



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF QUALITY ASSURANCE

401 East State Street

P.O. Box 420, Mail Code 401-02D

Trenton, New Jersey 08625-0420

Tel. (609) 292-3950 • Fax (609) 777-1774

<https://dep.nj.gov/dsr/oqa>

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

SHAWN M. LATOURETTE
Commissioner

October 01, 2024

David Ercoliani
General Contact
Garden State Labs – Lakehurst Lab
200 Union Avenue
Lakehurst Boro, NJ 08733

Dear Mr. Ercoliani:

RE: Laboratory Certification Number 15041
On-Site Audit Conducted July 26, 2024
OQA Reply to Corrective Action Response & Closeout

The Office of Quality Assurance (OQA) has completed its review of Garden State Labs – Lakehurst Lab's corrective action plan (CAP) and supporting documentation received September 20, 25, and 26, 2024. These documents were generated in reply to the OQA's August 19, 2024 audit report. The original report addressed the July 26, 2024 on-site audit. The OQA found your plan to be acceptable. We have included the applicable Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18 et seq.) requirement, our initial findings, your corrective action plan, and the OQA's response to your corrective action plan.

1. N.J.A.C. 7:18-5.1(b)2

In addition to satisfying the applicable requirements of N.J.A.C. 7:18-1 through 3, a laboratory performing chemical testing within the scope of 7:18-5.1(a) shall follow: All requirements specified in the applicable department sanctioned analytical methods (DSAMs), including without limitation any requirements that are more stringent than the requirements in this subchapter.

The laboratory has the following method deficiencies:

A. EPA 533, Section 6.9: Extracts are concentrated by evaporation with high-purity nitrogen using a water bath set no higher than 60°C [N-Evap, Model 11155, Organomation Associates (Berlin, MA), Inc., or equivalent]., AND

EPA 533, Section 11.4.6: Concentrate the extract to dryness under a gentle stream of nitrogen in a heated water bath (55–60 °C). Reconstitute the extract with 1.0 mL of 20% reagent water in methanol (v/v). Add the isotope performance standards to the extract and vortex.

The laboratory's extract concentration system (Buchi Syncore) cannot achieve the operating conditions required by the method: Concentrate the extract to dryness under a gentle stream of nitrogen in a heated water bath (55–60 °C). Instead, extracts are being concentrated under vacuum at 40°C. The laboratory must obtain a concentration system that meets the method specifications. The following method validation studies shall be submitted for review (using the updated equipment): initial demonstration of capability (IDOC), method detection limit (MDL), and the minimum reporting level (MRL) confirmation.

Laboratory's Response: A nitrogen evaporator has been obtained. DOC and MDL studies have been repeated using nitrogen rather than vacuum. Summaries are attached.

OQA's Response: The laboratory's response is acceptable. An updated MRL study was also submitted. Compliance will be verified during the next on-site audit.

- B. EPA 533, Section 9.2.7.3: Calculate the relative percent difference (RPD) for duplicate measurements.

Since the laboratory is not analyzing compliance samples, duplicate precision is not yet being evaluated and the software is not currently equipped to perform this evaluation. The laboratory shall submit documentation demonstrating that the software is ready to evaluate the RPD based on the criteria in sections 9.2.7.2 and 9.2.7.4 of EPA 533.

Laboratory's Response: A manual spreadsheet was available for review of duplicate precision but was not shared with the auditor as we will be using the internal LIMS, Sample Master, for storage and evaluation. Evidence confirming the use of Sample Master is attached.

OQA's Response: The laboratory's response is acceptable. Compliance will be verified during the next on-site audit.

- C. EPA 533, Section 10.4: Analyze a CCC [continuing calibration check] to verify the initial calibration at the beginning of each Analysis Batch, after every tenth field sample, and at the end of each Analysis Batch. The beginning CCC for each Analysis Batch must be at, or below, the MRL for each analyte. This CCC verifies instrument sensitivity prior to the analysis of samples. If standards have been prepared such that all low calibration levels are not in the same solution, it may be necessary to analyze two standards to meet this requirement. Alternatively, the nominal analyte concentrations in the analyte PDS may be customized to meet these criteria. Alternate subsequent CCCs between the mid and high calibration levels. Verify that the CCC meets the criteria in the following sections.

The laboratory begins each analysis with a reporting level standard as required. However, subsequent CCCs are being alternated between two mid-level standards (levels 2 and 4 out of 7 total standards) instead of between mid and high-level. This requirement is detailed in the method standard operating procedure (SOP). The laboratory shall provide the OQA with a corrective action plan (CAP) that states how this deficiency will be corrected and the date by which the corrective action will be



completed.

Laboratory's Response: The level of spike has been adjusted to have a spike concentration at the high end of the calibration range.

OQA's Response: The laboratory's response is acceptable. Compliance will be verified during the next on-site audit.

- D. EPA 533, Section 17.7: If available, the method analytes should be purchased as technical-grade (as defined in Sect. 3.22) to ensure that linear and branched isomers are represented. Standards or neat materials that contain only the linear isomer can be substituted if technical-grade analytes are not available as quantitative standards.

Manufacturers of the PFAS standards have recently released quantitative standards, with branched isomers, for PFNA (as detailed in EPA 1633, section 7.3.3). The laboratory must begin using this standard in calibrations for PFNA and include the branched isomers in the area determination (as described in section 12.1.2 of EPA 533). During the on-site audit, the laboratory demonstrated that they were in possession of a quantitative PFNA standard (with certificate) but had not yet used it. The laboratory must submit an updated method SOP to reflect the use of this standard.

