;

3. If the data is validated, the SRP validation section is required to review the 20% invoice verify that the sample and dilutions/reanalyses numbers are correct, and that all calculations in the Payment Voucher/Vendor Invoice and associated documentation are correct. When verified, the Payment Voucher/Vendor Invoice and associated documentation will be forwarded for processing and payment. If errors are detected, the Contractor will be directed to resolve the errors and may be required to submit revised invoices;
4. The State shall evaluate the Contractor's final data report. If the data report is acceptable, the SCM/Contract user shall authorize payment of the 20% retainage Payment Voucher/Vendor Invoice.

B. NJDEP Electronic Submittals of Payment Vouchers and Vendor Invoices;

All Contractors for Site Remediation Program and Emergency Response Program will be required to submit to NJDEP-SRP all Payment Vouchers and the backup documentation in a Adobe Acrobat format to an electronic mailbox.

ELECTRONIC MAILBOX ADDRESS: The SRP electronic mail box has the following email address: SRP_CFS_Invoices@dep.state.nj.us (Note there is one underline space between SRP_CFS and CFS_Invoices.).

OVERALL GENERAL REQUIREMENTS

1. The Contractor is required to use the latest version of Adobe Acrobat Software in the generation of the documents;
2. Any Payment Voucher Set that has to be resubmitted shall be sent to the same mailbox. The requirements for revisions are in Section entitled "General Electronic Requirements";
3. The Contractor cannot send a Payment Voucher Set to a NJDEP employee for submittal to the SRP electronic mail box;
4. The Contractor has the sole responsibility to ensure that the Payment Voucher submitted to the NJDEP for approval is the correct Payment Voucher for that Purchase Order;
5. If there is any required information from the preprinted Payment Voucher that is missing from the submittal, it will be automatically rejected;
6. Crossing out of Purchase Order numbers, fund numbers or account numbers with handwritten correction by the Contractor shall result in automatic rejection of a Payment Voucher set;
7. At this time, NJDEP will no longer correct any information submitted on a Payment Voucher Set submitted by the Contractor for payment. All corrections shall be completed by the Contractor (see Section entitled "Rejection of an electronic Payment Voucher Set" for additional information);

8. Any cross outs by the Contractor's staff shall be dated and initialed by the Contractor's staff prior to generation of the PDF file for submittal to the state;
9. The Contractor for each purchase order may submit multiple Payment Voucher Sets to the State for payment. The Contractor is required to use the correct Payment Voucher for both the hard copy and electronic copy of the Payment Voucher Sets. See Section 5.24.2 entitled "File Size Limitations" for additional information;
10. The Contractor shall complete "Section F Payee Declaration" of the Payment Voucher. The person who prepared the payment voucher shall sign and date the submitted Payment Voucher. The date should reflect the date they completed the documentation being submitted. If the Payment Voucher is submitted unsigned or undated, it will be automatically rejected;
11. The Contractor shall complete section "Section G Payee Reference" by inserting their company's invoice number and the name of the PDF file for this invoice. If this section is incomplete, the Payment Voucher set will be automatically rejected;
12. Do not submit a copy of the Purchase Order or any of the instructions that accompanied the Purchase Order or Payment Voucher with your PDF submittal; and
13. Any changes to these requirements will be conveyed to all Contractors in writing only by the Site Remediation Program, Contracting and Financial Services Element. NO other group is authorized to issue changes to these requirements.

C. Two Options For Payment Vouchers And Documentation Submittals;

There are two options (1 and 2) for the Contractor for the submittal of Payment Vouchers and the backup documentation that shall be submitted with each invoice.

Option 1:

The Contractor shall use a copy of the original Payment Voucher that was provided with the original Purchase Order issued by the State. The only information for each item that is to be changed on the Payment Voucher are the following:

1. In the box labeled "(C) Total Amount" [in the upper right of the form], correct the amount by either covering over the amount already on the box or crossing out with a single line strikeout and insert the correct amount for that particular invoice;
2. In the lower half of the voucher, for the quantity column (if applicable), and the amount column, the Contractor needs to use a single line strikeout to cross out the amount and handwrite the amount and quantity being submitted; and
3. If there is an item on the Payment Voucher for which the invoice which payment is not being requested under this invoice, the Contractor shall use a single line strikeout for the amount and quantity columns; or

Option 2:

If the Contractor uses their company's information systems to generate a copy of the Payment Voucher issued by the State, the Contractor shall include all the information from the original payment voucher on their generated form (includes the account numbers, PO numbers, addresses, complete description of the item, item numbers etc.). The only information that can be changed by the Contractor consists of box labeled "(C) Total Amount", the quantity column (if applicable) and the amount column. If there is an item on the Payment Voucher for

which payment is not being requested under this invoice, the Contractor is required to insert a "0" in the quantity and the amount columns.

PROFESSIONAL LABORATORY SERVICES CONTRACT SUBMITTALS

The Professional Laboratory Services Contracts required the submittal of 80% and 20% Payment Vouchers. Separate PDF files for the 20% and the 80% Payment Vouchers are required. These files will require a slightly different file name with the numbers "80%" and "20%" added to the end of the Contractors invoice number:

80% Payment Voucher: 7144565_000001_80%.PDF

20% Payment Voucher: 7144565_000001_20%.PDF

QUESTIONS/ASSISTANCE

If the Bidder has questions or needs assistance in this process, please contact the SCM.

D. Submittal of Paper Complete Payment Voucher and Vendor Invoice;

Various programs have not implemented the electronic invoice process that is being used by the NJDEP Site Remediation Program. For any program that requires the submittal of paper payment vouchers and vendor invoices the following requirements shall apply.

1. The vendor invoices shall be submitted with the project specific State of New Jersey Payment Vouchers (Form PBPV1) to the Bill To Name on the Payment Voucher; and
- 2 The payment voucher document set shall be submitted the staff person designated by the program upon engagement for the analytical work.

E. Frequency of Payment Voucher/Vendor Invoice Submission;

Contractors may submit payment vouchers and associated vendor invoices monthly to NJDEP or to a State Using Agency.

F. Return of Payment Voucher/Vendor Invoice; and

Any payment voucher/vendor invoice submittal package (invoice) that does not comply with this section shall be returned to the Contractor for correction and resubmission.

G. Payment Vouchers for contract modification;

Some work under this contract may be performed under a contract modification. The SCM will advise the Contractor if payment vouchers/vendor invoices packages for change order work shall be submitted separately.

5.23.2 COMPENSATION FOR UNIT PRICE (UP) BID ITEMS

- A. For each Unit Price (UP) Item on the Price Schedule, the Contractor will be paid for those units of work that are actually needed for the successful completion of a specific engagement. The contract prices are inclusive of overhead shall be held firm for the duration of the contract. See Section 4.4.5D.1 for a list of items included and excluded from unit prices;
- B. For each canister ordered, the canister rental cost will be paid to the Contractor;

- C. For each canister ordered, depending on the needs of the Contract User, the standard flow controller rental cost shall be paid to the Contractor. If the Contract User requires a different flow rate than what is specified in the contract but that is not covered by this unit price; and
- D. The contract prices are inclusive of overhead shall be held firm for the duration of the contract. See Section 5.2.4 for a list of items included and excluded from unit prices.

5.23.3 PAYMENT FOR INTERNAL STANDARD REANALYSIS

The basis point for the payment for the Internal Standard Reanalysis is the actual unit price for the analytical method. It does not include the canister rental and flow controller rental costs.

If the Contractor is required to reanalyze a sample due to internal standard area responses being outside of control limits, the method and contract requires the submittal of two complete sets of analytical data, one for the first analysis and another for the second analysis. The Contractor is eligible for payment for both analyses based on the contract price. To be eligible for payment for the second analysis, the Contractor shall demonstrate that the first analysis of the sample complied with the method, that internal standard area responses were outside of the control limits, and that the method required reanalysis of the sample.

Reanalysis of a sample is required when the internal standard area responses in the initial analysis is outside the control limits established by the method. NJDEP will pay the Contractor extra money to reanalyze the sample when this occurs. The payment for reanalysis will be the same as the original analysis. To be eligible for the extra payment, the Contractor shall demonstrate that the initial analysis and reanalysis was conducted in accordance with the method and Section 3.0 of this contract. NJDEP will authorize the reanalysis but will not pay for more than one reanalysis of the same sample.

5.23.4 PAYMENT FOR DILUTIONS

The basis point for the payment for the Dilution Payments is the actual unit price for the analytical method. It does not include the canister rental and flow controller rental costs.

If the Contractor is required to dilute and reanalyze a sample, the method and contract requires the submittal of two complete sets of analytical data, one for the first analysis and another for the analysis of the diluted sample. The Contractor is eligible for payment for both analyses based on the contract price. To be eligible for payment for analysis of the diluted sample, the Contractor shall demonstrate that the first analysis of the sample complied with the method and that the method required dilution and reanalysis of the sample.

Reanalysis of a sample is required when the initial analysis is outside the calibration range of the instrument. NJDEP will pay the Contractor extra money to dilute and reanalyze the sample. The amount paid to dilute and reanalyze will be the contract price for the analysis. To be eligible for this extra payment, the Contractor shall demonstrate that the dilution and reanalysis was conducted in accordance with the method stated in Section 3.0 of this contract. NJDEP will authorize payment for one dilution and reanalysis. NJDEP will not pay for a more than one dilution and reanalysis on the same sample.

For Example: An undiluted sample is analyzed for volatile organics and the concentration of tetrachloroethylene (PCE) exceeds the upper calibration range of the instrument. The Contractor dilutes the sample and reanalyzes the diluted sample in accordance with the analytical method. In this case, the laboratory dilutes the sample by a factor of 10, reanalyzes the diluted sample, and the concentration of PCE is now within the calibration range of the instrument. If the dilution and reanalysis of the sample is considered acceptable by NJDEP, the Contractor is eligible to

receive two payments: 1) a payment for the original analysis; and 2) a second payment for the dilution and reanalysis of the sample. Payment for the dilution and reanalysis will be the same as the original analysis.

5.23.5 SHIPPING AND CONTAINERS PAYMENT

The State or State Using Agency will pay the Contractor 10% of the cost of laboratory analysis of the 14-day turnaround time unit price for each canister to cover the cost of shipping of the unused canister from the Contractor and back to the Contractor and any disposal costs. In addition, the Contractor shall be paid for the canister rental and the flow controller rental (if applicable) at the unit price established in the price schedule to cover the cleaning of the equipment. This 10 % payment and the rental costs are not subject to retainage. The request for payment will be approved by the SCM for the following circumstances:

- A. If a Contract User ships unused empty sample canisters back to the laboratory for sample analysis that was ordered but never collected;
- B. If a Contract User collects samples, ships the canisters to the Contractor and then cancels the analysis through the SCM subsequent to the Contractor's receipt of the canisters but before the Contractor performs any analysis;
- C. If the Contract User delivered samples that cannot be analyzed because of incomplete sample collection that leads to a residual vacuum being outside specifications (-10 in Hg);
- D. If chain of custody non-compliance by the Contract User is determined by the State and the State decides to terminate the analysis prior to the initiation of sample analysis; and
- E. For any other actions by the Contract User or transporter action that causes the sample, upon delivery, to be non-compliant.

5.23.6 PAYMENT IF A CONTRACT USER CANCELS ANALYSIS

If the SCM directs the laboratory to halt the analysis of a sample, the State Agency is obligated to pay for the sample fraction actual analytical costs, the canister rental and flow controller rental costs (if applicable), provided the cause of such stoppage is the discretion of the State Agency, and not caused by negligence or errors on the part of the Contractor. The SCM will authorize payment to the Contractor 100% of the unit price for an analytical method, canister rental and flow controller rental (if applicable) if the State cancels the performance of an analysis after the Contractor has received samples, and started the analysis. This is not subject to the 20% retainage and shall be listed on the 80% invoice only.

5.23.7 PAYMENT IF CONTRACT USER SHIPS WRONG CONTAINERS

If the Contractor receives the wrong canister from the Contract User, the Contractor shall contact the Contract User and SCM.

The State will pay the Contractor for the cost of any extra shipping if samples shall be shipped from one Contractor to another. If States decides to cancel the analysis, the Contractor will be paid (See Section Shipping and Container payment above) 20% of the cost of the cancelled analysis.

5.23.8 SHIPPING COSTS BEYOND NORMAL DELIVERY THAT IS INCLUDED IN UNIT PRICE

- A. The Contractor shall not be responsible for any shipping costs beyond those for normal delivery and pickup charges that are included in the base shipping price from the Common Carrier. These costs shall be defined on the Common Carrier's website. The State shall be responsible for the payment for all extra charges beyond the normal shipping charges to commercial or office locations or Common Carrier Service Locations that have routine pickup and delivery. The extra charges shall be listed on the Common Carrier's website to be considered billable to the state. If the Contractor has a contract with the Common Carrier, that specifies a rate for the extra charges, a current copy of these charges shall be forwarded to the SCM. The SCM will provide a current copy of the charges to the Contract Users. The State will use the extra shipping cost line to pay any extra shipping costs;
- B. If the Contract User wants delivery or pickup of shipment of samples that require additional costs beyond normal delivery, he/she shall be aware of the additional charges. The Contract User will inform the SCM and the Project Team at the time of notification of the engagement that they need shipping beyond the normal delivery. The extra cost shall be factored into cost of the engagement;
- C. The actual cost of the non-contract shipping shall be listed as a separate entry in the cost for the engagement. The Contractor shall bill the State on the same invoice that is used for the sampling event. The required documentation for the payment of the extra shipping costs consist of copies of the Common Carrier's tracking forms listing the package tracking numbers and date of delivery. The actual costs shall be verified using the Common Carrier's website or the previously submitted documentation from the Contractor; and
- D. The following charges listed below are the responsibility of the State not the Contractor if the Common Carrier routinely charges for these options. The charges shall be clearly documented on the Common Carrier's website for review by the State or if the Contractor has a contract with the Common Carrier, that specifies a rate for the extra charges, a current copy of these charges shall be forwarded to the SCM.
 - 1. First AM Delivery (either to Contract User or Contractor);
 - 2. Saturday Pickup (either from the Contract User or Contractor);
 - 3. Saturday Delivery (either at the Contract User's location or the Contractor);
 - 4. Carrier Pickup charges from a non Routine Delivery/Pickup location;
 - 5. Any other additional charges imposed by the Common Carrier due to delivery or pickup request by the Contract User;
 - 6. Fuel Surcharges;
 - 7. Overnight Delivery to the Contract User; and
 - 8. Any new charges imposed by the Common Carrier at a later date.

5.23.9 NON-PAYMENT AND REQUESTS FOR REIMBURSEMENT

The SCM will not pay Payment Voucher/Vendor Invoice or will request reimbursement from the Contractor when it is discovered that the work performed did not correspond to the analytical

procedures set forth in the SOW. Partial non-payment and requests for reimbursement shall occur in the following cases:

A. Withholding of a portion of the 20% Retainage Invoice: The SCM shall withhold payment of all or a portion of the 20% retainage Payment Voucher/Vendor Invoice under the following conditions:

1. When the Contractor does not deliver a data report within the specified turn-around time as set forth in Section 3.0, the SCM shall subtract two percent (2%) per work day of the total invoice amount up to a maximum of the twenty percent (20%). In other words, if a data report is delivered 10 or more working days late, the Contractor will forfeit the entire retainage payment.

Data packages are considered to be delivered only when all required information is present and in compliance with Section 3.0 and all required Appendices. If any information is missing, the entire package will be considered as overdue until such time as the remaining information is submitted. The time clock on the data will stop when the package is received by the SCM or the validation staff. The clock will resume when the laboratory is notified by telephone of the missing information; and

2. When the deliverables received are not in the proper Data Report format as specified in Section 3.0 and the associated Appendices of this contract, then payment of the entire 20% retainage invoice will be forfeited to the State.

B. Withholding of a Portion of the 80% Invoice: For all tasks the SCM shall automatically withhold an additional 25% of the 80% Payment Voucher/Vendor Invoice, above and beyond all other withholdings under the following circumstances:

1. For any data package not bearing the signature of both the approved Laboratory Director and approved Quality Assurance Officer; and
- b. For any data package bearing the signatures of unapproved personnel when required by N.J.S.A.7: 18-2.10 and 2.11 and Section 5.58 (Personnel Requirements) of this Contract; and
- c. This withholding shall be executed by nonpayment of the entire 20% retainage, plus the recoupment of 25% of the 80% invoice if the above deficiencies were present in the report. The total amount withheld is therefore 40% of the total amount due. The costs that are paid at 100% in the 80% invoice are not affected by this withholding.

C. The Contractor will not be paid any money for the analysis of a sample if the Contractor performs an analysis that is inconsistent with the Scope of Work Section 3.0, or is inconsistent with the analytical methods. The costs that are paid at 100% in the 80% Payment Voucher/Vendor Invoice are not affected by this withholding.

Appendix 2 provides a listing of the most common reasons that make a faulty analysis ineligible for payment; however, Appendix 2 is not intended to be an all encompassing list. Contractors that perform an analysis that is inconsistent with the Scope of Work Section 3.0, the analytical method or is deficient for any reason specified in Appendix 2, will forfeit 100% of payment due (including the 80% invoice and the 20% retainage). The costs that are paid at 100% in the 80% invoice are not affected by this withholding. If a Contractor received the 80% payment before the State discovers that the analysis was performed in a manner inconsistent with the Scope of Work or the analytical method, the Contractor will be notified and will be required to reimburse the State.

For the Methods 3C, USEPA TO-15 and NJDEP LL-TO15, the State shall withhold payment for the entire fraction or a per compound. The per compound cost will be determined based on the total cost of the fraction divided by the number of required target compounds per fraction. This amount per compound per matrix per fraction will be calculated by the SCM at the time of award of the contract and reissued yearly. This determination will be provided to both the Contractor and Contract Users.

If the State determines that the Contractor is not entitled to payment for any analytical method, the entire cost of the canister rental and the flow controller rental for the affected sample shall also be withheld.

5.23.10 PURCHASE ORDERS

See Section 3.0. Purchase Orders will be issued in accordance with the engagement process. SCM(s) are responsible for arranging for the issuance of Purchase Orders to Contractors.

5.23.11 NJDEP ITEMIZATION OF AMOUNT DUE

The Contractor shall submit two New Payment Voucher/Vendor Invoices for payment. If 60 days after NJDEP has received a data package and performed a QA/QC review the Contractor has not submitted Payment Voucher/Vendor Invoice for payment, the SCM may itemize all costs due and payable and send this itemization with a copy of the original Purchase Order and blank Payment Vouchers to the Contractor by certified letter. If the Contractor does not contest the SCM's cost itemization within ten (10) days, then this shall be deemed the final amount owed for the analysis subject to submission of Payment Voucher/Vendor Invoice by the Contractor. In such a circumstance the SCM may reduce the outstanding Purchase Order amount to this final amount owed.

5.23.12 HAZARDOUS SHIPPING PAYMENT

If an engagement requires the Contractor to ship samples in a hazard packing group in accordance with USDOT hazardous shipping regulations, the Contractor shall provide NJDEP with a surcharge amount as part of the engagement process. The Contract User will add the surcharge to the normal 25% reanalysis contingency amount when preparing a purchase order. Payment for the shipping surcharge will be made through the contingency line on the Payment Voucher.

5.24 ELECTRONIC PAYMENTS

With the award of this contract, the successful vendor(s) will be required to receive their payment(s) electronically. In order to receive your payments via automatic deposit from the State of New Jersey, complete and return the "Credit Authorization Agreement for Automatic Deposits (ACH Credits)" Form with an **original voided check or bank letter**. The form shall include ABA number (routing or transit number), bank account number and if the bank account is a checking or savings account. The form and instructions are located on the Office of Management & Budget's website at: <http://www.state.nj.us/treasury/omb/forms/index.shtml>. The completed form along with the required voided check or bank letter should be mailed or faxed to: Department of the Treasury, Office of Management and Budget, PO Box 221, 6TH Floor – Room 674, Trenton, N.J. 08625-0221; fax: (609)-984-5210. To assist in identifying payments, the State offers vendors access to the Vendor Payment Inquiry web application (VPI) which offers check stub information online. Contact the State of New Jersey at AAIUNIT@treas.state.nj.us to request access to this application.

5.24.1 GENERAL ELECTRONIC REQUIREMENTS

- A. The electronic copy shall be created in Adobe Acrobat PDF Format in the Read Only format;
- B. The maximum number of characters in the PDF invoice name is 30 characters;
- C. Only one Payment Voucher Set per PDF file. Submittal of multiple Payment Voucher Sets in a PDF File will result in rejection of the file and payment shall be withheld for all the affected Payment Voucher Sets until the submittal is correct.

The file name shall consist of the following: State PO number and Contractor's Invoice number (with variations as provided below):

Example 7144565_000001.PDF;

- D. The Contractor shall mail the original Payment Voucher Set to the NJDEP at the required address. The Contractor shall send the electronic version of the Payment Voucher Set to the following State email address: SRP_CFS_Invoices@dep.state.nj.us (Note there is an underline space between SRP_CFS and CFS_Invoices.);
- E. In the subject section of the invoice email, the Contractor shall include the Job Number and the Purchase Order Number. If the Contractor has the Site Name it is also to be included in the subject section of the invoice email:

Example: XXXX XXXX Sanitary Landfill, Job number: C330BD90, PO#7415541;

- F. If the Payment Voucher Set is rejected by the, the Contractor shall resubmit an electronic copy of the Payment Voucher Set. The original file name shall be revised with the addition of "REV" to the Contractor's invoice number. If the is first revision of the Payment voucher set, the revision is listed as REV1, if it is a sequence revision it shall be labeled as REV2, REV3 etc.;

Example: 7144565_000001REV1.PDF; and

- G. Failure of the Contractor to submit acceptable and complete Payment Voucher sets and or revisions (if required), shall affect the Prompt Payment time frame on that Payment Voucher Set. If the Payment Voucher is rejected, Prompt Payment time frame is stopped. Upon receipt of the Revised Payment Voucher Set, a new Prompt Payment time frame will be initiated; and

5.24.2 FILE SIZE LIMITATIONS

As of June 28, 2011 the New Jersey Office of Information Technology (OIT) has established a new email message size limit of 50MB, and a single attachment size limit of 20MB. OIT is implementing this new rule in order to help prevent email delays and to improve efficiency, performance and service. The current email message size limit for the NJDEP is already 50MB. This new rule impacts email messages with individual attachments of 20MB or greater that are being sent to email addresses external of the NJDEP. Any email messages sent to email addresses external to the NJDEP will be delivered only if they do not exceed the total message size limit of 50MB, and do not exceed the single attachment size limit of 20MB. If your documentation is greater than the limitation specified here, you will have to properly separate this submittal into two or more Payment Voucher sets with the correct documentation with each Voucher and submit as different requests for payment in separate PDF files.

5.24.3 REJECTION OF AN ELECTRONIC PAYMENT VOUCHER SET

Each NJDEP staff person who is responsible for approval of a payment voucher at any step of the process when a problem is detected, is required to contact the vendor IN WRITING (email or memo is acceptable) and inform the vendor of the problem with the Payment Voucher and determine the resolution of the problem. The Contractor shall respond to the NJDEP staff person in writing by email. All correspondence between the NJDEP and the Contractor shall be documented in the NJDEP CFS Tracking System.

Please be advised at this time, the only way to correct an invoice is complete resubmittal of the Payment Voucher Set. If this process changes in the future additional instructions will be provided to the Contractors by the Site Remediation Program- Financial Services Element.

5.24.4 PAYMENT FOR SHIPPING

- A. The State shall pay the Contractor if the State or State Contractor makes mistakes in shipping; and
- B. The Contractor shall not be responsible for any shipping costs beyond those for normal pickup and delivery. The State shall be responsible for the payment for all extra charges either directly to the Common Carrier or if it is billed directly to the Contractor by the Common Carrier.

5.24.5 PRICE OF ANALYSIS IS NOT AFFECTED BY COMMON CARRIER

There shall be no change in the price of analysis if the NJDEP Contract User delivers samples directly to the Contractor without using the Contractor's Common Carrier.

5.25 PROGRAM EFFICIENCY ASSESSMENT

The State Using Agencies shall be charged an assessment equal to one-quarter of one percent (0.25%) of the value of all transactions under this contract. This assessment is authorized by N.J.S.A 52:27B-56 and N.J.A.C 17:12-1.5, to maintain the State's procurement system at a level to meet industry standards of efficiency.

5.26 AUDITS AND LEGAL ASSISTANCE

The Contractor understands and agrees that he shall cooperate in maintaining records and in presenting information required by the State as follows:

5.26.1 LEGAL ASSISTANCE

The Contractor shall provide assistance to the State in legal actions by the State against the parties deemed responsible for hazardous wastes at a project site to recover the costs of this contract and/or to prosecute violations of State and Federal environmental laws at the site. This assistance may include the preparation of reports, assisting State and/or Federal attorneys in the preparation of the government's case, testimony in court (expert and/or other types of testimony), testimony at deposition, the preparation and execution of interrogatory responses and affidavits, the preparation of the (official) record and other similar activities. Failure of the Contractor to meet these requirements shall be considered a material breach of contract. Where such assistance involves extra work by an employee, the State will reimburse the Contractor for such assistance at the prevailing hourly rates for the employee's primary classification at the time of request.

5.26.2 AUDITS AND RECORDS

- A. The Department reserves the right to make announced or unannounced inspection(s) or examination(s) of a laboratory whenever the NJDEP in its discretion consider such an inspection necessary to determine the extent of compliance with the conditions of the contract or the Regulations Governing Laboratory Certification and Standards of Performance, N.J.S.A. 7:18-1.1 et seq. NJDEP audits may occur at anytime during the laboratory's operating hours; and
- B. The following record keeping procedures apply to this contract:

For State Funded Work, the Contractor shall maintain books, records, documents and other evidence directly pertinent to the performance of the work in accordance with generally accepted accounting principles and practices consistently applied and shall make them available for inspection by the State no less than three (3) years from the date of final payment.

Regarding USEPA Funded Work:

1. For any work under this contract funded by the EPA, the Contractor shall maintain such books, records and evidence in accordance with 40 CFR 35.6700 in effect on the date of execution of this contract. The Contractor, shall also maintain the financial information and data used in the preparation or support of the cost submission required under 40 CFR 35.6585 for any negotiated contract or contract modification and a copy of the cost summary submitted to the State. Notwithstanding the relevant terms of these Federal regulations, all such materials will be maintained for a period of not less than ten (10) years from the date of final payment. The United States Environmental Protection Agency, the Comptroller General of the United States, the United States Department of Labor, the State, or any of their authorized representatives shall have access to all such books, records, documents and other evidence for the purpose of inspection, audit and copying during normal business hours. The Contractor will provide proper facilities for such access and inspection;
2. The Contractor agrees to make paragraphs 1 through 7 of this clause applicable to all contract modification directly related to project performance;
3. Audits conducted under this provision shall be in accordance with generally accepted auditing standards and with established procedures and guidelines of the reviewing or audit agency(ies);
4. The Contractor agrees to disclose all information and reports resulting from access to records under Paragraphs 1 and 2 of this clause to any of the agencies referred to in Paragraph 1;
5. Records under Paragraphs 1 and 2 above shall be maintained by the Contractor during performance on EPA assisted work under this subagreement and for the time periods specified in 40 CFR 35.6705 or in accordance with paragraphs 1 above, whichever is longer. In addition, those records which relate to any controversy arising under an EPA assistance agreement, litigation, the settlement of claims arising out of such performance or to costs or items to which an audit exception has been taken shall be maintained by the Contractor for the time period specified in 40 CFR 35.6705;

6. Access to records is not limited to the required retention periods. The authorized representatives designated in paragraph 1 of this clause shall have access to records at any reasonable time for as long as the records are maintained; and
7. This right of access clause applies to financial records pertaining to all contract contract modification regardless of the type of contract, and all contract amendments regardless of the type of contract. In addition, this right of access applies to all records pertaining to all contract, contract change orders and contract amendments:
 - a. To the extent, the records pertain directly to contract performance;
 - b. If there is any indication that fraud, gross abuse or corrupt practices may be involved; or,
 - c. If the contract is terminated for default or for convenience.

5.26.3 CONTRACT PARTIES

The parties to this contract are the Contractor and the State of New Jersey. Although this contract may be funded wholly or in part with funds from the Federal Environmental Protection Agency, neither the United States nor any of its departments, agencies or employees, is, or will be, considered a party to this contract.

6.0 PROPOSAL EVALUATION

6.1 RIGHT TO WAIVE

The Director reserves the right to waive minor irregularities. The Director also reserves the right to waive a requirement provided that:

- A. The requirement is not mandated by law;
- B. All of the otherwise responsive proposals failed to meet the requirement; and
- C. In the sole discretion of the Director, the failure to comply with the requirement does not materially affect the procurement or the State's interests associated with the procurement.

6.2 DIRECTOR'S RIGHT OF FINAL PROPOSAL ACCEPTANCE

The Director reserves the right to reject any or all proposals, or to award in whole or in part if deemed to be in the best interest of the State to do so. The Director shall have authority to award orders or contracts to the vendor or vendors best meeting all specifications and conditions in accordance with N.J.S.A. 52:34-12. Tie proposals will be awarded by the Director in accordance with N.J.S.A.17:12-2.10.

6.3 STATE'S RIGHT TO INSPECT BIDDER'S FACILITIES

The State reserves the right to inspect the bidder's establishment before making an award, for the purposes of ascertaining whether the bidder has the necessary facilities for performing the contract.

The State may also consult with clients of the bidder during the evaluation of bids. Such consultation is intended to assist the State in making a contract award which is most advantageous to the State.

6.4 STATE'S RIGHT TO REQUEST FURTHER INFORMATION

The Director reserves the right to request all information which may assist him or her in making a contract award, including factors necessary to evaluate the bidder's financial capabilities to perform the contract. Further, the Director reserves the right to request a bidder to explain, in detail, how the proposal price was determined.

6.5 PROPOSAL EVALUATION COMMITTEE

Proposals may be evaluated by an Evaluation Committee composed of members of affected departments and agencies together with representative(s) from the Division. Representatives from other governmental agencies may also serve on the Evaluation Committee. On occasion, the Evaluation Committee may choose to make use of the expertise of outside consultant(s) in an advisory role.

6.6 ORAL PRESENTATION AND/OR CLARIFICATION OF PROPOSAL

After the submission of proposals, unless requested by the State as noted below, vendor contact with the State is still not permitted.

After the proposals are reviewed, one, some or all of the bidders may be asked to clarify certain aspects of their proposals. A request for clarification may be made in order to resolve minor ambiguities, irregularities, informalities or clerical errors. Clarifications cannot correct any deficiencies or material omissions or revise or modify a proposal, except to the extent that correction of apparent clerical mistakes results in a modification.

The bidder may be required to give an oral presentation to the State concerning its proposal.

Bidders may not attend the oral presentations of their competitors.

It is within the State's discretion whether to require the bidder to give an oral presentation or require the bidder to submit written responses to questions regarding its proposal. Action by the State in this regard should not be construed to imply acceptance or rejection of a proposal. The Division will be the sole point of contact regarding any request for an oral presentation or clarification.

6.7 EVALUATION CRITERIA

The following evaluation criteria categories, not necessarily listed in order of significance, will be used to evaluate proposals received in response to this RFP. The evaluation criteria categories may be used to develop more detailed evaluation criteria to be used in the evaluation process:

6.7.1 TECHNICAL EVALUATION CRITERIA

- A. Laboratory Certification/Accreditation: Bidders will be reviewed for their compliance with the NJDEP laboratory certification and accreditation requirements. Bidders that hold all the NJDEP laboratory certifications and NELAP accreditation will be determined to be responsive to the laboratory certification/accreditation requirements. Bidders that do not hold all NJDEP laboratory certifications/accreditations will be determined to be non-responsive. No further review will be performed on bids for which the bidder does not hold all the required NJDEP laboratory certifications or accreditations and the bidder will be ineligible for contract award;
- B. Sample Data Package: The Sample Data Package will be evaluated utilizing the Data Package Evaluation Checklist specified in Appendix 4. The Sample Data Package will be evaluated as if it was a deliverable under the contract. If data is rejected such that the data would not be eligible for payment, then the sample data package submitted with the bid proposal will be determined to be non-responsive to the bid submission requirements and the bidder will not be eligible for contract award; and
- C. All Other Submissions: All other submissions will be evaluated for responsiveness and responsibility.

6.7.2 BIDDER'S PRICE SCHEDULE

Price Proposal Evaluated: Bid prices will be evaluated. An adjusted total bid price will be calculated. The bid evaluation shall be based on the estimated quantities noted on the price schedules for each line item. The price evaluation will include every item on the price schedules. A price proposal that fails to provide a price for any unit price item will be determined to be non-responsive.

For evaluation purposes, bidders will be ranked according to the total proposal price located on the Price Sheet/Schedule accompanying this RFP. All the responsive bidders will be listed by price from lowest to highest.

6.7.3 PROPOSAL DISCREPANCIES

In evaluating proposals, discrepancies between words and figures will be resolved in favor of words. Discrepancies between unit prices and totals of unit prices will be resolved in favor of unit prices. Discrepancies in the multiplication of units of work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated total of multiplied unit prices and units of work and the actual total will be resolved in favor of the actual total. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum of the column of figures.

6.7.4 EVALUATION OF THE PROPOSALS

The Evaluation Committee will then recommend to the Director for award the responsible bidder(s) whose proposal, conforming to this RFP, is most advantageous to the State, price and other factors considered. Award Recommendation shall be consistent with N.J.S.A. 52:34-12, when evaluating bids are deemed to meet the threshold criteria as responsible and responsive. Of the bidders determined to be responsive and responsible, the bidder ranked lowest in price will be recommended to be the Prime Contractor. The Evaluation Committee considers and assesses price, technical criteria, and other factors during the evaluation process when making a recommendation to the Director. The Director may accept, reject or modify the recommendation of the Evaluation Committee. Whether or not there has been a **negotiation process as outlined in Section 6.8** below, the Director reserves the right to negotiate price reductions with the selected bidder.

6.8 NEGOTIATION AND BEST AND FINAL OFFER (BAFO)

After evaluating proposals, the Division may enter into negotiations with one bidder or multiple bidders. The primary purpose of negotiations is to maximize the State's ability to obtain the best value based on the requirements, evaluation criteria, and cost. Multiple rounds of negotiations may be conducted with one bidder or multiple bidders. Negotiations will be structured by the Division to safeguard information and ensure that all bidders are treated fairly.

Similarly, the Division may invite one bidder or multiple bidders to submit a BAFO. Said invitation will establish the time and place for submission of the BAFO. Any BAFO that is not equal to or lower in price than the pricing offered in the bidder's original proposal will be rejected as non-responsive and the State will revert to consideration and evaluation of the bidder's original pricing.

If required, after review of the BAFO(s), clarification may be sought from the bidder(s). The Division may conduct more than one round of negotiation and/or BAFO in order to attain the best value for the State.

After evaluation of proposals and as applicable, negotiation(s) and/or BAFO(s), the Division will recommend, to the Director, the responsible bidder(s) whose proposal(s), conforming to the RFP, is/are most advantageous to the State, price and other factors considered. The Director may accept, reject or modify the recommendation of the Division. The Director may initiate additional negotiation or BAFO procedures with the selected bidder(s).

Negotiations will be conducted only in those circumstances where they are deemed by the Division or Director to be in the State's best interests and to maximize the State's ability to get the best value. Therefore, the bidder is advised to submit its best technical and price proposal in response to this RFP since the State may, after evaluation, make a

contract award based on the content of the initial submission, without further negotiation and/or BAFO with any bidder.

All contacts, records of initial evaluations, any correspondence with bidders related to any request for clarification, negotiation or BAFO, any revised technical and/or price proposals, the Evaluation Committee Report and the Award Recommendation, will remain confidential until a Notice of Intent to Award a contract is issued.

NOTE: If the Division contemplates negotiation, proposal prices will not be publicly read at the proposal submission opening. Only the name and address of each bidder will be publicly announced at the proposal submission opening.

6.9 COMPLAINTS

A bidder with a history of performance problems as demonstrated by formal complaints and/or contract cancellations for cause pursuant to Section 5.7.b of the State of NJ Standard Terms and Conditions accompanying this RFP may be bypassed for an award issued as a result of this RFP.

7.0 CONTRACT AWARD

7.1 DOCUMENTS REQUIRED BEFORE CONTRACT AWARD

7.1.1 REQUIREMENTS OF PUBLIC LAW 2005, CHAPTER 51, N.J.S.A. 19:44A-20.13 - N.J.S.A. 19:44A-20.25 (FORMERLY EXECUTIVE ORDER 134) AND EXECUTIVE ORDER NO. 117 (2008)

- A. The State shall not enter into a contract to procure from any Business Entity services or any material, supplies or equipment, or to acquire, sell or lease any land or building, where the value of the transaction exceeds \$17,500, if that Business Entity has solicited or made any contribution of money, or pledge of contribution, including in-kind contributions, to a candidate committee and/or election fund of any candidate for or holder of the public office of Governor or Lieutenant Governor, to any State, county, municipal political party committee, or to any legislative leadership committee during certain specified time periods;
- B. Prior to awarding any contract or agreement to any Business Entity, the Business Entity proposed as the intended awardee of the contract shall submit the Certification and Disclosure form, certifying that no contributions prohibited by either Chapter 51 or Executive Order No. 117 have been made by the Business Entity and reporting all contributions the Business Entity made during the preceding four (4) years to any political organization organized under 26 U.S.C.527 of the Internal Revenue Code that also meets the definition of a "continuing political committee" within the means of N.J.S.A. 19:44A-3(n) and N.J.S.A. 19:25-1.7. The required form and instructions, available for review on the Division's website at <http://www.state.nj.us/treasury/purchase/forms.shtml#eo134>, shall be provided to the intended awardee for completion and submission to the Division with the Notice of Intent to Award. Upon receipt of a Notice of Intent to Award a Contract, the intended awardee shall submit to the Division, in care of the Division Procurement Specialist, the Certification and Disclosure(s) within five (5) business days of the State's request. Failure to submit the required forms will preclude award of a contract under this RFP, as well as future contract opportunities; and
- C. Further, the Contractor is required, on a continuing basis, to report any contributions it makes during the term of the contract, and any extension(s) thereof, at the time any such contribution is made. The required form and instructions, available for review on the Division's website at <http://www.state.nj.us/treasury/purchase/forms.shtml#eo134>, shall be provided to the intended awardee with the Notice of Intent to Award.

7.1.2 SOURCE DISCLOSURE REQUIREMENTS

Pursuant to N.J.S.A. 52:34-13.2, all contracts primarily for services awarded by the Director shall be performed within the United States, except when the Director certifies in writing a finding that a required service cannot be provided by a Contractor or subContractor within the United States and the certification is approved by the State Treasurer. Also refer to Section on Service Performance Within U.S. of the State of NJ Standard Terms and Conditions.

Pursuant to the statutory requirements, the intended awardee of a contract primarily for services with the State of New Jersey shall disclose the location by country where services under the contract, including subcontracted services, will be performed. The Source Disclosure Certification form accompanies the subject RFP. **FAILURE TO SUBMIT SOURCING INFORMATION WHEN REQUESTED BY THE STATE SHALL PRECLUDE AWARD OF A CONTRACT TO THE BIDDER.**

If any of the services cannot be performed within the United States, the bidder shall state with specificity the reasons why the services cannot be so performed. The Director shall determine

whether sufficient justification has been provided by the bidder to form the basis of his or her certification that the services cannot be performed in the United States and whether to seek the approval of the Treasurer.

7.1.2.1 BREACH OF CONTRACT

A SHIFT TO PROVISION OF SERVICES OUTSIDE THE UNITED STATES DURING THE TERM OF THE CONTRACT SHALL BE DEEMED A BREACH OF CONTRACT. If, during the term of the contract, the Contractor or subContractor, who had on contract award declared that services would be performed in the United States, proceeds to shift the performance of any of the services outside the United States, the Contractor shall be deemed to be in breach of its contract. Such contract shall be subject to termination for cause pursuant to Section 5.7b.1 of the State of NJ Standard Terms and Conditions, unless such shift in performance was previously approved by the Director and the Treasurer.

7.1.3 AFFIRMATIVE ACTION

The intended awardee shall submit a copy of a New Jersey Certificate of Employee Information Report, or a copy of Federal Letter of Approval verifying it is operating under a federally approved or sanctioned Affirmative Action program. Intended awardee(s) not in possession of either a New Jersey Certificate of Employee Information Report or a Federal Letter of Approval \shall complete the Affirmative Action Employee Information Report (AA-302) located on the web at http://www.nj.gov/treasury/purchase/forms/AA_%20Supplement.pdf.

7.2 FINAL CONTRACT AWARD

Contract award[s] shall be made with reasonable promptness by written notice to that responsible bidder(s), whose proposal(s), conforming to this RFP, is(are) most advantageous to the State, price, and other factors considered. Any or all proposals may be rejected when the State Treasurer or the Director determines that it is in the public interest to do so.

7.2.1 POST AWARD SUBMITTALS

7.2.1.1 PERSONNEL POSITION IDENTIFICATION CERTIFICATION CHART

- A. For this submission, Awardees shall complete and submit the Personnel Position Certification Chart provided as Appendix 5.
- B. The chart has two parts. In the first part, the Awardee shall certify that the NJDEP Laboratory Certification Program administered by the NJDEP OQAs has reviewed and approved these personnel. In the second part, the Awardee shall certify that all other required personnel meet the requirements of Section 3.0 of the Scope of Work. See Appendix 5 for a list of personnel that shall be identified.

7.2.1.2 STANDARD OPERATING PROCEDURES, CERTIFICATION CHART, AND METHOD SOPS (APPENDIX 7)

- A. For this submission, Awardees shall complete and submit the Standard Operating Procedures Certification Chart provided as Appendix 7;
- B. In addition, Awardees shall submit two copies of the Contractors SOPs and two copies of the Method SOPs. Method SOPs will be used to verify the procedures used by the laboratory in the validation of the analytical data generated by the laboratory. All SOPs shall be submitted on CD in the PDF format from Adobe Acrobat (latest version). The CD shall have the

laboratory logo and name of the laboratory as a hologram on the disk. The cover slip shall be sealed shut for delivery to the state; and

- C. Multiple Laboratory Contractors may submit separate Contractors and Method SOPs for each laboratory under corporate control. Therefore, a Multiple Laboratory Contractor that proposes to use three different laboratories under corporate control may each submit Contractors and Method SOP manuals.

7.2.1.3 SHIPPING PLAN

The Contract Awardee shall submit a Shipping Plan that describes in detail all aspects of shipping. The SCM shall provide a copy of this information to the Contract Users. See Section 3.22.5 for the requirements.

7.2.1.4 ENGAGEMENT TIME FRAME DOCUMENT

The Contract Awardee shall establish a notification time frame for the ordering and cancellation of canisters by SCM/Contract User for any sampling event. The time frame notification document shall be sent to the SCM within fifteen (15) days for approval after award of the contract. The SCM shall provide a copy of this information to the Contract Users. See Section 3.22.6 for the requirements.

7.2.1.5 SHIPMENT AND PICKUP CHARGES BEYOND NORMAL DELIVERY DOCUMENTATION SUBMITTAL REQUIREMENTS

If the Contractor has a contract with the Third Party Common Carrier for shipping costs to and from their facility(ies) a current copy of these charges shall be forwarded to the SCM within fifteen (15) days for approval after award of the contract. The SCM shall provide a copy of this information to the Contract Users.

7.2.1.6 SAMPLE CONTAINER REQUEST FORM

The Contractor shall develop and utilize a Sample Container Request Form for this contract. This form sent to the Contract User and the SCM when the final order for canisters is verified by the State prior to canister shipment. A copy of the form shall be included in the canister shipment. The format of the form will be approved by the SCM upon award of the contract. This Sample Container Request Form document shall be sent to the SCM within fifteen (15) days for approval after award of the contract.

7.2.1.7 OTHER DOCUMENTATION

Any other documentation of the bidder's proposal which is requested by this RFP or otherwise required by the State and which is still outstanding.

7.2.1.8 POTENTIAL PROBLEMS

The bidder should set forth a summary of any and all problems that the bidder anticipates during the term of the contract. For each problem identified, the bidder should provide its proposed solution.

7.3 INSURANCE CERTIFICATES

The Contractor shall provide the State with current certificates of insurance for all coverages required by the terms of this contract, naming the State as an Additional Insured. Refer to Section 4.2 of the State of NJ Standard Terms and Conditions accompanying this RFP.

7.4 NEW LABORATORIES

After receipt of Notice of Contract Award, a Contractor may seek to qualify additional laboratories to perform analyses. The new laboratory shall be part of the same corporate family as the Contractor. Subcontracting and joint ventures are not allowed for purposes of adding new laboratories.

The Contractor shall identify the laboratory, the method(s) the laboratory will perform, the personnel within the laboratory that are needed to perform the method(s) (see Appendix 3), along with a new Personnel Position ID Chart (Appendix 5) and any other information (Example Data Report for the methods being requested) required by the SCM. Approval of the new laboratory will be contingent on the laboratory holding all the certifications for the task(s) as well as submission of satisfactory information on the forms noted above. A Contractor may not submit an additional laboratory to perform analysis for method(s) for which the Contractor was not awarded. No change in price is allowed when a laboratory is added.

The approval of any new laboratory after Notice of Term Contract Award will be at the discretion of the SCM and no time frame for this review cycle will be established.

8.0 CONTRACT ADMINISTRATION

The three components in the successful administration of this contract are: 1) the SCM; 2) the Contractor; and 3) the Contract Users. The SCM provides central contract administration and coordination among the various Contract Users and the Contractor. The Contract Users consist of the various State agencies, bureaus and offices that will engage the Contractor. The Contractor performs all work under the contract in a timely fashion.

8.1 CONTRACT MANAGER (SCM)

The SCM is the State employee responsible for the overall management and administration of the contract.

The SCM for this project will be identified at the time of execution of contract. At that time, the Contractor will be provided with the SCM's name, department, division, agency, address, telephone number, fax phone number, and e-mail address.

8.1.1 SCM RESPONSIBILITIES

For an agency contract where only one State office uses the contract, the SCM will be responsible for engaging the Contractor, assuring that Purchase Orders are issued to the Contractor, directing the Contractor to perform the work of the contract, approving the deliverables and approving payment vouchers. The SCM is the person that the Contractor will contact after the contract is executed for answers to any questions and concerns about any aspect of the contract. The SCM is responsible for coordinating the use of the Contract and resolving minor disputes between the Contractor and any component part of the SCM's Department.

If the contract has multiple users, then the SCM shall be the central coordinator of the use of the contract for all Using Agencies, while other State employees engage and pay the Contractor. All persons and agencies that use the contract shall notify and coordinate the use of the contract with the SCM. For the purpose of this contract, the SCM shall have the following responsibilities:

- A. The SCM is responsible for the overall administration and coordination of the contract including communication, maintenance of documentation and coordination of individual engagements;
- B. The SCM is responsible for monitoring the certification status of the Contractor to ensure conformance with certification requirements;
- C. The SCM will issue Stop Work Orders (SWO) and suspensions when the SCM determines that the Contractor is not complying with the terms of the contract;
- D. The SCM will process New Jersey State Using Agency Formal Complaints (PB-36s) to the New Jersey Department of the Treasury when contract non-compliance issues arise that cannot be resolved directly between the SCM and the Laboratory. The SCM may initiate other actions against Laboratories including initiation of termination upon completion of investigations;
- E. The SCM will recommend and disseminate any modifications to technical and non-technical terms and conditions of the contract to Contractor and Contract Users. Any modification to the contract will be by formal change order in accordance with Section 5.22.4;

- F. Contractor and Contract Users shall direct all questions and issues regarding the contract to the SCM; and
- G. The SCM will process all non payment issues to the contract.

Contract Manager
Kathleen M. Grimes, Research Scientist I
Site Remediation Program
Financial Services Element
401 East State Street – 6th Floor
Mail Code 401-06I
PO Box 420
Trenton, New Jersey 08625-0420
Phone: (609) 633-2355 Fax: (609) 292-4401
kathleen.grimes@dep.state.nj.us

8.1.2 COORDINATION WITH THE SCM

Any Contract User that is unable to resolve disputes with a Contractor shall refer those disputes to the SCM for resolution. Any questions related to performance of the work of the contract by Contract Users shall be directed to the SCM. The Contractor may contact the SCM if the Contractor cannot resolve a dispute with Contract Users.

8.1.3 CHANGES IN ANALYTICAL METHODS DURING TERM OF CONTRACT

The SCM will notify Contract Users and Contractors in accordance with the analytical procedures in Section 3.0 if, and when, it becomes necessary to make changes to the parameters during the term of the Contract.

8.2 ENGAGEMENT PROCESS AND DOCUMENTATION

8.2.1 SCM/CONTRACT USER SHALL ENGAGE CONTRACTOR TO PREPARE AND SHIP CONTAINERS

The SCM or Contract User shall contact the Contractor for an engagement in accordance with the engagement procedures specified below and provide all the information necessary for the Contractor to prepare and ship containers and begin work.

8.2.2 ENGAGEMENT TIME FRAME DOCUMENT (POST AWARD)

The Engagement Time Frame Document shall establish a standard notification timeframe for the ordering and cancelling of sample canisters by SCM/Contract User for any sampling event. The SCM will provide a copy of this information to the Contract Users and the SCM will review and approve all revisions to the document proposed by the Contractor during the term of the contract. Written approval shall be obtained from the SCM prior to implementation of the revision. See Section 3.22.6 for the full list of requirements.

8.3 ENGAGEMENT OF SECOND CONTRACTOR TO PERFORM SAMPLE ANALYSES

When NJDEP intends to have samples analyzed, The SCM or Contact User shall engage the Contractor for that task, unless the Contractor is suspended, has a conflict of interest, or does not have capacity available. The bidder with the second highest evaluation score shall be offered the engagement if the Contractor cannot perform the work. The engagement process shall be the same for the bidder with the second highest evaluation score.

If a Contractor has delivered data reports late from three sampling events, the Manager shall drop the offending Contractor in engagement position and then proceed with the new engagement order for the next six (6) months.

When the Contract User engages the Contractor, all telephone contacts shall be documented by Email and sent to the SCM. If contact is by made by electronic mail to the Contractor, the SCM shall be copied. Also, copies of all engagement packages shall be forwarded to the SCM.

8.4 WEEKLY SAMPLE ALLOCATION LIMIT

There is no limit to the number of samples that may be submitted to the Prime Contractor on a weekly basis except for the Forty-eight (48) Hour Turnaround samples. If the Contract User is planning a sampling event and the SCM discovers that the Prime Contractor cannot accept any additional for that weekly period, the Contract User will be advised to engage the new Contractor.

8.5 CONTRACT USER RESPONSIBILITIES

The Contract User shall prepare a sampling event in the following manner:

- A. Estimated Number of Samples: The Contract User shall determine the total number of samples per analytical method to be collected for each line item on the Price Schedules and the projected date of sample collection;
- B. Estimated Number of Containers and Flow Controllers: The Contract User shall determine the total number of canisters and flow controllers needed for the sampling event; and
- C. The Contract User shall contact the SCM to document that an engagement is required for a sampling event. The initial notification can be made by telephone, but a written notification shall also be provided. The notification shall include the following: 1) the turn around time required, and 2) the expected date of sampling.

8.6 SCM /CONTRACT USER PRICES FOR ENGAGEMENT

8.6.1 DETERMINE SUBTOTAL PRICE

The SCM/Contract User will determine a subtotaled price for the engagement by multiplying the number of samples by the unit prices in the contract.

8.6.2 REANALYSIS CONTINGENCY – 25%

The SCM/Contract User will calculate the reanalysis contingency by multiplying the subtotaled total price by 25%. The reanalysis contingency will be added to the subtotal totaled price to establish the engagement price.

8.6.3 ADDITIONAL SHIPPING COST

If additional shipping costs are required because of location and/or time requirements, the SCM/Contract User will calculate the additional cost and add them to the cost of the engagement.

8.6.4 CONTRACTOR CONTACT AND PURCHASE ORDER REQUEST

The SCM/Contract User will contact the Contractor, provide the site specific engagement, confirm the engagement by Email and USPS mail. The SCM/Contract User will prepare the engagement

package for the preparation of the Purchase Order to the Contractor in the amount of the total engagement price.

8.7 INITIAL CONFIRMATION OF ENGAGEMENT

The Contractor will notify the Contact User and the SCM that they have accepted the engagement.

8.8 FINAL CONFIRMATION OF ENGAGEMENT

Based on the Timeline established by the Contractor, the SCM/Contract User will confirm the final count of the canisters and obtain the final Sample Container Request Form.

8.9 CONTRACT USER ENGAGES THE CONTRACTOR

When the Contract User engages the Contractor, all telephone contacts shall be documented by Email and sent to the SCM. If contact is by made by electronic mail to the Contractor, the SCM shall be copied. Copies of all engagement packages shall be forwarded to the SCM for the contract file.

8.10 CONTACT OF CONTRACTOR

8.10.1 TELEPHONIC CONTACT

The SCM/Contract User will contact the Contractor's Project Manager by telephone and provide following information:

- A. Contract User Name, Office Location, Telephone Number and Email or telefax number;
- B. A description of the sampling event including project number, date of sampling event, number of samples and contract price lines utilized;
- C. The location of sample bottle delivery and return shipping back to the lab, as well as any special delivery or pickup requirements;
- D. Advise the Contractor that additional shipping costs beyond the base shipping rate may be incurred and additional billing will be required; and
- E. Date sample canisters should be delivered to State Agency or State Contractor.

8.10.2 SAMPLE DELIVERY WITH ACTUAL IDENTIFICATION OF SAMPLE LOCATION

In rare incidents, if samples will be delivered with the actual identification of the sample location in lieu of a coded sample number, the Contractor shall be subject to the Conflict of Interest provisions of this contract.

8.10.3 ENGAGEMENT CONFIRMATION

The engagement will be confirmed by the Contract User/SCM with a follow up telefax or Email and a letter by USPS.

8.10.4 ENGAGEMENT ACCEPTANCE

The Contractor confirms acceptance of the engagement to the Contract User/SCM by telefax or Email.

8.10.5 SAMPLE CONTAINER REQUEST FORM SUBMISSION

Upon confirmation of the final sample count from the Contract User, the Contractor shall submit electronically to both the Contract User and the SCM the Sample Container Request Form as required by this contract. The completed form shall be included in the shipment of canisters to the Contract User.

8.10.6 TELEPHONE CONTACT DOCUMENTATION

When the Contract User engages the Contractor, all telephone contacts shall be documented by Email to the SCM. If contact is by made by electronic mail to the Contractor, the SCM shall be copied. Copies of all engagement packages shall to forwarded to the SCM.

8.11 SHIPMENT OF SAMPLE CONTAINERS BY CONTRACTOR

At the Contractor's expense, sample canisters will be shipped in an appropriate shipping containers to the location agreed upon and on the established date. The Contractor shall ship the sample canisters in accordance with the approved Shipping Plan and with all appropriate chain of custody forms.

8.11.1 SPECIAL SHIPPING REQUESTED

The Contractor shall document the delivery of the shipping containers to the Contract User when special shipping was requested. The required documentation is the tracking form receipt printed out from the Common Carriers website. This documentation will be submitted for payment for any charges imposed by the Common Carrier beyond the base shipping rate.

8.11.2 NOTIFICATION OF SCM OF SHIPMENT TO CONTRACT USER

Notify the SCM by Email of the shipment to the Contract User.

8.11.3 FAILURE TO DELIVER SHIPPING CONTAINERS WHEN EXPECTED

If the Common Carrier fails to deliver the shipping containers within the expected time frame, the Contractor has the responsibility to contact the Common Carrier and track the shipping canisters to ensure they are delivered to the correct location.

8.12 DELIVERY OF SAMPLE CONTAINERS TO CONTRACTOR

8.12.1 DOCUMENTATION OF SHIPPING CONTAINER DELIVERY

The Contractor will document the delivery of the shipping containers in accordance with the requirements of the RFP. All documentation, including the tracking form receipt, shall be submitted with the invoice.

8.12.2 NOTIFICATION/DISCLOSURE TO CONTRACT USER/SCM OF PROBLEMS WITH SHIPMENT

Upon receipt, the Contractor will provide notification to the Contract User/SCM and will disclose any problems associated with the shipment. All contacts by the Contractor are followed up by the submittal of Form A-1A and the Contractor's Sample receipt log. The Contractor is responsible for all contact with the Common Carrier if delivery is not within the expected time frame or at the correct location.

8.12.3 FORWARDING TO SCM OF ELECTRONIC COPY OF PRELIMINARY FORM A-1A, CONTRACTOR'S SAMPLE RECEIPT AND LOG IN CHECKLIST

Upon completion of the logging in of the samples by the Sample Custodian, the Contractor's Project Manager shall forward to the SCM an electronic copy of the preliminary Form A-1A and the Contractor's Sample Receipt and Log in Checklist. The requirements of the Contractor's Sample Receipt and Log in Checklist are specified in Section 3.0. These documents shall be sent electronically in an Adobe Acrobat format via internet Email to the SCM within five (5) days of receipt at the Contractor's facility.

8.13 SAMPLE ANALYSIS AND DELIVERY OF DATA REPORTS

The Contractor will submit a copy of the summary data package to the Contract user including the Hzresult file. The Contractor will submit the Extended Data Report, one copy of the summary data package, all electronic deliverables (by electronic mail) and the CD Deliverable directly to the Contact Manager.

8.14 PROBLEMS

The SCM, in conjunction with the Contract User, will resolve any problems with the engagement prior to submittal of samples to the laboratory. All problems and subsequent resolutions shall be documented by Email or letter and sent to all project team members.

Upon receipt of the samples by the Contractor, any problems will be discussed with the SCM and followed up in writing or by Email. The SCM will resolve any problem with the Contract User or Project Team and direct the Contractor, in writing or by Email, what measures to take to rectify the problem.

New Jersey Department of Environmental Protection Site Remediation Program

*NJDEP-LLTO-15-3/2007, 3/2009) FOR
AMBIENT AIR NJDEP REGULATORY
DATA REPORT FORMAT-APPENDIX 1*

*Modified for Contract
November 2013*

*Prepared by New Jersey Department of
Environmental Protection (NJDEP)
Site Remediation Program
Financial Services Element
401 East State Street - 6th Floor
Mail Code 401-061 PO Box 420
Trenton, New Jersey 08625-042*

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APPENDIX 1
NJDEP-LOW LEVEL (NJDEP-LLTO-15- MARCH 2007, MARCH 2009) FOR AMBIENT
AIR NJDEP REGULATORY DATA REPORT FORMAT

1.0 INTRODUCTION

- 1.1 This Appendix contains the format used for reporting the NJDEP Low Level Method TO-15 March 2007, March 2009 update (NJDEP-LLTO-15). It presents instructions and the order in which data are to be reported.
- 1.2 The Contractor must follow all the requirements regarding scaling and presentation of chromatograms, spectra, manual integration requirements and quantitation reports as specified in the NJDEP-LLTO-15 Method.
- 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 the all State contract work. Copies of these forms are located in Section 15.0 of this Appendix. Electronic Copies will also be provided upon request.
- 1.4 The Appendix provides examples of the NJDEP Chain of Custodies forms in Section 15.0. These are required forms for the all State contract work.
- 1.5 The NJDEP-LLTO-15 Field Test Data Sheet is located in Section 15.0 of this Appendix. This Form is required for every canister unless a combined External Chain of Custody/Field Test Data Sheet is used. Examples of the Chain of Custody documentation used by NJDEP can be obtained electronically.
- 1.6 For all other reporting forms, the Contractor must generate the forms from their stand-alone Reporting Form Generation Software (such as Thruput Inc, Thru-Put Systems, Target, The Khemia Company or Environment Information System Corporation) that contains the information required by NJDEP.
- 1.7 The MicrosoftTM Excel Spreadsheet that is used to report the data electronically on the NJDEP-SRP Air Methods Data Summary Table cannot be used for the reporting forms.
- 1.8 The Contractor generated forms shall not have labels referring to "CLP", "SOW" and "EPA Sample #". If the Contractor's/Laboratory's reporting software requires inclusion of these labels, the Contractor must add a statement to the Case Narrative informing the data reviewer to disregard the labels.
- 1.9 Contractors must receive a written approval from the State Contract Manager prior to using any modified forms in Section 15.0. The NJDEP shall reject noncompliant forms and data packages.
- 1.10 Each Sample Delivery Group (20 samples or less) consists of a separate Extended Data Report (Section 3.0) and Summary Data Report (Section 2.5.1) and the associated electronic deliverables. Individual Sample Delivery Groups cannot be merged together to create a single data package.

2.0 NJDEP REGULATORY FORMAT REQUIREMENTS FOR THE DATA PACKAGES AND ELECTRONIC FILES

- 2.1 The deliverable from the Contractor will consist of both the paper documents and electronic files.
- 2.2 The Contractor must submit the following deliverables to the NJDEP and other state users within the time frame established at the time of engagement.
 - 2.2.1 Original Extended Data Report with original chain of custody forms
 - 2.2.2 Original and one copy of the Summary Data Report
 - 2.2.3 Electronic Deliverables
 - 2.2.4 Acrobat Format (PDF) File of both the Extended and Summary Report compact disc.
- 2.3 The NJDEP Regulatory Report Format is organized to facilitate the preparation and review of the data package. The Contractor must present the NJDEP- LLTO-15 data in a separate section from other air methods and must comply with the requirements of this Appendix in the specified order.
- 2.4 General Data Package Requirements for Both the Extended and Summary Data Report
 - 2.4.1 The entire document must be legible. The State shall reject data packages containing incomplete or illegible signatures and documentation.
 - 2.4.2 Each batch of samples or sample delivery group (20 field samples or less) must have a separate set of data packages. If more than one air analysis is required of a sample (for example a sample is analyzed for fixed gases by USEPA Method 3C), all data must be present in one data set in separate sections. The only information from each analysis that can be merged together in the front section of the data package is as follows.
 - Title Page;
 - External Chain of Custody or External Chain of Custody/Field Test Data Sheets;
 - Internal Chain of Custody;
 - Field Test Data Sheet (if Applicable);
 - Shipping Documentation;
 - Copies of Traceability Certificates from Commercial Gas Standard Suppliers;
 - Case Narrative;
 - Methodology Review;
 - Data Sheets in Excel; and
 - Method Detection Limit Studies (MDL Study and MDLV Study)
 - 2.4.3 If a sample is diluted because a parameter concentration exceeded the upper calibration standard, then the Contractor is required to report both the undiluted and diluted data sets of both acquisitions. If the parameter concentrations are such that the sample can be analyzed only at a dilution, then the sample data set at the appropriate dilution and one data set at a more concentrated dilution must be submitted.
 - 2.4.4 The data summary forms, at a minimum, must 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.

- 2.4.5 The Contractor must complete all the required information on the reporting forms and raw data forms as specified by this Appendix.
- 2.4.6 The original extended data report and data summary reports can be printed single sided or double sided. However, the original chain of custody forms and shipping documentation must be single sided.
- 2.4.7 Both data reports must be organized and labeled in accordance with instructions in this Appendix.
- 2.4.8 Both data reports must be securely bound along the left-hand margin of the report. Staples are not acceptable.
- 2.4.9 The extended data report must be sequentially paginated starting with the first page after the Table of Contents.

2.5 NJDEP Regulatory Format Summary Data Report

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

- Section 4.2 Title Page;
- Section 4.4 Chain of Custody (external documentation and Field Test Data Sheets);
- Section 4.7 Methodology Review;
- Section 4.8 Case Narrative;
- Section 4.9 Method Detection Limit Summary;
- Section 4.10 Verified Method Detection Limit Summary;
- Section 5.1 Reporting Limit Laboratory Control Sample;
- Section 5.2 Method Blank Summary;
- Section 5.3 Instrument Performance Check Summary;
- Section 5.4 Internal Standard Area and Retention Time Summary;
- Section 6.0 Sample Data Summary (summary data only);
- Section 7.1.1 Initial Calibration Form Summary- (reporting form only);
- Section 7.1.2 Initial Calibration Verification Sample Standard Summary- (reporting form only);
- Section 7.1.3 Continuing Calibration Verification Summary- (reporting form only);
- Section 8.2 Blank Data (reporting form only);

- 2.5.2 Clearly label and complete the deliverable in accordance with instructions in this Appendix. Arrange the deliverable in the order specified in this Appendix.
- 2.5.3 Do not submit raw QC data, sample preparation, shipping documentation, and standard data in the summary data report.

2.6 NJDEP Regulatory Format Extended Data Report

See Sections 3.0-14 below for the complete requirements.

2.7 Electronic Files by Electronic Mail

The three electronic files generated by the Contractor are to be submitted by electronic mail to the State Contract Manager on the same day that the data package is due to the State.

- NJDEP-SRP Air Methods Data Summary Table;
- The Electronic Data Deliverable Format; and
- The Electronic HZResult Table

2.7.1 NJDEP- SRP Air Methods Data Summary Table (See form in Section 15)

2.7.1.1 There is no embedded calculation in this worksheet.

2.7.1.2 Data from other matrices cannot be reported with the air data.

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

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

2.7.1.5 The Contractor is required to input information that is required in the custom headers and footers of the worksheet for each sample.

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

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

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

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

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

- 2.7.1.10 The dilution factor must be listed on the first row of each method data in the worksheet for each sample below the method/units row. The dilution factor must be listed even if the dilution factor is 1.
- 2.7.1.11 For the QC samples generated by the laboratory such as the RLLCS, the Laboratory File Name must be used as the tab name of the sample worksheet. The name must also be the same that is used in the Print Setup header information.
- 2.7.1.12 The compound names cannot be changed. The names that must be used are listed in Table 1 "List of Required Compounds, Molecular Weight and CAS Number" located in Section 15 of this Appendix. These are the same names used by the NJDEP Laboratory Certification Program for this method.
- 2.7.1.13 The CAS numbers for any target compound cannot be changed. The required CAS numbers for each target compound are listed in the Table 1 "List of Required Compounds, Molecular Weight and CAS Number" located in Section 15.0 of this Appendix.
- 2.7.1.14 The required molecular weights for each target compound are located in the Table 1 "List of Required Compounds, Molecular Weight and CAS Number" located in Section 15.0 of this Appendix.
- 2.7.1.15 The order of the target compounds on the table can be revised. All target compounds must be presented prior to the non-target compounds.
- 2.7.1.16 No notes are to be included in the table as to the acceptability of any target or non-target compound data.
- 2.7.1.17 If non-target compounds are requested, then they are to be reported at the end of the list of compounds by the NJDEP-LLTO-15 method. The retention times are to be reported in the field labeled "Retention Time NT Only" column of the worksheet. Retention times are to be reported in minutes with two decimal places.
- 2.7.1.18 For the non-target compounds, unless there is a positive identification and molecular weight can be determined based on the compound, the ug/m3 result field must be left blank.
- 2.7.1.19 If a CAS number exists for a non-target compound, then that number is to be inserted in the appropriate column.
- 2.7.1.20 If non-target compounds were requested and none were detected, then that entire section is to be left blank with no entries or wording listed.
- 2.7.1.21 If other air methods such as Method 3C or Method 25C are being reported for the same sample, all of the results for the other air methods must be reported on the same form. The results of each method must be listed together under a separate sub-header and the correct units listed. An example of this format is supplied on the worksheet is in Section 15.0 of this Appendix.
- 2.7.1.22 Required Reporting of Results (ppbv and µg/m3)

The ppbv values are to be reported exactly as required in the sample data summary forms.

The µg/m3 data is to be reported as follows:

The screening levels have been rounded to 2 significant figures for a value greater than or equal to 10 and to 1 significant figure for a value less than 10, including those less than 1. This approach is used by the USEPA Office of Solid Waste and Emergency Response and is described in the Supplement Guidance for Developing Soil Screening Levels for Superfund Sites, (USEPA, 2001). The rounding rules specified below are contained in Hurlburt (1994).

- If the first number beyond the last significant digit is less than 5, the last significant number remains the same; and the remaining numbers are dropped. For example, 4.438 is rounded to one significant figure, 4 and 44.38 is rounded to 2 significant figures, 44.
- If the first number beyond the last significant digit is more than 5, the last significant number increases by one and the remaining numbers are dropped. For example, 4.638 is rounded to one significant figure, 5 and 46.68 is rounded to 2 significant figures, 47.
- If the first number beyond the last significant digit is exactly 5, then the last digit is rounded to the closest even number. For example, 4.5 is rounded to one significant figure, 4 and 45.4 is rounded to two significant figures, 46.

2.7.2 Electronic Data Deliverable Format (Sample.Txt File)

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

2.7.2.2 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	Character	15	Unique ID established by

sample)			the lab.
Date Sampled(For each sample)	Date	10	Format: mm/dd/yyyy
Matrix(For each sample)	Character	10	Air, Soil Gas, Ambient

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

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

2.7.3 The Electronic HZRESULT Tables (NJDEP SRP Requirement Only)

2.7.3.1 The NJDEP Site Remediation Program posts instructions, requirements, and software for electronic data submissions at the following web address: <http://www.state.nj.us/dep/srp/hazsite>. Additional clarification will be posted on the SRP website as a general notice to all parties. Contractors should routinely review the website for additional clarification documents.

2.7.3.2 Required Reporting of Results (ppbv and µg/m3)

The ppbv values are to be reported exactly as required in the sample data summary forms.

The µg/m3 data is to be reported as follows:

The screening levels have been rounded to 2 significant figures for a value greater than or equal to 10 and to 1 significant figure for a value less than 10, including those less than 1. This approach is used by the USEPA Office of Solid Waste and Emergency Response and is described in the “Supplement Guidance for Developing Soil Screening Levels for Superfund Sites, (USEPA, 2001).” The rounding rules specified below are contained in Hurlburt (1994).

- If the first number beyond the last significant digit is less than 5, the last significant number remains the same; and the remaining numbers are dropped. For example, 4.438 is rounded to one significant figure, 4 and 44.38 is rounded to 2 significant figures, 44.
- If the first number beyond the last significant digit is more than 5, the last significant number increases by one and the remaining numbers are dropped. For example, 4.638 is rounded to one significant figure, 5 and 46.68 is rounded to 2 significant figures, 47.
- If the first number beyond the last significant digit is exactly 5, then the last digit is rounded to the closest even number. For example, 4.5 is rounded to one significant figure, 4 and 45.4 is rounded to two significant figures, 46.

2.8 Files on Compact Disc

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

- 2.8.1 Adobe™ Portable Document File (PDF) files of the Extended and the Summary Data Reports (format See Section 2.9)
- 2.8.2 HZresult File
- 2.8.3 NJDEP-SRP Air Methods Data Summary Table File
- 2.8.4 Sample.Txt File

2.9 Delivery of Hardcopy Data in PDF Format

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 must be the latest version of the software. The PDF file for Extended Data Report must be organized in accordance to directions provided in Table 2 located in Section 15.0 of this Appendix. 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). The required hierarchal bookmark structure for the Extended Data Report is shown in Table 2 in Section 15.0 of this Appendix.

The Summary Data Report PDF file is not required to be bookmarked. The Summary Data Report PDF must follow the order established below and report only the required forms as specified in Section 2.5.

If the sampling event includes air methods such as USEPA Method 3C or Method 25C in addition to NJDEP-LLTO-15 Method within the same sample delivery group, then the hierarchal bookmark structure must be expanded to the Group Bookmark level for each method. 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.

3.0 CHROMATOGRAMS, MASS SPECTRA AND QUANTITATION REPORT REPORTING REQUIREMENTS

The required information on the Chromatograms and Quantitation Reports are the same for the calibration standards, quality control samples, blanks and samples.

3.1 Quantitation Report Requirements

3.1.1 The Quantitation Report that accompanies the chromatogram must contain at a minimum the following information at the top of the Report:

- 3.1.1.1 Data file identification;
- 3.1.1.2 Report date;
- 3.1.1.3 Injection date and time;
- 3.1.1.4 Operator;
- 3.1.1.5 Sample Identification Number;
- 3.1.1.6 Instrument identification;
- 3.1.1.7 Method file;
- 3.1.1.8 Quantitation type;
- 3.1.1.9 Integrator (instrument type);
- 3.1.1.10 Version of form generation software; and
- 3.1.1.11 Calibration file

3.1.2 The actual data results must be reported with the following information:

- 3.1.2.1 Compound;
- 3.1.2.2 Retention time;
- 3.1.2.3 Response (area count); and
- 3.1.2.4 Amount (ppbv)

3.1.3 The following additional information must be included in the quantitation report or elsewhere in the data package such as a client specific sample summary report, narrative, final data report, spectral displays or calibration check reports or reports generated through a LIM system. If the information is included elsewhere, then the locations of each must be referenced in the front of the data submission such as in a table of contents or other summary index.

- 3.1.3.1 Sample information (Field ID number (*indexed to the laboratory ID number*), date/time of sampling, type of sample);
- 3.1.3.2 Calibration date (initial calibration end date and time);
- 3.1.3.3 Dilution factor;
- 3.1.3.4 Concentration formula;
- 3.1.3.5 Expected retention time;
- 3.1.3.6 Delta retention time (Difference between the expected and actual retention times);
- 3.1.3.7 On-column amount (ppbv); and
- 3.1.3.8 Calculated amount (ppbv)

3.2 Chromatograms

3.2.1 Chromatograms are to be generated using a form generation software. Strip chart data is not acceptable.

3.2.2 The following information must be printed in the top section of the chromatogram page.

- 3.2.2.1 Sample identification number;
- 3.2.2.2 Analyst;
- 3.2.2.3 Injection date and time;
- 3.2.2.4 Instrument identification; and
- 3.2.2.5 Data file

The column phase/column diameter and a dilution factor are to be included either on the chromatogram page or in another section as described in 3.1.3 above.

3.2.3 Only the internal standards in the chromatograms shall be labeled with the names or retention times on the peaks.

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

3.2.5 Scaling factors (label the “x” and “y” axis using a numerical scale) must be provided.

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

3.2.7 If a chromatogram is replotted electronically to meet these requirements, then the scaling factor used must be displayed on the chromatogram.

3.2.8 Data System Printouts - If automated data systems procedures are used for preliminary identification and/or quantitation of the target compounds, then the complete data system report shall be included in all sample data packages. The complete data system report shall include all the information listed below. For a Contractor 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.

- 3.2.8.1 Comparison of compounds found vs. the library entry;
- 3.2.8.2 Sample identification number;
- 3.2.8.3 Date and time of analysis;
- 3.2.8.4 Retention time or scan number of identified target compounds;
- 3.2.8.5 Ion used for quantitation with measured area;
- 3.2.8.6 Copy of area table from data system;
- 3.2.8.7 GC/MS instrument identifier; and
- 3.2.8.8 Laboratory file identifier;

In all instances where the data system report has been edited or where manual integration or quantitation has been performed, the GC/MS operator shall identify such edits or manual procedures by initialing and dating the changes made to the report, and shall include the integration scan range. In addition, a hardcopy printout of the EICP of the quantitation ion displaying the manual integration shall be included in the raw data. This applies to all compounds targeted by the method/contract and internal standards.

- 3.2.9 In all instances where the data system report has been edited or where manual integrations or quantitation has been performed, the GC/MS Operator shall identify such edits or manual procedures by initialing and dating the changes made to the report and shall include the integration time range. The instrument must automatically mark the integrated area with the letter "M" on the quantitation report. The GC/MS operator shall verify that each integrated area is properly marked on the quantitation report. In addition, a hardcopy printout of the EICP of the quantitation ion displaying the prior to the manual integration and after the manual integration shall be included in the raw data on separate EICP area printouts. The manual integration lines must be clearly distinguishable from the baseline. This applies to all compounds and internal standards compounds.
- 3.2.10 A separate hardcopy printout (presented on one page) of the manual integration shall be included immediately behind its associated chromatogram. The manual integration lines must be distinguishable from any line that is drawn by the instrument when printed out.
- 3.2.11 Reconstructed ion chromatograms shall be normalized to the largest target or internal standard and shall be labeled with following header information:
- 3.2.11.1 Sample identification number;
 - 3.2.11.2 Laboratory data file number;
 - 3.2.11.3 Instrument identification; and
 - 3.2.11.4 Analyst name

3.3 Mass Spectra Requirements

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

- 3.3.1 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 must be provided. Spectra shall be labeled with Sample Identification Number, Laboratory File Identifier, date and time of analysis, and GC/MS instrument identifier. Compound names shall be clearly marked on all spectra.
- 3.3.2 When applicable, copies of mass spectra of non target compounds with associated best-match spectra (maximum of three best matches) must be provided. Spectra shall be labeled with Sample Identification Number, Laboratory File Identifier, date and time of analysis, and GC/MS instrument identifier. Compound names shall be clearly marked on all spectra.

4.0 REPORT FORMAT AND DATA REPORT REQUIREMENT INSTRUCTIONS

- 4.1 The order of the NJDEP Regulatory Format Extended Data Report for NJDEP-LLTO-15 Method is specified in this section. The format is tailored to NJDEP-LLTO-15 Method and differs from the requirements for other methods. The data package must follow the order specified below (unless a similar/equivalent format is submitted and an exception is granted by the Department during the certification process) and meet all the requirements specified below.

- 4.2 Title Page – NJDEP Form A-1A is a required form. All areas must be completed on the form. The required information includes the following:
- 4.2.1 Name of Agency which sent the samples to the laboratory;
 - 4.2.2 NJDEP or other State agency's case number or name;
 - 4.2.3 Contract number (for state work);
 - 4.2.4 Laboratory's name and location;
 - 4.2.5 Sample Delivery Group or Batch number;
 - 4.2.6 First and last date of sample receipt at the laboratory's facility;
 - 4.2.7 Field sample numbers;
 - 4.2.8 Laboratory sample numbers;
 - 4.2.9 Sample location;
 - 4.2.10 Date and time of sample collection;
 - 4.2.11 Date of data report;
 - 4.2.12 Laboratory Quality Assurance Officer's name and signature; and
 - 4.2.13 Laboratory Manager's name and signature
- 4.3 Table of Contents - List on this table list, with a page reference, all topic headings in Sections 4.0 through 13.0 of this Appendix.
- 4.4 External and Internal Chain of Custody Forms and Shipping Documentation Forms
- 4.4.1 External and internal laboratory chain of custody documents are required for all data reports submitted to the State. DEP Form-095 (with Shipping Container) is used for samples submitted by all State agencies. The Contract User is required to complete all sections pertaining to sample collection. The Contractor must properly complete the laboratory portions of these forms. Include all air waybills for each SDG, miscellaneous shipping and receiving records.
 - 4.4.2 When chain of custody documentation is missing or contains errors, immediately notify the State Contract Manager and Contract User.
 - 4.4.3 For every canister, a NJDEP-LLTO-15/TO-15 Field Test Data Sheet (FTDS) must be initiated by the Contractor and accompany the canister to the field. The FTDS is completed by the Contract User and returned to the Contractor with the canister.
 - 4.4.4 The Combined External Chain of Custody Record/Field Test Data Sheet (NJDEP Form-95D) can be used in place of the separate External Chain of Custody Record and the FTDS.
 - 4.4.5 The Contractor must document the internal chain of custody using DEP Form-077 for all State agencies. Full name and signatures are required. All signatures must be legible. The printed name must be the full name of the Contractor's employee and it must be legible. Illegible chain of custody documentation will result in data rejection.
 - 4.4.6 Each sample submitted consists of a canister. Document the internal chain of custody for each canister for this method. Internal chain of custody documentation for all samples may be listed on one (1) form for any given case (group) of samples submitted.
 - 4.4.7 Indicate on the internal chain of custody document all movements of the canister through the laboratory. Show the date and time of relinquishing and accepting of the sample by each individual who handled the sample materials. The chain of custody is terminated only when the sample analysis is complete or the canister is depleted.

4.5 Shipping Documentation

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

4.5.1 Air Bills

Include the original air bill in the extended data report. If the air bill was not received, then include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information.

4.5.2 Sample Receipt and Log-In Checklist for Ambient Air Samples

This form is used to document the receipt and inspection of sample containers and samples. One original checklist is required for each sampling event of twenty samples or less (only the hardcopy form is required). The form must contain the information in 4.5.2.1 and 4.5.2.2 below. The Contractor can 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.

4.5.2.1 Required top of page information:

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

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

Shipping Container Information:

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

Sample Condition:

- Sample containers were received intact

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

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

Sample Integrity Usability:

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

Anomalies or Non Conformance Summary (Comment section)

4.6 Gas Standards Traceability Certificates

Copies of the Gas Standards Traceability Certificates or Certificates of Analysis for the standard lots supplied by the Commercial Gas Supplier must be provided. The certificates must be in lot number order by increasing number and by method.

4.7 Methodology Review

Indicate by Method and Revision number, the analyses that were conducted on the samples. Use NJDEP Form A-4 - Ambient Air Analysis (10/2013).

4.8 Case Narrative -Use NJDEP Form A -1C or a laboratory facsimile.

- 4.8.1 The document shall contain in narrative form any item not conforming to the requirements of this contract and/or method, including, but not limited to the discussing of failed Quality Assurance or Quality Control criteria, sample matrix effects on the analysis, sample dilutions, and reanalyses. The Contractor's/Laboratory's document shall include any technical and administrative problems, corrective actions and resolutions.
- 4.8.2 The Contractor shall document in the narrative all instances of manual integrations and an explanation of all flagged edits (e.g. manual edit) on the quantitation reports. The manual integrations can be documented on a separate printout attached to the case narrative.
- 4.8.3 The Contractor must certify that gas standards were used in the sample analysis. The commercial supplier of the primary and secondary gas standard must be listed.
- 4.8.4 The Contractor must document all GC columns used for analysis. 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 must be described here. List the trap name (when denoted by the manufacturer) and 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.

- 4.8.5 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.”***
- 4.8.6 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.
- 4.8.7 Hard Copies of the Excel Data sheets for each sample (field sample, dilutions, RLLCS and blanks) in the format specified by Section 2.7.1 NJDEP-SRP Air Methods Data Summary Table must be provided at the end of the Case Narrative. The order of the excel data sheets should follow the order of the electronic data.
- 4.8.8 The laboratory must clearly annotate the laboratory practices employed (both routinely and job specifically) with respect to the volume of standards injected, the volume of sample injected, the volume of makeup air used routinely and the volume of makeup air used for dilutions. The Department must be able to historically regenerate the data from the documentation submitted. Each sample, standard and blank analyzed is to include all volume information such that calculations can be easily performed and checked. At a minimum, the routinely employed amounts/volumes are to be noted in the case narrative and job specific sample, standard and blank amounts/volumes are to be noted in the applicable analysis summary sheets or the run logs and pressure gauge readings sheets.

4.9 Method Detection Limit Summary

The annual method detection limit (MDL) study as required by the NJDEP LLTO-15 method and the NJDEP Laboratory Certification Regulations N.J.A.C 7:18 Sections 5.5(c) 10 & 11 must be submitted. The Method Detection Limit Summary submitted by the laboratory must contain the following information for each compound in a tabular format. All information except for signatures must be computer generated or typed. The order sequence shall be chronological and by instrument if more than one instrument is used.

The required format of the Summary is as follows:

- 4.9.1 Laboratory Name;
- 4.9.2 Laboratory Location;
- 4.9.3 Matrix Type;
- 4.9.4 Effective Date/Expiration date of MDL Study;
- 4.9.5 Instrument ID and Column ID;
- 4.9.6 Indication if the Instrument is used for Clean Canister Certification Analysis;
- 4.9.7 Compound name;
- 4.9.8 Data for seven replicates;
- 4.9.9 Mean value;
- 4.9.10 True Value;
- 4.9.11 Percent recovery;
- 4.9.12 Standard deviation;
- 4.9.13 Method Detection Limit (ppbv);

- 4.9.14 Reporting Limit (ppbv);
- 4.9.15 True Value/MDL;
- 4.9.16 Analyst name and date analyzed;
- 4.9.17 Supervisor name and date (who reviewed study);
- 4.9.18 Report preparer's name and date prepared; and
- 4.9.19 QA Officer name and date signed

4.10 Method Detection Limit Verification Summary (MDLV)

The Verified Method Detection Limit Verification Summary (MDLV Summary) must be submitted with the Method Detection Limit Study (Section 4.9). All information except for signatures must be computer generated or typed. The order sequence shall be chronological and by instrument if more than one instrument is used

The required format of the Summary is as follows:

4.10.1 Top of Page Information

- Instrument Identification;
- Date of verification study;
- Analysis method;
- Cleanup method (if applicable);
- Study identification file name;
- Matrix;
- Analysis level;
- Analyst name; and
- QA Officer name and date signed

4.10.2 Required Columns

- Analyte name;
- CAS number;
- MDLV source;
- Source study (Laboratory File Identification);
- Source instrument;
- Source analysis date;
- MDLV concentration (ppbv);
- Reporting Limit (ppbv); and
- RL/MDLV ratio

5.0 QUALITY CONTROL DATA SUMMARY

5.1 Reporting Limit Laboratory Control Sample (RLLCS) Summary

- 5.1.1 Record the RLLCS sample data on a laboratory-generated form.
- 5.1.2 If more than one form is necessary, forms shall be arranged in chronological order by date of analysis.
- 5.1.3 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

5.1.4 The method required control limits must be provided. The percent recovery is to be calculated for each compound to the nearest whole percent. All Percent Recoveries outside of Quality Control (QC) Limits are to be flagged with an asterisk “*” in the QC Limit column.

5.1.5 The following columns are required on the form for each compound:

- Amount added (ppbv)
- Amount recovered (ppbv)
- Percent recovery
- QC limits

5.2 Method Blank Summary

5.2.1 Record the method blank summary on a laboratory-generated form. Record all samples, dilutions, reanalyses, RLLCS and any other QC samples analyzed with the method blank.

5.2.2 If more than one form is necessary, forms shall be arranged in chronological order by date of analysis.

5.2.3 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

5.2.4 The GC column and the internal diameter must be listed on the form or noted elsewhere in the data package.

5.2.5 The following columns are required on the form. The samples, dilutions, reanalyses, RLLCS and any other QC samples associated with the method blank are to be listed in this section.

- Field sample identification number
- Laboratory sample identification number
- Time and date of analysis

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

5.3 Instrument Performance Check Summary

5.3.1 Report the Instrument Performance Check data on a laboratory-generated form. Include in the listing all calibrations, samples and QC samples associated with each tune. (Identification number, date and time of each injection must be listed.

5.3.2 If more than one form is necessary, forms shall be arranged in chronological order by date of analysis.

5.3.3 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

5.3.4 The GC column and internal diameter must be listed on the form or noted elsewhere in the data package.

5.3.5 The time and date of the injection of the Instrument Performance Check standard.

- 5.3.6 For each required ion, enter the percent relative abundance in the right hand column of the top table. All relative abundances must be reported as a number. If the relative abundance is zero 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 must be provided with the calculated number in parentheses.
- 5.3.7 In the lower table, list all the samples (including dilutions and reanalyses), standards, blanks and RLLCS samples analyzed under that instrument performance check. The following fields must be included in the lower table and completed for each acquisition:
- Field Sample Number;
 - Lab Sample Number;
 - Date Analyzed; and
 - Time Analyzed
- 5.3.8 All of summary forms listing samples (including dilutions and reanalyses), standards, blanks and RLLCS samples, must contain either an initial calibration sequence or an opening continuing calibration verification standard. A closing continuing calibration verification standard must be listed on all forms.

5.4 Internal Standard and RT Summary

- 5.4.1 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 must be provided on the form. The retention time difference must be reported from the latest daily 24-hour calibration standard or mean retention time over the initial calibration range.
- 5.4.2 If more than one form is necessary, forms shall be arranged in chronological order by date of analysis. Each valid calibration is required to have a separate form.
- 5.4.3 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 5.4.4 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 10 ppbv standard are used for evaluation against the samples.
- 5.4.5 For each internal standard used list the internal area response and calculate the upper and lower limits for each internal area response and the retention time.
- 5.4.6 The retention time limits are ± 20 seconds (± 0.33 minutes) from the most recent valid calibration as defined in NJDEP-LLTO-15 Method Section 22 or the mean retention time over the initial calibration range.
- 5.4.7 The internal standard area response limits are $\pm 40\%$ between the sample, blank, or QC samples and the valid calibration used.
- 5.4.8 For each valid calibration list in a table format 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.
- 5.4.9 In a table below the valid calibration internal standard area response information, list each sample, including dilutions, reanalyses, blanks, RLLCS samples or other QC

samples for that given valid calibration. The Field Sample Identification number should be used to identify each field sample. All entries must 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 "*" must be placed next to the number being reported as a superscript to the right of the number.

6.0 SAMPLE DATA SUMMARY

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

6.1 Record quantitative results, UNCORRECTED for blank and method detection limits on a laboratory-generated form in accordance with the requirements listed below.

6.1.1 Report all data to two (2) significant figures on the summary form. For example, (i.e., if 0.53 ppbv, report 0.53 ppbv; if the value is 9.7 ppbv, report 9.7 ppbv; if the value is 10.3 ppbv, report 10 ppbv; if the value is 116 ppbv report 120 ppbv). The results reported on the summary form should be the same number as the calculated amount (ppbv) from the quantitation report.

6.1.2 The laboratory shall use the calculated amount (ppbv) from the quantitation report in Section 3.1.2 corrected for any dilutions and preparation factors, for the calculation of the ug/m3 results. After the result is converted to ug/m3, the rounding rules in Section 2.7.1.22 are to be used for the reporting of the ug/m3 data on the NJDEP-SRP Air Methods Data Summary Table.

6.2 Report all data in ppbv concentration units. Do not report data in ug/m3 on this form. (Conversion of data to ug/m3 will occur on NJDEP-SRP Air Methods Data Summary Table.)

6.3 Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the required reporting limit with the "U" qualifier (Example 0.20 U ppbv).

6.4 Do not report any data using the Method Detection Limit as the Reporting Limit for any compound.

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

6.6 Compounds that exceed the upper limit of the initial calibration are to be reported with an "E" qualifier as defined in Section 14.0.

6.7 Each diluted sample must be reported on a separate form.

6.7.1 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 are to be reported with a "D" qualifier as defined in Section 14.0.

6.7.2 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.

- 6.7.3 Compounds that are reported in the diluted sample and not reported in the undiluted sample must be reported without a “D” qualifier. Instead qualify the data with the laboratory defined qualifier “X”. See Section 14.0 for additional information.
- 6.8 The following information, at a minimum, is required to be on each form, in addition to the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 6.8.1 Matrix type (Air);
 - 6.8.2 Sample volume (ml);
 - 6.8.3 Amount of makeup air added to canister(if applicable);
 - 6.8.4 Amount of makeup air added for dilution (if applicable);
 - 6.8.5 Laboratory sample identification number;
 - 6.8.6 Laboratory file identification number;
 - 6.8.7 GC Column type and internal diameter (may be noted elsewhere);
 - 6.8.8 Date received;
 - 6.8.9 Date analyzed;
 - 6.8.10 Dilution factor; and
 - 6.8.11 The table summarizing the compound results information must contain the following:
 - CAS Number for all target compounds;
 - Compound name;
 - Concentration units (ppbv);
 - Concentration reported; and
 - Laboratory qualifier applied
- 6.9 The quantitation reports, associated chromatograms and mass spectra must be provided for each sample acquisition including each dilution. These documents must immediately follow the Sample Data Summary Form. The chromatograms, mass spectra and data system reports must comply with Section 3.0.
- 6.10 Sample Mass Spectra
- 6.10.1 The mass spectra must comply with section 3.3 of this Appendix.
 - 6.10.2 Copies of raw spectra and copies of background-subtracted mass spectra of volatile compounds listed in the method that are identified in the sample and corresponding background-subtracted target compound standard mass spectra must be provided.
 - 6.10.3 Spectra must be labeled with sample ID number, lab file identifier, date and time of analysis. The GC/MS instrument identifier and compound names shall be clearly marked on all spectra.
 - 6.10.4 Negative Proof: Submit a copy of the standard mass spectrum and a copy of the non-confirmed mass spectrum in the data report when GC/MS analysis indicates the presence of a target list compound at a concentration greater than the reporting limit (RL) but examination of the standard mass spectrum and corresponding mass spectrum do not confirm the presence of the compound in the sample.
- 6.11 Tentatively Identified Compounds (TICs)
- The laboratory shall report any Tentatively Identified Compounds for all samples, blanks and clean canister certification data. The following is required. The TIC compounds are the non-target compounds not listed in the NJDEP-LLTO-15 Method.

- 6.11.1 Tentatively Identified Compounds are to be reported on a laboratory-generated form. A separate form must be provided for each acquisition (including all reanalyses and blanks). The form must be reported even if no TICs are found.
- 6.11.2 The sample specific Tentatively Identified Compounds Summary form must follow the sample data summary form for each sample.
- 6.11.3 Any diluted sample must be reported on a separate form.
- 6.11.4 Report all data in ppbv concentration units. Do not report data in ug/m3 on this form. (Conversion of data to ug/m3 will occur on NJDEP-SRP Air Methods Data Summary Table.)
- 6.11.5 The following information is required to be on each form, in addition to the requirement of Sections 2.4.4 and 2.4.5 of this Appendix.
- 6.11.5.1 Matrix type (Air);
 - 6.11.5.2 Sample volume (ml);
 - 6.11.5.3 Laboratory sample ID;
 - 6.11.5.4 Laboratory file ID;
 - 6.11.5.5 GC Column and ID;
 - 6.11.5.6 Date received;
 - 6.11.5.7 Date analyzed; and
 - 6.11.5.8 Dilution factor;
 - 6.11.5.9 The table summarizing the non target compound results information must contain the following:
 - CAS Number (if available);
 - Compound name;
 - Retention time;
 - Estimated concentration units (ppbv); and
 - Laboratory qualifier applied
- 6.11.6 Up to 15 tentatively identified (TICs) of greatest apparent concentration shall be reported on TIC form.
- 6.11.7 Carbon dioxide and compounds with responses less than 10% of the internal standard area from which they are to be quantified (as determined by inspection of the peak areas or height) are not to be reported (nor are they to be counted as part of the 15 compounds that are to be reported).
- 6.11.9 TICs shall be reported in chronological order for blank contaminants. TICs shall be reported in chronological order with respect to Retention Times. Report the concentration to two significant figures. Retention times shall be reported in minutes and decimal minutes, **not** seconds or minutes:seconds. Two significant figures are required for the decimal minutes.

7.0 STANDARDS DATA SECTION

7.1 Initial Calibration Form Summary and Raw Data

- 7.1.1 The data summary for the Initial Calibrations must be recorded on a laboratory-generated form.

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

7.1.3 The Initial Calibration Data Summary report, in addition to the requirements of Sections 2.4.4 and 2.4.5 of this Appendix, must contain the following information at the top of the page of the form:

- Calibration file names;
- Instrument identification; and
- Column type and name (may be noted elsewhere)

The start and end calibration dates and times should be included in this section. However, as a substitute, individual calibration time and date standard information included in the respective quantitation reports of the standards may be noted.

The table summarizing the calibration information must contain the following:

- Calibration file name or identifier by level established in the calibration file name above;
- Name of compound (Truncated names are only allowed if the truncated name is referenced to the full name of the compound listed elsewhere in the data package.);
- Relative Response Factor of Standard analyzed;
- Average Relative Response Factor; and
- % Relative Standard Deviation

(A list of the associated samples is to be included either in this section or elsewhere in the data package.)

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

7.2 Initial Calibration Verification Sample Standard Form Summary and Raw Data

7.2.1 The data summary for the Initial Calibration Verification Sample Standard shall be recorded on a laboratory-generated form.

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

7.2.3 The form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

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

7.2.5 The following columns are required on the form for each compound:

- Amount added (ppbv);
- Amount recovered (ppbv);

- Percent recovery; and
- QC limits

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

7.2.7 The volumes used/injected must be noted.

7.3 Continuing Calibration Form Summary and Raw Data (Opening and Closing)

7.3.1 The data summary for all the Continuing Calibrations must be recorded on a laboratory-generated form.

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

7.3.3 The Continuing Calibration Data Summary report, in addition to the requirements of Sections 2.4.4 and 2.4.5 of this Appendix, must contain the following information in the header of the form.

- Laboratory file ID;
- Calibration date and time;
- Instrument identification; and
- Column type and name (may be noted elsewhere)

Start and end times of the initial calibration dates and times are to be included in this section. However, as a substitute, individual calibration time and date standard information included in the respective quantitation reports of the standards may be noted.

The table summarizing the calibration information must contain the following:

- Name of compound (Truncated names are only allowed if the truncated name is referenced to the full name of the compound listed elsewhere in the data package.);
- Relative Response Factor of standard analyzed;
- Average Relative Response Factor;
- % Difference; and
- Maximum % Difference allowed by method

A list of the associated samples is to be included either in this section or elsewhere in the data package.

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

7.3.5 The volumes used/injected must be noted.

8.0 RAW QC DATA PACKAGE

8.1 Instrument Performance Data

The following information is required:

- 8.1.1 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 USEPA Method TO-15 lists the required BFB key ions and ion abundance criteria. If different criteria are used, it must have been pre-approved by the NJDEP Office of Quality Assurance.
- 8.1.2 Bar graph spectrum must be labeled as per section 3.0 of this Appendix.
- 8.1.3 Mass listing, labeled as per Section 3.0 of this Appendix.
- 8.1.4 Reconstructed total ion chromatogram, labeled as per Section 3.0 of this Appendix.
- 8.1.5 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

8.2 Blank Data (includes Method Blanks and any Instrument Blanks)

- 8.2.1 Blank data shall be arranged by type of blank (method blanks, instrument blanks) and shall be in chronological order by instrument and date of analysis.
- 8.2.2 The Blank Data Summary must be reported as per the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 8.2.3 Tabulated results must be provided on a laboratory-generated form for the target compounds that is the same form used for the sample data.
- 8.2.4 The quantitation reports associated chromatograms and mass spectra must be provided for each sample acquisition including dilutions. For each acquisition, these documents must immediately follow the Sample Data Summary form for the method blank. The chromatograms, mass spectra and data reports must be labeled as required by Section 3.0 of this Appendix.
- 8.2.5 Do not report values less than the reporting limits for a compound. Data is not to be reported down to the MDL for any 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 at the method required reporting limit with the "U" qualifier (Example 0.2 U ppbv).
- 8.2.6 The Blank Data Summary must comply with Section 6.0 of this Appendix.
- 8.2.7 Tentatively Identified Compounds detected in any blank must be reported in accordance with Section 6.0 of this Appendix.

8.3 Reporting Limit Laboratory Control Samples

The following information is required.

- 8.3.1 Reporting Limit Laboratory Control Sample (RLLCS) data shall be arranged in chronological order by instrument and date of analysis.

- 8.3.2 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 8.3.3 Tabulated results on a laboratory-generated form for the target compounds (the same form used for the sample data) as required by Section 6.0 of this Appendix.
- 8.3.4 RLLCS 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.
- 8.3.5 The chromatograms, data system reports and mass spectra (if applicable) must be labeled as required by Section 3.0 of this Appendix.
- 8.3.6 All results for the RLLCS that are less than the required reporting limits must be reported in addition to the results that are above the required reporting limits.

9.0 CLEAN CANISTER CERTIFICATION DATA

The laboratory must submit the following QC summary information supporting the verification that the canister used to certify the batch of canisters as clean. The format must comply with Sections 2.4.4 and 2.4.5 of this Appendix. If more than one set of clean canisters are needed for a sample delivery group, all sets of data shall be arranged in chronological order by date of analysis.

9.1 Summary QC Data

9.1.1 Reporting Limit Laboratory Control Sample Summary

See Section 5.1 of this Appendix for reporting requirements.

9.1.2 Method Blank Summary Data Report

See Sections 5.2 and 8.2 of this Appendix for reporting requirements.

9.1.3 Instrument Performance Check Summary

See Section 5.3 of this Appendix for reporting requirements.

9.1.4 Internal Standard and RT Summary

See Section 5.4 of this Appendix for reporting requirements

9.1.5 Initial Calibration Summary

Report the initial calibration information in compliance with Sections 7.1.1 through 7.1.3 of this Appendix.

9.1.6 Initial Calibration Verification Sample Standard Summary

Report the initial calibration information in compliance with Sections 7.2.1 through 7.2.4 of this Appendix.

9.1.7 Continuing Calibration Summary (opening and closing)

Report the continuing calibration information in compliance with Sections 7.3.1 through 7.3.3 of this Appendix.

9.2 Clean Canister Data

9.2.1 The actual clean canister data shall consist of the following. If more than one canister is used to certify all the canisters in the SDG are clean, the Contactor shall place sample packages in order of increasing sample number considering both letters and numbers.

9.2.2 The Clean Canister Data must be reported as per the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

9.2.3 The quantitation reports, associated chromatograms and mass spectra must be provided for each clean canister sample acquisition including dilutions. For each acquisition, these documents must immediately follow the Sample Data Summary Form. The chromatograms, mass spectra and data system reports must comply with Section 3.0.

9.2.4 The data reporting format must comply with Section 6.0 of this Appendix.

9.2.5 Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the method required reporting limit with the "U" qualifier (Example 0.2 U ppbv).

9.2.6 In the extended data report, the Clean Canister Data can be submitted after the other summary reporting form or can be submitted following the Internal Standard Area and Retention Time Summary (9.1.4) and be prior to the Initial Calibration Summary (9.1.5). This is the same order as the Table 2 format.

10.0 INSTRUMENT RUN LOG

The field samples instrument run log is to be presented first, followed by the clean canister instrument run log.

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

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

10.3 The Instrument run log for the continuing calibration must start with the injection of the opening continuing calibration verification standard and end with the closing calibration verification standard.

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

10.5 The following information must be included at the top of the page of the instrument run log page:

- Laboratory name;
- Instrument identification;
- Column;
- Date(s) of analyses;
- Analyst name and signature;
- Supervisor name and signature;
- Sample Delivery Group Number (Project Identification No);
- Target directory for files; and
- Initial calibration date

The columns of the table must be labeled as follows:

- Injection order number (must be chronological);
- Laboratory sample ID number;
- Preparation batch ID number;
- Sequence name/batch;
- Dilution factor;
- QC Check (indicating that the sample passed Quality Control);
- Analyst initials;
- Comments;
- Injection volume;
- Volume of make-up air added to canister (if applicable); and
- Volume of make-up air added for dilution (if applicable)

11.0 PRESSURE GAUGE READINGS

Copies of the actual logbook pages on which the initial and final pressure gauge readings are recorded must be provided for all analyses. This includes all pressures before and after make-up gas may have been added as a function of routine procedures or dilutions.

12.0 CANISTER DILUTION CALCULATIONS

The laboratory must submit the following information in a table format:

- Laboratory name;
- Laboratory Sample Number or Field Sample Number;
- Initial pressure ("Hg");
- Initial atmosphere;
- Initial psia;
- Initial volume of canister (L);
- Dilution factor;
- Final pressure ("Hg");
- Final psia;
- Final atmosphere;
- Final volume of canister (L);
- Required footnotes must be defined in chart;
- $x''\text{Hg} =$;
- $\text{Atm} =$;
- $\text{Psia} =$; and
- $\text{Psig} =$

13.0 SCREENING DATA

If the laboratory screens the samples prior to analysis, all screening data must be included in this section. Include all instrument outputs, including strip charts from screening activities.

14.0 DATA REPORTING QUALIFIERS

The method does not specify the use of data qualifiers. However, NJDEP has identified the data qualifiers that must be used to report the data.

- U- This flag indicates the compounds was analyzed for but not reported. The RL shall be adjusted if dilutions are required.
- B- This flag is used when an analyte 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. Blank contaminants are flagged "B" only when they are detected in a sample above the Reporting Limit.
- 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, for example when the concentration of an analyte exceeds the upper calibration range, 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 are flagged with a "D" flag. This flag alerts data users that any discrepancies between the reported concentrations maybe due to dilution of the sample.

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 **cannot be combined** on a single reporting form. Results are to be combined only in the electronic (excel) LL TO15 Conversion Tables.

- J- This flag indicates an estimated concentration for Tentatively Identified Compounds (TICs) where a 1:1 response is assumed.
- N- This flag indicates presumptive evidence of a compound. This flag is used only for Tentatively Identified Compounds, where the identification is based on a mass spectral library search and must 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".

15.0 FORMS AND TABLES

Note: No page numbers exist for this section.

Table 1 List of Required Compounds, Molecular Weights and CAS Numbers

Table 2 Extended Data Package Hierarchal Bookmark Structure

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

External Chain of Custody Form (NJDEP Form-77)

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

Combined External Chain of Custody Record/Field Test Data Sheet (NJDEP Form-95D)

NJDEP LLTO-15/TO-15 Field Test Data Sheet (NJDEP Form-95E)

Title Page – NJDEP Form A-1A

Case Narrative - NJDEP Form A -1C

Methodology Summary NJDEP Form A-4 - NJDEP-LLTO-15 Method-10/2013

NJDEP-SRP Methods Data Summary Table 2013 No Calculations (The file here is example only, the actual reporting format is provided as a separate excel file).

TABLE 1**LIST OF REQUIRED COMPOUNDS, MOLECULAR WEIGHTS AND CAS NUMBERS**

This Table contains the required compounds and their associated molecular weights and CAS numbers. The information in this table must be used for the reporting of the analytical data to NJDEP. Changes to the compound names, CAS numbers and molecular weights are not allowed for reporting of the data to the State of New Jersey.

<i>Compound Name</i>	<i>CAS Number</i>	<i>Molecular Weight</i>
Acetone	67-64-1	58.08
Allyl chloride	107-05-1	76.53
Benzene	71-43-2	78.11
Bromodichloromethane	75-27-4	163.8
Bromoform	75-25-2	252.8
Bromomethane	74-83-9	94.94
1,3-Butadiene	106-99-0	54.09
Chlorobenzene	108-90-7	112.6
Chloroethane	75-00-3	64.52
Chloroform	67-66-3	119.4
Chloromethane	74-87-3	50.49
Carbon disulfide	75-15-0	76.14
Carbon tetrachloride	56-23-5	153.8
2-Chlorotoluene	95-49-8	126.6
Cyclohexane	110-82-7	84.16
Dibromochloromethane	124-48-1	208.3
1,2-Dibromoethane	106-93-4	187.9
1,2-Dichlorobenzene	95-50-1	147.0
1,3-Dichlorobenzene	541-73-1	147.0
1,4-Dichlorobenzene	106-46-7	147.0
Dichlorodifluoromethane	75-71-8	120.9
1,1-Dichloroethane	75-34-3	98.96
1,2-Dichloroethane	107-06-2	98.96
1,1-Dichloroethene	75-35-4	96.94
1,2-Dichloroethene (cis)	156-59-2	96.94
1,2-Dichloroethene (trans)	156-60-5	96.94
1,2-Dichloropropane	78-87-5	113.0
1,3-Dichloropropene (cis)	10061-01-5	111.0
1,3-Dichloropropene (trans)	10061-02-6	111.0
1,2-Dichlorotetrafluoroethane	76-14-2	170.9
1,4-Dioxane	123-91-1	88.12
Ethanol	64-17-5	46.07

Ethylbenzene	100-41-4	106.2
Compound Name	CAS Number	Molecular Weight
4-Ethyltoluene	622-96-8	120.2
n-Heptane	142-82-5	100.2
1,3-Hexachlorobutadiene	87-68-3	260.8
n-Hexane	110-54-3	86.17
Isopropanol	67-63-0	60.10
Methylene chloride	75-09-2	84.94
Methyl ethyl ketone	78-93-3	72.11
Methyl isobutyl ketone	108-10-1	100.2
Methyl methacrylate	80-62-6	100.12
Methyl tert-butyl ether	1634-04-4	88.15
Naphthalene	91-20-3	128.2
Styrene	100-42-5	104.1
Tert-butyl alcohol	75-65-0	74.12
1,1,2,2-Tetrachloroethane	79-34-5	167.9
Tetrachloroethene	127-18-4	165.8
Tetrahydrofuran	109-99-9	72.11
Toluene	108-88-3	92.14
1,2,4-Trichlorobenzene	120-82-1	181.5
1,1,1-Trichloroethane	71-55-6	133.4
1,1,2-Trichloroethane	79-00-5	133.4
Trichloroethene	79-01-6	131.4
Trichlorofluoromethane	75-69-4	137.4
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	187.4
1,2,4-Trimethylbenzene	95-63-6	120.2
1,3,5-Trimethylbenzene	108-67-8	120.2
2,2,4-Trimethylpentane	540-84-1	114.2
Vinyl bromide	593-60-2	106.9
Vinyl chloride	75-01-4	62.50
Xylenes (m&p)	179601-23-1	106.2
Xylenes (o)	95-47-6	106.2

TABLE 2**EXTENDED DATA PACKAGE HIERARCHAL BOOKMARK STRUCTURE**

Parent Bookmark	Child Bookmark
Title Page	
Table of Contents	
External Chain of Custody or External Chain of Custody/ Field Test Data Sheet	
Internal Chain of Custody	
Field Test Data Sheet (if applicable)	
Shipping Documentation	Air bills (If Applicable)
	Sample Receipt and Log In Check List
Copies of Traceability Certificates from Commercial Gas Standard Suppliers- Certificates of Analysis	
Methodology Review	
Case Narrative	Case Narrative
	Manual Integration Documentation
	TIC—alkane/alkene Identification Documentation
	Data Sheets in Excel - Copies of the Microsoft Excel Reporting Sheets
Method Detection Limit Studies	Method Detection Limit Study Summary
	Verified MDL Summary
QC Summary Data	Reporting Limit Laboratory Control Sample Summary
	Method Blank 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
	Initial Calibration Verification Sample 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 (method and Instrument blanks)
	Reporting Limit Laboratory Control Sample Data
Clean Canister Certification Data In chronological date order for each clean canister	Laboratory Control Sample Summary
	Method Blank Summary and Data Report
	Instrument Performance Check
	Internal Standard Area and RT Summary
	Clean Canister Data by increasing alphanumeric laboratory sample number Order (with supporting raw data).
	Initial Calibration Summary

	Initial Calibration Verification Sample Standard Summary
	Continuing Calibration Summary(ies) including Closing CCV
Sample Preparation	Instrument Run Logs (sample data run logs)
	Instrument Run Logs (clean canister run logs)
	Pressure Gauge Readings
	Canister Dilution Calculation (If Applicable)
	Screening Data
Last Page of Document	

Note: The quantitation reports and chromatograms for each of the calibration standards associated with the initial calibration must 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 must 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 must immediately follow each continuing (opening or closing) calibration summary form. Spectra are only required for compounds that undergo manual integration.

(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

[illegible]

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
XXXXXXXXXXXXXXXXXXXX			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

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	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
1		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	

[illegible]

Distribution: White – Original (Sent With Report)
 Pink – NJDEP Field Sampling Personnel

Yellow – Sampling Custodian Upon Receipt of Shipping Container from Field
Gold – Sample Custodian for Sample Preparation and Shipment

LLTO-15/TO-15 Method **Canister Sampling Field Test Data Sheet**

January 2007

General Information

Site Location: _____ Site Address: _____ Field ID No: _____ Sampling Date(s): _____ Shipping Date: _____	Job Number: _____ Size of Canister: _____ Canister Serial No: _____ Flow Controller No: _____
---	--

Sampling Information

AMBIENT READINGS (Outside)			SAMPLING TIMES (24 hour clock)		
	Temperature (°F)	Barometric Pressure (inches of Hg)		Local Times	Elapsed Time Meter Reading
Start			Start		
Stop			Stop		
CANISTER PRESSURE (inches of Hg) From Gauge			INTERIOR TEMPERATURE °F		
Start			Start		
Stop			Stop		
_____ Signature/Title Investigator					

Laboratory Information

<u>FLOW RATES (ml/min) Flow Controller Readout</u>		<u>CANISTER PRESSURE (inches of Hg)</u>	
Shipping out from Lab _____	required (from lab record log) after return	Initial Pressure (to field) _____	required (from lab record log) after return
Receiving in Lab _____	(if applicable only if changed)	Final Pressure (from field) _____	required (from lab record log) after return
Data Shipped Out: _____ Date Received Back: _____ Individual Canister Certification (provide File #): _____ Batch Certification (provide Batch ID#): _____			
_____ Signature/Title GC/MS Analyst for NJDEP-LLTO-15			

Title Page – NJDEP Form A-1A

[illegible]

Case Narrative - NJDEP 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

--

Methodology Summary NJDEP Form A-4 - NJDEP-LLTO-15 Method-10/2013

Laboratory:	Project No:
Location:	SDG No:

Name	<i>Required Methodology</i>	<i>Indicate Method</i>
<i>Volatile Organics</i>	<i>NJDEP-LLTO-15</i>	
<i>Volatile Organics</i>	<i>USEPA Method TO-15</i>	
<i>Carbon Dioxide, Methane, Nitrogen, Oxygen, Carbon Monoxide</i>	<i>USEPA Method 3C</i>	
<i>Non Methane Organic Carbon</i>	<i>USEPA Method 25C</i>	

Project:
Field ID Number:
Laboratory ID Number:

NJDEP SRP AIR METHODS DATA SUMMARY TABLE

Sampling Date:
Analysis Date:

Chemical	CAS Number	Molecular Weight	Lab Results	Q	Corrected Results	Retention Time NT Only	QAS Decision	Footnotes
Method TO-15			ppbv		ug/m³			
Acetone	67-64-1	58.08						
Allyl chloride	107-05-1	76.53						
Benzene	71-43-2	78.11						
Bromodichloromethane	75-27-4	163.8						
Bromoform	75-25-2	252.8						
Bromomethane	74-83-9	94.94						
1,3-Butadiene	106-99-0	54.09						
Chlorobenzene	108-90-7	112.6						
Chloroethane	75-00-3	64.52						
Chloroform	67-66-3	119.4						
Chloromethane	74-87-3	50.49						
Carbon disulfide	75-15-0	76.14						
Carbon tetrachloride	56-23-5	153.8						
2-Chlorotoluene	95-49-8	126.6						
Cyclohexane	110-82-7	84.16						
Dibromochloromethane	124-48-1	208.3						
1,2-Dibromoethane	106-93-4	187.9						
1,2-Dichlorobenzene	95-50-1	147.0						
1,3-Dichlorobenzene	541-73-1	147.0						
1,4-Dichlorobenzene	106-46-7	147.0						
Dichlorodifluoromethane	75-71-8	120.9						
1,1-Dichloroethane	75-34-3	98.96						
1,2-Dichloroethane	107-06-2	98.96						
1,1-Dichloroethene	75-35-4	96.94						
1,2-Dichloroethene (cis)	156-59-2	96.94						
1,2-Dichloroethene (trans)	156-60-5	96.94						
1,2-Dichloropropane	78-87-5	113.0						
1,3-Dichloropropene (cis)	10061-01-5	111.0						
1,3-Dichloropropene (trans)	10061-02-6	111.0						
1,2-Dichlorotetrafluoroethane	76-14-2	170.9						
1,4-Dioxane	123-91-1	88.12						
Ethanol	64-17-5	46.07						
Ethylbenzene	100-41-4	106.2						
4-Ethyltoluene	622-96-8	120.2						
n-Heptane	142-82-5	100.2						
1,3-Hexachlorobutadiene	87-68-3	260.8						
n-Hexane	110-54-3	86.17						
Isopropanol	67-63-0	60.10						
Methylene chloride	75-09-2	84.94						
Methyl ethyl ketone	78-93-3	72.11						
Methyl isobutyl ketone	108-10-1	100.2						
Methyl methacrylate	80-62-6	100.1						
Methyl tert-butyl ether	1634-04-4	88.15						
Styrene	100-42-5	104.1						

Project:
Field ID Number:
Laboratory ID Number:

NJDEP SRP AIR METHODS DATA SUMMARY TABLE

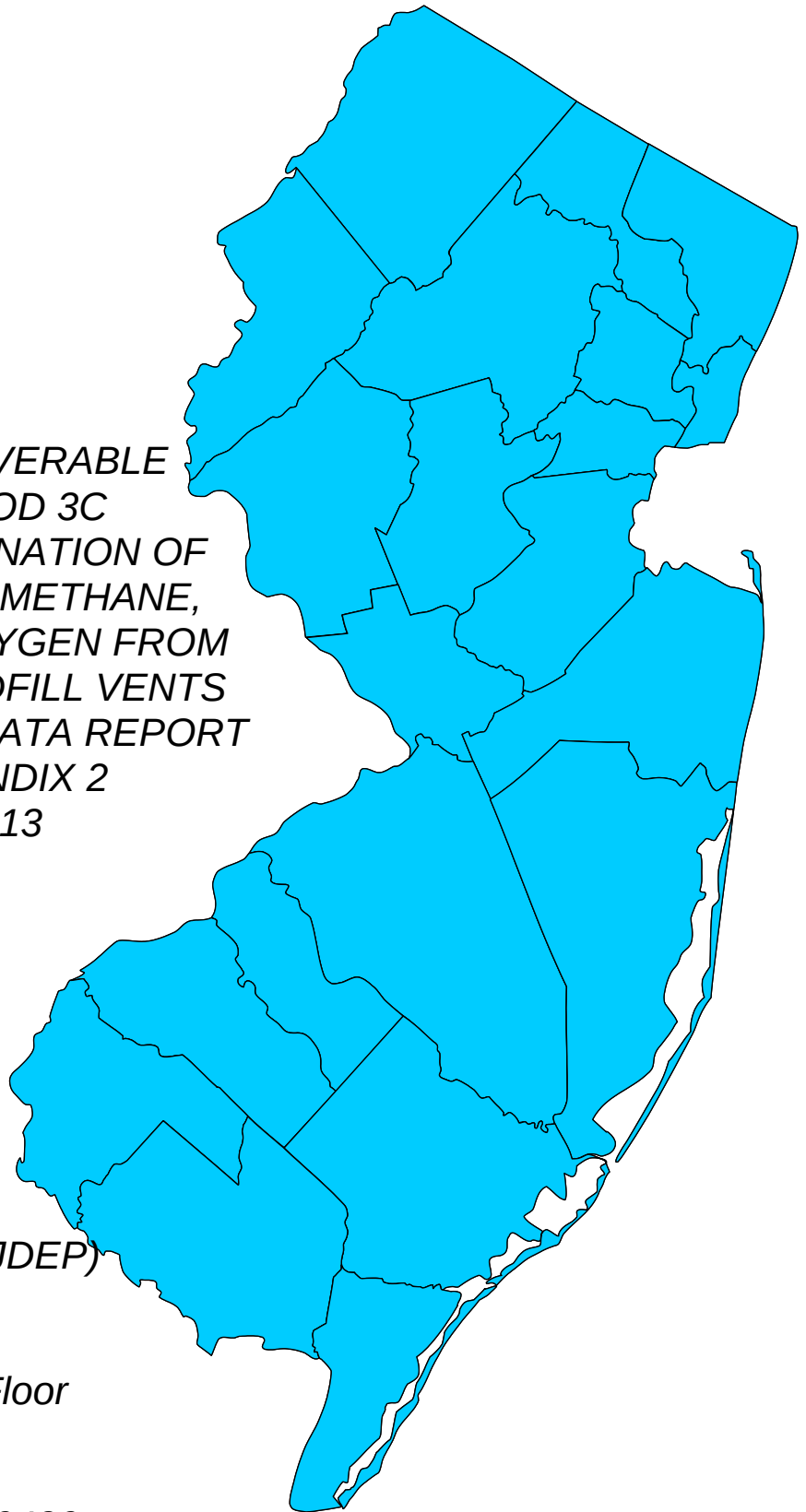
Sampling Date:
Analysis Date:

Chemical	CAS Number	Molecular Weight	Lab Results	Q	Corrected Results	Retention Time NT Only	QAS Decision	Footnotes
Method TO-15			ppbv		ug/m³			
Tert-butyl alcohol	75-65-0	74.12						
1,1,2,2-Tetrachloroethane	79-34-5	167.9						
Tetrachloroethene	127-18-4	165.8						
Tetrahydrofuran	109-99-9	72.11						
Toluene	108-88-3	92.14						
1,2,4-Trichlorobenzene	120-82-1	181.5						
1,1,1-Trichloroethane	71-55-6	133.4						
1,1,2-Trichloroethane	79-00-5	133.4						
Trichloroethene	79-01-6	131.4						
Trichlorofluoromethane	75-69-4	137.4						
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	187.4						
1,2,4-Trimethylbenzene	95-63-6	120.2						
1,3,5-Trimethylbenzene	108-67-8	120.2						
2,2,4-Trimethylpentane	540-84-1	114.2						
Vinyl bromide	593-60-2	106.9						
Vinyl chloride	75-01-4	62.50						
Naphthalene	91-20-3	128.2						
Xylenes (m&p)	179601-23-1	106.2						
Xylenes (o)	95-47-6	106.2						
Volatile Tentatively Identified Compounds (up to 15 compounds)								
USEPA Method 3C			%(v/v)					
Carbon Dioxide	124-38-9							
Methane	74-82-8							
Nitrogen	7727-37-9							
Oxygen	7782-44-7							
Carbon Monoxide	630-08-0							
USEPA Method 25C			ppmC					
Non Methane Organic Carbon	USEPA25C							

*New Jersey Department of Environmental Protection
Site Remediation Program*

*CONTRACT DELIVERABLE
USEPA METHOD 3C
FOR THE DETERMINATION OF
CARBON DIOXIDE, METHANE,
NITROGEN, AND OXYGEN FROM
SOIL GAS AND LANDFILL VENTS
NJDEP REGULATORY DATA REPORT
FORMAT- APPENDIX 2
November 2013*

*New Jersey Department of
Environmental Protection (NJDEP)
Site Remediation Program
Financial Services Element
401 East State Street – 6th Floor
Mail Code 401-061
PO Box 420
Trenton, New Jersey 08625-0420*



**APPENDIX 2 -USEPA METHOD 3C DETERMINATION OF CARBON DIOXIDE,
METHANE, NITROGEN, AND OXYGEN FROM SOIL GAS AND LANDFILL VENTS
NJDEP REGULATORY DATA REPORT FORMAT**

1.0 INTRODUCTION

- 1.1 This Appendix contains the format used for reporting carbon dioxide, carbon monoxide, methane, nitrogen and oxygen data analyzed by USEPA Method 3C from Soil Gas and Landfill Vents. It presents instructions and the order in which data is reported. The Appendix can to be used in conjunction with Appendix 1 and Appendix 3 for the reporting of data under this contract.
- 1.2 The NJDEP provides only three standardized reporting forms for this contract, the Title Page, Case Narrative and Methodology Form. The Contractor can obtain electronic versions of the NJDEP generated forms after contract award. Copies of these forms are located in Section 9.0 of this Appendix.
- 1.3 The Method 3C/25C Field Test Data Sheet is located in Section 9.0 of this Appendix. This Form is required for every canister in addition to any External Chain of Custody form.
- 1.4 The Contractor shall follow all the requirements regarding scaling and presentation of chromatograms, spectra, manual integration requirements and quantitation reports as specified in the contract requirements for Method 3C.
- 1.5 The Original Documentation Section (Section 6.1) 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.
- 1.6 For all other reporting forms the Contractor shall generate the forms from Reporting Form Generation Software (such as Target, Thruput Inc, Thru-Put Systems, Target, The Khemia Company, or Environment Information System Corporation) that contains the information required by NJDEP.
- 1.7 The Microsoft TM Excel Spreadsheet used to report the data electronically on the NJDEP-SRP Air Methods Data Summary Table to the State cannot be used for the reporting forms.
- 1.8 The forms should not have labels referring to "CLP", "SOW" and "EPA Sample #". If these labels are included due to the reporting software used by the Contractor, then a statement shall be added to the Case Narrative informing the data reviewer to disregard the labels.
- 1.9 All Contractors shall receive a written approval from the State Contract Manager prior to using any modified forms in Section 15.0. The NJDEP shall reject noncompliant forms and data packages.
- 1.10 Each Sample Delivery Group (20 samples or less) consists of a separate Extended and Summary Data Report and the associated electronic deliverables. Individual Sample Delivery Groups cannot be merged together to create a data package.

2.0 GENERAL NJDEP REGULATORY FORMAT REQUIREMENTS

- 2.1 The deliverables from the Contractor will consist of the both paper documents and electronic files.
- 2.2 The Contractor shall submit the following deliverables to the NJDEP or other state users within the time frame established at the time of engagement.
- Original Extended Data Report with original chain of custody forms
 - Original and one copy of the Summary Data Report
 - Electronic Deliverables
 - Acrobat Format (PDF) File of both the Extended and Summary Report compact disc.
- 2.2 The NJDEP Regulatory Report Formats are organized to facilitate the preparation and review of the data package. The Contractor shall present the USEPA Method 3C data in separate section from the other methods in this contract and shall comply with the requirements of this Appendix in the specified order.
- 2.4 The data results shall be reported uncorrected for any field measurements collected or recorded by the sampler. The correction for field measurements shall be done by the sampler after the data report is received from the Contractor.
- 2.5 The Contractor is required to complete the Laboratory Information section of the "Method 3C/25C Canister Sampling Field Test Data Sheet" that is included as part of the contract. The Field Test Data Sheet is initiated by the Contractor and is sent to the Sampler with the Canisters. The Contractor fills out the required portion of the form prior to sending out the canisters and completed the form upon receipt of the Test Sheet and the Canisters from the field. The original form is to be returned with the Extended Data Report. A copy of the form shall be included in the Summary Data Reports.
- 2.6 The entire document shall be legible. The State shall reject data packages with containing incomplete or illegible signatures and documentation.
- 2.7 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 analysis is required of a sample (i.e. sample is analyzed for volatile organics by NJDEP Low Level USEPA Method TO-15/USEPA Method TO-15, all data shall be present in one data set in separate sections. The only information from each analysis that can be merged together in the front section of the data package is as follows.
- Title Page
 - External Chain of Custody Field Test Data Sheets Internal Chain of Custody
 - Shipping Documentation
 - Copies of Traceability Certificates from Commercial Gas Standard Suppliers
 - Methodology Review
 - Case Narrative
 - Data Sheets in Excel
 - Method Detection Limit Studies (MDL Study and MDLV Study)

- 2.8 All injections including samples, standards, QC samples and blanks are done in duplicate and calculated using the average sample area. The injection shall occur in sequence. For each sample, standard, QC sample and blanks, the results for both acquisitions shall be presented. The results are acceptable when the peak areas or height for two consecutive injections agree within 5% of their average.
- 2.9 All the sample results are reported as diluted because the canisters have to be pressurized by the Contractor prior to pulling a volume of sample for analysis. Further diluted samples are required to meet the same requirements as initially diluted samples. The data from initially diluted and further samples shall be submitted as separate data sets.
- 2.10 If a sample requires additional dilution because a parameter concentration exceeded the upper calibration standard, the Contractor is required to report both the original analysis as a dilution (due to pressurization requirements) and further diluted data sets of both acquisitions. If the parameter concentrations are such that the sample can be analyzed only at a higher dilution, the sample data set at the appropriate dilution and one data set at a more concentrated dilution shall be submitted (maximum of two sets of data).
- 2.11 The data summary forms, at a minimum, shall include the project number, sample delivery group number, laboratory name, field sample Identification number and laboratory sample Identification number (if applicable), QC sample name (if applicable), fraction or analysis being performed, and the time and date of analysis.
- 2.12 The original extended data report and data summary reports can be printed single sided or double sided. However, the original chain of custody forms and shipping documentation shall be single sided.
- 2.13 The Contractor shall complete all the required information on the reporting forms and raw data forms as specified by this Appendix.
- 2.14 Both data reports shall be organized and labeled in accordance with instructions in the Appendix.
- 2.15 Securely bind the deliverable 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.

3.0 ELECTRONIC DATA FILES DELIVERABLE REQUIREMENTS

3.1 ELECTRONIC FILES BY ELECTRONIC MAIL

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

- NJDEP-SRP Air Methods Data Summary Table

- The Electronic Data Deliverable Format

3.2 **FILES ON COMPACT DISC**

The CD shall have the Contractor logo and name of the Contractor as a hologram on the disc label. The SDG number shall be on a stick-on label. The cover slip of cardboard shall document the Contractor name, include sticker with SDG number. The cover slip shall be sealed shut for delivery to the State. The following files shall be included on the CD:

- Acrobat PDF files of both the Extended and the Summary Data Reports
- NJDEP-SRP Air Methods Data Summary Table File
- The Electronic Data Deliverable Format

3.3 **THE NJDEP-SRP AIR METHODS DATA SUMMARY TABLE AND METHOD 25C REQUIREMENTS**

3.3.1 Data from other matrices cannot be reported with the air data.

3.3.2 The format of the cells for every entry shall be text format. This is known in Visual Basic for Applications (VBA) as "@" This causes each entry to be displayed exactly as entered.

3.3.3 Do not set the Print Area on any worksheet. Incorrectly setting the Print Area will prevent all the sample information from being printed.

3.3.4 The Contractor is required to input information that is required in the custom headers and footers of the worksheet for each sample.

- This left header information is as follows:
 - Project Number or name
 - Field Sample Identification Number
 - Laboratory File Identification Number
- This right header information is as follows:
 - Sample Date
 - Analysis Date
- This left footer information is as follows:
 - Laboratory Name
 - Laboratory City/State

3.3.5 This table is in a Microsoft Excel spreadsheet and lists every parameter that can be analyzed for by this method.

3.3.6 The files shall be named with the Sample Delivery Group Number and end with ".XLS". An example of this form in Section 9.0 of this Appendix.

3.3.7 A separate excel worksheet within one Microsoft Excel™ file shall be provided for each field sample.

- 3.3.8 Only the target parameters that the Contractor is required to analyze for are to be included in the file that is submitted to the State.
- 3.3.9 The Field Sample Identification Number shall be used to name the sample sheet.
- 3.3.10 The dilution factor shall be listed on the first row of each method data in the worksheet for each sample below the method/units row.
- 3.3.11 For the QC samples generated by the Contractor such as the LCS, 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.
- 3.3.12 The compound names cannot be changed. The names listed are the compound names used by the NJDEP Laboratory Certification Program for this method and are listed in the Table 1 "List of Required Compounds and CAS Numbers" in Section 9.0 of this Appendix.
- 3.3.13 The CAS numbers for any target compound cannot be changed. The required CAS numbers for each target compound are listed Table 1 "List of Required Compounds and CAS Numbers" in Section 9.0 of this Appendix.
- 3.3.14 No notes are to be included in the table as to the acceptability of any data.
- 3.3.15 The averaged result shall be reported for each compound in the Laboratory Results Column. The Calculated Results column is not to be completed by the Contractor. Report the same number that is reported on the Sample Data Summary form as specified in Section 6.13.
- 3.3.16 The required units for Method 3C is v/v%.
- 3.3.17 If other air methods such as NJDEP-LLTO-15/USEPA Method TO-15 or Method 25C are being reported for the same sample, all the results for the other air methods can be reported on the same form. The method shall be listed with a separate header and the correct units. See Example provided in Section 9.0 of this Appendix.

3.4 **ELECTRONIC DATA DELIVERABLE FORMAT (SAMPLE.TXT FILE)**

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

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

4.0 DELIVERY OF HARDCOPY DATA IN PDF FORMAT

- 4.1 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.

- 4.2 The PDF file for Extended Data Report shall be organized in accordance to directions provided in Table 1 located in Section 9.0 of this Appendix. 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). The required hierarchal bookmark structure for the Extended Data Report is shown in Table 1.
- 4.3 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 7.0.

If the sampling event includes air methods such as USEPA Method 25C or NJDEP-LLTO-15/USEPA Method TO-15 within the same sample delivery group, the hierarchal bookmark structure shall be expanded to the Group Bookmark level for each method. 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 REGULATORY EXTENDED DATA FORMAT REPORT (EXTENDED DATA REPORT)

5.1 CHROMATOGRAMS AND QUANTITATION REPORT REPORTING REQUIREMENTS

The required information on the Chromatograms and Quantitation Report for the same for the calibration standards, samples, blanks and samples.

5.1.1 QUANTITATION REPORT REQUIREMENTS

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

- A. Data file identification;
- B. Report date;
- C. Injection date and time;
- D. GC Operator;
- E. Instrument identification;
- F. Quantitation type;
- G. Dilution factor;
- H. Calibration File; and
- I. Calibration sample Level (for all standards)

The Contractor can provide additional information as needed for their own use.

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

Compound;
Concentration Formula;
Retention time;
Response (peak height or area);

On-column Amount (ppmC); and
Calculated Amount (ppmC)

If the Contractor provides the information on the Expected Retention Times and retention time windows or Delta Retention Time for NMOC on the quantitation report, then a separate printout will not be required. If a separate printout is used, see Section 6.11.2 for requirements.

5.2 **CHROMATOGRAMS**

5.2.1 Chromatograms are to be generated using a form-generation software. Strip chart data is not acceptable.

5.2.2 The following information shall be printed in the top of the chromatogram page.

Laboratory sample identification number;
Analyst;
Injection date and time;
Instrument identification;
Column phase and diameter; and
Data file

The Contractor can provide additional information as needed for their own use.

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

5.2.4 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.

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

5.2.6 Scaling factor (label the "x" and "y" axis using a numerical scale) shall be provided.

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

5.2.8 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:

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

5.2.9 In all instances where the data system report has been edited, or where manual integrations or quantitation has been performed, the GC 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 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 out.

6.0 ORDER OF EXTENDED DATA REPORT AND FORMAT REQUIREMENTS

The order of the Extended Data Report for USEPA Method 3C is specified in this section. The format is tailored to USEPA Method 3C and differs from the requirements for other methods. The data package shall follow the order specified below and meet all the requirements specified below.

6.1 ORIGINAL DOCUMENTATION SECTION

6.1.1 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 Checklist Page. This section is submitted in front of the Extended Data Report. The inclusion of this section allows the Contractor to submit a copy of the PDF file of the Extended Data Report as specified in Section 4.0 above as the compliant data package.

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

6.1.3 REQUIRED ORIGINAL FORMS

Original documents are always required for the following forms:

- Title Page NJDEP Form A-1A;
- Case Narrative NJDEP Form A-1C;
- Internal Chain of Custody Forms; and
- Field Test Data Sheets

6.1.4 EXTERNAL CHAIN OF CUSTODY FORMS

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

6.1.5 AIR BILLS

- A. Include the original or a legible copy of the air bill in this section. If the air bill contains information on multiple shipping containers, then the original form shall be included in one of the site specific data reports. For the other reports, a photocopy of the air bill shall be submitted in this section.
- B. If the air bill was not received, then include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information. The hardcopy receipt shall be provided in this section.

6.1.6 SAMPLE RECEIPT AND LOG-IN CHECKLIST FOR METHOD 25C SAMPLES

The Sample Receipt and Log-In Checklist as specified by Section 6.5.2 can contain information on multiple Sample Delivery Groups for that sampling event. The original form shall be included in one of the related data report. For the other reports, a photocopy of the Sample Receipt and Log-In Checklist form shall be submitted in this section.

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

A. A cover page labeled Original Documentation is required.

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

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

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

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

<u>Document Name</u>	<u>Number of Pages</u>
----------------------	------------------------

- | | |
|--|--|
| 1. Sample Listing (Form A-1A) | |
| 2. External Chain of Custody Form(s) | |
| 3. Internal Chain of Custody Forms(s) | |
| 4. Field Test Data Sheets | |
| 5. Case Narrative (Form A-1C) | |
| 6. Air Bills (If Applicable) | |
| 7. Sample Receipt and Log-In Checklist | |

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

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

6.2 TITLE PAGE

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

- Name of Agency which sent the samples to the Contractor;
- NJDEP, or other State agencies' case number or name;
- Contract Number;
- Laboratory's name and location;
- Sample Delivery Group or Batch number;
- First and last date of sample receipt at the Contractor's facility;
- Field sample numbers;

- Laboratory sample numbers;
- Sample location;
- Date and time of sample collection;
- Date of data report;
- Laboratory Quality Assurance Officer name and signature; and
- Laboratory Manager name and signature

6.3 **TABLE OF CONTENTS**

List on this table list, with a page reference, all topic headings in Sections 6.1 through 6.20 of this Appendix.

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

- 6.4.1 Present field and internal laboratory chain of custody documents. DEP Form-095 (with Shipping Container) is used for samples submitted by all State agencies. All data packages presented to the State under this contract shall contain these items. The sampler is required to complete all sections including the 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.
- 6.4.2 If the sampling event for non soil gas sampling, also requires the collection of samples for NJDEP LLTO-15/USEPA Method TO-15 for volatile organics, then the Combined External Chain of Custody Record/Field Test Data Sheet (NJDEP Form-95D) can be used in place of the regular External Chain of Custody Record (NJDEP Form-95C). However the NJDEP Method 3C/25C Canister Sampling Field Test Data Sheet (FTDS) shall also be completed by both the Contractor and the sampler.
- 6.4.3 When chain of custody documentation is missing or contains errors, immediately notify the NJDEP or other State Agency submitting the samples.
- 6.4.4 For every non soil gas sampling event, a NJDEP Method 3C/25C Canister Sampling Field Test Data Sheet (FTDS) will be initiated by the Contractor and sent to the field with the canisters for the sampler to add their required information. The sampler then returns the FTDS with the canister to the Contractor for completion of the data sheet and the FTDS will be returned to the State as part of the data reports.
- 6.4.5 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.
- 6.4.6 Each sample submitted consists of a canister. Document the internal chain of custody for each canister for the method. Internal chain of custody documentation for all samples may be listed on one (1) form for any given case (group) of samples submitted.
- 6.4.7 Indicate on the internal chain of custody document all movements of the canister through the Laboratory. Show the date and time of relinquishing and accepting of the sample by each individual who handled the sample materials. The chain of custody is terminated only when the sample analysis is complete or the canister is depleted.

6.4.8 Electronic Internal Chain of Custody will 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 then 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 Section 6.4 of this Appendix 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 will have to use the hard copy Internal Chain of Custody forms.
- G. A print out from the system documenting the internal chain of custody shall be provided with each Data Report.

6.5 **SHIPPING DOCUMENTATION**

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

6.5.1 **AIR BILLS**

Include the original air bill in the extended data package. If the airbill is not received, include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information.

6.5.2 **SAMPLE RECEIPT AND LOG-IN CHECKLIST FOR METHOD 3C SAMPLES**

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

A. Required information at top of form:

- Contractor name;
- Form name;
- Client's name;

- Sample delivery group number;
- Project name or number;
- Date and time received;
- Received by;
- Log in date;
- Name and signature of staff member who logged in samples;
- Signature of project manager;
- Date signed by project manager;
- Number of shipping containers received;
- Samples delivered by; and
- 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:

Shipping Container Information:

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

Sample Condition:

- Sample containers were received intact

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

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

Sample Integrity Usability:

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

Anomalies or Non Conformance Summary (Comment section)

6.6 **CASE NARRATIVE**

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

- 6.6.2 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 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.
- 6.6.3 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 can be document on a separate printout attached to the case narrative.
- 6.6.4 The Contractor shall certify that gas standards were used in the sample analysis. The commercial supplier of the primary and secondary gas standard shall be listed.
- 6.6.5 The Contractor shall document all GC columns used for analysis by fraction. 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. 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.
- 6.6.6 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."**
- 6.6.7 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. Hard Copies of the Excel Data sheets for each sample (field sample, dilutions, LCS and blanks) in the format specified by Section 3.3 NJDEP-SRP Air Methods Data Summary Table shall be provided at the end of the Case Narrative. The order of the excel data sheets should follow the order of the electronic data.
- 6.6.8 Hard Copies of the Excel Data sheets for each sample (field sample, dilutions, LCS and blanks) in the format specified by Section 3.3 NJDEP-SRP Air Methods Data Summary Table shall be provided at the end of the Case Narrative. The order of the excel data sheets should follow the order of the electronic data.

6.7 **GAS STANDARDS TRACEABILITY CERTIFICATES**

Copies of the Gas Standards Traceability Certificates or Certificates of Analysis for the standard lots supplied by the Commercial Gas Supplier shall be provided. The certificates shall be in lot number order by increasing number and by method.

6.8 **METHODOLOGY REVIEW**

NJDEP Form A-4 Air Analysis (10/2013) is required. Indicate by Method and Revision number, what analyses were conducted on the samples.

6.9 **METHOD 3C DETECTION LIMIT STUDY**

The annual method detection limit (MDL) study as required by the NJDEP Laboratory Certification Regulations N.J.A.C 7:18 Sections 5.5(c) 10 & 11 shall be submitted. All results shall be in % v/v. All information except for signatures shall be computer generated or typed. The order sequence shall be chronological and by instrument if more than one instrument is used. The information provided for each compound shall include the following:

The required format of the Summary is as follows:

- Laboratory Name;
- Laboratory Location;
- Matrix Type;
- Effective Date/Expiration date of MDL Study;
- Instrument ID and Column ID;
- Compound name;
- Data for seven replicates;
- Mean value;
- True Value;
- Percent recovery;
- Standard deviation;
- Method Detection Limits (v/v%);
- Reporting Limits (v/v%);
- True Value/MDL Ratio;
- RL/MDL Ratio;
- Analyst name and date analyzed;
- Supervisor name and date(who reviewed study);
- Report preparer's name and date prepared; and
- QA Officer name and data signed.

6.10 **METHOD DETECTION LIMIT VERIFICATION SUMMARY (MDLV)**

The Verified Method Detection Limit Verification Summary (MDLV Summary) shall be submitted with the Method Detection Limit Study (Section 6.9). All information except for signatures shall be computer generated or typed. The order sequence shall be chronological and by instrument if more than one instrument is used

The required format of the Summary is as follows:

6.10.1 Required information at top of form

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

6.10.2 Required Columns

- Analyte name;
- CAS number;
- MDLV source;
- Source study;
- Source instrument;
- Source analysis date;
- MDLV (% v/v);
- Reporting Limit (% v/v); and
- QL/MDLV ratio

6.11 **QUALITY CONTROL DATA SUMMARY**

6.11.1 **LABORATORY CONTROL SAMPLE (LCS) SUMMARY**

- A. The data summary shall be recorded on a laboratory-generated form.
- B. The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.
- C. The order sequence will be chronological and by instrument if more than one instrument is used.
- D. The average of the duplicate acquisitions are to be reported on the summary form as the LCS results. Each individual acquisition for the LCS sample is reported in Section 6.15.2 of this Appendix.
- E. The method required control limits shall be provided. The percent recovery is to be calculated for each compound to the nearest whole percent (two significant figures).
- F. All Percent Recoveries outside of Quality Control (QC) Limits are to be flagged with an asterisk “*” in the QC Limit column.
- G. The following columns are required on the form for each compound:
 - Spike amount (%v/v);
 - Derived concentration (%v/v);
 - Percent recovery; and
 - QC limits

6.11.2 **RETENTION TIME SUMMARY**

- A. If the Contractor provides the information on the Expected Retention Times and retention time windows or Delta Retention time for NMOC on the quantitation report, then a separate printout will not be required.
- B. The retention time summary shall be recorded on a laboratory-generated form.
- C. The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.
- D. The order sequence shall be chronological and by instrument if more than one instrument is used.

- E. Identify the GC column and the internal diameter on the form.
- F. Each injection for all standards, samples, QC samples shall be listed in the chronological order of injection on the instrument. The laboratory Identification number type of sample and Field sample number shall be listed.
- G. The expected retention time, the actual retention, the retention time window or the delta retention time shall be listed for each injection.
- H. The Contractor can combine the required information from the Retention Time Summary Form with the Analytical Sequence Summary Form (Section 6.14.1) and create one form.

6.11.3 METHOD BLANK SUMMARY

- A. The data summary shall be recorded on a laboratory-generated form. Record all samples, dilutions, reanalyses, RLLCS and any other QC samples analyzed with the method blank. The order sequence will be chronological and by instrument if more than one instrument is used.
- B. The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.
- C. Identify the GC column and the internal diameter on the form.
- D. The following columns are required on the form. The samples, dilutions, reanalyses, LCS and any other QC samples associated with the method blank are to be listed in this section.
 - Field sample identification number
 - Laboratory sample identification number
 - Time and date of analysis

Note: The actual analytical results for the method blank are reported in another section. (See Section 6.15.1)

6.12 SAMPLE DATA SUMMARY

- 6.12.1 The Contractor shall place sample packages in order of increasing sample number considering both letters and numbers.
- 6.12.2 Record sample data on a laboratory-generated form. A separate form shall be provided for each acquisition.
- 6.12.3 Record quantitative results, UNCORRECTED for blank and method detection limits on a laboratory-generated form in accordance with the requirements listed below.

Report all data to two (2) significant figures on the summary form.

- For example:
- a) if the value is 5.54 %v/v ppbv, report 5.5 % v/v.
 - b) if the value is 10.3 %v/v, report 10 %v/v.
 - c) if the value is 116 %v/v report 120 %v/v.

- 6.12.4 The results reported on the summary form should be the same number as the calculated averaged amount (%v/v) from the quantitation report.
- 6.12.5 Report all data in %v/v.
- 6.12.6 The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.
- 6.12.7 Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the required reporting limit with the “U” qualifier.
- 6.12.8 Do not report any data using the method detection limit as the Reporting Limit for any compound.
- 6.12.9 Report the initial dilution factor on each reporting form due the pressurization of the canisters for the initial analysis. For any additional analysis that requires a dilution report the dilution factor that does not factor in the initial analysis.
- 6.12.10 Compounds that exceed the upper limit of the initial calibration are to be reported with a “E” qualifier as defined in Section 8.0
- 6.12.11 Each diluted sample shall be reported on separate form.
- 6.12.12 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 are to be reported with a “D” qualifier as defined in Section 8.0.
- 6.12.13 Compounds compound 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.
- 6.12.14 Compounds that are reported in the diluted sample and not reported in the initial analysis shall be reported without a “D” qualifier.
- 6.12.15 The following information is required to be on each form, in addition to the requirements of Sections 2.11 and 2.13 of this Appendix.
- Matrix type (Air);
 - Sample volume (% v/v);
 - Laboratory sample ID;
 - Laboratory file ID;
 - GC Column and ID;
 - Date received;
 - Date analyzed; and
 - Dilution factor
- 6.12.16 The table summarizing the compound results information shall contain the following:
- CAS Number for all target compounds;
 - Compound name;
 - Concentration units (% v/v);

- Concentration reported; and
- Laboratory qualifier applied

6.12.17 The quantitation reports and the associated chromatogram for each acquisition shall immediately follow each sample data summary report. The chromatogram and data system reports shall comply with Section 5.0.

6.13 **AVERAGE DATA SUMMARY REPORT**

6.13.1 The parameter name is to included only one time in the table for each gas.

6.13.2 The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.

6.13.3 The two acquisitions for each parameter are to be listed consecutively and the average listed underneath. Only the results column needs to be completed for the two acquisitions. For the averaged results only the reporting limits, Units, date analyzed and dilution factor columns shall be completed.

6.13.4 A record shall be generated that provides for the average of the two (2) results with the results of both acquisitions listed.

- Compound Name;
- Analytical results;
- reporting limit unit;
- date analyzed; and
- dilution factor

6.13.5 Record the quantitative results, UNCORRECTED for blank and method detection limits in accordance with the requirements listed below.

Report all data to two (2) significant figures on the summary form.

For example: a) if the value is 5.54 %v/v ppbv, report 5.5 % v/v
 b) if the value is 10.3 %v/v, report 10 %v/v
 c) if the value is 116 %v/v report 120 %v/v.

The results reported on the summary form should be the same number as the calculated averaged amount (%v/v) from the quantitation report.

6.14 **STANDARDS DATA SECTION**

6.14.1 **ANALYTICAL SEQUENCE SUMMARY**

- A. The data analytical sequence summary shall be recorded on a laboratory-generated form.
- B. The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.
- C. The order sequence shall be chronological and by instrument if more than one instrument is used.

- D. The Analytical Sequence Summary shall include all the acquisitions associated with the sample batch.
- The Initial Calibration acquisitions;
 - The Initial Calibration Verification Sample Standard acquisitions;
 - The Opening Continuing Calibration Verification Standard acquisition conducted prior to the analysis of the samples;
 - All sample acquisitions;
 - Any acquisition between the initial CCCS and compliant Closing Continuing Calibration Verification Standard;
 - All associated batch QC sample acquisitions; and
 - The sequence shall end with a compliant Closing Continuing Calibration Verification Standard acquisition;
- E. The Analytical Sequence Summary report shall contain the following information in the header of the form.
- Start and end calibration date(s);
 - Instrument identification; and
 - Column type
- F. In a tabular format the following information shall be provided for each acquisition.
- Sample number;
 - Laboratory Sample ID; and
 - Time and date of each injection

6.14.2 INITIAL CALIBRATION SUMMARY AND RAW DATA

- A. The data summary shall be recorded on a laboratory-generated form.
- B. The order sequence shall be chronological and by instrument if more than one instrument is used.
- C. The Initial Calibration Data Summary in addition to the requirements of Sections 2.11 and 2.13 of this Appendix shall contain the following information at the top of the form.
- Start calibration date and time;
 - End calibration date and time;
 - Calibration file names;
 - Instrument identification; and
 - Column type and name
- D. The table summarizing the calibration information shall contain the following:

- Name of compound;
- Calibration file name or identifier by level established in the calibration file name above;
- Relative Response Factors based on peak height or peak area (shall be used consistently across the entire sample set);
- Curve type;
- Maximum % Relative Standard Deviation;
- Average Relative Response Factor; and
- % Relative Standard Deviation

E. All initial calibration chromatograms and quantitation shall be reported in chronological order by instrument.

6.14.3 INITIAL CALIBRATION VERIFICATION SAMPLE STANDARD FORM SUMMARY AND RAW DATA

- A. The data summary for the Initial Calibration Verification Sample Standard shall be recorded on a laboratory-generated form.
- B. The order sequence shall be chronological and by instrument if more than one instrument is used.
- C. The Initial Calibration Verification Sample Standard (ICV Sample Standard) summary report in addition to the requirement of the requirements of Sections 2.11 and 2.13 of this Appendix shall contain the following information at the top of the form.
- Laboratory file ID;
 - Initial Calibration Verification Sample Standard date and time;
 - Initial Calibration date and time (start and stop);
 - Instrument identification; and
 - Column type and name
- D. The method required control limits shall be provided. The percent recovery is to be calculated for each compound to the nearest whole percent (two significant figures). All Percent Recoveries outside of Quality Control (QC) Limits are to be flagged with an asterisk “*” in the QC Limit column.

The following columns are required on the form for each compound:

Amount added (ppbv);
Amount recovered (ppbv);
Percent recovery; and
QC limits

E. The quantitation report and chromatograms for each ICV Sample Standard shall immediately follow that ICV Sample Standard summary form.

6.14.4 CALIBRATION VERIFICATION SUMMARY AND RAW DATA (OPENING AND CLOSING)

A. The data summary shall be recorded on a laboratory-generated form.

- B. The order sequence will be chronological and by instrument if more than one instrument is used.
- C. The Continuing Calibration Data Summary report in addition to the requirement of the requirements of Sections 2.11 and 2.13 of this Appendix shall contain the following information at the top of the form.
- Laboratory file ID;
 - Calibration date and time;
 - Initial Calibration date and time (start and stop);
 - Instrument identification; and
 - Column type and name
- D. The table summarizing the calibration information shall contain the following:
- Name of compound;
 - Relative Response Factor based on Peak height or peak area (shall be used consistently across the entire sample set);
 - Curve type;
 - Maximum % Difference;
 - Average Relative Response Factor; and
 - % Difference
- E. All continuing calibration chromatograms and quantitation shall be reported in chronological order by instrument.

6.15 **RAW QC DATA PACKAGE**

6.15.1 **METHOD BLANK SUMMARY**

- A. Method blank data shall be in chronological order by instrument and date of analysis.
- B. The reagent blank data summary shall comply with Sections 6.12 and 6.13 of this Appendix.
- C. The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.
- D. Tabulated results shall be on a laboratory-generated form for the target compounds that is the same form used for the sample data.
- E. The quantitation reports and the associated chromatogram for each acquisition shall immediately follow each sample data summary report. The chromatogram and data system reports shall comply with Section 5.1.
- F. Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any compound. If the compound is detected by the instrument at less than the Reporting Limit, then the sample data for that compound is to be reported at the method required reporting limit with the "U" qualifier. (Example 25 U %v/v.)

6.15.2 **LABORATORY CONTROL SAMPLE RESULTS SUMMARY**

- A. Laboratory Control Sample (LCS) data shall be arranged in chronological order by instrument and date of analysis.
- B. The LCS summary shall comply with Sections 6.12 and 6.13 of this Appendix.
- C. The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.
- D. Tabulated results shall be on a laboratory-generated form for the target compounds that is the same form as used for the sample data.
- E. The quantitation reports and the associated chromatogram for each acquisition shall immediately follow each sample data summary report. The chromatogram and data system reports shall comply with Section 5.1.

6.15.3 INSTRUMENT BLANK RESULTS SUMMARY (IF APPLICABLE)

- A. Instrument blank data shall be in chronological order by instrument and date of analysis.
- B. The instrument blank data summary shall comply with Sections 6.12 and 6.13 of this Appendix.
- C. The reporting form shall comply with Sections 2.11 and 2.13 of this Appendix.
- D. Tabulated results shall be on a laboratory-generated form for the target compounds that is the same form used for the sample data.
- E. The quantitation reports and the associated chromatogram for each acquisition shall immediately follow each sample data summary report. The chromatogram and data system reports shall comply with Section 5.1.
- F. Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the method required reporting limit with the "U" qualifier. (Example 25 U %v/v).

6.16 CLEAN CANISTER CERTIFICATION DATA

- 6.16.1 The Contract requires that a canister certified clean under SRP Method LL-TO-15/USEPA Method TO-15 be used for the Clean Canister Certification for Method 3C. As part of that certification the entire deliverable requirements of SRP LLTO-15/USEPA Method TO-15 Section 9.0 shall be submitted for documentation of the clean canister. Please refer to the deliverable requirements of that Appendix.
- 6.16.2 If more than one canister is used to certify all the canisters in the Sample Delivery Group is clean, then the Contactor shall arrange all clean canister arranged in chronological order by date of analysis and increasing sample number considering both letters and numbers
- 6.16.3 The sample information in order increasing sample number considering both letters and numbers and chronological order by date of analysis.

6.17 **INSTRUMENT RUN LOG**

6.17.1 The field sample instrument run log is to be presented first, followed by the clean canister instrument run log.

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

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

6.17.4 The Instrument run log for the continuing calibration shall start with the injection of the opening continuing calibration verification standard and end with the closing calibration verification standard.

6.17.5 If manual integration is conducted on a sample it shall be noted in the comment section.

6.17.6 The following information shall be included at the top instrument run log page:

- Laboratory name;
- Instrument identification;
- Column;
- Date(s) of analyses;
- Analyst name and signature;
- Supervisor name and signature;
- Sample Delivery Group Number (Project Identification No);
- Target directory for files;
- Initial calibration date; and
- Injection volume

6.17.7 The columns of the table shall be labeled as follows:

- Injection order number (shall be chronological);
- Laboratory sample ID Number;
- Preparation batch ID Number;
- Sequence name/batch;
- Dilution factor;
- QC Check (indicating that the sample passed Quality Control);
- Analyst initials; and
- Comments

6.18 **PRESSURE GAUGE READINGS**

Present a copy of the actual logbook pages on which the initial and final pressure gauge readings are recorded.

6.19 **CANISTER DILUTION CALCULATIONS**

The Contractor shall submit the following information in a table format:

- Laboratory ID;
- Laboratory Sample Number or Field Sample Number;

- Initial Pressure ("Hg);
- Initial atmosphere;
- Initial psia;
- Initial Volume of Canister (L);
- Dilution factor;
- Final Pressure ("Hg);
- Final psia;
- Final atmosphere;
- Final Volume of Canister (L);
- Required footnotes shall be defined in chart;
- x"Hg = ;
- Atm = ;
- Psia= ; and
- Psig=

6.20 **SCREENING DATA**

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

7.0. NJDEP REGULATORY FORMAT SUMMARY DATA REPORT

7.1 The NJDEP Regulatory Summary Data Report will consist of documentation required by sections listed below. The documentation shall include the summary reporting forms for the sample data, laboratory control sample, method blank, instrument blanks (if applicable), analytical sequence, initial calibration and continuing calibration.

- Section 6.2 Title Page;
- Section 6.4 Chain of Custody (External Only) and Methods 3C/25C Field Test Data Sheets;
- Section 6.6 Case Narrative;
- Section 6.8 Methodology Review;
- Section 6.9 Method Detection Limit Summary;
- Section 6.10 Verified Method Detection Limit Summary;
- Section 6.11.1 Laboratory Control Sample Summary;
- Section 6.11.2 Retention Time Summary (If Applicable);
- Section 6.11.3 Method Blank Summary;
- Section 6.13 Average Data Summary Report (reporting form only);
- Section 6.14.1 Analytical Sequence Summary;
- Section 6.14.2 Initial Calibration Summary (reporting form only);
- Section 6.14.3 Initial Calibration Verification Sample Standard (reporting form only); and
- Section 6.14.4 Calibration Verification Summary opening and closing (reporting form only)

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

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

8.0 DATA REPORTING QUALIFIERS

The method doesn't specify the use of data qualifiers. However, NJDEP has identified the data qualifiers that shall be used on the data.

- U- The flag indicates the compounds was analyzed for but no reported. The RL shall be adjusted if dilutions are required.
- B- This flag is used when the analyte 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. Blank contaminants are flagged B only when they are detected in a sample.
- E- This flag indicates compounds whose concentrations exceed 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, then 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, for example when the concentration of an analyte exceeds the upper calibration range, then 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 are flagged with a “D” flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample.

Note 1: The “D” flag is not applied to compounds that are not detected in the 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 cannot be combined on a single reporting form.

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”.

9.0 FORMS AND TABLES

Note: No page numbers exist for this section;

Table 1 List of Required Compounds and CAS Numbers;

Table 2 Extended Data Package Hierarchical Bookmark Structure;

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

External Chain of Custody Form (NJDEP Form-77);

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

Combined External Chain of Custody Record/Field Test Data Sheet (NJDEP Form-95D);

NJDEP Method 3C/25C Canister Sampling Field Test Data Sheet;

Title Page – NJDEP Form A-1A;

Case Narrative - NJDEP Form A -1C;

Methodology Summary NJDEP Form A-4 - Air Methods (10/2013); and

NJDEP Air Methods Data Summary Table (The file here is example only, the actual reporting format is provided as a separate excel file)

TABLE 1 LIST OF REQUIRED COMPOUNDS AND CAS NUMBERS

This Table contains the required compounds and CAS numbers. The information in this table shall be used for the reporting of the analytical data to NJDEP. Changes to the compound names and CAS numbers are not allowed for reporting of the data to the State of New Jersey.

Compound Name	CAS Number
Carbon Dioxide	124-38-9
Methane	74-82-8
Nitrogen	7727-37-9
Oxygen	7782-44-7
Carbon Monoxide	630-08-0

TABLE 2
EXTENDED DATA PACKAGE HIERARCHICAL BOOKMARK STRUCTURE

Parent Bookmark	Child Bookmark
Title Page	
Table of Contents	
External Chain of Custody Forms and Canister specific Field Test Data Sheets	External Chain of Custody Forms or External COC/ FTDS combination Method 3C/25C Canister Sampling Field Test Data Sheet for each canister
Internal Chain of Custody	
Shipping Documentation	Airbills (If applicable) Sample Receipt and Log In Check List
Copies of Traceability Certificates from Commercial Gas Standard Suppliers	
Methodology Review	
Case Narrative	Case Narrative
	Manual Integration Documentation
	Data Sheets in Excel - Copies of the Microsoft Excel Reporting Sheets
Method Detection Limit Studies	Method Detection Limit Study
	Verified Method Detection Limit Summary
QC Summary Data	Laboratory Control Sample Summary
	Method Blank Summary
Sample Data	Sample Data Summary
	Samples in increasing alphanumeric field sample number Order (with supporting raw data)
Standards Data	Analytical Sequence
	Initial Calibration Summary
	Initial Calibration Verification Sample Standard Form Summary
	Continuing Calibration Summaries including Opening and Closing CCV
	Analytical Sequence
	Chromatograms and Data System Printouts (see note below.)
Raw QC Data	Blank Data (method and instrument blanks)
	Laboratory Control Sample Data
Clean Canister Certification Data In chronological date order for each clean canister – Method NJDEP-LLTO-15/USEPA Method TO-15 Data	Method SRP LL-TO-15/USEPA Method TO-15 Clean Canister Certification Data
	Method 3C Clean Canister Certification Data(if applicable) Clean Canister Data Conversion Table to v/v % (if applicable)
Sample Preparation	Instrument Run Logs (sample data run logs)

	Instrument Run Logs (clean canister run logs)
	Pressure Gauge Readings (if applicable)
	Canister Dilution Calculation(If applicable)
	Screening Data
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.

The quantitation report and chromatograms for each ICV Sample Standard shall immediately follow that ICV Sample Standard summary form.

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.

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: _____

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

[illegible]

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

Relinquished	Received	Time/Date	Reason For Change of External Custody
XXXXXXXXXXXXXXXXXX			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	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	

[illegible]

Yellow – Sampling Custodian Upon Receipt of Shipping Container from Field
Gold – Sample Custodian for Sample Preparation and Shipment

10/2006

Sampling Information			
Temperature of Vent Gas: _____ °C _____ °K			
Stack Differential Pressure (SDP) _____ (inches of water) (pitot tube reading)			
Stack Velocity of Vent Gas (Method 2/2C): _____ ft/min			
Leak Check: Pressure gauge reading prior to sampling: _____ mm Hg			
Pressure gauge reading after sampling: _____ mm Hg			
Diameter of Stack (inches): _____ Radius of Stack (inches): _____ Radius of Stack (feet): _____			
Sampling Time (24-hour clock): Start: _____ Stop: _____			
Barometric Pressure: On Site Measurement: ☐ Yes ☐ No			
If no, record the name/location of the NOAA Weather Station: _____ _____			
Barometric Pressure reading: _____ mm Hg Time (24-hour clock) _____			
Note: The NOAA number is acceptable to be reported if the elevation is less than 50 feet from weather station and the distance is less than 15 miles from the weather station being used for reporting. If not, the actual measurements from the site shall be reported.			
			_____ Signature/Title Sampler

Laboratory Information	
CANISTER PRESSURE mm of Hg (inches)	
Initial Pressure (to field) _____	required (from lab record log) after return
Final Pressure (from field) _____	required (from lab record log) after return
Data Shipped: _____	
Date Received: _____	
Individual Canister Certification (provide File #): _____	
Batch Certification (provide Batch ID#): _____	
_____ Signature/Title Analyst Who Certified Canisters	

Title Page – NJDEP 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:		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>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 disk or electronically has been authorized by the laboratory manager or his/her designee, as verified by the following signature.</i>			
LABORATORY MANAGER (TYPED)			DATE
LABORATORY MANAGER (SIGNATURE)			
QUALITY ASSURANCE OFFICER (TYPED)			DATE
QUALITY ASSURANCE OFFICER (SIGNATURE)			

Case Narrative - NJDEP 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

--

Methodology Summary NJDEP Form A-4 - NJDEP-Air Methods (10/2013)

Laboratory:	Project No:
Location:	SDG No:

Name	Required Methodology	Indicate Method
Volatile Organics	NJDEP-LLTO-15	
Volatile Organics	USEPA Method TO-15	
Carbon Dioxide, Methane, Nitrogen, Oxygen, Carbon Monoxide	USEPA Method 3C	
Non Methane Organic Carbon	USEPA Method 25C	

Project:
Field ID Number:
Laboratory ID Number:

**TARGET/NON TARGET ANALYTES –
AIR RESULTS**

Sampling Date:
Analysis Date:

Chemical	CAS Number	Molecular Weight	Lab Results	Q	Corrected Results $\mu\text{g}/\text{m}^3$	Retention Time NT Only	QAS Decision	Footnotes
Method TO-15			ppbv					
Acetone	67-64-1	58.08						
Allyl chloride	107-05-1	76.53						
Benzene	71-43-2	78.11						
Bromodichloromethane	75-27-4	163.8						
Bromoform	75-25-2	252.8						
Bromomethane	74-83-9	94.94						
1,3-Butadiene	106-99-0	54.09						
Chlorobenzene	108-90-7	112.6						
Chloroethane	75-00-3	64.52						
Chloroform	67-66-3	119.4						
Chloromethane	74-87-3	50.49						
Carbon disulfide	75-15-0	76.14						
Carbon tetrachloride	56-23-5	153.8						
2-Chlorotoluene	95-49-8	126.6						
Cyclohexane	110-82-7	84.16						
Dibromochloromethane	124-48-1	208.3						
1,2-Dibromoethane	106-93-4	187.9						
1,2-Dichlorobenzene	95-50-1	147.0						
1,3-Dichlorobenzene	541-73-1	147.0						
1,4-Dichlorobenzene	106-46-7	147.0						
Dichlorodifluoromethane	75-71-8	120.9						
1,1-Dichloroethane	75-34-3	98.96						
1,2-Dichloroethane	107-06-2	98.96						
1,1-Dichloroethene	75-35-4	96.94						
1,2-Dichloroethene (cis)	156-59-2	96.94						
1,2-Dichloroethene (trans)	156-60-5	96.94						
1,2-Dichloropropane	78-87-5	113.0						
1,3-Dichloropropene (cis)	10061-01-5	111.0						
1,3-Dichloropropene (trans)	10061-02-6	111.0						
1,2-Dichlorotetrafluoroethane	76-14-2	170.9						
1,4-Dioxane	123-91-1	88.12						
Ethanol	64-17-5	46.07						
Ethylbenzene	100-41-4	106.2						
4-Ethyltoluene	622-96-8	120.2						
n-Heptane	142-82-5	100.2						
1,3-Hexachlorobutadiene	87-68-3	260.8						
n-Hexane	110-54-3	86.17						
Isopropanol	67-63-0	60.10						
Methylene chloride	75-09-2	84.94						
Methyl ethyl ketone	78-93-3	72.11						
Methyl isobutyl ketone	108-10-1	100.2						
Methyl methacrylate	80-62-6	100.1						
Methyl tert-butyl ether	1634-04-4	88.15						
Naphthalene	91-20-3	128.2						
Styrene	100-42-5	104.1						

Project:
Field ID Number:
Laboratory ID Number:

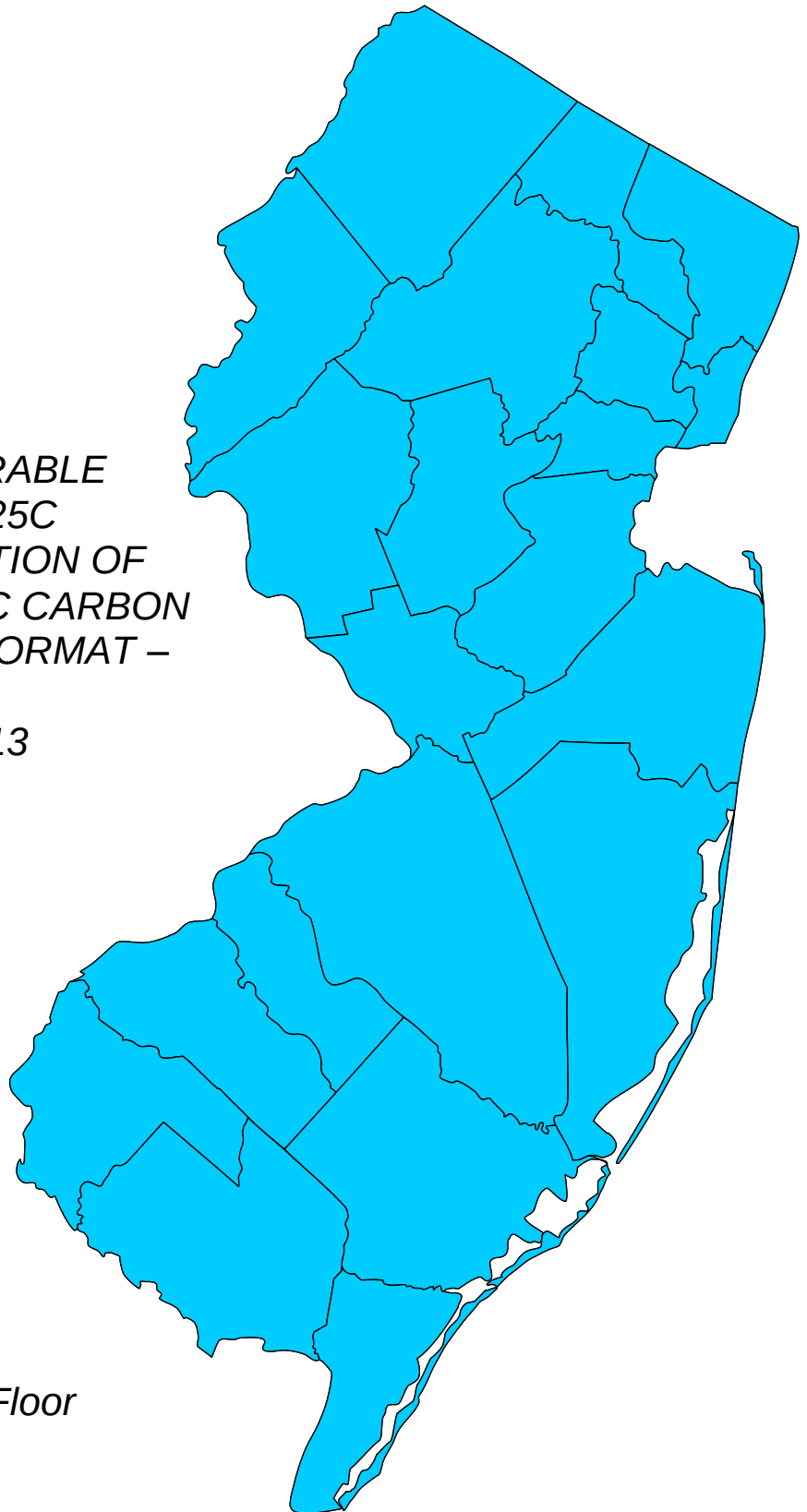
**TARGET/NON TARGET ANALYTES –
AIR RESULTS**

Sampling Date:
Analysis Date:

Chemical	CAS Number	Molecular Weight	Lab Results	Q	Corrected Results	Retention Time NT Only	QAS Decision	Footnotes
Method TO-15			ppbv		µg/m³			
Tert-butyl alcohol	75-65-0	74.12						
1,1,2,2-Tetrachloroethane	79-34-5	167.9						
Tetrachloroethene	127-18-4	165.8						
Tetrahydrofuran	109-99-9	72.11						
Toluene	108-88-3	92.14						
1,2,4-Trichlorobenzene	120-82-1	181.5						
1,1,1-Trichloroethane	71-55-6	133.4						
1,1,2-Trichloroethane	79-00-5	133.4						
Trichloroethene	79-01-6	131.4						
Trichlorofluoromethane	75-69-4	137.4						
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	187.4						
1,2,4-Trimethylbenzene	95-63-6	120.2						
1,3,5-Trimethylbenzene	108-67-8	120.2						
2,2,4-Trimethylpentane	540-84-1	114.2						
Vinyl bromide	593-60-2	106.9						
Vinyl chloride	75-01-4	62.50						
Xylenes (m&p)	179601-23-1	106.2						
Xylenes (o)	95-47-6	106.2						
Volatile Tentatively Identified Compounds (up to 30 compounds)								
USEPA Method 3C			%(v/v)					
Carbon Dioxide	124-38-9							
Methane	74-82-8							
Nitrogen	7727-37-9							
Oxygen	7782-44-7							
Carbon Monoxide	630-08-0							
USEPA Method 25C			ppmC					
Non Methane Organic Carbon	USEPA25C							

*New Jersey Department of Environmental Protection
Site Remediation Program*

*CONTRACT DELIVERABLE
USEPA METHOD 25C
FOR THE DETERMINATION OF
NON METHANE ORGANIC CARBON
NJDEP REGULATORY FORMAT –
APPENDIX 3
SEPTEMBER 2013*



*Site Remediation Program
Financial Services Element
401 East State Street – 6th Floor
Mail Code 401-061
PO Box 420
Trenton, New Jersey 08625-0420*

**APPENDIX 3 – USEPA METHOD 25C DETERMINATION OF NON METHANE
ORGANIC CARBON FROM LANDFILL GAS VENTS
NJDEP REGULATORY REPORTING FORMAT**

1.0 INTRODUCTION

- 1.1 This Appendix contains the format used for reporting Non Methane Organic Carbon (NMOC) by USEPA Method 25C. It presents instructions and the order in which data is reported. The Appendix can to be used in conjunction with Appendix 1 and Appendix 2 for the reporting of data under this contract.
- 1.2 The NJDEP provides only three standardized reporting forms for this contract, the Title Page, Case Narrative and Methodology Form. The Contractor can obtain electronic versions of the NJDEP generated forms after contract award. Copies of these forms are located in Section 9.0 of this Appendix.
- 1.3 The Method 3C/25C Field Test Data Sheet is located in Section 9.0 of this Appendix. This Form is required for every canister in addition to any External Chain of Custody form.
- 1.4 The Original Documentation Section (Section 6.1) 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 The Contractor must follow all the requirements regarding scaling and presentation of chromatograms, spectra, manual integration requirements and quantitation reports as specified in the contract requirements for Method 25C.
- 1.6 For all other reporting forms, the Laboratory must generate the forms from Reporting Form Generation Software (such as Target, Thruput Inc, Thru-Put Systems, The Khemia Company, or Environment Information System Corporation) that contains the information required by NJDEP.
- 1.7 The Microsoft TM Excel Spreadsheet used to reported the data electronically on the NJDEP-SRP Air Methods Data Summary Table to the State cannot be used for the reporting forms.
- 1.8 The forms should not have labels referring to "CLP", "SOW" and "EPA Sample #". If due to the reporting software used by the laboratory, these labels are included, then a statement must be added to the Case Narrative informing the data reviewer to disregard the labels.
- 1.9 All Contractors must receive a written approval from the State Contract Manager prior to using any modified forms in Section 15.0. The NJDEP shall reject noncompliant forms and data packages.
- 1.10 Each Sample Delivery Group (20 samples or less) consists of a separate Extended and Summary Data Report and the associated electronic deliverables. Individual Sample Delivery Groups cannot be merged together to create a data package.

2.0 GENERAL NJDEP REGULATORY REPORT FORMAT REQUIREMENTS

- 2.1 The deliverables from the Laboratory must consist of the both paper documents and electronic files.
- 2.2 The Laboratory must submit the following deliverables to the NJDEP or other state users within the time frame established at the time of engagement.
- Original Extended Data Report with original chain of custody forms;
 - Original and one copy of the Summary Data Report;
 - Electronic Deliverables; and
 - Acrobat Format (PDF) File of both the Extended and Summary Data Report on compact disc.
- 2.3 The NJDEP Regulatory Data Report Format is organized to facilitate the preparation and review of the data package. The laboratory must present the USEPA Method 25C data in separate section from the other methods in this contract and must comply with the requirements of this Appendix in the specified order.
- 2.4 The data results must be reported uncorrected for any field measurements collected or recorded by the sampler. The correction for field measurements must be done by the sampler after the data report is received from the Contractor.
- 2.5 The Contractor is required to complete the Laboratory Information Section of the "Method 3C/25C Canister Sampling Field Test Data Sheet" that is included as part of the contract. The Field Test Data Sheet is initiated by the Contractor and is sent to the Sampler with the Canisters. The Contractor fills out the required portion of the form prior to sending out the canisters and completed the form upon receipt of the Test Sheet and the Canisters from the field. The original form is to be returned with the Extended Data Report. A copy of the form must be included in the Summary Data Reports.
- 2.6 The entire document must be legible. The State shall reject data packages with containing incomplete or illegible signatures and documentation.
- 2.7 Each batch of samples or Sample Delivery Group (20 field samples or less) must have a separate set of data packages. If more than one analysis is required of a sample (i.e. sample is analyzed for volatile organics by NJDEP SRP Low Level USEPA Method TO-15), all data must be present in one data set in separate sections. The only information from each analysis that can be merged together in the front section of the data package is as follows.
- Title Page;
 - External Chain of Custody Field Test Data Sheets;
 - Shipping Documentation;
 - Copies of Traceability Certificates from Commercial Gas Standard Suppliers;
 - Methodology Review;
 - Case Narrative;
 - Data Sheets in Excel; and
 - Method Detection Limit Studies(MDL Study and MDLV Study)

- 2.8 All injections including samples, standards, QC samples and blanks are to be done in triplicate and calculated using the average sample area or height. The injections must occur in sequence. The results are acceptable when the peak areas or heights for three consecutive injections agree within 5% of their average.
- 2.9 All the initial sample results are reported as diluted because the canisters have to be pressurized by the Contractor prior to pulling a volume of sample for analysis. Further diluted samples are required to meet the same requirements as initially diluted samples. The data from initially diluted and further diluted samples must be submitted as separate data sets.
- 2.10 If a sample requires additional dilution because a parameter concentration exceeded the upper calibration standard, the Contractor is required to report both the original analysis as a dilution (due to pressurization requirements) and further diluted data set of both acquisitions. If the parameter concentrations are such that the sample can be analyzed only at a higher dilution, the sample data set at the appropriate dilution and one data set at a more concentrated dilution must be submitted (maximum of two sets of data).
- 2.11 The data summary forms, at a minimum, must include the project number, Sample Delivery Group (SDG) number, laboratory name, field sample ID and laboratory sample ID number (if applicable), QC sample name (if applicable), and date and time (if possible) analysis.
- 2.12 The original extended data report and summary data reports can be printed single sided or double sided. However, the original chain of custody forms and shipping documentation must be single sided.
- 2.13 The Contractor must complete all the required information on the reporting forms and raw data forms as specified by this Appendix.
- 2.14 Both data reports must be organized and labeled in accordance with instructions in the Appendix.
- 2.15 Securely bind all deliverables along the left-hand margin of the report. Staples are not acceptable.
- 2.16 The extended data report must be sequentially paginated starting with the first page after the Table of Contents.
- 2.17 The NJDEP has assigned a CAS for the method. The required CAS number to be used for all reporting is "USEPA25C".

3.0 ELECTRONIC DATA FILES DELIVERABLE REQUIREMENTS

3.1 ELECTRONIC FILES BY ELECTRONIC MAIL

The two electronic files generated by the Contractor are to be submitted by electronic mail to the State Contract Project Manager on the same day that the data package is

due to be the State. Copies of these files must also be submitted to the State on CD-ROM as required by Section 3.2 of this Appendix.

- NJDEP-SRP Air Methods Data Summary Table; and
- The Electronic Data Deliverable Format

3.2 **FILES ON COMPACT DISC**

The CD must have the Contractor logo and name of the Contractor as a hologram on the disc label. The SDG number must be on a stick-on label. The cover slip of cardboard must document the Contractor name, include sticker with SDG number. The cover slip must be sealed shut for delivery to State. The following files must be included on the CD:

- Acrobat PDF files of both the Extended and the Summary Data Reports
- NJDEP-SRP Air Methods Data Summary Table File
- The Electronic Data Deliverable Format

3.3 **THE NJDEP-SRP AIR METHODS DATA SUMMARY TABLE AND METHOD 25C REQUIREMENTS**

3.3.1 Data from other matrices cannot be reported with the air data.

3.3.2 The format of the cells for every entry must be text format. This is known in Visual Basic for Applications (VBA) as “@.” This causes each entry to be displayed exactly as entered.

3.3.3. Do not set the Print Area on any worksheet. Incorrectly setting the Print Area will prevent all the sample information from being printed.

3.3.4 The Contractor is required to input information that is required in the custom headers and footers of the worksheet for each sample.

- This left header information is as follows:
 - Project Number or name;
 - Field Sample Identification Number; and
 - Laboratory File Identification Number;
- This right header information is as follows:
 - Sample Date; and
 - Analysis Date
- This left footer information is as follows:
 - Laboratory Name; and
 - Laboratory City/State

3.3.5 This table is in a Microsoft Excel spreadsheet and lists every parameter that can be analyzed for by this method.

- 3.3.6 The files must be named with the Sample Delivery Group Number and end with ".XLS". An example of this form in Section 9.0 of this Appendix.
 - 3.3.7 A separate excel worksheet within one Microsoft Excel™ file must be provided for each field sample.
 - 3.3.8 Only the target parameters that the Contractor is required to analyze for are to be included in the file that is submitted to the State.
 - 3.3.9 The Field Sample Identification Number must be used to name the sample sheet.
 - 3.3.10 The dilution factor must be listed on the first row of each method data in the worksheet for each sample below the method/units row.
 - 3.3.11 For the QC samples generated by the Contractor such as the LCS, the Laboratory File Name must be used as the tab name of the sample worksheet. The name must also be the same that is used in the Print Setup header information.
 - 3.3.12 The required CAS Number for Method 25C is USEPA25C. No notes are to be included in the table as to the acceptability of any data.
 - 3.3.13 The averaged result must be reported for the compound in the Laboratory Results Column. The Calculated Results column is not to be completed by the Contractor. Report the same number that is reported on the Sample Data Summary form as specified in Section 6.13.
 - 3.3.14 The required unit for Method 25C is ppmC.
 - 3.3.15 If other air methods such as NJDEP-LLTO-15/USEPA Method TO15 or Method 3C are being reported for the same sample, all the results can be reported on the same form. The method must be listed with a separate header and the correct units. See Example provided in Section 9.0 of this Appendix.
- 3.4 **ELECTRONIC DATA DELIVERABLE FORMAT (SAMPLE.TXT FILE)**
- 3.4.1 Character fields must present all alphabetic characters in the upper case. Submit this information electronically to the State. Contain the data fields in a plain text file, with a file named "SAMPLE.TXT." Enter each data field on a separate line concluded by a carriage return line feed combination (ASCII characters 13 and 10).
 - 3.4.2 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	Air

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

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

4.0 DELIVERY OF HARDCOPY DATA IN PDF FORMAT

- 4.1 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 must be the latest version of the software.
- 4.2 The PDF file for Extended Data Report must be organized in accordance to directions provided in Table 1 located in Section 9.0 of this Appendix. 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). The required hierarchal bookmark structure for the Extended Data Report is shown in Table 1.
- 4.3 Summary Data Report PDF file is not required to be bookmarked. The Summary Data Report PDF must follow the order established below and report only the required forms as specified in Section 7.0.

If the sampling event includes air methods such as USEPA Method 3C or NJDEP-LLTO-15/USEPA Method TO-15 within the same sample delivery group, the hierarchal bookmark structure must be expanded to the Group Bookmark level for each method. 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 REGULATORY EXTENDED DATA FORMAT REPORT (EXTENDED DATA REPORT)

5.1 CHROMATOGRAMS AND QUANTITATION REPORT REPORTING REQUIREMENTS

The required information on the Chromatograms and Quantitation Report for the same for the calibration standards, samples, blanks and samples.

5.1.1 QUANTITATION REPORT REQUIREMENTS

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

- A. Data file identification;
- B. Report date;
- C. Injection date and time;
- D. GC Operator;
- E. Instrument identification;
- F. Quantitation type;
- G. Dilution factor;
- H. Calibration File; and
- I. Calibration sample Level (for all standards)

The Contractor can provide additional information as needed for their own use.

5.1.2 The actual data results must be reported with the following information:

Compound;
Concentration Formula;
Retention time;
Response (peak height or area);
On-column Amount (ppmC);
Calculated Amount (ppmC)

If the Contractor provides the information on the Expected Retention Times and retention time windows or Delta Retention Time for NMOC on the quantitation report, then a separate printout will not be required. If a separate printout is used, see Section 6.11.2 for requirements.

5.2 **CHROMATOGRAMS**

5.2.1 Chromatograms are to be generated using a form-generation software. Strip chart data is not acceptable.

5.2.2 The following information must be printed in the top of the chromatogram page.

Laboratory sample identification number;
Analyst;
Injection date and time;
Instrument identification;
Column phase and diameter; and
Data file

The Contractor can provide additional information as needed for their own use.

5.2.3 The retention time or peak name must be printed over the peaks for each detected compound name.

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

5.2.5 Chromatograms must display compound peaks normalized to full scale for all samples, standards and QC samples.

5.2.6 Scaling factor (label the "x" and "y" axis using a numerical scale) must be provided.

5.2.7 If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram.

5.2.8 When a chromatogram must be rescaled, it must 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 must be included is the following:

A. Field sample identification number;

- B. Data file identification number;
- C. Injection date and time;
- D. Instrument identification number; and
- E. Analyst name

5.2.9 In all instances where the data system report has been edited, or where manual integrations or quantitation has been performed, the GC Operator shall identify such edits or manual procedures by initialing and dating the changes made to the report and shall include the integration time range. The instrument must automatically mark the integrated area with the letter "M" on the quantitation report. The GC 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 must be distinguishable from any line that is drawn by the instrument when printed out.

6.0 ORDER OF EXTENDED DATA REPORT AND FORMAT REQUIREMENTS

The order of the Extended Data Report for USEPA Method 25C is specified in this section. The format is tailored to USEPA Method 25C and differs from the requirements for other methods. The data package must follow the order specified below and meet all the requirements specified below.

6.1 ORIGINAL DOCUMENTATION SECTION

6.1.1 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 Checklist Page. This section is submitted in front of the Extended Data Report. The inclusion of this section allows the Contractor to submit a copy of the PDF file of the Extended Data Report as specified in Section 4.0 above as the compliant data package.

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

6.1.3 REQUIRED ORIGINAL FORMS

Original documents are always required for the following forms:

- Title Page NJDEP Form A-1A;
- Case Narrative NJDEP Form A-1C;
- Internal Chain of Custody Forms; and
- Field Test Data Sheets

6.1.4 EXTERNAL CHAIN OF CUSTODY FORMS

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

6.1.5 AIR BILLS

- A. Include the original or a legible copy of the air bill in this section. If the air bill contains information on multiple shipping containers, then the original form must be included in one of the site specific data reports. For the other reports, a photocopy of the air bill must be submitted in this section.
- B. If the air bill was not received, then include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information. The hardcopy receipt must be provided in this section.

6.1.6 SAMPLE RECEIPT AND LOG-IN CHECKLIST FOR METHOD 25C SAMPLES

The Sample Receipt and Log-In Checklist as specified by Section 6.5.2 can contain information on multiple Sample Delivery Groups for that sampling event. The original form must be included in one of the related data report. For the other reports, a photocopy of the Sample Receipt and Log-In Checklist form must be submitted in this section.

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

- A. A cover page labeled Original Documentation is required.
- B. Table of Contents Page shall contain the following information.
- C. The Header information of the Table of Contents is as follows.
 - Laboratory Name;
 - Laboratory Location;
 - Project Number (If no project number is supplied include the name of the project supplied by the sampler); and
 - Sample Delivery Group Number
- D. The Body of the Table of Contents is to be structured as follows.

Document Name

Number of Pages

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

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

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

6.2 **TITLE PAGE**

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

- Name of Agency which sent the samples to the Contractor;
- NJDEP, or other State agencies' case number or name;
- Contract Number;
- Laboratory's name and location;
- Sample Delivery Group or Batch number;
- First and last date of sample receipt at the Contractor's facility;
- Field sample numbers;
- Laboratory sample numbers;
- Sample location;
- Date and time of sample collection;
- Date of data report;
- Laboratory Quality Assurance Officer name and signature; and
- Laboratory Manager name and signature

6.3 **TABLE OF CONTENTS**

List on this table list, with a page reference, all topic headings in Sections 6.1 through 6.20 of this Appendix.

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

- 6.4.1 Present field and internal laboratory chain of custody documents. DEP Form-095 (with Shipping Container) is used for samples submitted by all State agencies. All data packages presented to the State under this contract must contain these items. The sampler is required to complete all sections including the sample collection. The Contractor must properly complete the laboratory portions of these forms. Include all air waybills for each SDG, miscellaneous shipping and receiving records.
- 6.4.2 If the sampling event for non soil gas sampling, also requires the collection of samples for SRP-LLTO-15 for volatile organics, then the Combined External Chain of Custody Record/Field Test Data Sheet (NJDEP Form-95D) can be used in place of the regular External Chain of Custody Record (NJDEP Form-95C). However the NJDEP Method 3C/25C Canister Sampling Field Test Data Sheet (FTDS) must also be completed by both the Contractor and the sampler.
- 6.4.3 When chain of custody documentation is missing or contains errors, immediately notify the NJDEP or other State Agency submitting the samples.
- 6.4.4 For every non soil gas sampling event, a NJDEP Method 3C/25C Canister Sampling Field Test Data Sheet (FTDS) will be initiated by the Contractor and sent to the field with the canisters for the sampler to add their required information. The sampler then returns the FTDS with the canister to the Contractor for completion of the data sheet and the FTDS will be returned to the State as part of the data reports.

- 6.4.5 The Contractor must document the internal chain of custody using DEP Form-077 for all State agencies. Full name and signatures are required. All signatures must be legible. The printed name must be the full name of the Contractor's employee and it must be legible. Illegible chain of custody documentation will result in data rejection.
- 6.4.6 Each sample submitted consists of a canister. Document the internal chain of custody for each canister for the method. Internal chain of custody documentation for all samples may be listed on one (1) form for any given case (group) of samples submitted.
- 6.4.7 Indicate on the internal chain of custody document all movements of the canister through the Laboratory. Show the date and time of relinquishing and accepting of the sample by each individual who handled the sample materials. The chain of custody is terminated only when the sample analysis is complete or the canister is depleted.
- 6.4.8 Electronic Internal Chain of Custody will be acceptable for this Appendix with the following requirements. Prior approval must be obtained to use an Electronic Internal Chain of Custody System.
- A. The system must be password protected.
 - B. The Electronic Internal Chain of Custody System must at a minimum contain all of the information and fields as the Hard Copy Internal Chain of Custody Form. If the Electronic System does not contain all of the required information it will not be approved.
 - C. The Contractor may add additional fields to meet the needs of their laboratory.
 - D. The Electronic Internal Chain of Custody System must comply with all the Internal Chain of Custody requirements of Section 6.4 of this Appendix in documenting and providing electronic signoff for the movement of samples through the Laboratory.
 - E. Full names not initials must be used on the Electronic Chain of Custody System.
 - F. Once approved if it is determined that the Contractor is not following the requirements of this Section, the approval will be withdrawn. The Contractor will have to use the hard copy Internal Chain of Custody forms.
 - G. A print out from the system documenting the internal chain of custody must be provided with each Data Report.

6.5 **SHIPPING DOCUMENTATION**

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

6.5.1 **AIR BILLS**

Include the original air bill in the extended data package. If the air bill is not received, include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information.

6.5.2 SAMPLE RECEIPT AND LOG-IN CHECKLIST FOR METHOD 25C SAMPLES

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

A. Required information at top of form:

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

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

Shipping Container Information:

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

Sample Condition:

- Sample containers were received intact

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

- Sample ID/Sample Description;
- Date of sample collection;
- Time of sample collection;
- Identification of sampler;
- Requested test method(s);

- Necessary signatures; and
- Internal Chain of Custody (ICOC) required (answer is always yes)

Sample Integrity Usability:

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

Anomalies or Non Conformance Summary (Comment section)

6.6 **CASE NARRATIVE**

- 6.6.1 Use NJDEP Form A -1C or a laboratory facsimile.
- 6.6.2 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 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.
- 6.6.3 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 can be document on a separate printout attached to the case narrative.
- 6.6.4 The Contractor must certify that gas standards were used in the sample analysis. The commercial supplier of the primary and secondary gas standard must be listed.
- 6.6.5 The Contractor must document all GC columns used for analysis by fraction. 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 must be described here. List trap name, when denoted by the manufacturer, its composition (packing material/brand name, amount of packing material, in length, cm). Priority statements on the composition of any part of the column or trap are not acceptable.
- 6.6.6 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.”**
- 6.6.7 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.
- 6.6.8 Hard Copies of the Excel Data sheets for each sample (field sample, dilutions, LCS and blanks) in the format specified by Section 3.3 NJDEP-SRP Air Methods Data

Summary Table must be provided at the end of the Case Narrative. The order of the excel data sheets should follow the order of the electronic data.

6.7 **GAS STANDARDS TRACEABILITY CERTIFICATES**

Copies of the Gas Standards Traceability Certificates or Certificates of Analysis for the standard lots supplied by the Commercial Gas Supplier must be provided. The certificates must be in lot number order by increasing number and by method.

6.8 **METHODOLOGY REVIEW**

NJDEP Form A-4 Air Analysis (5/2008) is required. Indicate by Method and Revision number, what analyses were conducted on the samples.

6.9 **METHOD 25C DETECTION LIMIT STUDY**

The annual method detection limit (MDL) study as required by the NJDEP Laboratory Certification Regulations N.J.A.C 7:18 Sections 5.5(c) 10 & 11 must be submitted. All results must be in ppmC. All information except for signatures must be computer generated or typed. The order sequence shall be chronological and by instrument if more than one instrument is used. The information provided for each compound must include the following:

The required format of the Summary is as follows:

- Laboratory Name;
- Laboratory Location;
- Matrix Type;
- Effective Date/Expiration date of MDL Study;
- Instrument ID and Column ID;
- Compound name;
- Data for seven replicates;
- Mean value;
- True Value;
- Percent recovery;
- Standard deviation;
- Method Detection Limits (ppmC);
- Reporting Limits (ppmC);
- True Value/MDL Ratio;
- RL/MDL Ratio;
- Analyst name and date analyzed;
- Supervisor name and date (who reviewed study);
- Report preparer's name and date prepared; and
- QA Officer name and date signed

6.10 **METHOD DETECTION LIMIT VERIFICATION SUMMARY (MDLV)**

The Verified Method Detection Limit Verification Summary (MDLV Summary) must be submitted with the Method Detection Limit Study (Section 6.9). All information except for signatures must be computer generated or typed. The order sequence shall be chronological and by instrument if more than one instrument is used.

The required format of the Summary is as follows:

6.10.1 Required Information at top of page

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

6.10.2 Required Columns

- Analyte name;
- CAS number- USEPA25C;
- MDLV source;
- Source study;
- Source instrument;
- Source analysis date;
- MDLV (ppmC);
- Reporting Limit (ppmC); and
- QL/MDLV ratio

6.11 **QUALITY CONTROL DATA SUMMARY**

6.11.1 **LABORATORY CONTROL SAMPLE (LCS) SUMMARY**

- A. The data summary must be recorded on a laboratory-generated form.
- B. The reporting form must comply with Sections 2.11 and 2.13 of this Appendix.
- C. The order sequence must be chronological and by instrument if more than one instrument is used.
- D. The average of the triplicate acquisitions are to be reported on the summary form as the LCS results. Each individual acquisition for the LCS sample is reported in Section 6.15.2 of this Appendix.
- E. The method required control limits must be provided. The percent recovery is to be calculated for the compound to the nearest whole percent.
- F. All Percent Recoveries outside of Quality Control (QC) Limits are to be flagged with an asterisk "*" in the QC Limit column.
- G. The following columns are required on the form for the compound:
 - Spike amount (%v/v)

- Derived concentration (%v/v)
- Percent recovery
- QC limits

6.11.2 RETENTION TIME SUMMARY

- If the Contractor provides the information on the Expected Retention Times and retention time windows or Delta Retention time for NMOC on the quantitation report, then a separate printout will not be required.
- The retention time summary must be recorded on a laboratory-generated form.
- The reporting form must comply with Sections 2.11 and 2.13 of this Appendix.
- The order sequence must be chronological and by instrument if more than one instrument is used.
- Identify the GC column and the internal diameter on the form.
- Each injection for all standards, samples, QC samples must be listed in the chronological order of injection on the instrument. The laboratory Identification number type of sample and Field sample number must be listed
- The expected retention time, the actual retention, the retention time window or the delta retention time must be listed for each injection.
- The Contractor can combine the required information from the Retention Time Summary Form with the Analytical Sequence Summary Form (Section 6.14.1) and create one form.

6.11.3 METHOD BLANK SUMMARY

- The data summary must be recorded on a laboratory-generated form. Record all samples, dilutions, reanalyses, LCS and any other QC samples analyzed with the reagent blank. The order sequence must be chronological and by instrument if more than one instrument is used.
- The reporting form must comply with Sections 2.11 and 2.13 of this Appendix.
- Identify the GC column and the internal diameter on the form.
- The following columns are required on the form. The samples, dilutions, reanalyses, LCS and any other QC samples associated with the method blank are to be listed in this section.
 - Field sample identification number;
 - Laboratory sample identification number; and
 - Time and date of analysis

Note: The actual analytical results for the method blank are reported in another section (See Section 6.15.1).

6.12 **SAMPLE DATA SUMMARY**

- 6.12.1 The Contractor shall place sample packages in order of increasing sample number considering both letters and numbers.
- 6.12.2 Record sample data on a laboratory-generated form. A separate form must be provided for each acquisition
- 6.12.3 Record quantitative results, UNCORRECTED for blank and method detection limits on a laboratory-generated form in accordance with the requirements listed below.

Report all data to two (2) significant figures on the summary form.

For example: a) if the value is 5.54 ppmC, report 5.5 ppmC
b) if the value is 10.3 ppmC, report 10 ppmC
c) if the value is 116 ppmC, report 120 ppmC

- 6.12.4 The results reported on the summary form should be the same number as the calculated averaged amount (ppmC) from the quantitation report.
- 6.12.5 Report all data in ppmC.
- 6.12.6 The reporting form must comply with sections 2.11 and 2.13 of this appendix.
- 6.12.7 Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the required reporting limit with the "U" qualifier.
- 6.12.8 Do not report any data using the method detection limit as the reporting limit for any compound.
- 6.12.9 Report the initial dilution factor on each reporting form due the pressurization of the canisters for the initial analysis. For any additional analysis that requires a dilution report the dilution factor that does not factor in the initial analysis.
- 6.12.10 Compounds that exceed the upper limit of the initial calibration are to be reported with an "E" qualifier as defined in section 8.0.
- 6.12.11 Each diluted sample must be reported on separate form.
- 6.12.12 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 are to be reported with a "D" qualifier as defined in section 8.0.
- 6.12.13 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.

6.12.14 Compounds that are reported in the diluted sample and not reported in the initial analysis must be reported without a “D” qualifier.

6.12.15 The following information is required to be on each form, in addition to the requirements of Sections 2.11 and 2.13 of this Appendix.

- Matrix type (Air);
- Sample volume (mL);
- Laboratory sample ID;
- Laboratory file ID;
- GC Column and ID;
- Date received;
- Date analyzed; and
- Dilution factor

6.12.16 The table summarizing the compounds results information on the form must contain the following:

- CAS Number USEPA25C;
- Compound name- Non Methane Organic Carbon;
- Concentration units (ppmC);
- Concentration reported; and
- Laboratory qualifier applied

6.12.17 The quantitation reports and the associated chromatogram for each acquisition must immediately follow each sample data summary report. The chromatogram and data system reports must comply with Section 5.0.

6.12 **AVERAGE DATA SUMMARY REPORT**

6.13.1 The parameter name is to included only one time in the table.

6.13.2 The reporting form must comply with Sections 2.11 and 2.13 of this Appendix.

6.13.3 The three acquisitions are to be listed consecutively and the average listed underneath. Only the results column needs to be completed for the three acquisitions. For the averaged results only the reporting limits, units, date analyzed and dilution factor columns must be completed.

6.13.4 A record must be generated that provides for the average of the three (3) results with the results of all acquisitions listed.

- SDG number;
- Sample ID;
- Date received; and
- Lab name and location

6.13.5 The table summarizing the compound results information must contain the following:

- Compound Name;

- Analytical results;
- reporting limit units;
- date analyzed; and
- dilution factor

6.13.6 Record the quantitative results, UNCORRECTED for blank and method detection limits in accordance with the requirements listed below.

Report all data to two (2) significant figures on the summary form.

For example: a) if the value is 5.54 ppmC, report 5.5 ppmC
 b) if the value is 10.3 ppmC, report 10 ppmC
 c) if the value is 116 ppmC report 120 ppmC

6.14 **STANDARDS DATA SECTION**

6.14.1 **ANALYTICAL SEQUENCE SUMMARY**

- A. The data summary must be recorded on a laboratory-generated form.
- B. The reporting form must comply with Sections 2.11 and 2.13 of this Appendix.
- C. The order sequence must be chronological and by instrument if more than one instrument is used.
- D. The Contractor can combine the required information from the Retention Time Summary Form (Section 6.11.2) with the Analytical Sequence Summary form and create one form.
- E. The Analytical Sequence Summary must include all the acquisitions associated with the sample batch.
 - The Initial Calibration acquisitions;
 - The Initial Calibration Verification Sample Standard acquisitions;
 - The Opening Continuing Calibration Verification Standard acquisition conducted prior to the analysis of the samples;
 - All sample acquisitions;
 - All associated batch QC sample acquisitions;
 - The sequence must end with a compliant Closing Continuing Calibration Verification Standard acquisition; and
 - Any acquisition between a Continuing Calibration Verification Standard (CCVS) and compliant Closing Continuing Calibration Verification Standard.

F. The Analytical Sequence Summary report must contain the following information at the top of the form.

- Start and end calibration date(s)
- Instrument identification
- Column type

G. In a tabular format, the following information must be provided for each acquisition.

- Sample number
- Laboratory Sample ID
- Time and date of each injection

6.14.2 INITIAL CALIBRATION DATA SUMMARY AND RAW DATA

A. The data summary must be recorded on a laboratory-generated form.

B. The order sequence must be chronological and by instrument if more than one instrument is used.

C. The Initial Calibration Data Summary in addition to the requirements of Sections 2.11 and 2.13 of this Appendix must contain the following information at the top of the form.

- Start calibration date and time;
- End calibration date and time;
- Calibration file names;
- Instrument identification; and
- Column type and name

D. The table summarizing the calibration information must contain the following:

- Name of compound;
- Calibration file name or identifier by level established in the calibration file name above;
- Relative response factors based on peak height or peak area (must be used consistently across the entire sample set);
- Curve type;
- Maximum % Relative Standard Deviation;
- Average Relative Response Factor; and
- % Relative Standard Deviation

E. All initial calibration chromatograms and quantitation must be reported in chronological order by instrument.

6.14.3 INITIAL CALIBRATION VERIFICATION SAMPLE STANDARD FORM SUMMARY AND RAW DATA

A. The data summary for the Initial Calibration Verification (ICV) Sample Standard must be recorded on a laboratory-generated form.

- B. The order sequence must be chronological and by instrument if more than one instrument is used.
- C. The Initial Calibration Verification Sample Standard (ICV Sample Standard) summary report in addition to the requirement of Sections 2.11 and 2.13 of this Appendix must contain the following information at the top of the form.
- Laboratory file ID;
 - Initial Calibration Verification Sample Standard date and time;
 - Initial Calibration date and time (start and stop);
 - Instrument identification; and
 - Column type and name
- D. The method required control limits must be provided. The percent recovery is to be calculated for each compound to the nearest whole percent (two significant figures). All Percent Recoveries outside of Quality Control (QC) Limits are to be flagged with an asterisk “*” in the QC Limit column.

The following columns are required on the form for each compound:

Amount added (ppbv);
Amount recovered (ppbv);
Percent recovery; and
QC limits

- E. The quantitation report and chromatograms for each ICV Sample Standard must immediately follow that ICV Sample Standard summary form.

6.14.4 CALIBRATION VERIFICATION SUMMARY AND RAW DATA (OPENING AND CLOSING)

- A. The data summary must be recorded on a laboratory-generated form.
- B. The order sequence must be chronological and by instrument if more than one instrument is used.
- C. The Continuing Calibration Data Summary report in addition to the requirement of the requirements of Sections 2.11 and 2.13 of this Appendix must contain the following information at the top of the form.
- Laboratory file ID;
 - Calibration date and time;
 - Initial Calibration date and time (start and stop);
 - Instrument identification; and
 - Column type and name
- D. The table summarizing the calibration information must contain the following:
- Name of compound;

- Relative response factors based on peak height or peak area (must be used consistently across the entire sample set);
 - Relative Response Factor of standard analyzed;
 - Curve type;
 - Maximum % Difference; and
 - % Difference
- E. All the continuing calibration chromatograms and quantitation must be reported in chronological order by instrument.

6.15 **RAW QC DATA PACKAGE**

6.15.1 **METHOD BLANK SUMMARY**

- A. Method blank data shall be in chronological order by instrument and date of analysis.
- B. The method blank data summary must comply with Section 6.12 of this Appendix.
- C. The reporting form must comply with Sections 2.11 and 2.13 of this Appendix.
- D. Tabulated results must be on a laboratory-generated form for the target compounds that is the same form used for the sample data.
- E. The quantitation reports and the associated chromatogram for each acquisition must immediately follow each sample data summary report. The chromatogram and data system reports must comply with Section 5.0.
- F. Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the method required reporting limit with the “U” qualifier (example 25 U ppmC).

6.15.2 **LABORATORY CONTROL SAMPLE RESULTS SUMMARY**

- A. Laboratory Control Sample (LCS) data shall be arranged in chronological order by instrument and date of analysis.
- B. The LCS summary must comply with Section 6.12 of this Appendix.
- C. The reporting form must comply with Sections 2.11 and 2.13 of this Appendix.
- D. Tabulated results must be on a laboratory-generated form for the target compounds that is the same form as used for the sample data as required by Section 6.0 of this Appendix.
- E. The quantitation reports and the associated chromatogram for each acquisition must immediately follow each sample data summary report. The chromatogram and data system reports must comply with Section 3.0.

6.15.3 INSTRUMENT BLANK RESULTS SUMMARY (IF APPLICABLE)

- A. Instrument blank data shall be in chronological order by instrument and date of analysis.
- B. The instrument blank data summary must comply with Section 6.12 of this Appendix.
- C. The reporting form must comply with Sections 2.11 and 2.13 of this Appendix.
- D. Tabulated results must be on a laboratory-generated form for the target compounds that is the same form used for the sample data.
- E. The quantitation reports and the associated chromatogram for each acquisition must immediately follow each sample data summary report. The chromatogram and data system reports must comply with Section 5.0.
- F. Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the method required reporting limit with the "U" qualifier (example 25 ppmC).

6.16 CLEAN CANISTER CERTIFICATION DATA

- 6.16.1 The Contract requires that a canister certified clean under SRP Method LL-TO-15 be used for the Clean Canister Certification for Method 25C. As part of that certification the entire deliverable requirements of SRP LLTO-15 Section 9.0 must be submitted for documentation of the clean canister. Please refer to the deliverable requirements of that Appendix.
- 6.16.2 If more than one canister is used to certify all the canisters in the Sample Delivery Group (SDG) is clean, then the Contactor shall arrange all clean canister data arranged in chronological order by date of analysis and increasing Sample number considering both letters and numbers.
- 6.16.3 The sample information in order of increasing Sample number considering both letters and numbers and chronological order by date of analysis.

6.17 INSTRUMENT RUN LOG

- 6.17.1 The field sample instrument run log is to be presented first, followed by the clean canister instrument run log.
- 6.17.2 Copies of the actual logbook page(s) must be provided.
- 6.17.3 The Instrument Run Log for the associated initial calibration must be included.

6.17.4 The Instrument Run Log for the continuing calibration must start with the injection of the opening continuing calibration verification standard and end with the closing calibration verification standard.

6.17.5 If manual integration is conducted on a sample it must be noted in the comment section.

6.17.6 The following information must be included at the top of the instrument run log page:

- Laboratory name;
- Instrument identification;
- Column;
- Date(s) of analyses;
- Analyst name and signature;
- Supervisor name and signature;
- Sample Delivery Group Number (Project Identification No);
- Initial calibration date; and
- Injection volume

6.17.7 The columns of the table must be labeled as follows:

- Injection order number (must be chronological);
- Laboratory sample ID Number;
- Preparation batch ID Number;
- Sequence name/batch;
- Dilution factor;
- QC Check (indicating that the sample passed Quality Control);
- Analyst initials; and
- Comments

6.18 **PRESSURE GAUGE READINGS**

Present a copy of the actual logbook pages on which the initial and final pressure gauge readings are recorded

6.19 **CANISTER DILUTION CALCULATIONS**

The laboratory must submit the following information in a table format:

- Laboratory ID;
- Initial Pressure ("Hg);
- Initial atmosphere;
- Initial psia;
- Initial Volume of Canister (L);
- Dilution factor;
- Final Pressure ("Hg);
- Final psia;
- Final atmosphere;
- Final Volume of Canister (L);

- Required footnotes must be defined in chart;
- x"Hg = ;
- Atm = ;
- Psia= ; and
- Psig=

6.20 **SCREENING DATA**

If the laboratory screens the samples prior to analysis, all screening data must be included in this section. Include all instrument output, including strip charts from screening activities.

7.0 **NJDEP REGULATORY SUMMARY DATA REPORT (SUMMARY DATA REPORT)**

7.1 The Regulatory Summary Data Report has specific requirements detailed below for this submittal. The documentation shall include the summary reporting forms for the sample data, laboratory control sample, reagent blank, instrument blanks (if applicable), analytical sequence, initial calibration and continuing calibration.

- Section 6.2 Title Page;
- Section 6.4 Chain of Custody (External Only) and Methods 3C/25C Field Test Data Sheet;
- Section 6.6 Case Narrative;
- Section 6.8 Methodology Review;
- Section 6.9 Method Detection Limit Summary;
- Section 6.10 Verified Method Detection Limit Summary;
- Section 6.11.1 Laboratory Control Sample Summary;
- Section 6.11.2 Retention Time Summary (if applicable);
- Section 6.11.3 Method Blank Summary;
- Section 6.13 Average Data Summary Report (reporting form only);
- Section 6.14.1 Analytical Sequence Summary;
- Section 6.14.2 Initial Calibration Summary (reporting form only);
- Section 6.14.3 Initial Calibration Verification Sample Standard (reporting form only; and
- Section 6.14.4 Calibration Verification Summary-Opening and Closing (reporting form only)

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

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

8.0 **DATA REPORTING QUALIFIERS**

The method doesn't specify the use of data qualifiers. However, NJDEP has identified the data qualifiers that must be used on the data.

- U- The flag indicates the compounds was analyzed for but no reported. The RL shall be adjusted if dilutions are required
- B- This flag is used when the analyte 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. Blank contaminants are flagged b only when they are detected in a sample.
- E- This flag indicates compounds whose concentrations exceed 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, then 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, for example when the concentration of an analyte exceeds the upper calibration range, then 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 from are flagged with a D flag. This flag alerts data users that any discrepancies between the reported concentrations maybe due to dilution of the sample.
 - Note 1: The D flag is not applied to compounds, which are not detected in the 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 cannot be combined on a single reporting form.
- 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.

9.0 FORMS AND TABLES

Note: No page numbers exist for this section.

Table 1 Extended Data Package Hierarchal Bookmark Structure

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

External Chain of Custody Form (NJDEP Form-77)

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

Combined External Chain of Custody Record/Field Test Data Sheet (NJDEP Form-95D)

NJDEP Method 3C/25C Canister Sampling Field Test Data Sheet

Title Page – NJDEP Form A-1A

Case Narrative - NJDEP Form A -1C

Methodology Summary NJDEP Form A-4 - Air Methods (10/2013)

NJDEP Air Methods Data Summary Table (The file here is example only, the actual reporting format is provided as a separate excel file).

Table 1
Extended Data Package Hierarchal Bookmark Structure

If the sampling event includes other methods such as USEPA methods 3C and NJDEP Method TO15 within the same sample delivery group, the hierarchal Bookmark structure must be expanded to the Group Bookmark level for each method. Group Bookmark → Parent Bookmark → Child Bookmark. Each method shall be considered a Group Bookmark.

Parent Bookmark	Child Bookmark
Title Page	
Table of Contents	
External Chain of Custody Forms or External COC/ FTDS combination Method 3C/25C Canister Sampling Field Test Data Sheet for each canister	
Internal Chain of Custody	
Shipping Documentation Airbills (If Applicable) Sample Receipt and Log In Check List	
Case Narrative Manual Integration Documentation Data Sheets in Excel - Copies of the Microsoft Excel Reporting Sheets	
Copies of Traceability Certificates from Commercial Gas Standard Suppliers	
Methodology Review	
Method Detection Limit Studies	Method Detection Limit Study Summary
	Verified MDL Summary
QC Summary Data	Laboratory Control Sample Summary
	Retention Time Summary (if applicable)
	Method Blank Summary
Sample Data	Sample Data Summary
	Samples in increasing alphanumeric field sample number Order (with supporting raw data)
Standards Data	Analytical Sequence
	Initial Calibration Summary
	Initial Calibration Verification Sample Standard Summary (report form only)
	Continuing Calibration Summary(ies)-Opening and Closing
	Chromatograms and Data System Printouts
Raw QC Data	Blank Data (Method and Instrument Blanks)
	Laboratory Control Sample Data
Clean Canister Certification Data In chronological date order for each clean canister – Method NJDEP-LLTO-15/USEPA Method	Method SRP LL-TO-15/USEPA Method T0-15 Clean Canister Certification Data
	Method 25C Clean Canister Certification Data(if applicable)

T0-15	Clean Canister Data Conversion Table to ppmC (if applicable)
Sample Preparation	Instrument Run Logs (sample data run logs)
	Instrument Run Logs (clean canister run logs)
	Pressure Gauge Readings (if applicable)
	Canister Dilution Calculation(If applicable)
	Screening Data
Last Page of Document	

Note: The quantitation reports and chromatograms for each of the calibration standards associated with the initial calibration must immediately follow the initial calibration summary form.

The quantitation report and chromatograms for each ICV Sample Standard must immediately follow that ICV Sample Standard summary form.

The quantitation report and chromatogram for each calibration standard associated with the continuing calibration standard must immediately follow each continuing (opening or closing) calibration summary form.

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: _____

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

[illegible]

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

Relinquished	Received	Time/Date	Reason For Change of External Custody
XXXXXXXXXXXXXXXXXXXX			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)
☐ – Sample Custodian

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	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	

[illegible]

Yellow – Sampling Custodian Upon Receipt of Shipping Container from Field
Gold – Sample Custodian for Sample Preparation and Shipment

8/2008

General Information	
Site Location: _____	Job Number: _____
Site Address: _____	Size of Canister: _____
Field ID No: _____	Canister Serial No: _____
Sampling Date(s): _____	Pressure Gauge No: _____
Shipping Date: _____	

Sampling Information					
Temperature of Vent Gas: _____ °C _____ °K					
Stack Differential Pressure (SDP) _____ (inches of water) (pitot tube reading)					
Stack Velocity of Vent Gas (Method 2/2C): _____ ft/min					
Leak Check: Pressure gauge reading prior to sampling: _____ mm Hg					
Pressure gauge reading after sampling: _____ mm Hg					
Diameter of Stack (inches): _____		Radius of Stack (inches): _____		Radius of Stack (feet): _____	
Sampling Time (24-hour clock): Start: _____		Stop: _____			
Barometric Pressure: On Site Measurement: ☐ Yes ☐ No					
If no, record the name/location of the NOAA Weather Station: _____ _____					
Barometric Pressure reading: _____ mm Hg Time (24-hour clock) _____					
Note: The NOAA number is acceptable to be reported if the elevation is less than 50 feet from weather station and the distance is less than 15 miles from the weather station being used for reporting. If not, the actual measurements from the site must be reported.					
_____ Signature/Title Sampler					

Laboratory Information			
CANISTER PRESSURE mm of Hg (inches)			
<u>FLOW RATES (ml/min) Flow Controller Readout</u>		<u>CANISTER PRESSURE mm of Hg (inches)</u>	
Shipping out from Lab _____	required (from lab record log) after return	Initial Pressure (to field) _____	required (from lab record log) after return
Receiving in Lab _____	(if applicable only if changed)	Final Pressure (from field) _____	required (from lab record log) after return
Data Shipped: _____ Date Received: _____ Individual Canister Certification (provide File #): _____ Batch Certification (provide Batch ID#): _____			
		_____ Signature/Title Analyst Who Certified Canisters	

Title Page – NJDEP Form A-1A

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

[illegible]

Case Narrative - NJDEP 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

Methodology Summary NJDEP Form A-4 - NJDEP-Air Methods (10/2013)

Laboratory:	Project No:
Location:	SDG No:

Name	Required Methodology	Indicate Method
Volatile Organics	NJDEP-LLTO-15	
Volatile Organics	USEPA Method TO-15	
Carbon Dioxide, Methane, Nitrogen, Oxygen, Carbon Monoxide	USEPA Method 3C	
Non Methane Organic Carbon	USEPA Method 25C	

Project:
Field ID Number:
Laboratory ID Number:

**TARGET/NON TARGET ANALYTES –
AIR RESULTS**

Sampling Date:
Analysis Date:

Chemical	CAS Number	Molecular Weight	Lab Results	Q	Corrected Results	Retention Time NT Only	QAS Decision	Footnotes
Method TO-15			ppbv		ug/m³			
Acetone	67-64-1	58.08						
Allyl chloride	107-05-1	76.53						
Benzene	71-43-2	78.11						
Bromodichloromethane	75-27-4	163.8						
Bromoform	75-25-2	252.8						
Bromomethane	74-83-9	94.94						
1,3-Butadiene	106-99-0	54.09						
Chlorobenzene	108-90-7	112.6						
Chloroethane	75-00-3	64.52						
Chloroform	67-66-3	119.4						
Chloromethane	74-87-3	50.49						
Carbon disulfide	75-15-0	76.14						
Carbon tetrachloride	56-23-5	153.8						
2-Chlorotoluene	95-49-8	126.6						
Cyclohexane	110-82-7	84.16						
Dibromochloromethane	124-48-1	208.3						
1,2-Dibromoethane	106-93-4	187.9						
1,2-Dichlorobenzene	95-50-1	147.0						
1,3-Dichlorobenzene	541-73-1	147.0						
1,4-Dichlorobenzene	106-46-7	147.0						
Dichlorodifluoromethane	75-71-8	120.9						
1,1-Dichloroethane	75-34-3	98.96						
1,2-Dichloroethane	107-06-2	98.96						
1,1-Dichloroethene	75-35-4	96.94						
1,2-Dichloroethene (cis)	156-59-2	96.94						
1,2-Dichloroethene (trans)	156-60-5	96.94						
1,2-Dichloropropane	78-87-5	113.0						
1,3-Dichloropropene (cis)	10061-01-5	111.0						
1,3-Dichloropropene (trans)	10061-02-6	111.0						
1,2-Dichlorotetrafluoroethane	76-14-2	170.9						
1,4-Dioxane	123-91-1	88.12						
Ethanol	64-17-5	46.07						
Ethylbenzene	100-41-4	106.2						
4-Ethyltoluene	622-96-8	120.2						
n-Heptane	142-82-5	100.2						
1,3-Hexachlorobutadiene	87-68-3	260.8						
n-Hexane	110-54-3	86.17						
Isopropanol	67-63-0	60.10						
Methylene chloride	75-09-2	84.94						
Methyl ethyl ketone	78-93-3	72.11						
Methyl isobutyl ketone	108-10-1	100.2						
Methyl methacrylate	80-62-6	100.1						
Methyl tert-butyl ether	1634-04-4	88.15						
Naphthalene	91-20-3	128.2						
Styrene	100-42-5	104.1						

Project:
Field ID Number:
Laboratory ID Number:

**TARGET/NON TARGET ANALYTES –
AIR RESULTS**

Sampling Date:
Analysis Date:

Chemical	CAS Number	Molecular Weight	Lab Results	Q	Corrected Results	Retention Time NT Only	QAS Decision	Footnotes
Method TO-15			ppbv		ug/m³			
Tert-butyl alcohol	75-65-0	74.12						
1,1,2,2-Tetrachloroethane	79-34-5	167.9						
Tetrachloroethene	127-18-4	165.8						
Tetrahydrofuran	109-99-9	72.11						
Toluene	108-88-3	92.14						
1,2,4-Trichlorobenzene	120-82-1	181.5						
1,1,1-Trichloroethane	71-55-6	133.4						
1,1,2-Trichloroethane	79-00-5	133.4						
Trichloroethene	79-01-6	131.4						
Trichlorofluoromethane	75-69-4	137.4						
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	187.4						
1,2,4-Trimethylbenzene	95-63-6	120.2						
1,3,5-Trimethylbenzene	108-67-8	120.2						
2,2,4-Trimethylpentane	540-84-1	114.2						
Vinyl bromide	593-60-2	106.9						
Vinyl chloride	75-01-4	62.50						
Xylenes (m&p)	179601-23-1	106.2						
Xylenes (o)	95-47-6	106.2						
Volatile Tentatively Identified Compounds (up to 30 compounds)								
USEPA Method 3C			%(v/v)					
Carbon Dioxide	124-38-9							
Methane	74-82-8							
Nitrogen	7727-37-9							
Oxygen	7782-44-7							
Carbon Monoxide	630-08-0							
USEPA Method 25C			ppmC					
Non Methane Organic Carbon	USEPA25C							

Appendix 4
Atmospheric Parameters Certifications

Certification No.	Compound Name	Technique	Approved EPA Method
	<i>Atmos. Inorg: Parameters Non Metals</i>		
CAP01.00005	Carbon dioxide	Thermal Conductivity	EPA 3C
CAP01.00068	Methane	Thermal Conductivity	EPA 3C
CAP01.00070	Nitrogen	Thermal Conductivity	EPA 3C
CAP01.00100	Oxygen	Thermal Conductivity	EPA 3C
CAP03.00015	Non- Methane Organic Compounds	FID	EPA 25C
	<i>Volatile Organics: NJDEP-LLTO-15</i>		
CAP03.06850	Acetone	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06852	Allyl chloride	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06854	Benzene	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06856	Bromodichloromethane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06858	Bromoform	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06860	Bromomethane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06862	Butadiene, (1,3-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06864	Carbon disulfide	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06866	Carbon tetrachloride	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.03868	Chlorobenzene	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06870	Chloroethane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06872	Chloroform	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06874	Chloromethane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06876	Chlorotoluene (2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.03878	Cyclohexane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06880	Dibromochloromethane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06882	Dibromoethane (1,2-) EDB	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06884	Dichlorobenzene (1,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06886	Dichlorobenzene (1,3-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06888	Dichlorobenzene (1,4-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06890	Dichlorodifluoromethane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06892	Dichloroethane (1,1-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06894	Dichloroethane (1,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06896	Dichloroethene (1,1-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06898	Dichloroethene (cis-1,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009

Appendix 4
Atmospheric Parameters Certifications

Certification No.	Compound Name	Technique	Approved EPA Method
CAP03.06900	Dichloroethene (trans-1,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06902	Dichloropropane (1,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06904	Dichloropropene (cis -1,3-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06906	Dihloropropene (trans-1,3-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06908	Dichlorotetrafluorethane (1,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06910	1,4-Dioxane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06912	Ethanol	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06914	Ethylbenzene	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06916	Ethyltoluene (4-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06918	Heptane (n-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06920	Hexane (n-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06924	Isopropanol	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06926	Methylene chloride (dichloromethane)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06928	Methyl ethyl ketone	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06930	Methyl isobutyl ketone (MIBK)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06932	Methyl methacrylate	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06934	Methyl tert-butyl ether	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06935	Naphthalene	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06936	Styrene	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06938	Tert-butyl alcohol	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06940	Tetrachloroethane (1,1,2,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06942	Tetrachloroethene	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06944	Tetrahydrofuran	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06946	Toluene	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06948	Trichlorobenzene (1,2,4-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06950	Trichloroethane (1,1,1-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06952	Trichloroethane (1,1,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06954	Trichloroethene	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06956	Trichlorofluoromethane	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06958	Trichloro(1,1,2-)trifluoroethane (1,2,2-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06960	Trimethylbenzene (1,2,4-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06962	Trimethylbenzene (1,3,5-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06964	Trimethylpentane (2,2,4-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007,

Appendix 4 Atmospheric Parameters Certifications

			OTHER NJDEP-LLTO-15-3/2009
Certification No.	Compound Name	Technique	Approved EPA Method
CAP03.06966	Vinyl bromide	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06968	Vinyl Chloride	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06970	Xylene (m- + p-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
CAP03.06972	Xylene (o-)	GC/MS, Canisters	OTHER NJDEP-LLTO-15-3/2007, OTHER NJDEP-LLTO-15-3/2009
	Volatile Organics: EPA TO-15		
CAP03.00184	Acetone	GC/MS, Canisters	EPA TO-15
CAP03.00215	Allyl chloride	GC/MS, Canisters	EPA TO-15
CAP03.00225	Benzene	GC/MS, Canisters	EPA TO-15
CAP03.00250	Bromodichloromethane	GC/MS, Canisters	EPA TO-15
CAP03.00255	Bromoform	GC/MS, Canisters	EPA TO-15
CAP03.00260	Bromomethane	GC/MS, Canisters	EPA TO-15
CAP03.00265	Butadiene, (1,3-)	GC/MS, Canisters	EPA TO-15
CAP03.00270	Carbon disulfide	GC/MS, Canisters	EPA TO-15
CAP03.00275	Carbon tetrachloride	GC/MS, Canisters	EPA TO-15
CAP03.00300	Chlorobenzene	GC/MS, Canisters	EPA TO-15
CAP03.00305	Chloroethane	GC/MS, Canisters	EPA TO-15
CAP03.00310	Chloroform	GC/MS, Canisters	EPA TO-15
CAP03.00315	Chloromethane	GC/MS, Canisters	EPA TO-15
CAP03.00325	Chlorotoluene (2-)	GC/MS, Canisters	EPA TO-15
CAP03.00335	Cyclohexane	GC/MS, Canisters	EPA TO-15
CAP03.00342	Dibromochloromethane	GC/MS, Canisters	EPA TO-15
CAP03.00350	Dibromoethane (1,2-) EDB	GC/MS, Canisters	EPA TO-15
CAP03.00355	Dichlorobenzene (1,2-)	GC/MS, Canisters	EPA TO-15
CAP03.00360	Dichlorobenzene (1,3-)	GC/MS, Canisters	EPA TO-15
CAP03.00365	Dichlorobenzene (1,4-)	GC/MS, Canisters	EPA TO-15
CAP03.00368	Dichlorodifluoromethane	GC/MS, Canisters	EPA TO-15
CAP03.00370	Dichloroethane (1,1-)	GC/MS, Canisters	EPA TO-15
CAP03.00375	Dichloroethane (1,2-)	GC/MS, Canisters	EPA TO-15
CAP03.00380	Dichloroethene (1,1-)	GC/MS, Canisters	EPA TO-15
CAP03.00384	Dichloroethene (cis-1,2-)	GC/MS, Canisters	EPA TO-15
Certification No.	Compound Name	Technique	EPA TO-15
CAP03.00385	Dichloroethene (trans-1,2-)	GC/MS, Canisters	EPA TO-15
CAP03.00395	Dichloropropane (1,2-)	GC/MS, Canisters	EPA TO-15
CAP03.00400	Dichloropropene (cis -1,3-)	GC/MS, Canisters	EPA TO-15

Appendix 4
Atmospheric Parameters Certifications

<i>Certification No.</i>	<i>Compound Name</i>	<i>Technique</i>	<i>Approved EPA Method</i>
CAP03.00401	Dihloropropene (trans-1,3-)	GC/MS, Canisters	EPA TO-15
CAP03.00405	Dichlorotetrafluoroethane (1,2-)	GC/MS, Canisters	EPA TO-15
CAP03.00440	1,4-Dioxane	GC/MS, Canisters	EPA TO-15
CAP03.00451	Ethanol	GC/MS, Canisters	EPA TO-15
CAP03.00465	Ethylbenzene	GC/MS, Canisters	EPA TO-15
CAP03.00480	Ethyltoluene (4-)	GC/MS, Canisters	EPA TO-15
CAP03.00500	Heptane (n-)	GC/MS, Canisters	EPA TO-15
CAP03.00505	Hexane (n-)	GC/MS, Canisters	EPA TO-15
CAP03.00511	Isopropanol	GC/MS, Canisters	EPA TO-15
CAP03.00555	Methylene chloride (dichloromethane)	GC/MS, Canisters	EPA TO-15
CAP03.00525	Methyl ethyl ketone	GC/MS, Canisters	EPA TO-15
CAP03.00535	Methyl isobutyl ketone (MIBK)	GC/MS, Canisters	EPA TO-15
CAP03.00545	Methyl methacrylate	GC/MS, Canisters	EPA TO-15
CAP03.00550	Methyl tert-butyl ether	GC/MS, Canisters	EPA TO-15
CAP03.00567	Naphthalene	GC/MS, Canisters	EPA TO-15
CAP03.00625	Styrene	GC/MS, Canisters	EPA TO-15
CAP03.00652	Tert-butyl alcohol	GC/MS, Canisters	EPA TO-15
CAP03.00655	Tetrachloroethane (1,1,2,2-)	GC/MS, Canisters	EPA TO-15
CAP03.00660	Tetrachloroethene	GC/MS, Canisters	EPA TO-15
CAP03.00662	Tetrahydrofuran	GC/MS, Canisters	EPA TO-15
CAP03.00665	Toluene	GC/MS, Canisters	EPA TO-15
CAP03.00635	Trichlorobenzene (1,2,4-)	GC/MS, Canisters	EPA TO-15
CAP03.00635	Trichloroethane (1,1,1-)	GC/MS, Canisters	EPA TO-15
CAP03.00675	Trichloroethane (1,1,2-)	GC/MS, Canisters	EPA TO-15
CAP03.00680	Trichloroethene	GC/MS, Canisters	EPA TO-15
CAP03.00684	Trichlorofluoromethane	GC/MS, Canisters	EPA TO-15
CAP03.00685	Trichloro(1,1,2-)trifluoroethane (1,2,2-)	GC/MS, Canisters	EPA TO-15
CAP03.00645	Trimethylbenzene (1,2,4-)	GC/MS, Canisters	EPA TO-15
CAP03.00640	Trimethylbenzene (1,3,5-)	GC/MS, Canisters	EPA TO-15
CAP03.00650	Trimethylpentane (2,2,4-)	GC/MS, Canisters	EPA TO-15
CAP03.00705	Vinyl bromide	GC/MS, Canisters	EPA TO-15
CAP03.00710	Vinyl Chloride	GC/MS, Canisters	EPA TO-15
CAP03.00715	Xylene (m)	GC/MS, Canisters	EPA TO-15
CAP03.00725	Xylene (p)	GC/MS, Canisters	EPA TO-15
CAP03.00720	Xylene (o-)	GC/MS, Canisters	EPA TO-15

APPENDIX 5

NON-PAYMENT ISSUES

REIMBURSEMENT OF 100% OF TOTAL INVOICE AMOUNT

The STATE shall not pay 100% of the submitted invoices (both the 80% invoice and the 20% retainage for an overall 100% withholding) for each affected sample or analytical fraction for the specific reasons as stated below:

See Contract Section 6.9.10.C on how the withholding is to be conducted for both the inorganic and organic fraction. All Contract Users and using agencies must send their requests for withholding to the State Contract Manager. All final decisions on withholding are made by the State Contract Manager.

A. General Withholding

1.0 Methodology Requirement Violation

- a. The Contractor used a method not specified in the contract for the analysis of the samples.
- b. The Contractor modified a method without approval of the State Contract Manager and NJDEP Office of Quality Assurance.

2.0 Non-approved Contractor Violations

- a. The samples were analyzed by an unapproved network laboratory.
- b. The samples were analyzed by subcontractor laboratory.

3.0 Chain of Custody Violations

The Contractor fails to properly complete any chain of custody document, or it is determined during data validation or an on-site inspection that any chain of custody document has been falsified.

4.0 Certification Violations

The Contractor lost certification status on a parameter or method and analyzed samples after being notified by the Laboratory Certification Program and/or the State Contract Manager.

5.0 Holding Time Violations

The Contractor failed to analyze the samples with the required holding times specified in the contract.

(Note: The Contractor is **not entitled** to shipping and canister costs as per Section 5.2.3.)

NON-PAYMENT ISSUES

6.0 Number of Samples in Batch

The Contractor in assigning samples to specific batches exceeds 20 samples in a batch. For all samples, exceeding the count of 20 in a particular batch, payment will be withheld.

7.0 Clean Canister Certification

- a. The Contractor failed to follow the clean canister certification requirements of the contract.
- b. The Contractor failed to verify through each contract method's clean canister certification procedure, that the canister chosen for the batch certification is clean and meets contractual requirements.
- c. The Contractor failed to properly document and track the canisters throughout the clean canister certification process and required by the contract for each method.
- d. The Contractor used a method blank or instrument blank as the canister being certified clean for the batch. The Contractor used lower reporting limits than specified for the reporting of the clean canister certification and failed to correct as directed by the State Contract Manager.
- e. The contractor failed to supply the required documentation to certify the canister as clean.

8.0 Method Detection Limit Study

- a. The Method Detection Limit Study does not meet the requirements of the contract.
- b. The Method Detection Limit Study was not conducted yearly and prior to the analysis of the samples. The study must be within one year prior to the analysis of the samples.
- c. The contractual maximum allowable MDL for a compound was exceeded.
- d. The Contractor failed to follow the contract required spiking levels for each compound in a specific method.
- e. For Method 3C and 25C, the Contractor failed to use the same procedure (peak height or area) in the calculation of the MDL study for a compound as was used for sample analysis.

9.0 Method Detection Limit Verification Study Summary

- a. The Method Detection Limit Verification Study does not meet the requirements of the Contract.
- b. The Method Detection Limit Verification Study was not conducted yearly and prior to the analysis of the samples. The study must be within one year prior to the analysis of the samples.

NON-PAYMENT ISSUES

- c. The Contractor failed to follow the contract required spiking levels for each compound in a specific method.
- d. For Method 3C and 25C, the Contractor failed to use the same procedure (peak height or area) in the calculation of the MDLV study for a compound as was used for sample analysis.

10.0 Gas Standards Requirements

- a. The Contractor failed to follow requirements of the contract regarding the use of commercially prepared gas standards.
- b. The Contractor created gas standards from neat liquids/gases within its laboratory/organization and did not purchase the standards as required.
- c. The Contractor failed to use gas standards from a commercial supplier that meets the requirements of the Contract.
- d. The Certificates of Analysis for the standards were not submitted and could not be obtained from the Contractor.

11.0 Pressurization Criteria

- a. The Contractor failed to follow the pressurization adjustment requirements of the contract.
- b. The Contractor for Method 3C and 25C failed to use ultrahigh purity Helium as makeup air.
- c. The Contractor for NJDEP LL-TO15 Method failed to use humidified ultra pure zero air as make up air.

12.0 Analytical Sequence Requirements

- a. The Contractor failed to follow the method specific analytical sequence requirements as specified in the contract
- b. The sample/quality control sample was analyzed outside of the required time frame for the analytical sequence.

13.0 Chromatographic Scaling Requirements

- a. The Contractor failed to follow the contract required Chromatographic Scaling Requirements for each method.
- b. The chromatogram for any standard, QC Sample or sample was not to the correct scale.
- c. The chromatogram for any standard, QC Sample or sample was not properly labeled.

NON-PAYMENT ISSUES

14.0 Adequate Number of Required Laboratory Generated Quality Control Samples

- a. The Contractor failed to follow the contract requirements for the number of Laboratory Generated Quality Control Samples for each method.
- b. If the number of Quality Control Samples associated with a batch or analytical sequence does not meet the requirements of the contract, then the State shall withhold payment of all associated samples. The affected QC samples include the method blanks, instrument blanks (if analyzed) and laboratory control samples.

15.0 Correct Type of Required Laboratory Generated Quality Control Samples

- a. The Contractor failed to follow the contract requirements for the correct type of Laboratory Generated Quality Control Samples for each method.
- b. If a Quality Control Sample is not the correct type as required by the contract for either a batch or a sequence requirement, then the State shall withhold payment of all associated samples. The affected QC samples include the method blanks, instrument blanks (if analyzed) and laboratory control samples.

16.0 Failure to Meet Deliverable Requirements

The Contractor failed to follow the Data Report Deliverable Requirements as required by the Contract. The Contractor will be given the opportunity to submit missing documentation and correct documentation as required under the Contract. However, the Contractor cannot meet the requirements of the Data Report Deliverable Requirements in the resubmittal to the State, then payment can be withheld and appropriate action initiated by the State Contract Manager.

USEPA Method 3C

1.0 Carbon Dioxide Peak

The Contractor failed to follow the contract requirements with the presence of a Carbon Dioxide Peak in any of the standards, QC samples or sample acquisitions.

2.0 Reporting Limits

- a. The Contractor failed to follow the reporting limit requirements of the contract.
- b. The reporting limit is lower than the lowest calibration standard.
- c. The reporting limit used by laboratory is above the maximum allowable Reporting Limit allowed by the Contract.

3.0 Injectors or Acquisition Requirements

NON-PAYMENT ISSUES

- a. The Contractor failed to follow the method specific injection and acquisition requirements of the contract.
- b. The injections of any sample, standard, QC sample, or blank was not done in duplicate and in sequence.
- c. The peak heights or areas of each consecutive injection for a reported acquisition do not agree within 5 % of their average.
- d. The Contractor mixed peak area and peak height for the various acquisitions and calculation of data across the data set for each compound.
- e. The Contractor failed to use the same procedure (peak height or area) in the calculation of the sample results as was used for the MDL study and or the MDLV.

4.0 Initial Calibration

- a. The Contractor failed to follow the initial calibration requirements of the contract.
- b. A minimum of 5 calibration standards at different levels were not used for each compound.
- c. The lowest calibration standard was not at the reporting limit.
- d. Linearity Determination was not determined by response factors as required by the Contract.
- e. The % RSD for the Initial Calibration exceeded 20% for a compound.

5.0 Initial Calibration Verification Sample Standard

- a. The Contractor failed to follow the initial calibration verification sample standard requirements of the contract.
- b. The Initial Calibration Verification Sample Standard was not analyzed.
- c. The % Difference of the Initial Calibration Verification Sample Standard for a compound exceeded 20 %.

6.0 Continuing Calibration Verification (Opening and Closing)

- a. The Contractor failed to follow the continuing calibration verification requirements (opening or closing) of the contract.
- b. The Continuing Calibration Verification Standard was not analyzed.
- c. The % Difference of the Continuing Calibration Verification Standard for a compound exceeded 20%.

NON-PAYMENT ISSUES

7.0 Laboratory Control Sample

- a. The Contractor failed to follow the Laboratory Control Sample requirements of the contract.
- b. The Contractor failed to analyze a Laboratory Control Sample as required by the contract.

8.0 Method Blank

- a. The Contractor failed to follow the method blank requirements of the contract.
- b. The Contractor failed to analyze the method blank as required by the contract.

9.0 Instrument Blank

The Contractor failed to follow the instrument blank requirements of the contract.

USEPA Method 25C

1.0 Reporting Limits

- a. The Contractor failed to follow the reporting limit requirements of the contract.
- b. The reporting limit is lower than the lowest calibration standard.
- c. The reporting limit used by laboratory is above the maximum allowable Reporting Limit allowed by the Contract.

2.0 Injections or Acquisition Requirements

- a. The Contractor failed to follow the method specific injection and acquisition requirements of the contract.
- b. The injections of any sample, standard, QC sample, or blank was not done in triplicate and in sequence.
- c. The peak heights or areas of each consecutive injection for a reported acquisition do not agree within 5% of their average.
- d. The Contractor mixed peak area and peak height for the various acquisitions and calculation of data across the data set.
- e. The Contractor failed to use the same procedure (peak height or area) in the calculation of the sample results as was used for the MDL study and or the MDLV.

NON-PAYMENT ISSUES

3.0 Initial Calibration

- a. The Contractor failed to follow the initial calibration requirements of the contract.
- b. The three required calibration standards at the required concentrations were not analyzed.
- c. The midpoint standard was not at the contract required concentration.
- d. Linearity Determination was not determined by response factors as required by the Contract.
- e. The three acquisitions of each calibration level were not average together to determine the % Difference from the known concentration.
- f. The % Difference of the three acquisitions for each standard used to calculate the average calibration standard result exceeds the contract required limits.
- g. The % RSD for the Initial Calibration does not meet the contract requirements.

4.0 Initial Calibration Verification Sample Standard

- a. The Contractor failed to follow the initial calibration verification sample standard requirements of the contract.
- b. The Initial Calibration Verification Sample Standard was not analyzed.
- c. The % Difference of the Initial Calibration Verification Sample Standard exceeded $\pm 30\%$.

5.0 Continuing Calibration Verification (Opening and Closing)

- a. The Contractor failed to follow the continuing calibration verification requirements (opening or closing) of the contract.
- b. The Continuing Calibration Verification Standard was not analyzed.
- c. The % Difference of the Continuing Calibration Verification Standard exceeded 15%.

6.0 Laboratory Control Sample

- a. The Contractor failed to follow the Laboratory Control Sample requirements of the contract.
- b. The Contractor failed to analyze a Laboratory Control Sample as required by the contract.

7.0 Method Blank

- a. The Contractor failed to follow the method blank requirements of the contract.

NON-PAYMENT ISSUES

- b. The Contractor failed to analyze the method blank as required by the contract.

8.0 Instrument Blank

The Contractor failed to follow the instrument blank requirements of the contract.

NJDEP-LLTO-15

1.0 Water Management

The Contractor failed to follow the water management requirements of the contract.

2.0 Reporting Limits

- a. The Contractor failed to follow the reporting limit requirements of the contract.
- b. The reporting limit is lower than the lowest calibration standard.
- c. The reporting limit used by laboratory is above the maximum allowable Reporting Limit allowed by the Contract.
- d. The Reporting Limits (RL) for a particular compound in an undiluted sample exceeds the RL required by the Method and the contract.
- e. The reporting limit is not being reported correctly for both the detected and non detected results.

3.0 Instrument Performance Check (IPC)

- a. The Contractor failed to follow the Instrument Performance Check (IPC) requirements of the contract.
- b. The Instrument Performance Check submitted failed to meet the performance requirements of the method and contract requirements.
- c. The IPC gas standard was combined with a calibration standard to create a single mixture injection.
- d. The IPC was not the first injection in a twenty-four hour sequence.

4.0 Internal Standards

- a. The Contractor failed to follow the internal standard requirements of the contract.
- b. The samples, QC samples, calibration standards and blanks are not spiked with internal standards.

NON-PAYMENT ISSUES

- c. The Contractor failed to spike the samples, QC samples, calibration standards and blanks with the same internal standards at the same concentration.
- d. The Contractor failed to follow the contract requirements on reanalysis to determine matrix effect.

5.0 GC/MS Initial Calibration

- a. The Contractor failed to follow the initial calibration requirements of the contract.
- b. A minimum of five calibration levels were not conducted for each required compound.
- c. The required concentration range of calibration standards was not used.
- d. The Contractor failed to follow the % RSD requirements of the contract.

6.0 Initial Calibration Verification Sample Standard

- a. The Contractor failed to follow the initial calibration verification sample standard requirements of the contract.
- b. The Initial Calibration Verification Sample Standard was not analyzed.
- c. The Contractor failed to follow the % Difference requirements of the contract.

7.0 GC/MS Continuing Calibration Verification Standard (Daily and Closing)

- a. The Contractor failed to follow the continuing calibration verification requirements (opening or closing) of the contract.
- b. The Continuing Calibration Verification Standard was not analyzed.
- c. The Contractor failed to follow the % Difference requirements of the contract.

8.0 Reporting Limit Laboratory Control Sample

- a. The Contractor failed to follow the Reporting Limit Laboratory Control Sample requirements of the contract.
- b. The Contractor failed to analyze a Reporting Limit Laboratory Control Sample as required by the contract.

9.0 Manual Integration

The contractor failed to follow the manual integration requirements of the contract and also failed to resubmit compliant data upon request of the State Contract Manager.

NON-PAYMENT ISSUES

10.0 Dilutions and Automatic addition of Makeup Air

- a. The Contractor failed to follow the contract requirements for the procedures for the dilution of samples.
- b. The Contractor failed to follow the contract requirements regarding the addition of makeup air.

11.0 Method Blank

- a. The Contractor failed to follow the method blank requirements of the contract.
- b. The Contractor failed to analyze the method blank as required by the contract.

12.0 Instrument Blank

The Contractor failed to follow the instrument blank requirements of the contract.

USEPA Method TO-15

1.0 Water Management

The Contractor failed to follow the water management requirements of the contract.

2.0 Reporting Limits

- a. The Contractor failed to follow the reporting limit requirements of the contract.
- b. The reporting limit is lower than the lowest calibration standard.
- c. The reporting limit used by laboratory is above the maximum allowable Reporting Limit allowed by the Contract.
- d. The Reporting Limits (RL) for a particular compound in an undiluted sample exceeds the RL required by the Method and the contract.
- e. The reporting limit is not being reported correctly for both the detected and non detected results.

3.0 Instrument Performance Check (IPC)

- a. The Contractor failed to follow the Instrument Performance Check (IPC) requirements of the contract.
- b. The Instrument Performance Check submitted failed to meet the performance requirements of the method and contract requirements.
- c. The IPC gas standard was combined with a calibration standard to create a single mixture injection.

NON-PAYMENT ISSUES

- d. The IPC was not the first injection in a twenty-four hour sequence.

4.0 Internal Standards

- a. The Contractor failed to follow the internal standard requirements of the contract.
- b. The samples, QC samples, calibration standards and blanks are not spiked with internal standards.
- c. The Contractor failed to spike the samples, QC samples, calibration standards and blanks with the same internal standards at the same concentration.
- d. The Contractor failed to follow the contract requirements on reanalysis to determine matrix effect.

5.0 GC/MS Initial Calibration

- a. The Contractor failed to follow the initial calibration requirements of the contract.
- b. A minimum of five calibration levels were not conducted for each required compound.
- c. The required concentration range of calibration standards was not used.
- d. The Contractor failed to follow the % RSD requirements of the contract.

6.0 GC/MS Continuing Calibration Verification Standard

- a. The Contractor failed to follow the continuing calibration verification requirements (opening or closing) of the contract.
- b. The Continuing Calibration Verification Standard was not analyzed.
- c. The Contractor failed to follow the % Difference requirements of the contract.

7.0 Laboratory Control Sample

- a. The Contractor failed to follow the Laboratory Control Sample requirements of the contract.
- b. The Contractor failed to analyze a Laboratory Control Sample as required by the contract.

8.0 Manual Integration

The contractor failed to follow the manual integration requirements of the contract and also failed to resubmit compliant data upon request of the State Contract Manager.

NON-PAYMENT ISSUES

9.0 Dilutions and Automatic addition of Makeup Air

- a. The Contractor failed to follow the contract requirements for the procedures for the dilution of samples.
- b. The Contractor failed to follow the contract requirements regarding the addition of makeup air.

10.0 Method Blank

- a. The Contractor failed to follow the method blank requirements of the contract.
- b. The Contractor failed to analyze the method blank as required by the contract.

11.0 Instrument Blank

The Contractor failed to follow the instrument blank requirements of the contract.

Appendix 6

Data Package Evaluation Checklist

SAMPLE DATA REPORT EVALUATION CHECKLIST

The following checklist shall be utilized in conjunction with the requirements of the RFP to determine the technical acceptability and completeness of the sample data report. A copy of this completed form with a copy of the pages from the sample data report that deviated from the methods or the RFP's specifications shall be attached to the final award recommendation report.

LABORATORY NAME:

LABORATORY LOCATION:

REVIEWER:

REVIEWER'S SIGNATURE:

REVIEW DATE:

Most evaluation items are coded with a 1, 2 or 3. Evaluation items coded with a number 1 are essential and failure to comply with one or more essential items will result in rejection of data for that task in the bid submission. Evaluation items coded with a number 2 are major task items and failure to comply with 3 or more major items will result in rejection of data for that task in the bid submission. Evaluation items coded with a number 3 or minor items and failure to comply with 5 or more minor items will result in rejection of data for that task in the bid submission. If the data is rejected during the bid submission evaluation, it is determined to be non-responsive.

Severity Code	Action:
1 = Essential	≥ 1 , Reject Bid
2 = Major	≥ 3 , Reject Bid
3 = Minor	≥ 5 , Reject Bid

I. Submission Criteria

The criteria listed in this section must be addressed for each of the method for which the bidder has submitted a bid for.

Criteria	Deficiency	Severity Code No
Was a data package submitted for this method?		1
Did the laboratory submit a data package from a sample collected and analyzed specifically for this bid submission? Is the sample data package derived from archives? Either source is acceptable. However, failure to identify the source is not acceptable. Reject the data package if the source of the sample is not identified.		1
Is the sample a real environmental sample or it a sample generated in the laboratory or a PE sample?		1
Is the correct type and number of hard copy data reports submitted? (Extended Data and Summary Data Report is required).		2
Was the laboratory certified for the required methods at the time the sample was being analyzed?		1
Was the laboratory certified for the required parameters in each method at the time the sample was being analyzed?		1
Does the electronic deliverables for each method meet the contract requirements?		1

Appendix 6

Data Package Evaluation Checklist

General Documentation Criteria

Criteria	Severity Code	Compliant (indicate Yes or No)
Title Page	3	
Table of Contents/CCS Forms	3	
External/Internal Chain of Custody Documentation	1	
Shipping Documentation(if shipped)	2	
Methodology Review Page Provided	2	
Case Narrative	2	
Sample Receipt and Log In Form	2	
Deliverable Requirements as of Exhibit B in SOWs and this RFP	1	
Document Bound and Paginated	2	

Method Detection Limit Studies (for each fraction/matrix/technique)

Criteria	Severity Code	Compliant (indicate Yes or No)
Method Detection Limit Summary	1	
Method Detection Limit Verification	1	

Method NJDEP-LLTO-15 Method

Criteria	Deficiency	Severity Code
All target compounds reported as ppbv		1
Deliverable meets requirements of Appendix 1		1
Title Page		2
Table of Contents		2
External/Internal Chain of Custody Documentation		1
Sample Receipt and Log in Checklist		1
Gas Standards Traceability Certificates		1
Methodology Review		2
Case Narrative		2
Electronic Deliverables		1
Reporting Limits meet requirements		1

Appendix 6

Data Package Evaluation Checklist

Air added to Canister at unacceptable level		1
All Chromatogram documentation meet requirements		1
All Quantitation Reports meet requirements		1
Holding Time		1
Instrument Performance Check		1
Initial Calibration		1
Initial Calibration Verification Sample Standard		3
Daily Calibration Verification Standards (Opening and Closing)		1
Internal Standards and Retention Times		1
Chromatographic Scaling Requirements		1
Method Blanks		1
Instrument Blanks(if applicable)		3
Reporting Limit Laboratory Control Sample		3
Sample Data (targets and TICs)		1
Dilutions done correctly		1
Clean Canister Certification		1
Instrument Run Logs		2
Pressure Gauge Readings		2
Canister Dilution Calculations		1

USEPA Method 3C

Criteria	Deficiency	Severity Code
All compound/parameters reported as % v/v		1
Deliverable meets requirements of Appendix 2		1

Appendix 6

Data Package Evaluation Checklist

Title Page		2
Table of Contents		2
External/Internal Chain of Custody Documentation		1
Sample Receipt and Log in Checklist		1
Gas Standards Traceability Certificates		1
Methodology Review		2
Case Narrative		2
Electronic Deliverables		1
Reporting Limits meet requirements		1
Air added to Canister at unacceptable level		1
All Chromatogram documentation meet requirements		1
All Quantitation Reports meet requirements		1
Holding Time		1
Initial Calibration		1
Initial Calibration Verification Sample Standard		1
Daily Calibration Verification Standards (Opening and Closing)		1
Chromatographic Scaling Requirements		1
Method Blanks		1
Instrument Blanks(if applicable)		3
Laboratory Control Sample		2
Sample Data		1
Dilutions done correctly		1
Clean Canister Certification		1

Appendix 6

Data Package Evaluation Checklist

Instrument Run Logs		2
Pressure Gauge Readings		2
Canister Dilution Calculations		1

USEPA Method 25C

Criteria	Deficiency	Severity Code
Data reported as NMOC (ppmC)		1
Deliverable meets requirements of Appendix 3		1
Title Page		2
Table of Contents		2
External/Internal Chain of Custody Documentation		1
Sample Receipt and Log in Checklist		1
Gas Standards Traceability Certificates		1
Methodology Review		2
Case Narrative		2
Method Detection Limit Summary		1
Method Detection Limit Verification		1
Electronic Deliverables		1
Reporting Limits meet requirements		1
Air added to Canister at unacceptable level		1
All Chromatogram documentation meet requirements		1
All Quantitation Reports meet requirements		1
Holding Time		1
Initial Calibration		1
Initial Calibration Verification Sample Standard		1

Appendix 6

Data Package Evaluation Checklist

Daily Calibration Verification Standards (Opening and Closing)		1
Chromatographic Scaling Requirements		1
Method Blanks		1
Instrument Blanks(if applicable)		3
Laboratory Control Sample		2
Sample Data		1
Dilutions done correctly		1
Clean Canister Certification		1
Instrument Run Logs		2
Pressure Gauge Readings		2
Canister Dilution Calculations		1

EPA Method TO-15

Criteria	Deficiency	Severity Code
All target compounds reported as ppbv		1
Deliverable meets requirements of Appendix 1		1
Title Page		2
Table of Contents		2
External/Internal Chain of Custody Documentation		1
Sample Receipt and Log in Checklist		1
Gas Standards Traceability Certificates		1
Methodology Review		2
Case Narrative		2

Appendix 6

Data Package Evaluation Checklist

Electronic Deliverables		1
Reporting Limits meet requirements		1
Air added to Canister at unacceptable level		1
All Chromatogram documentation meet requirements		1
All Quantitation Reports meet requirements		1
Holding Time		1
Instrument Performance Check		1
Initial Calibration		1
Daily Calibration Verification Standards)		1
Internal Standards and Retention Times		1
Chromatographic Scaling Requirements		1
Method Blanks		1
Instrument Blanks(if applicable)		3
Laboratory Control Sample		3
Sample Data (targets and TICs)		1
Dilutions done correctly		1
Clean Canister Certification		1
Instrument Run Logs		2
Pressure Gauge Readings		2
Canister Dilution Calculations		1

Appendix 7

Standard Operating Procedures Certification Chart

Laboratory Analysis of Air Samples Collected From Hazardous Waste Sites

The laboratory shall submit the 2- part certification within 30 days of award of the contract. The certification indicates that the laboratory certifies that the SOP now reflects the requirements of the contract. Electronic copies of the revised SOP must be submitted to the State Contract Manager as required by the IFB as a post award submittal requirement. The SOP shall be made available for review by the State at the time for compliance audit. Any revisions must be submitted to the State Contract Manager for approval.

Part A- Approval Certification of Standard Operating Procedures by NJDEP OQA

The following sections of the laboratory's Standard Operating Procedures (SOP) must have been submitted and approved by the Office of Quality Assurance, prior to submittal to the State Contract Manager. The laboratory must certify that the SOPs have been reviewed and approved by the Office of the Quality Assurance for all sections that this office has oversight. The Laboratory Director shall sign below to certify that all appropriate sections have been approved.

Sections that require Approval by Office of Quality Assurance			
Section	Item	Yes	No
8.6.9	Sample Receipt and Log-in Procedures		
8.6.10	Sample Identification and Storage Procedures		
8.6.12	Reagent and Standard Purity, Preparation, and Storage Procedures		
8.6.13	Analytical Procedures for Analyses Performed under the Contract		
8.6.14	Method Detection Limits, Minimum Detectable Concentration, Precision and Accuracy, Determination Procedures.		
8.6.15	Method Detection Limit Verification		
8.6.16	Reporting Limits – All Methods		
8.6.17	Water Management		

I certify that the above sections persons comply N.J.A.C. 7:18 and with the terms and conditions of the contract sections specified above.

Laboratory Director Name: _____

Company Name: _____

Date: _____

Appendix 7

Standard Operating Procedures Certification Chart

Laboratory Analysis of Air Samples Collected From Hazardous Waste Sites

Part B- Standard Operating Procedures Requirements not covered by Certification Regulations

The following sections of the laboratory's Standard Operating Procedures (SOP) shall be revised by the laboratory to reflect the requirements of the IFB. The Laboratory Director is to sign below to certify that all appropriate sections have been revised.

Sections that require Certification by the Laboratory			
Section	Item	Yes	No
8.6.5	Chain of Custody		
8.6.6	Clean Canister Certification Requirements- All Methods		
8.6.7	Canister Preparation and Shipment Procedures		
8.6.8	Clean Canister Certification Procedures – All Methods		
8.6.11	Sample and Laboratory Contamination Avoidance Procedures		
8.6.18	Technical and Managerial Review		
8.6.19	Contract Compliance Screening Procedures		

I certify that the above sections persons comply with the terms and conditions of the contract sections specified above.

Laboratory Director Name: _____

Company Name: _____

Date: _____

Appendix 8

Personnel Position Identification Certification Chart

Laboratory Analysis of Air Samples Collected From Hazardous Waste Sites

The Contract Awardee is to identify the individuals that hold the following positions. If the Contract Awardee is a single laboratory contractor, only one individual should be identified for each position. If the Contract Awardee is a multiple laboratory contractor, then one individual should be identified for each laboratory with the first person identified being the representative of the headquarters laboratory. These positions are required by the contract and New Jersey regulation N.J.A.C. 7:18. Contract Awardees must self certify that all individuals have already been approved through the laboratory certification process by the NJDEP Office of Quality Assurance and that these personnel meet the terms the contract. See Section 3 of the Scope of Work.

Personnel Required by All Tasks

IFB Section	Position	Name
Supervisory Personnel Requirements		
4.4.4.A	Laboratory Director	
4.4.4.B	Assistant Laboratory Director	1. 2.
4.4.4.C	Project Manager	1. 2.
4.4.4.D	Quality Assurance Officer	1.
4.4.4.E	Alternate Quality Assurance Officer	1. 2.
4.4.4.F	Document Control Officer	
4.4.4.G	Sample Custody Officer	
4.4.4.H	Data Base Manager	
4.4.4.I	GC/MS Supervisor	
4.4.4.J	GC Supervisor	
Non Supervisory Personnel Requirements		
4.4.4.L	Quality Assurance Officer	

4.4.4.M	Assistant Sample Custody Officer	1. 2.
4.4.4.N	Assistant Document Control Officer	1. 2.
4.4.4.O	GC/MS Operator	1. 2.
4.4.4.P	GC Operator	1. 2.

I certify that the above persons comply with the terms and conditions of the contract sections specified above.

Name: _____

Company Name: _____

Date: _____

APPENDIX 9
BID SUBMISSION CHECKLIST

The RFP requires the bidder to submit information and documentation at each stage of the bidding process.

The following documents or their equivalents must, where applicable, be filled out, signed and submitted at the appropriate stage of the bidding process in order for a bidder to be eligible for contract award. Samples of some of these documents are provided as Attachments to the RFP. Others must be prepared by the bidder. Failure to fill out or sign the relevant portions of the applicable documents and to submit the documents within the time limits specified in this RFP will result in rejection of that proposal as non-responsive to the RFP. Where additional copies of the Attachments are required for the bidder or any subcontractors, please photocopy the document or request additional copies from the Purchase Bureau.

BID SUBMISSION CHECKLIST

The following checklist of submissions for each stage may be helpful as an aid in completing your bid. For additional details regarding these items, see Section 5 of this RFP.

Cover Sheet or a letter of transmittal signed by the person authorized by the Corporate Resolution

Attachment A – Signatory Page

Attachment B - Ownership Disclosure Form

Attachment C- Disclosure of Investigations/Actions Involving Bidder

Attachment D - MacBride Principles Certification

Attachment E - Affirmative Action

Attachment F. Services Source Disclosure Form

BUSINESS REGISTRATION

EXAMPLE DATA REPORTS & ELECTRONIC SUBMITTALS FOR EACH METHOD BID

- ☐ One Original and One Copy Required- USEPA Method 3C
- ☐ One Original and One Copy Required- USEPA Method 25C
- ☐ One Original and One Copy Required- USEPA Method TO-15 (if submitting a bid for this method)
- ☐ One Original and One Copy Required- Method NJDEP-LLTO-15 (if submitting a bid for this method)

One (1) clearly marked original and two (2) copies of the bid proposal (total of three (3)) submissions are required including the Sample Data Reports.

SOFTWARE DOCUMENTATION REQUIREMENTS

- ☐ Data Systems for all methods-Proof of software ownership or license agreement from the manufacturer must be provided as part of the bid documents and included in the SOP.
- ☐ GC/MS- Mass Spectral Library- Proof of software ownership or license agreement for the NIST/EPA/NIH Mass Spectral Library with Search Program (Data Version: NIST 11, Software Version 2.0g), Wiley Registry 9th Edition / NIST 2011 Mass Spectral Library or equivalent mass spectral library that is required for the bid as the reference library.

New Jersey Department of Environmental Protection Site Remediation Program

*NJDEP-TO-15 FOR AMBIENT AIR
NJDEP REGULATORY DATA REPORT
FORMAT-APPENDIX 10
Modified for Contract
November 2013*

*Prepared by New Jersey Department of
Environmental Protection (NJDEP)
Site Remediation Program
Financial Services Element
401 East State Street - 6th Floor
Mail Code 401-061 PO Box 420
Trenton, New Jersey 08625-042*

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1.0 INTRODUCTION

- 1.1 This Appendix contains the format used for reporting data from USEPA METHOD TO-15. It presents instructions and the order in which data are to be reported.
- 1.2 This Deliverable is applicable Laboratories who are certified for USEPA METHOD TO-15 by the NJDEP Office of Quality Assurance and is the required deliverable for this method.
- 1.3 The Contractor must follow all the requirements regarding scaling and presentation of chromatograms, spectra, manual integration requirements and quantitation reports as specified in the required deliverables and/or USEPA METHOD TO-15 requirements.
- 1.4 The Appendix provides examples of the three reporting forms for this deliverable. The forms are the Title Page, Case Narrative and Methodology Form. These forms are required for the Contract. Copies of these forms are located in Section 15.0 of this Appendix. Electronic Copies will also be provided upon request.
- 1.5 The Appendix provides examples of the NJDEP Chain of Custodies forms in Section 15.0. These are required forms for the all State contract work.
- 1.6 The LL-TO15/TO-15 Method Canister Sampling Field Test Data Sheet is located in Section 15.0 of this Appendix. This Form is required for every canister unless a combined Air Methods - External Chain of Custody Record/Field Test Data Sheet is used. Examples of the Chain of Custody documentation used by NJDEP can be obtained electronically.
- 1.7 For all other reporting forms, the Contractor must generate the forms from their stand-alone Reporting Form Generation Software (such as Thruput Inc, Thru-Put Systems, Target, The Khemia Company, or Environment Information System Corporation) that contains the information required by NJDEP.
- 1.8 The MicrosoftTM Excel Spreadsheet that is used to report the data electronically on the NJDEP-SRP Air Methods Data Summary Table cannot be used for the reporting forms.
- 1.9 The Contractor generated forms shall not have labels referring to "CLP", "SOW" and "EPA Sample #". If the Contractor's/Laboratory's reporting software requires inclusion of these labels, the Contractor must add a statement to the Case Narrative informing the data reviewer to disregard the labels.
- 1.10 All Laboratories must receive a written approval from NJDEP-SRP-ODQ prior to using any modified forms in Section 15.0. The NJDEP shall reject noncompliant forms and data packages.
- 1.11 Each Sample Delivery Group (20 samples or less) consists of a separate Extended Data Report (Section 3.0) and Summary Data Report (Section 2.5.1) and the associated electronic deliverables. Individual Sample Delivery Groups cannot be merged together to create a single data package.

2.0 NJDEP REGULATORY FORMAT REQUIREMENTS FOR THE DATA PACKAGES AND ELECTRONIC FILES

- 2.1 The deliverable from the Contractor will consist of both the paper documents and electronic files.

- 2.2 The Contractor must submit the following deliverables to the NJDEP, other state users within the time frame established at the time of engagement.
- 2.2.1 Original Extended Data Report with original chain of custody forms
 - 2.2.2 Original and one copy of the Summary Data Report
 - 2.2.3 Electronic Deliverables
 - 2.2.4 Acrobat Format (PDF) File of both the Extended and Summary Report compact disc.
- 2.3 The NJDEP Regulatory Report Format is organized to facilitate the preparation and review of the data package. The Contractor must present the USEPA Method TO-15 data in a separate section from other air methods and must comply with the requirements of this Appendix in the specified order.
- 2.4 General Data Package Requirements for Both the Extended and Summary Data Report
- 2.4.1 The entire document must be legible. Data shall be not be submitted in a format consisting of multiple pages copied on one side; the front and back of each page is allowed. The State shall reject data packages containing incomplete or illegible signatures and documentation.
 - 2.4.2 Each batch of samples or sample delivery group (20 field samples or less) must have a separate set of data packages. If more than one air analysis is required of a sample (for example a sample is analyzed for fixed gases by USEPA Method 3C), all data must be present in one data set in separate sections. The only information from each analysis that can be merged together in the front section of the data package is as follows.
 - Title Page;
 - External Chain of Custody or External Chain of Custody/Field Test Data Sheets;
 - Internal Chain of Custody;
 - TO-15 Method Canister Sampling Field Test Data Sheet (if Applicable);
 - Shipping Documentation;
 - Copies of Traceability Certificates from Commercial Gas Standard Suppliers;
 - Case Narrative;
 - Methodology Review;
 - Data Sheets in Excel; and
 - Method Detection Limit Studies (MDL Study and MDLV Study)
 - 2.4.3 If a sample is diluted because a parameter concentration exceeded the upper calibration standard, then the Contractor is required to report both the undiluted and diluted data sets of both acquisitions. If the parameter concentrations are such that the sample can be analyzed only at a dilution, then the sample data set at the appropriate dilution and one data set at a more concentrated dilution must be submitted. Samples requiring dilution shall be mentioned in the case narrative.
 - 2.4.4 The data summary forms, at a minimum, must 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.
 - 2.4.5 The Contractor must complete all the required information on the reporting forms and raw data forms as specified by this Appendix.

- 2.4.6 The original extended data report and data summary reports can be printed single sided or double sided. However, the original chain of custody forms and shipping documentation must be single sided.
- 2.4.7 Both data reports must be organized and labeled in accordance with instructions in this Appendix.
- 2.4.8 Both data reports must be securely bound along the left-hand margin of the report. Staples are not acceptable.
- 2.4.9 The extended data report must be sequentially paginated starting with the first page after the Table of Contents.

2.5 NJDEP Regulatory Format Summary Data Report

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

- Section 4.2 Title Page;
- Section 4.4 Chain of Custody (external documentation and Field Test Data Sheets);
- Section 4.7 Methodology Review;
- Section 4.8 Case Narrative;
- Section 4.9 Method Detection Limit Summary;
- Section 4.10 Verified Method Detection Limit Summary;
- Section 5.1 Laboratory Control Sample;
- Section 5.2 Method Blank Summary;
- Section 5.3 Instrument Performance Check Summary;
- Section 5.4 Internal Standard Area and Retention Time Summary;
- Section 6.0 Sample Data Summary (summary data only);
- Section 7.1 Initial Calibration Form Summary- (reporting form only);
- Section 7.2 Continuing Calibration Verification Summary- (reporting form only);
- Section 8.2 Blank Data (reporting form only)

- 2.5.2 Clearly label and complete the deliverable in accordance with instructions in this Appendix. Arrange the deliverable in the order specified in this Appendix.
- 2.5.3 Do not submit raw QC data, sample preparation, shipping documentation, and standard data in the summary data report.

2.6 NJDEP Regulatory Format Extended Data Report

See Section 3.0 through and including Section 14.0 below for the complete requirements.

2.7 Electronic Files by Electronic Mail

The three electronic files generated by the Contractor are to 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 will also be submitted to the State on CD-ROM as required by Section 2.8 of this Appendix.

- NJDEP-SRP Air Methods Data Summary Table
- The Electronic Data Deliverable Format
- The Electronic HZResult Table
-

2.7.1 NJDEP- SRP Air Methods Data Summary Table

2.7.1.1 There is no embedded calculation in this worksheet.

2.7.1.2 Data from other matrices cannot be reported with the air data.

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

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

2.7.1.5 The Contractor is required to input information that is required in the custom headers and footers of the worksheet for each sample.

- The left header information is as follows:
 - Project Number or Name;
 - Field Sample Identification Number; and
 - Laboratory File Identification Number
- The right header information is as follows:
 - Sample Date; and
 - Analysis Date
- The left footer information is as follows:
 - Laboratory Name; and
 - Laboratory City/State

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

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

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

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

2.7.1.10 The dilution factor must be listed on the first row of each method data in the worksheet for each sample below the method/units row. The dilution factor must be listed even if the dilution factor is 1.

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

- 2.7.1.12 The compound names cannot be changed. The names that must be used are listed in Table 1 “List of Required Compounds, Molecular Weight and CAS Number” located in Section 15 of this Appendix. These are the same names used by the NJDEP Laboratory Certification Program for this method.
- 2.7.1.13 The CAS numbers for any target compound cannot be changed. The required CAS numbers for each target compound are listed in the Table 1 “List of Required Compounds, Molecular Weight and CAS Number” located in Section 15.0 of this Appendix.
- 2.7.1.14 The required molecular weights for each target compound are located in the Table 1 “List of Required Compounds, Molecular Weight and CAS Number” located in Section 15.0 of this Appendix.
- 2.7.1.15 The order of the target compounds on the table can be revised. All target compounds must be presented prior to the non-target compounds.
- 2.7.1.16 If non-target compounds are requested, then they are to be reported at the end of the list of compounds by the USEPA METHOD TO-15 method. The retention times are to be reported in the field labeled “Retention Time NT Only” column of the worksheet. Retention times are to be reported in minutes with two decimal places.
- 2.7.1.17 For the non-target compounds, unless there is a positive identification and molecular weight can be determined based on the compound, the ug/m3 result field must be left blank.
- 2.7.1.18 If a CAS number exists for a non-target compound, then that number is to be inserted in the appropriate column.
- 2.7.1.19 If non-target compounds were requested and none were detected, then that entire section is to be left blank with no entries or wording listed.
- 2.7.1.20 If other air methods such as Method 3C or Method 25C are being reported for the same sample, all of the results for the other air methods must be reported on the same form. The results of each method must be listed together under a separate sub-header and the correct units listed. An example of this format is supplied on the worksheet in Section 15.0 of this Appendix.

2.7.1.21 Required Reporting of Results (ppbv and µg/m3)

The ppbv values are to be reported exactly as required in the sample data summary forms.

The µg/m3 data is to be reported as follows:

The screening levels have been rounded to 2 significant figures for a value greater than or equal to 10 and to 1 significant figure for a value less than 10, including those less than 1. This approach is used by the USEPA Office of Solid Waste and Emergency Response and is described in the Supplement Guidance for Developing Soil Screening Levels for Superfund Sites, (USEPA, 2001). The rounding rules specified below are contained in Hurlbert (1994).

- If the first number beyond the last significant digit is less than 5, the last significant number remains the same; and the remaining numbers are

dropped. For example, 4.438 is rounded to one significant figure, 4 and 44.38 is rounded to 2 significant figures, 44.

- If the first number beyond the last significant digit is more than 5, the last significant number increases by one and the remaining numbers are dropped. For example, 4.638 is rounded to one significant figure, 5 and 46.68 is rounded to 2 significant figures, 47.
- If the first number beyond the last significant digit is exactly 5, then the last digit is rounded to the closest even number. For example, 4.5 is rounded to one significant figure, 4 and 45.4 is rounded to two significant figures, 46
- Rounding shall be done at the last step of all the arithmetic processes used to determine the concentrations in $\mu\text{g}/\text{m}^3$.

2.7.2 Electronic Data Deliverable Format (Sample.Txt File)

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

2.7.2.2 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	Air, Soil Gas, Ambient

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

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

2.7.3 The Electronic HZRESULT Tables (NJDEP SRP Requirement Only)

2.7.3.1 The NJDEP Site Remediation Program posts instructions, requirements, and software for electronic data submissions at the following web address: <http://www.state.nj.us/dep/srp/hazsite>. Additional clarification will be posted on the SRP website as a general notice to all parties. Contractors should routinely review the website for additional clarification documents.

2.7.3.2 Required Reporting of Results (ppbv and $\mu\text{g}/\text{m}^3$)

The ppbv values are to be reported exactly as required in the sample data summary forms.

The $\mu\text{g}/\text{m}^3$ data is to be reported as follows:

The screening levels have been rounded to 2 significant figures for a value greater than or equal to 10 and to 1 significant figure for a value less than 10, including those less than 1. This approach is used by the USEPA Office of Solid Waste and Emergency Response and is described in the Supplement Guidance for Developing Soil Screening Levels for Superfund Sites, (USEPA, 2001). The rounding rules specified below are contained in Hurlbert (1994).

- If the first number beyond the last significant digit is less than 5, the last significant number remains the same; and the remaining numbers are dropped. For example, 4.438 is rounded to one significant figure, 4 and 44.38 is rounded to 2 significant figures, 44.
- If the first number beyond the last significant digit is more than 5, the last significant number increases by one and the remaining numbers are dropped. For example, 4.638 is rounded to one significant figure, 5 and 46.68 is rounded to 2 significant figures, 47.

- If the first number beyond the last significant digit is exactly 5, then the last digit is rounded to the closest even number. For example, 4.5 is rounded to one significant figure, 4 and 45.4 is rounded to two significant figures, 46.
- Rounding shall be done at the last step of all the arithmetic processes used to determine the concentrations in $\mu\text{g}/\text{m}^3$.

2.8 Files on Compact Disc

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

- 2.8.1 Adobe™ Portable Document File (PDF) files of the Extended and the Summary Data Reports (format See Section 2.9)
- 2.8.2 HZresult File
- 2.8.3 NJDEP-SRP Air Methods Data Summary Table File
- 2.8.4 Sample.Txt File

2.9 Delivery of Hardcopy Data in PDF Format

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 must be the latest version of the software. The PDF file for Extended Data Report must be organized in accordance to directions provided in Table 2 located in Section 15.0 of this Appendix. 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). The required hierarchal bookmark structure for the Extended Data Report is shown in Table 2 in Section 15.0 of this Appendix.

The Summary Data Report PDF file is not required to be bookmarked. The Summary Data Report PDF must follow the order established below and report only the required forms as specified in Section 2.5.

If the sampling event includes air methods such as USEPA Method 3C or Method 25C or other air methods in addition to USEPA METHOD TO-15 within the same sample delivery group, then the hierarchal bookmark structure must be expanded to the Group Bookmark level for each method. 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.

3.0 CHROMATOGRAMS, MASS SPECTRA AND QUANTITATION REPORT REPORTING REQUIREMENTS

The required information on the Chromatograms and Quantitation Reports are the same for the calibration standards, quality control samples, blanks and samples.

3.1 Quantitation Requirements

3.1.1 The Quantitation Report that accompanies the chromatogram must contain at a minimum the following information at the top of the Report:

- 3.1.1.1 Data file identification;
- 3.1.1.2 Report date;
- 3.1.1.3 Injection date and time;
- 3.1.1.4 Operator;
- 3.1.1.5 Sample Identification Number;
- 3.1.1.6 Instrument identification;
- 3.1.1.7 Method file;
- 3.1.1.8 Quantitation type;
- 3.1.1.9 Integrator (instrument type);
- 3.1.1.10 Version of form generation software; and
- 3.1.1.11 Calibration file

3.1.2 The actual data results must be reported with the following information:

- 3.1.2.1 Compound;
- 3.1.2.2 Retention time;
- 3.1.2.3 Response (area count);and
- 3.1.2.4 Amount (ppbv)

3.1.3 The following additional information must be included in the quantitation report or elsewhere in the data package such as a client specific sample summary report, narrative, final data report, spectral displays or calibration check reports or reports generated through a LIM system. If the information is included elsewhere, then the locations of each must be referenced in the front of the data submission such as in a table of contents or other summary index.

- 3.1.3.1 Sample information (Field ID number (*indexed to the laboratory ID number*), date/time of sampling, type of sample)
- 3.1.3.2 Calibration date (initial calibration end date and time)
- 3.1.3.3 Dilution factor
- 3.1.3.4 Concentration formula
- 3.1.3.5 Expected retention time
- 3.1.3.6 Delta retention time (Difference between the expected and actual retention times)
- 3.1.3.7 On-column amount (ppbv)
- 3.1.3.8 Calculated amount (ppbv)

3.2 Chromatograms

3.2.1 Chromatograms are to be generated using a form-generation software. Strip chart data is not acceptable.

3.2.2 The following information must be printed in the top section of the chromatogram page.

- 3.2.2.1 Sample identification number.
- 3.2.2.2 Analyst
- 3.2.2.3 Injection date and time
- 3.2.2.4 Instrument identification
- 3.2.2.5 Data file

The column phase/column diameter and a dilution factor are to be included either on the chromatogram page or in another section as described in 3.1.3 above.

- 3.2.3 The internal standards in the chromatograms shall be labeled with the names or retention times on the peaks.
- 3.2.4 When no compounds are identified in a sample, the chromatograms from the analyses of the sample must use the same scaling factor as was used for the low-point standard of the initial calibration associated with those analyses.
- 3.2.5 Scaling factors (label the “x” and “y” axis using a numerical scale) must be provided.
- 3.2.6 Chromatograms must display all target compound peaks and internal standard peaks normalized to full scale for all samples, standards and QC samples. The chromatograms shall be normalized to full scale based on the highest target or internal standard.
- 3.2.7 If a chromatogram is re-plotted electronically to meet these requirements, then the scaling factor used must be displayed on the chromatogram.
- 3.2.8 Data System Printouts - If automated data systems procedures are used for preliminary identification and/or quantitation of the target compounds, then the complete data system report shall be included in all sample data packages. The complete data system report shall include all the information listed below. 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.
 - 3.2.8.1 Comparison of compounds found vs. the library entry;
 - 3.2.8.2 Sample identification number;
 - 3.2.8.3 Date and time of analysis;
 - 3.2.8.4 Retention time or scan number of identified target compounds;
 - 3.2.8.5 Ion used for quantitation with measured area;
 - 3.2.8.6 Copy of area table from data system;
 - 3.2.8.7 GC/MS instrument identifier; and
 - 3.2.8.8 Laboratory file identifier

In all instances where the data system report has been edited or where manual integration or quantitation has been performed, the GC/MS operator shall identify such edits or manual procedures by initialing and dating the changes made to the report, and shall include the integration scan range. In addition, a hardcopy printout of the EICP of the quantitation ion displaying the manual integration shall be included in the raw data. This applies to all compounds targeted by the method/contract and internal standards.

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

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

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

3.2.11.1 Sample identification number

3.2.11.2 Laboratory data file number

3.2.11.3 Injection date and time

3.2.11.4 Instrument identification

3.2.11.5 Analyst name

3.3 Mass Spectra Requirements

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

3.3.1 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 must be provided. Spectra shall be labeled with Sample Identification Number, Laboratory File Identifier, date and time of analysis, and GC/MS instrument identifier. Compound names shall be clearly marked on all spectra

3.3.2 When applicable, copies of mass spectra of non target compounds with associated best-match spectra (maximum of three best matches) must be provided. Spectra shall be labeled with Sample Identification Number, Laboratory File Identifier, date and time of analysis, and GC/MS instrument identifier. Compound names shall be clearly marked on all spectra.

4.0 REPORT FORMAT AND DATA REPORT REQUIREMENT INSTRUCTIONS

4.1 The order of the NJDEP Regulatory Format Extended Data Report for USEPA METHOD TO-15 is specified in this section. The format is tailored to USEPA METHOD TO-15 and differs from the requirements for other methods. The data package must follow the order specified below (unless a similar/equivalent format is submitted and an exception is granted by the Department during the certification process) and meet all the requirements specified below.

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

4.2.1 Name of Agency which sent the samples to the laboratory;

4.2.2 NJDEP or other State agency's case number or name;

4.2.3 Contract number (for state work);

4.2.4 Laboratory's name and location;

4.2.5 Sample Delivery Group or Batch number;

4.2.6 First and last date of sample receipt at the laboratory's facility;

4.2.7 Field sample numbers;

4.2.8 Laboratory sample numbers;

4.2.9 Sample location;

4.2.10 Date and time of sample collection;

- 4.2.11 Date of data report;
 - 4.2.12 Laboratory Quality Assurance Officer's name and signature; and
 - 4.2.13 Laboratory Manager's name and signature
- 4.3 Table of Contents - List on this table list, with a page reference, all topic headings in Sections 4.0 through 13.0 of this Appendix.
- 4.4 External and Internal Chain of Custody Forms and Shipping Documentation Forms
- 4.4.1 External and internal laboratory chain of custody documents are required for all data reports submitted to the State. DEP Form-095 (with Shipping Container) is used as the external custody form for samples submitted by all State agencies. The sampler is required to complete all sections pertaining to sample collection. The Contractor/Laboratory must properly complete the laboratory portions of these forms. Include all air waybills for each SDG, miscellaneous shipping and receiving records.
 - 4.4.2 When chain of custody documentation is missing or contains errors, immediately notify the NJDEP or other State agency submitting the samples.
 - 4.4.3 For every canister, a LL-TO15/TO-15 Method Canister Sampling Field Test Data Sheet (FTDS) must be initiated by the Contractor and accompany the canister to the field. The FTDS is completed by the sampler and returned to the Contractor with the canister.
 - 4.4.4 The Combined External Chain of Custody Record/Field Test Data Sheet (NJDEP Form-95D) can be used in place of the separate External Chain of Custody Record and the FTDS.
 - 4.4.5 The Contractor must document the internal chain of custody using DEP Form-077 for all State agencies. Full name and signatures are required. All signatures must be legible. The printed name must be the full name of the Contractor's employee and it must be legible. Illegible chain of custody documentation will result in data rejection.
 - 4.4.6 The Internal Chain of Custody is to remain with the samples at all times and bear the name of the person assuming responsibility of the samples and the date. Full names and signatures are required. All signatures must be legible. The printed name must be the full name of the Laboratory's employee and it must be legible. Illegible chain of custody documentation will result in data rejection.
 - 4.4.7 Each sample submitted consists of a canister. Document the internal chain of custody for each canister for this method. Internal chain of custody documentation for all samples may be listed on one (1) form for any given case (group) of samples submitted.
 - 4.4.8 Indicate on the internal chain of custody document all movements of the canister through the laboratory. Show the date and time of relinquishing and accepting of the sample by each individual who handled the sample materials. The chain of custody is terminated only when the sample analysis is complete or the canister is depleted.
- 4.5 Shipping Documentation
- The Contractor must provide all the original shipping documents including, but are not limited to, the following documents:

4.5.1 Air Bills

Include the original air bill in the extended data report. If the air bill was not received, then include a hardcopy receipt requested from the shipping company or a printout of the shipping company's electronic tracking information.

4.5.2 Sample Receipt and Log-In Checklist for Ambient Air Samples

This form is used to document the receipt and inspection of sample containers and samples. One original checklist is required for each sampling event of twenty samples or less (only the hardcopy form is required). The form must contain the information in 4.5.2.1 and 4.5.2.2 below. The Contractor can 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.

4.5.2.1 Required top of page information:

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

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

Shipping Container Information:

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

Sample Condition:

- Sample containers were received intact

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

- Sample ID/Sample Description;
- Date of sample collection;
- Time of sample collection;
- Identification of sampler;

- Requested test method(s);
- Necessary signatures; and
- Internal Chain of Custody (ICOC) required (answer is always yes)

Sample Integrity Usability:

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

Anomalies or Non Conformance Summary (Comment section)

4.6 Gas Standards Traceability Certificates

Copies of the Gas Standards Traceability Certificates or Certificates of Analysis for the standard lots supplied by the Commercial Gas Supplier must be provided. The certificates must be in lot number order by increasing number and by method.

4.7 Methodology Review

Indicate by Method and Revision number, the analyses that were conducted on the samples. Use NJDEP Form A-4 - Ambient Air Analysis (10/2013) noted in Section 15.

4.8 Case Narrative -Use NJDEP Form A -1C noted in Section 15 or a laboratory facsimile.

- 4.8.1 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 resolutions.
- 4.8.2 The Contractor shall document in the narrative all instances of manual integrations and an explanation of all flagged edits (e.g. manual edit) on the quantitation reports. The manual integrations can be documented on a separate printout attached to the case narrative.
- 4.8.3 The Contractor must certify that gas standards were used in the sample analysis. The commercial supplier of the primary and secondary gas standard must be listed.
- 4.8.4 For the tentatively identified compounds (TICs) that are being reported, the listing of the compound with retention time and estimated quantitations are a required part of the case narrative.
- 4.8.5 The Contractor must document all GC columns used for analysis. 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 must be described here. List the trap name (when denoted by the manufacturer) and 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.
- 4.8.6 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.”

- 4.8.7 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.
- 4.8.8 Hard Copies of the Excel Data sheets for each sample (field sample, dilutions, LCS and blanks) in the format specified by Section 2.7.1 NJDEP-SRP Air Methods Data Summary Table must be provided at the end of the Case Narrative. The order of the excel data sheets should follow the order of the electronic data.
- 4.8.9 The laboratory must clearly annotate the laboratory practices employed (both routinely and job specifically) with respect to the volume of standards injected, the volume of sample injected, the volume of makeup air used routinely and the volume of makeup air used for dilutions. The Department must be able to historically regenerate the data from the documentation submitted. Each sample, standard and blank analyzed is to include all volume information such that calculations can be easily performed and checked. At a minimum, the routinely employed amounts/volumes are to be noted in the case narrative and job specific sample, standard and blank amounts/volumes are to be noted in the applicable analysis summary sheets or the run logs and pressure gauge readings sheets.

4.9 Method Detection Limit Summary

The annual method detection limit (MDL) study as required by the NJDEP Laboratory Certification Regulations N.J.A.C 7:18 Sections 5.5(c) 10 & 11 must be submitted for USEPA Method TO-15. The Method Detection Limit Summary submitted by the laboratory must contain the following information for each compound in a tabular format. All information except for signatures must be computer generated or typed. The order sequence shall be chronological and by instrument if more than one instrument is used.

The required format of the Summary is as follows:

- 4.9.1 Laboratory Name;
- 4.9.2 Laboratory Location;
- 4.9.3 Matrix Type
- 4.9.4 Effective Date/Expiration date of MDL Study;
- 4.9.5 Instrument ID and Column ID;
- 4.9.6 Indication if the Instrument is used for Clean Canister Certification Analysis;
- 4.9.7 Compound name;
- 4.9.8 Data for seven replicates;
- 4.9.9 Mean value;
- 4.9.10 True Value;
- 4.9.11 Percent recovery;
- 4.9.12 Standard deviation;
- 4.9.13 Method Detection Limit (ppbv);
- 4.9.14 Reporting Limit (ppbv);
- 4.9.15 True Value/MDL;
- 4.9.16 Analyst name and date analyzed;
- 4.9.17 Supervisor name and date (who reviewed study);
- 4.9.18 Report preparer's name and date prepared; and
- 4.9.19 QA Officer name and date signed

4.10 Method Detection Limit Verification Summary (MDLV)

The Verified Method Detection Limit Verification Summary (MDLV Summary) must be submitted with the Method Detection Limit Study (Section 4.9). All information except for signatures must be computer generated or typed. The order sequence shall be chronological and by instrument if more than one instrument is used.

The required format of the Summary is as follows:

4.10.1 Top of Page Information

- Instrument Identification;
- Date of verification study;
- Analysis method;
- Cleanup method (if applicable);
- Study identification file name;
- Matrix;
- Analysis level;
- Analyst name; and
- QA Officer name and date signed

4.10.2 Required Columns

- Analyte name;
- CAS number;
- MDLV source;
- Source study (Laboratory File Identification);
- Source instrument;
- Source analysis date;
- MDLV concentration (ppbv);
- Reporting Limit (ppbv); and
- RL/MDLV ratio

5.0 QUALITY CONTROL DATA SUMMARY

5.1 Laboratory Control Sample (LCS) Summary

- 5.1.1 Record the LCS sample data on a laboratory-generated form.
- 5.1.2 If more than one form is necessary, forms shall be arranged in chronological order by date of analysis.
- 5.1.3 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 5.1.4 The method required control limits must be provided. The percent recovery is to be calculated for each compound to the nearest whole percent. All Percent Recoveries outside of Quality Control (QC) Limits are to be flagged with an asterisk "*" in the QC Limit column.
- 5.1.5 The following columns are required on the form for each compound:
 - Amount added (ppbv)
 - Amount recovered (ppbv)

- Percent recovery
- QC limits

5.2 Method Blank Summary

- 5.2.1 Record the method blank summary on a laboratory-generated form. Record all samples, dilutions, reanalyses, LCSs and any other QC samples analyzed with the Method blank.
- 5.2.2 If more than one form is necessary, forms shall be arranged in chronological order by date of analysis.
- 5.2.3 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 5.2.4 The GC column and the internal diameter must be listed on the form or noted elsewhere in the data package.
- 5.2.5 The following columns are required on the form. The samples, dilutions, reanalyses, LCS and any other QC samples associated with the method blank are to be listed in this section.
 - Field sample identification number
 - Laboratory sample identification number
 - Time and date of analysis

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

5.3 Instrument Performance Check Summary

- 5.3.1 Report the Instrument Performance Check data on a laboratory-generated form. Include in the listing all calibrations, samples and QC samples associated with each tune. (Identification number, date and time of each injection must be listed.
- 5.3.2 If more than one form is necessary, forms shall be arranged in chronological order by date of analysis.
- 5.3.3 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 5.3.4 The GC column and internal diameter must be listed on the form or noted elsewhere in the data package.
- 5.3.5 The time and date of the injection of the Instrument Performance Check standard.
- 5.3.6 For each required ion, enter the percent relative abundance in the right hand column of the top table. All relative abundances must be reported as a number. If the relative abundance is zero 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 must be provided with the calculated number in parentheses.
- 5.3.7 In the lower table, list all the samples (including dilutions and reanalyses), standards, blanks and LCS samples analyzed under that instrument performance check. The following fields must be included in the lower table and completed for each acquisition:

- Field Sample Number;
- Lab Sample Number;
- Date Analyzed;
- Time Analyzed

5.3.8 All of summary forms listing samples (including dilutions and reanalyses), standards, blanks and LCS samples, must contain either an initial calibration sequence or an opening continuing calibration verification standard.

5.4 Internal Standard and RT Summary

- 5.4.1 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 must be provided on the form. The retention time difference must be reported from the latest daily 24-hour calibration standard or mean retention time over the initial calibration range.
- 5.4.2 If more than one form is necessary, forms shall be arranged in chronological order by date of analysis. Each valid calibration is required to have a separate form.
- 5.4.3 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 5.4.4 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 10 ppbv standard are used for evaluation against the samples.
- 5.4.5 For each internal standard used list the internal area response and calculate the upper and lower limits for each internal area response and the retention time.
- 5.4.6 The retention time limits are ± 20 seconds (± 0.33 minutes) from the most recent valid calibration as defined in USEPA METHOD TO-15 or the mean retention time over the initial calibration range.
- 5.4.7 The internal standard area response limits are $\pm 40\%$ between the sample, blank, or QC samples and the valid calibration used.
- 5.4.8 For each valid calibration list in a table format 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.
- 5.4.9 In a table below the valid calibration internal standard area response information, list each sample, including dilutions, reanalyses, blanks, LCS samples or other QC samples for that given valid calibration. The Field Sample Identification number should be used to identify each field sample. All entries must 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 "*" must be placed next to the number being reported as a superscript to the right of the number.

6.0 SAMPLE DATA SUMMARY

The laboratory shall place sample packages in order of increasing sample laboratory ID number.

- 6.1 Record quantitative results, UNCORRECTED for blank and method detection limits on a laboratory-generated form in accordance with the requirements listed below.
- 6.1.1 Report all data to two (2) significant figures on the summary form. For example, (i.e., if 0.53 ppbv, report 0.53 ppbv; if the value is 9.7 ppbv, report 9.7 ppbv; if the value is 10.3 ppbv, report 10 ppbv; if the value is 116 ppbv report 120 ppbv). The results reported on the summary form should be the same number as the calculated amount (ppbv) from the quantitation report.
- 6.1.2 The laboratory shall use the calculated amount (ppbv) from the quantitation report in Section 3.1 corrected for any dilutions and preparation factors, for the calculation of the ug/m³ results. After the result is converted to ug/m³, the rounding rules in Section 2.7.1.21 are to be used for the reporting of the ug/m³ data on the NJDEP-SRP Air Methods Data Summary Table File.
- 6.2 Report all data in ppbv concentration units. Do not report data in ug/m³ on this form. (Conversion of data to ug/m³ will occur on the NJDEP-SRP Air Methods Data Summary Table File.
- 6.3 Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the required reporting limit with the "U" qualifier (Example 0.20 U ppbv).
- 6.4 Do not report any data using the Method Detection Limit as the Reporting Limit for any compound.
- 6.5 Record sample data on a laboratory-generated form. A separate form must be provided for each acquisition.
- 6.6 Compounds that exceed the upper limit of the initial calibration are to be reported with an "E" qualifier as defined in Section 14.0.
- 6.7 Each diluted sample must be reported on a separate form.
- 6.7.1 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 are to be reported with a "D" qualifier as defined in Section 14.0.
- 6.7.2 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.
- 6.7.3 Compounds that are reported in the diluted sample and not reported in the undiluted sample must be reported without a "D" qualifier. Instead qualify the data with the laboratory defined qualifier "X". See Section 14.0 for additional information.
- 6.8 The following information, at a minimum, is required to be on each form, in addition to the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.
- 6.8.1 Matrix type (Air);
- 6.8.2 Sample volume (ml);
- 6.8.3 Amount of make-up air added to canister (if applicable);
- 6.8.4 Amount of make-up air added for dilution (if applicable);
- 6.8.5 Laboratory sample identification number;

- 6.8.6 Laboratory file identification number;
- 6.8.7 GC Column type and internal diameter (may be noted elsewhere);
- 6.8.8 Date received;
- 6.8.9 Date analyzed;
- 6.8.10 Dilution factor;
- 6.8.11 The table summarizing the compound results information must contain the following:

- CAS Number for all target compounds;
- Compound name;
- Concentration units (ppbv);
- Concentration reported; and
- Laboratory qualifier applied

6.9 The quantitation reports, associated chromatograms and mass spectra must be provided for each sample acquisition including each dilution. These documents must immediately follow the Sample Data Summary Form. The chromatograms, mass spectra and data system reports must comply with Section 3.0.

6.10 Sample Mass Spectra

6.10.1 The mass spectra must comply with section 3.3 of this Appendix.

6.10.2 Copies of raw spectra and copies of background-subtracted mass spectra of volatile compounds listed in the method that are identified in the sample and corresponding background-subtracted target compound standard mass spectra must be provided.

6.10.3 Spectra must be labeled with sample ID number, lab file identifier, date and time of analysis. The GC/MS instrument identifier and compound names shall be clearly marked on all spectra.

6.10.4 Negative Proof: Submit a copy of the standard mass spectrum and a copy of the non-confirmed mass spectrum in the data report when GC/MS analysis indicates the presence of a target list compound at a concentration greater than the reporting limit (RL) but examination of the standard mass spectrum and corresponding mass spectrum do not confirm the presence of the compound in the sample.

6.11 Tentatively Identified Compounds (TICs)

The laboratory shall report any Tentatively Identified Compounds for all samples, blanks and clean canister certification data. The following is required. The TIC compounds are the non-target compounds not listed in the TO-15 Method.

6.11.1 Tentatively Identified Compounds are to be reported on a laboratory-generated form. A separate form must be provided for each acquisition (including all reanalyses and blanks). The form must be reported even if no TICs are found.

6.11.2 The sample specific Tentatively Identified Compounds Summary form must follow the sample data summary form for each sample.

6.11.3 Any diluted sample must be reported on a separate form.

6.11.4 Report all data in ppbv concentration units. Do not report data in ug/m³ on this form. (Conversion of data to µg/m³ will occur on the NJDEP-SRP Air Methods Data Summary Table File)

6.11.5 The following information is required to be on each form, in addition to the requirement of Sections 2.4.4 and 2.4.5 of this Appendix.

6.11.5.1 Matrix type (Air);

6.11.5.2 Sample volume (ml);

6.11.5.3 Laboratory sample ID;

6.11.5.4 Laboratory file ID;

6.11.5.5 GC Column and ID;

6.11.5.6 Date received;

6.11.5.7 Date analyzed;

6.11.5.8 Dilution factor; and

6.11.5.9 The table summarizing the non-target compound results information must contain the following:

- CAS Number (if available);
- Compound name;
- Retention time;
- Estimated concentration units (ppbv); and
- Laboratory qualifier applied

6.11.6 Up to 15 tentatively identified compounds (TICs) of greatest apparent concentration shall be reported on TIC form.

6.11.7 Carbon dioxide and compounds with responses less than 10% of the internal standard area from which they are to be quantified (as determined by inspection of the peak areas or height) are not to be reported (nor are they to be counted as part of the 15 compounds that are to be reported).

6.11.8 TICs shall be reported in chronological order for blank contaminants. TICs shall be reported in chronological order with respect to Retention Times. Report the concentration to two significant figures. Retention times shall be reported in minutes and decimal minutes, **not** seconds or minutes:seconds. Two significant figures are required for the decimal minutes.

7.0 STANDARDS DATA SECTION

7.1 Initial Calibration Form Summary and Raw Data

7.1.1 The data summary for the Initial Calibrations must be recorded on a laboratory-generated form.

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

7.1.3 The Initial Calibration Data Summary report, in addition to the requirements of Sections 2.4.4 and 2.4.5 of this Appendix, must contain the following information at the top of the page of the form:

- Calibration file names;
- Instrument identification; and
- Column type and name (may be noted elsewhere)

The start and end calibration dates and times should be included in this section. However, as a substitute, individual calibration time and date standard information included in the respective quantitation reports of the standards may be noted.

The table summarizing the calibration information must contain the following:

- Calibration file name or identifier by level established in the calibration file name above;
- Name of compound (Truncated names are only allowed if the truncated name is referenced to the full name of the compound listed elsewhere in the data package.);
- Relative Response Factor of Standard analyzed;
- Average Relative Response Factor; and
- % Relative Standard Deviation

(A list of the associated samples is to be included either in this section or elsewhere in the data package.)

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

7.2 Continuing Calibration Form Summary and Raw Data

- 7.2.1 The data summary for all the Continuing Calibrations must be recorded on a laboratory-generated form.

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

- 7.2.3 The Continuing Calibration Data Summary report, in addition to the requirements of Sections 2.4.4 and 2.4.5 of this Appendix, must contain the following information in the header of the form.

- Laboratory file ID;
- Calibration date and time;
- Instrument identification; and
- Column type and name (may be noted elsewhere)

Start and end times of the initial calibration dates and times are to be included in this section. However, as a substitute, individual calibration time and date standard information included in the respective quantitation reports of the standards may be noted.

The table summarizing the calibration information must contain the following:

- Name of compound (Truncated names are only allowed if the truncated name is referenced to the full name of the compound listed elsewhere in the data package.)
- Relative Response Factor of standard analyzed
- Average Relative Response Factor
- % Difference
- Maximum % Difference allowed by method

(A list of the associated samples is to be included either in this section or elsewhere in the data package.)

7.2.4 The quantitation report and chromatogram for each calibration standard associated with the continuing calibration standard must immediately follow each continuing calibration summary form. Spectra are required only for compounds that undergo manual integration.

7.2.5 The volumes used/injected must be noted.

8.0 RAW QC DATA PACKAGE

8.1 Instrument Performance Data

The following information is required:

8.1.1 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 USEPA Method TO-15 lists the required BFB key ions and ion abundance criteria. If different criteria are used, it must have been pre-approved by the NJDEP Office of Quality Assurance.

8.1.2 Bar graph spectrum must be labeled as per section 3.0 of this Appendix.

8.1.3 Mass listing, labeled as per Section 3.0 of this Appendix.

8.1.4 Reconstructed total ion chromatogram, labeled as per Section 3.0 of this Appendix.

8.1.5 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

8.2 Blank Data (includes Method Blanks and any Instrument Blanks)

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

8.2.2 The Blank Data Summary must be reported as per the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

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

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

8.2.5 Do not report values less than the reporting limits for a compound. Data is not to be reported down to the MDL for any 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 at the method required reporting limit with the "U" qualifier (Example 0.2 U ppbv).

8.2.6 The Blank Data summary must comply with Section 6.0 of this Appendix.

8.2.7 Tentatively Identified Compounds detected in any blank must be reported in accordance with Section 6.0 of this Appendix.

8.3 Laboratory Control Samples

The following information is required.

8.3.1 Laboratory Control Sample (LCS) data shall be arranged in chronological order by instrument and date of analysis.

8.3.2 The reporting form must comply with the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

8.3.3 Tabulated results on a laboratory-generated form for the target compounds (the same form used for the sample data) as required by Section 6.0 of this Appendix.

8.3.4 LCS 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.

8.3.5 The chromatograms, data system reports and mass spectra (if applicable) must be labeled as required by Section 3.0 of this Appendix.

8.3.6 All results for the LCS that are less than the required reporting limits must be reported in addition to the results that are above the required reporting limits.

9.0 CLEAN CANISTER CERTIFICATION DATA

The laboratory must submit the following QC summary information supporting the verification that the canister used to certify the batch of canisters as clean. The format must comply with Sections 2.4.4 and 2.4.5 of this Appendix. If more than one set of clean canisters are needed for a sample delivery group, all sets of data shall be arranged in chronological order by date of analysis.

9.1 Summary QC Data

9.1.1 Laboratory Control Sample Summary

See Section 5.1 of this Appendix for reporting requirements.

9.1.2 Method Blank Summary Data Report

See Sections 5.2 and 8.2 of this Appendix for reporting requirements.

9.1.3 Instrument Performance Check Summary

See Section 5.3 of this Appendix for reporting requirements.

9.1.4 Internal Standard and RT Summary

See Section 5.4 of this Appendix for reporting requirements.

9.1.5 Initial Calibration Summary

Report the initial calibration information in compliance with Sections 7.1.1 through 7.1.3 of this Appendix.

9.1.6 Continuing Calibration Summary

Report the continuing calibration information in compliance with Sections 7.2.1 through 7.2.3 of this Appendix.

9.2 Clean Canister Data

9.2.1 The actual clean canister data shall consist of the following. If more than one canister is used to certify all the canisters in the SDG are clean, the Contactor shall place sample packages in order of increasing sample number considering both letters and numbers.

9.2.2 The Clean Canister Data must be reported as per the requirements of Sections 2.4.4 and 2.4.5 of this Appendix.

9.2.3 The quantitation reports, associated chromatograms and mass spectra must be provided for each clean canister sample acquisition including dilutions. For each acquisition, these documents must immediately follow the Sample Data Summary Form. The chromatograms, mass spectra and data system reports must comply with Section 3.0.

9.2.4 The data reporting format must comply with Section 6.0 of this Appendix.

9.2.5 Do not report values less than the reporting limits for a compound. Data cannot be reported down to the MDL for any 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 at the method required reporting limit with the "U" qualifier (Example 0.2 U ppbv).

9.2.6 In the extended data report, the Clean Canister Data can be submitted after the other summary reporting form or can be submitted following the Internal Standard Area and Retention Time Summary (9.1.4) and be prior to the Initial Calibration Summary (9.1.5). This is the same order as the Table 2 format.

10.0 INSTRUMENT RUN LOG

The field samples instrument run log is to be presented first, followed by the clean canister instrument run log.

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

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

10.3 The Instrument run log for the continuing calibration must start with the injection of the first pertinent continuing calibration.

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

10.5 The following information must be included at the top of the page of the instrument run log page:

- Laboratory name;
- Instrument identification;
- Column;
- Date(s) of analyses;
- Analyst name and signature;
- Supervisor name and signature;
- Sample Delivery Group Number (Project Identification No);
- Target directory for files; and
- Initial calibration date

The columns of the table must be labeled as follows:

- Injection order number (must be chronological);
- Laboratory sample ID number;
- Preparation batch ID number;
- Sequence name/batch;
- Dilution factor;
- QC Check (indicating that the sample passed Quality Control);
- Analyst initials
- Comments
- Injection volum
- Volume of make-up air added to canister (if applicable); and
- Volume of make-up air added for dilution (if applicable)

11.0 PRESSURE GAUGE READINGS

Copies of the actual logbook pages on which the initial and final pressure gauge readings are recorded must be provided for all analyses. This includes all pressures before and after make-up gas may have been added as a function of routine procedures or dilutions.

12.0 CANISTER DILUTION CALCULATIONS

The laboratory must submit the following information in a table format:

- Laboratory name;
- Laboratory Sample Number or Field Sample Number;
- Initial pressure ("Hg");
- Initial atmosphere;
- Initial psia;
- Initial volume of canister (L);
- Dilution factor;
- Final pressure ("Hg");
- Final psia;
- Final atmosphere;
- Final volume of canister (L);
- Required footnotes must be defined in chart;
- $x''\text{Hg} =$;
- $\text{Atm} =$;
- $\text{Psia} =$; and
- $\text{Psig} =$

13.0 SCREENING DATA

If the laboratory screens the samples prior to analysis, all screening data must be included in this section. Include all instrument outputs, including strip charts from screening activities.

14.0 DATA REPORTING QUALIFIERS

The method does not specify the use of data qualifiers. However, NJDEP has identified the data qualifiers that must be used to report the data.

- U- This flag indicates the compounds was analyzed for but not reported. The RL shall be adjusted if dilutions are required.
- B- This flag is used when an analyte 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. Blank contaminants are flagged "B" only when they are detected in a sample above the Reporting Limit.
- 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, for example when the concentration of an analyte exceeds the upper calibration range, 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 are flagged with a "D" flag. This flag alerts data users that any discrepancies between the reported concentrations maybe due to dilution of the sample.
 - 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 **cannot be combined** on a single reporting form. Results are to be combined only in the electronic (excel) TO15 Unit Conversion Tables.
- J- This flag indicates an estimated concentration for Tentatively Identified Compounds (TICs) where a 1:1 response is assumed.
- N- This flag indicates presumptive evidence of a compound. This flag is used only for Tentatively Identified Compounds, where the identification is based on a mass spectral library search and must 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".

15.0 FORMS AND TABLES

Note: No page numbers exist for this section.

Table 1 List of Required Compounds, Molecular Weights and CAS Numbers

Table 2 Extended Data Package Hierarchal Bookmark Structure

Internal Chain of Custody Form (NJDEP Form-077)

External Chain of Custody Form (NJDEP Form 095C)

Combined External Chain of Custody Record/Field Test Data Sheet (NJDEP Form-095D)

LLTO-15/TO-15 Method Canister Sampling Field Test Data Sheet (NJDEP Form-095E)

Title Page – NJDEP Form A-1A

Case Narrative - NJDEP Form A -1C

Methodology Summary NJDEP Form A-4 – USEPA TO-15 Method -10/2013

NJDEP-SRP Methods Data Summary Table 2013 No Calculations (The file here is example only, the actual reporting format is provided as a separate excel file)

TABLE 1**LIST OF REQUIRED COMPOUNDS, MOLECULAR WEIGHTS AND CAS NUMBERS**

This Table contains the required compounds and their associated molecular weights and CAS numbers. The information in this table must be used for the reporting of the analytical data to NJDEP. Changes to the compound names, CAS numbers and molecular weights are not allowed for reporting of the data to the State of New Jersey.

<i>Compound Name</i>	<i>CAS Number</i>	<i>Molecular Weight</i>
Acetone	67-64-1	58.08
Allyl chloride	107-05-1	76.53
Benzene	71-43-2	78.11
Bromodichloromethane	75-27-4	163.8
Bromoform	75-25-2	252.8
Bromomethane	74-83-9	94.94
1,3-Butadiene	106-99-0	54.09
Chlorobenzene	108-90-7	112.6
Chloroethane	75-00-3	64.52
Chloroform	67-66-3	119.4
Chloromethane	74-87-3	50.49
Carbon disulfide	75-15-0	76.14
Carbon tetrachloride	56-23-5	153.8
2-Chlorotoluene	95-49-8	126.6
Cyclohexane	110-82-7	84.16
Dibromochloromethane	124-48-1	208.3
1,2-Dibromoethane	106-93-4	187.9
1,2-Dichlorobenzene	95-50-1	147.0
1,3-Dichlorobenzene	541-73-1	147.0
1,4-Dichlorobenzene	106-46-7	147.0
Dichlorodifluoromethane	75-71-8	120.9
1,1-Dichloroethane	75-34-3	98.96
1,2-Dichloroethane	107-06-2	98.96
1,1-Dichloroethene	75-35-4	96.94
1,2-Dichloroethene (cis)	156-59-2	96.94
1,2-Dichloroethene (trans)	156-60-5	96.94
1,2-Dichloropropane	78-87-5	113.0
1,3-Dichloropropene (cis)	10061-01-5	111.0
1,3-Dichloropropene (trans)	10061-02-6	111.0
1,2-Dichlorotetrafluoroethane	76-14-2	170.9
1,4-Dioxane	123-91-1	88.12
Ethanol	64-17-5	46.07
Ethylbenzene	100-41-4	106.2

Compound Name	CAS Number	Molecular Weight
4-Ethyltoluene	622-96-8	120.2
n-Heptane	142-82-5	100.2
1,3-Hexachlorobutadiene	87-68-3	260.8
n-Hexane	110-54-3	86.17
Isopropanol	67-63-0	60.10
Methylene chloride	75-09-2	84.94
Methyl ethyl ketone	78-93-3	72.11
Methyl isobutyl ketone	108-10-1	100.2
Methyl methacrylate	80-62-6	100.12
Methyl tert-butyl ether	1634-04-4	88.15
Styrene	100-42-5	104.1
Tert-butyl alcohol	75-65-0	74.12
1,1,2,2-Tetrachloroethane	79-34-5	167.9
Tetrachloroethene	127-18-4	165.8
Tetrahydrofuran	109-99-9	72.11
Toluene	108-88-3	92.14
1,2,4-Trichlorobenzene	120-82-1	181.5
1,1,1-Trichloroethane	71-55-6	133.4
1,1,2-Trichloroethane	79-00-5	133.4
Trichloroethene	79-01-6	131.4
Trichlorofluoromethane	75-69-4	137.4
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	187.4
1,2,4-Trimethylbenzene	95-63-6	120.2
1,3,5-Trimethylbenzene	108-67-8	120.2
2,2,4-Trimethylpentane	540-84-1	114.2
Vinyl bromide	593-60-2	106.9
Vinyl chloride	75-01-4	62.50
Xylenes (m&p)	179601-23-1	106.2
Xylenes (o)	95-47-6	106.2
Naphthalene	91-20-3	128.2

TABLE 2**EXTENDED DATA PACKAGE HIERARCHICAL BOOKMARK STRUCTURE**

Parent Bookmark	Child Bookmark
Title Page	
Table of Contents	
External Chain of Custody or External Chain of Custody/ Field Test Data Sheet	
Internal Chain of Custody	
Field Test Data Sheet (if applicable)	
Shipping Documentation	Air bills (If Applicable) Sample Receipt and Log In Check List
Copies of Traceability Certificates from Commercial Gas Standard Suppliers- Certificates of Analysis	
Methodology Review	
Case Narrative	Case Narrative Manual Integration Documentation Data Sheets in Excel - Copies of the Microsoft Excel Reporting Sheets
Method Detection Limit Studies	Method Detection Limit Study Summary Verified MDL Summary
QC Summary Data	Laboratory Control Sample Summary Method Blank 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 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 (method and Instrument blanks) Laboratory Control Sample Data
Clean Canister Certification Data In chronological date order for each clean canister	Laboratory Control Sample Summary Method Blank Summary and Data Report Instrument Performance Check Internal Standard Area and RT Summary Clean Canister Data by increasing alphanumeric laboratory sample number Order (with supporting raw data). Initial Calibration Summary Continuing Calibration Summary(ies)
Sample Preparation	Instrument Run Logs (sample data run logs) Instrument Run Logs (clean canister run logs) Pressure Gauge Readings Canister Dilution Calculation (If Applicable)

	Screening Data
Last Page of Document	

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

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

Address: _____ Name: _____

_____ Title: _____

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

Division: Bureau: Phone: () Job Number:

[illegible]

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

Relinquished	Received	Time/Date	Reason For Change of External Custody
XXXXXXXXXXXXXXXXXXXX			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

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	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	
		SIGNATURE	SIGNATURE	
		PRINTED NAME	PRINTED NAME	

Air Methods – External Chain of Custody Record/Field Test Data Sheet

New Jersey Department of Environmental Protection

Laboratory Information																
Laboratory Name: _____ Address: _____ City/State/Zip: _____ Phone: _____ FAX: _____						Individual Preparing Canister/Containers Name: _____ Title: _____ Laboratory Affixed Seal Number: _____ Time/Date Sample Shipping Container Sealed: _____										
NJDEP Information																
Project Number: _____				Bureau: _____				Contract Number: _____				Turnaround Time: _____				
Sampler's Name: _____				Phone Number: _____				Division: _____				☐ 48 hours ☐ 7 days ☐ 14 days				
Sample Identification	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure In Field ("Hg) (Start)	Canister Pressure In Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Can ID	Can Size (L)	Flow Controller Readout (ml/min)	Can Cert ID	NJDEP LLTO-15\ TO-15 EPA 3C Method 25 C Other Specify Indoor/Ambient Air Soil Gas Landfill Vent/Other Specify	
Barometric Pressure		Comments				Laboratory Canister Certification										
Start						GC/MS Analyst Signature (NJDEP LLTO-15//TO-15): _____										
Stop						GC Analyst Signature (3C, 25C): _____										
External Chain of Custody																
Relinquished		Received		Time/Date		Reason for Change of External Custody										
XXXXXXXXXXXXXXXXXX						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: _____								Individual Opening Sample Shipping Container: _____								
Time/Date Internal Chain of Custody Initiated on NJDEP Form 077 (Internal Chain of Custody): _____																

Distribution: White – Original (Sent With Report)
 Pink – NJDEP Field Sampling Personnel

Yellow – Sampling Custodian Upon Receipt of Shipping Container from Field
 Gold – Sample Custodian for Sample Preparation and Shipment

**LLTO-15/ TO-15 Method
Canister Sampling Field Test Data Sheet**

January 2007

General Information

Site Location: _____ Site Address: _____ Field ID No: _____ Sampling Date(s): _____ Shipping Date: _____	Job Number: _____ Size of Canister: _____ Canister Serial No: _____ Flow Controller No: _____
---	--

Sampling Information

AMBIENT READINGS (Outside)			SAMPLING TIMES (24 hour clock)	
	Temperature (°F)	Barometric Pressure (inches of Hg)		Local Times
Start			Start	Elapsed Time Meter Reading
Stop			Stop	
CANISTER PRESSURE (inches of Hg) From Gauge			INTERIOR TEMPERATURE °F	
Start			Start	
Stop			Stop	
_____ Signature/Title Investigator				

Laboratory Information

FLOW RATES (ml/min) Flow Controller Readout		CANISTER PRESSURE (inches of Hg)	
Shipping out from Lab _____ required (from lab record log) after return Receiving in Lab _____ (if applicable only if changed)	Initial Pressure _____ required (from lab record log) after return (to field) Final Pressure _____ required (from lab record log) after return (from field)		
Date Shipped Out: _____ Date Received Back: _____ Individual Canister Certification (provide File #): _____ Batch Certification (provide Batch ID#): _____			
_____ Signature/Title GC/MS Analyst for NJDEP-LLTO-15			

Title Page – NJDEP Form A-1A

[illegible]

Case Narrative - NJDEP 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

--

Methodology Summary NJDEP Form A-4 - USEPA NJDEP-TO-15 Method-10/2013

Laboratory:	Project No:
Location:	SDG No:

<i>Name</i>	<i>Required Methodology</i>	<i>Indicate Method</i>
<i>Volatile Organics</i>	<i>NJDEP-LLTO-15</i>	
<i>Volatile Organics</i>	<i>USEPA Method TO-15</i>	
<i>Carbon Dioxide, Methane, Nitrogen, Oxygen, Carbon Monoxide</i>	<i>USEPA Method 3C</i>	
<i>Non Methane Organic Carbon</i>	<i>USEPA Method 25C</i>	

Project:
Field ID Number:
Laboratory ID Number:

NJDEP SRP AIR METHODS DATA SUMMARY TABLE

Sampling Date:
Analysis Date:

Chemical	CAS Number	Molecular Weight	Lab Results	Q	Corrected Results	Retention Time NT Only	QAS Decision	Footnotes
<i>Method TO-15</i>			<i>ppbv</i>		<i>ug/m³</i>			
Acetone	67-64-1	58.08						
Allyl chloride	107-05-1	76.53						
Benzene	71-43-2	78.11						
Bromodichloromethane	75-27-4	163.8						
Bromoform	75-25-2	252.8						
Bromomethane	74-83-9	94.94						
1,3-Butadiene	106-99-0	54.09						
Chlorobenzene	108-90-7	112.6						
Chloroethane	75-00-3	64.52						
Chloroform	67-66-3	119.4						
Chloromethane	74-87-3	50.49						
Carbon disulfide	75-15-0	76.14						
Carbon tetrachloride	56-23-5	153.8						
2-Chlorotoluene	95-49-8	126.6						
Cyclohexane	110-82-7	84.16						
Dibromochloromethane	124-48-1	208.3						
1,2-Dibromoethane	106-93-4	187.9						
1,2-Dichlorobenzene	95-50-1	147.0						
1,3-Dichlorobenzene	541-73-1	147.0						
1,4-Dichlorobenzene	106-46-7	147.0						
Dichlorodifluoromethane	75-71-8	120.9						
1,1-Dichloroethane	75-34-3	98.96						
1,2-Dichloroethane	107-06-2	98.96						
1,1-Dichloroethene	75-35-4	96.94						
1,2-Dichloroethene (cis)	156-59-2	96.94						
1,2-Dichloroethene (trans)	156-60-5	96.94						
1,2-Dichloropropane	78-87-5	113.0						
1,3-Dichloropropene (cis)	10061-01-5	111.0						
1,3-Dichloropropene (trans)	10061-02-6	111.0						
1,2-Dichlorotetrafluoroethane	76-14-2	170.9						
1,4-Dioxane	123-91-1	88.12						
Ethanol	64-17-5	46.07						
Ethylbenzene	100-41-4	106.2						
4-Ethyltoluene	622-96-8	120.2						
n-Heptane	142-82-5	100.2						
1,3-Hexachlorobutadiene	87-68-3	260.8						
n-Hexane	110-54-3	86.17						
Isopropanol	67-63-0	60.10						
Methylene chloride	75-09-2	84.94						
Methyl ethyl ketone	78-93-3	72.11						
Methyl isobutyl ketone	108-10-1	100.2						
Methyl methacrylate	80-62-6	100.1						
Methyl tert-butyl ether	1634-04-4	88.15						
Styrene	100-42-5	104.1						
Tert-butyl alcohol	75-65-0	74.12						

Project:
Field ID Number:
Laboratory ID Number:

NJDEP SRP AIR METHODS DATA SUMMARY TABLE

Sampling Date:
Analysis Date:

Chemical	CAS Number	Molecular Weight	Lab Results	Q	Corrected Results	Retention Time NT Only	QAS Decision	Footnotes
Method TO-15			ppbv		ug/m³			
1,1,2,2-Tetrachloroethane	79-34-5	167.9						
Tetrachloroethene	127-18-4	165.8						
Tetrahydrofuran	109-99-9	72.11						
Toluene	108-88-3	92.14						
1,2,4-Trichlorobenzene	120-82-1	181.5						
1,1,1-Trichloroethane	71-55-6	133.4						
1,1,2-Trichloroethane	79-00-5	133.4						
Trichloroethene	79-01-6	131.4						
Trichlorofluoromethane	75-69-4	137.4						
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	187.4						
1,2,4-Trimethylbenzene	95-63-6	120.2						
1,3,5-Trimethylbenzene	108-67-8	120.2						
2,2,4-Trimethylpentane	540-84-1	114.2						
Vinyl bromide	593-60-2	106.9						
Vinyl chloride	75-01-4	62.50						
Naphthalene	91-20-3	128.2						
Xylenes (m&p)	179601-23-1	106.2						
Xylenes (o)	95-47-6	106.2						
Volatile Tentatively Identified Compounds (up to 15 compounds)								
USEPA Method 3C			%(v/v)					
Carbon Dioxide	124-38-9							
Methane	74-82-8							
Nitrogen	7727-37-9							
Oxygen	7782-44-7							
Carbon Monoxide	630-08-0							
USEPA Method 25C			ppmC					
Non Methane Organic Carbon	USEPA25C							

APPENDIX 11 14-X-23262

METHOD OF OPERATION

SECTION 1.0

The successful analysis of all compounds necessary for this contract not only requires the accurate, precise, and timely measurement of the analytes by the Contractor but also proper administration, information meetings guidance, and instructions from the Contract Manager and proper collection, packaging and shipment of samples from the Contract Users. These encompass the Method of Operation of this contract. General responsibilities regarding analyses are listed below, followed by detailed responsibilities for communication, analyte collection, shipment and receipt, and analytical issues, such as matrix interference, analysis of multiphase samples, sample reanalysis, etc.

1.1 GENERAL RESPONSIBILITIES OF CONTRACT USERS

- A. Contract Users may contact the Contractor regarding the initiation of any engagement. All communication with the Contractor will be documented by email to the Contract Manager;
- B. Contract Users will submit sample engagement information to the Contract Manager;
- D. Contract Users will engage the Contractor and provide the Contractor with sufficient information about the sampling event to ensure the correct number of sample canisters by the Contractor;
- E. Contract Users will coordinate sample distribution among multiple Contractors, if necessary;
- F. Contract Users will process any New Jersey State Using Agency Formal Complaints (PB-36s) through the Contract Manager; and
- G. Contract Users will contact the Contract Manager regarding any non-payment issue.

1.2 LINES OF COMMUNICATION ESTABLISHED BETWEEN STATE AND CONTRACTOR

Communication between the Contract Manager, Contract Users and the Contractor depends on whether the Contractor operates a single laboratory or operates multiple laboratories, as detailed below.

A. Single Contractor Communications

A Contractor performing work under this contract may have only one laboratory. This Contractor is referred to as a Single Laboratory.

This contract restricts all communication to and between the Contract Manager, Contract User and a Single Laboratory as set forth in the table below. Communications outside these channels may jeopardize payment to the Laboratory.

TABLE 1. SINGLE LABORATORY CONTRACTOR COMMUNICATIONS CHANNELS

STATE OF NEW JERSEY	LABORATORY	PURPOSE
State Contract Manager	Laboratory Director QA Officer Project Manager	Routine communications Non-routine communications Sample engagement refusal Monthly sample status reports Major dispute resolution Non payment notification Reimbursement requests Suspension or termination Other adverse actions Change Orders Engagement and payment Analysis status Minor dispute resolution Data rejection issues
Contract Users	QA Officer Project Manager	Engagement Shipping status Data Validation Questions Payment Minor dispute resolution
Purchase Bureau, Treasury	Laboratory Director Project Manager	Termination issues Major changes in terms and conditions of the contract PB-36 -- NJ State Using Agency formal complaint report resolution

NOTE: No direct communications are authorized between Contract Users and any Contractor personnel cited in Section 1.2.

B. Multiple Laboratory Contractor Communications

This contract restricts all communications to and between the Contract Manager, Contract Users and the Multiple Laboratory Contractor as set forth in the table below. Communications outside these channels may jeopardize payment to the Multiple Laboratory Contractor.

Multiple Laboratory Contractors will establish a central point of communication or “headquarters” that will be the focus of all contact between the Contract Manager, Contract Users, and the various laboratories operated by the Multiple Laboratory Contractor. The Contract Manager or Contract Users will contact the individual laboratory personnel of a Contractor only with the concurrence contact of the chosen (headquarters) laboratory.

The Contract Manager and Contract Users will direct all engagements and payment issues to the Contract Laboratory’s central headquarters staff. Questions regarding any analytical work will be coordinated with the headquarters staff and the secondary laboratory designated staff. Communication channels are specified in the following table:

TABLE 2. MULTIPLE LABORATORY CONTRACTOR COMMUNICATIONS CHANNELS

STATE OF NEW JERSEY	LABORATORY	PURPOSE
State Contract Manager	Corporate Laboratory Director (HQ Lab) Corporate QA Officer (HQ Lab) Corporate Project Manager (HQ Lab)	Routine communications Non-routine communications Sample engagement refusal Monthly sample status reports Major dispute resolution Non payment notification Reimbursement requests Suspension or termination Other adverse actions Change Orders Engagement and payment Analysis status Minor dispute resolution Data rejection issues
Contract Users	QA Officer Project Manager	Engagement Shipping status Data Validation Questions Payment Minor dispute resolution
Purchase Bureau, Treasury	Corporate Laboratory Director(HQ Lab) Corporate Project Manager (HQ Lab)	Termination issues Major changes in terms and conditions of the contract PB-36 -- NJ State Using Agency formal complaint report resolution

NOTE: No direct communications are authorized between Contract Users and any Contractor personnel cited in Section 1.2 (Tables 1 & 2) or outside the designated corporate headquarters staff.

1.3 CONTRACT USER RESPONSIBILITIES FOR SAMPLING EVENTS

The Contract User will prepare a sampling event. The total number of canisters requested by type, flow rate required, requested turnaround time and special shipment requirements shall be determined.

1.3.1 ESTIMATED NUMBER OF SAMPLES

The Contract User will determine the total number of samples to be collected for each line item on the contract Price Schedules and the projected date of sample collection. The number of samples will include any ambient sample(s).

1.3.2 CONTACT OF CONTRACT MANAGER

The Contract User will contact the Contract Manager to document that an engagement is required for a sampling event. The initial notification can be made by telephone, but a written notification will also be provided. The notification will include at a minimum the following:

- A. Type of analysis required;
- B. Number of samples per method;
- C. Expected date of sampling;
- D. Date empty canisters are to be delivered to Contract User;
- E. Shipping location (shipping to location and from location); and
- F. Site specific information (project team information, funding source and job number).

1.4 CONTRACT USER CHAIN OF CUSTODY COMMENCEMENT

For all Contract Users, the chain of custody commences when the Contractor laboratory releases the sample canisters. The Contract User personnel will retain custody of the sample canisters. When filled, the Contract User will record the appropriate information on the chain of custody document for each sample canisters. The Contract User then ships the samples back to the Contractor where an authorized representative from the laboratory accepts custody of the samples.

1.5 SHIPPING CONTAINERS

All canisters are be shipped at room temperature (RT) from and to the Contractor.

The Contract User shall return samples in the Contractor provided shipping containers.

The Contract User is prohibited from purchasing insurance to insure return sample shipments to the Contractor. If the Contract User inadvertently or otherwise insures the samples with the common carrier, the Contractor is required to request reimbursement from the State for the cost of the insurance.

1.6 SHIPMENT/PICKUP CHARGES BEYOND NORMAL DELIVERY

The Contract User will inform the Contract Manager and the Contractor at the time of notification of the engagement that they need shipping beyond the normal delivery. The estimation of extra cost will be factored into cost of the engagement.

The State will ensure payment for all extra charges beyond the normal shipping charges to commercial or office locations that have routine pickup and delivery. The extra charges will be listed on the Common Carrier's website to be considered billable to the State. The Contract Manager will receive and use the charges contract if a contract between the Contractor and the Common Carrier specifies a rate for the extra charges. A current copy of Common Carrier charges will be forwarded to the Contract Manager, who will provide a current copy of the charges to the Contract Users.

1.7 CHARGES THAT ARE THE RESPONSIBILITY OF THE STATE

The following charges are the responsibility of the State, not the Contractor, if the Common Carrier routinely charges for these options. The charges will be clearly documented on the Common Carrier's website for review by the State. If the Contractor has a contract with the Common Carrier, that specifies a rate for the extra charges, a current copy of these charges will be forwarded to the Contract Manager.

- A. Overnight delivery of sample canisters to the Contract User;
- B. First AM Delivery (to Contract User or to Contractor). The Contract User is informed that first AM Delivery depending on the common Carrier may be between 7-8 AM in the morning and staff shall be available to receive the shipment;
- C. Saturday Pickup (from Contract User or from Contractor);
- D. Saturday Delivery (either at the Contract User's location or the Contractor's location);
- E. Carrier Pickup charges from a non-Routine Delivery/Pickup location;
- F. Any other additional charges imposed by the Common Carrier due to delivery or pickup request by the Contract User;
- G. Fuel Surcharge; and
- H. Any new changes imposed by the Common Carrier at a later date.

1.8 CONTRACT USER RECEIVES CONTAINERS AND COLLECTS SAMPLES

The Contract User/State Contractor shall inspect the shipping container which holds all canisters, to ensure that the Contractor provided all the canisters.

1.9 RECEIPT OF NONCOMPLIANT, UNUSED CONTAINERS BY CONTRACT USER

The Contract User will reject improperly prepared canisters and will return rejected canisters to the Contractor. The Contract User shall return rejected canisters to the Contractor. The Contractor shall absorb the cost of rejected canisters as an overhead cost. The Contract User will inform the Contract Manager why the canisters are being rejected. The Contract Manager will inform the Contractor as to why the canisters are being rejected and take any appropriate action. The State will not pay for the shipment of canisters that are rejected. Containers may be rejected for the following reasons:

- A. Containers received without the required NJDEP External Chain of Custody Forms and/or the required Field Test Data Sheets, without properly completed chain of custody forms or in any manner that would compromise the chain of custody will be rejected; and/or
- B. Failure to provide all the Containers requested, failure to provide the type of canisters requested, or any other problem with the canisters that will jeopardize the sampling event.

1.10 CONTRACT USER SAMPLE COLLECTION

The Contract User shall be responsible for sample collection and completing the appropriate chain of custody forms, NJDEP LL-TO-15 Field Test Data Sheet, the Method 3C/25C Combined Field Test Data Sheet and any other field documentation that is required.

1.11 CONTRACT USER SHIPS SAMPLES TO THE CONTRACTOR

- A. After collection of samples, the Contract User/State Contractor shall contact the Contractor's Common Carrier and ship sample canisters, in the Contractor's shipping canisters back to the Contractor. The Contract User/State Contractor will ship canisters from official State offices, State warehouses or State Contractor's offices that have routine pickup and delivery by the Common Carrier. The Contract User/ Contractor can ship from a Common Carrier's Service Center for delivery to the Contractor as long as there is no additional cost. This does not include the cost of picking up at a work site, since it may involve additional charges imposed by the Common Carrier;
- B. The Contract User will detach the dust filter/flow controller from the canister and return the canister and the dust filter/flow controller to the Contractor;
- C. Containers that are known or suspected to contain 50% methane or more by volume cannot be shipped by air transportation unless the Contractor had added helium to the canisters prior to shipment to the Contract User. Ground shipping is required for all canisters that do not have helium added to the canisters prior to shipment to the Contract User;
- D. There shall be no change in the price of analysis if the NJDEP Contract User delivers samples directly to the Contractor without using the Contractor's Common Carrier. The Contractor shall permit Contract Users to deliver samples directly to the Contractor using Contract User provided transportation;
- E. The Contract User shall include the properly completed NJDEP External Chain of Custody Forms with the samples and associated Field Test Data Sheets. If Methods 3C/25C were also collected at the same time, the Contract User will complete the Field Test Data Sheet for Methods 3C/25C;
- F. The Contract User shall pack the canisters using Contractor supplied packing materials and will include the NJDEP External Chain of Custody Forms and associated Field Test Data Sheets. If Methods 3C/25C were also collected at the same time, the Contract User will include the Field Test Data Sheet for Methods 3C/25C;
- G. It is the Contract User's responsibility to return samples in compliance with the Contractor's approved shipping plan; and
- H. Delivery of samples from the Contract User will normally entail the Contract User contacting the Contractor's common carrier and having the samples shipped at the Contractor's expense. The cost of shipping samples is included in the cost of analysis.

1.12 CONTRACT USERS COMPLIANCE WITH CONTRACTORS SHIPPING PLAN

The Shipping Plan requirements are in Section 3.22.5.

1.12.1 CONTRACT USERS WILL COMPLY WITH APPROVED SHIPPING PLAN (CONTRACTOR SUPPLIED SHIPPING CONTAINERS)

If the Contract User returns samples to the Contractor in Contractor supplied shipping containers, then it will be the Contract User's responsibility to comply with the approved Shipping Plan, to complete all shipping declarations and apply any labels and placards provided by the Contractor for the return shipment.

1.12.2 CONTRACT USER WILL USE APPROVED CONTRACTOR'S SHIPPING PLAN AND CONTRACT USER WILL COMPLETE ALL SHIPPING DECLARATIONS (CONTRACT USER SUPPLIED SHIPPING CONTAINERS)

If the Contract User returns samples to the Contractor in Contract User supplied shipping containers, then it will be the Contract User's responsibility to comply with the approved Contractor's Shipping Plan. The Contract User will complete all shipping declarations and supply any labels and placards needed for the shipment to the Contractor.

1.12.3 CONTRACT USER WILL COMPLY WITH APPROVED SHIPPING PLAN (CONTRACTOR SUPPLIED SHIPPING CONTAINERS)

If the Contract User returns samples to the Contractor in Contractor supplied shipping containers, **then it will be the Contract User's responsibility to comply with the approved Shipping Plan.** The Contract User will complete all shipping declarations and supply any labels and placards provided by the Contractor for the return shipment.

1.12.4 CONTRACT USER WILL USE APPROVED CONTRACTOR'S SHIPPING PLAN AND CONTRACT USER WILL COMPLETE ALL SHIPPING DECLARATIONS (CONTRACT USER SUPPLIED SHIPPING CONTAINERS)

If the Contract User returns samples to the Contractor in Contract User supplied shipping containers then it will be the Contract User's responsibility to comply with the approved Contractor's Shipping Plan. The Contract User will complete all shipping declarations and supply any labels and placards needed for the shipment to the Contractor.

1.13 PENALTY TO CONTRACTOR FOR DELIVERING DATA REPORTS LATE FROM THREE SAMPLING EVENTS

If a Contractor submits data reports late from three sampling events, the Contract Manager shall drop the Contractor to the last alternate Contractor position for six months. In turn, the alternate Contractors that were below the Contractor in engagement position shall move up in their engagement position.

1.14 SAMPLE DELIVERY GROUP

- A. This contract defines a Sample Delivery Group (SDG) as a unit of no greater than twenty (20) canisters collected at a particular site. The SDG assignment is made upon receipt of the samples at the Contractor's facility. If less than twenty (20) samples are submitted for a particular site, it is considered a single SDG. If more than twenty samples are submitted from a particular site, then the Contractor is required to split those samples into separate SDGs of 20 or less and analyze each sample delivery with the appropriate number of QC samples for each group. Samples cannot be combined with other client's samples to create a SDG that consists of a mix of private client samples and State samples;
- B. A SDG is a group of twenty (20) or fewer samples received over a period of up to seven (7) calendar days. Data from all samples in a SDG are due concurrently. All samples within an SDG received within seven (7) calendar days, excluding Sundays and Government holidays;
- C. Samples from the sampling event shall be assigned to SDGs at the discretion of the Contractor;

- D. Laboratory control samples, method blanks and instrument blanks are considered QC samples and are not included in the sample count for a SDG; and
- E. The SDG assignment made by the Contractor is not related to the analytical sequence. The sample delivery group assignment is strictly used to track the movement of the samples in the Contractor and the production of the analytical data package.

1.15 REQUIRED SAMPLE HOLDING TIMES - ALL METHODS

1.15.1 LIMITATIONS ON THE NUMBER OF DAYS CONTAINERS CAN BE OUT OF THE LABORATORY

All canisters after evacuation to negative thirty (–30) inches of mercury have a finite period before the level of the vacuum pressure loss that occurs naturally will inhibit the use of the canister in sample collection. Due to the loss of vacuum that occurs naturally during the storage of canisters, NJDEP has established a fifteen (15) day time limit that canisters can be out of the laboratory. The fifteen (15) day time limit begins with the shipment of the canisters to the Contract User. The canisters will be returned to the Contractor after fifteen (15) days whether or not they were used for sample collection.

1.15.2 SAMPLE HOLDING TIME

This contract specifies a sample holding time of thirty (30) days. Analysis of samples after the holding time shall not be permitted. NJDEP shall not pay the Contractor for samples analyzed after the holding time has expired.

1.15.3 REPORTING OF ANALYTICAL DATA

This contract requires reporting of analytical data based on the required turn around time for submittal of analytical data to the State. All the three (3) turnaround times are less than the required holding time of thirty (30) days. The Contractor is required to follow the turnaround time specified in this contract.

1.16 SAMPLING EQUIPMENT

The Contract User/State Contractor shall supply all the tubing and equipment necessary to connect the canister to the sampling train.

1.17 CONTRACT MANAGER - MATRIX INTERFERENCE

The Contract Manager will give guidance and instruction if the Contractor determines that the matrix is interfering with sample analysis. The Contract Manager will notify the State Project Team and determine the action to be taken. The Contract Manager will send written instructions to the Contractor laboratory regarding the affected sample (a telefax/email will suffice).

1.18 CONTRACT MANAGER - CLOSING CALIBRATION VERIFICATION FOR VOLATILES – MATRIX INTERFERENCE

Upon confirmation of sample matrix interference affecting the Closing CCVs, the Contract Manager will be contacted by the Contractor to identify the problem that has occurred and obtain instructions from the Contract Manager. Sample Payment for this problem will only after after matrix interference is verified in the analytical data report submittal to the Contract Manager.

1.19 CONTRACT USER SAMPLING TIMES OUTSIDE THE ESTABLISHED 8 HOURS OR 24 HOURS FOR 6-LITER CONTAINERS - (INDOOR AIR ONLY)

If the Contract Users requires a collection different from the standard 8-hour or 24-hour time frame for indoor air sampling only, this is a billable item outside the terms and conditions of this contract. This procedure cannot be used on 1-liter, 2.7-liter, or 3.2-liter canisters. The following procedures are required:

- A. A written request shall be made to the Contract Manager for a varied sampling time. The time will be specified in the request, as is the number of required 6-liter canisters. The request will be a minimum of seven (7) working days (not including weekends and holidays) prior to when the sample canisters are expected from the Contractor;
- B. The Contract Manager will contact the Contractor to determine if the Contractor can prepare flow controllers and canisters at the requested flow rate and sampling time frame. The Contractor will be required to submit a cost for this procedure. The Contractor can decline to do this procedure and suffer no penalty under the contract;
- C. The cost of this calibration shall be provided in writing by the Contractor to the Contract Manager and the Contract User. If approved by the Contract User, a written approval shall be transmitted back to the Contract Manager. The cost of this recalibration is outside the contract and will be paid separately by the Contract User; and
- D. The Contractor shall be given a minimum of three (3) days, not including weekends and holidays, to properly calibrate and set the flow controllers for the specified time frame.

1.20 CONTRACT USER REQUESTS ADDITIONAL ANALYSIS

If after the Contractor has analyzed a sample in compliance with the SOWs and this Contract and the State Project Team want the sample reanalyzed, the State is obligated to pay for the initial sample analysis and a second sample analysis. The Contract Manager will send the Contractor written conformation to reanalyze the sample (email or telefax will suffice);

1.21 CONTRACT USER REQUIREMENTS TRACER COMPOUNDS FOR SOIL GAS

If the Contract User wants to use n-butane or other recognized compounds as the tracer compound, the Contract User will contact the Contract Manager to determine if the Contractor can obtain a commercially-prepared gas standard that contains that compound. Please be aware that the Contractor will have to obtain laboratory certification from the NJDEP Office of Quality Assurance for this new tracer compound prior to use by the Contract User. If approved the Contract User is required to inform the Contract Manager which sampling event will have that a tracer compound used. The Contract Manager will convey this information to the Contractor. If the Contractor cannot obtain the standard and/or obtain certification, the Contract User will not use that Tracer Gas compound.

1.22 STATE RESPONSIBILITIES - FIELD SAMPLING ASSISTANCE CONTRACT

NJDEP may use the services of a separate Contractor under the management of another Contract Manager to take samples under this contract. It will be the responsibility of the Contract User to inform the appropriate Contract Manager when coordination is required. It is the responsibility of the Contract User to coordinate the use of both contracts and the Contract User will advise the Contractor when the Field Sampling Assistance contract will be used.

1.23 STATE RESPONSIBILITIES - COORDINATION WITH OTHER STATE CONTRACTS

If Coordination with other State Contracts is required, the Contract Manager will coordinate all sampling engagements with the Project Team or Contract Manager who is responsible for the other state contract.