Laboratory's Response: The branched PFNA standard has been included in the calibration scheme.

OQA's Response: The laboratory's response is acceptable. The most recent version of the SOP (Rev. 5, Effective 10/1/2024) includes this standard. Compliance will be verified during the next on-site audit.

2. N.J.A.C. 7:18-5.5(b)1

The laboratory shall develop and implement a written methods manual containing a standard operating procedure (SOP) for each Department Sanctioned Analytical Method (DSAM), in accordance with the criteria and procedures of the DSAM and this chapter. A laboratory shall not perform analyses using a DSAM unless it has developed and implemented such an SOP for the DSAM. The laboratory shall update the manual to reflect any changes in the procedures practiced by the laboratory.

The method 533 SOP (GSL EPA 533, Revision 2, 7/10/2024) submitted by the laboratory was reviewed and marked for revision. A copy of the marked-up SOP was emailed to the laboratory on August 19, 2024. The laboratory must update the SOP in accordance with the auditor's markups and to reflect other requirements noted in this letter. A copy of the updated SOP shall be submitted for review.

Laboratory's Response: GSL EPA533 has been revised (Revision 5) incorporating auditor markups, responses to deficiencies and operational improvements. A copy is attached.

OQA's Response: The laboratory's response is acceptable. Compliance will be verified during



the next on-site audit.

3. N.J.A.C. 7:18-5.5(c)10

A certified environmental laboratory or a laboratory that is applying for certification shall determine its own MDLs in reagent water. MDL data are required for all DSAMs containing reference MDL data for which the laboratory possesses or is applying for certification. The laboratory shall make the MDL determinations in accordance with 40 CFR 136 Appendix B.

The laboratory was not calculating the MDLb (MDL from method blanks) correctly in instances where there is a mix of detects and non-detects in the method blanks. In such instances, the MDLb value for a given analyte is set to the highest method blank value. The laboratory fixed the calculation during the on-site audit and updated all MDL values accordingly. Compliance will be verified with the submittal of the laboratory's MDL study using the new extract concentrator.

Laboratory's Response: MDL/MDLb data has been submitted using the correct calculation.

OQA's Response: The laboratory's response is acceptable. Compliance will be verified during the next on-site audit.

4. N.J.A.C. 7:18-5.5(c)13.iv

The laboratory shall maintain a bound notebook containing records of the preparation of standards. The laboratory shall include the following information in the records:

The identification number of the working standard solution, date of preparation, expiration date, signature of the analyst who prepared the solution, all chemical compounds in the solution, identification number of the intermediate concentration standards, concentration of intermediate standards, aliquot volumes, dilution volumes, and final concentrations in specified units.

The laboratory does not provide working standards with an expiration date. The laboratory shall include an expiration date in the standards preparation log (ensuring that the date does not exceed any expiration dates of the standards from which they are prepared). The laboratory shall submit a copy of the preparation log sheet demonstrating that expiration dates are now being recorded.

Laboratory's Response: The standard and spiking solution preparation procedure has been revised. The working standards/spikes will be prepared fresh on the day of use, documented on the attached preparation forms with a prompt to record expiration date.

OQA's Response: The laboratory's response is acceptable. Compliance will be verified during the next on-site audit.

5. N.J.A.C. 7:18-5.6(c)



The laboratory shall not accept custody of regulatory samples unless a chain-of custody form is submitted with the samples, in accordance with N.J.A.C. 7:18-9.3(b)4.

1. Before accepting custody of a regulatory sample, the laboratory shall determine that the sample is properly labeled and has met the handling and preservation requirements. If the sample fails to meet those requirements, the laboratory shall indicate that failure on the chain-of-custody section of the sample request form or the chain-of-custody form;
2. The laboratory's sample custodian accepting responsibility for the sample shall sign the chain-of-custody form;
3. The laboratory shall have an internal chain-of-custody procedure or an alternate sample tracking procedure which establishes a sample's integrity and completely tracks its custody during its lifetime in the laboratory;

Samples to be analyzed at the Lakehurst facility are received at one of the laboratory's other facilities where chains of custody are signed and verified for completeness and sample preservation. Upon receipt of samples, the Lakehurst facility must also sign the chain of custody (since it is a separate location with unique laboratory ID). Additionally, the sample temperature must be recorded upon receipt to ensure that it meets the method handling requirements. The laboratory shall provide the OQA with a CAP that states how this deficiency will be corrected and the date by which the corrective action will be completed.

Laboratory's Response: SOP for Sample management SOP GSL.SM.PRC.01.10 has been revised to include internal sample transfer. A copy of the SOP is attached as an example of what the transfer log looks like.

OQA's Response: The laboratory's response is acceptable. In addition to the SOP, the laboratory submitted an example sample transfer chain of custody. Compliance will be verified during the next on-site audit.

Based upon the results of the on-site audit and acceptable documentation submitted by Garden State Labs – Lakehurst Lab, your certification status has been updated for the following parameters:

Parameter code	Parameter	Method	Certification Status
DW09.28900	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	EPA 533	Certified
DW09.28950	1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid	EPA 533	Certified
DW09.29000	1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid	EPA 533	Certified
DW09.29050	1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid	EPA 533	Certified
DW09.29100	4,8-dioxa-3H-perfluorononanoic acid	EPA 533	Certified



Parameter code	Parameter	Method	Certification Status
DW09.29150	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	EPA 533	Certified
DW09.29200	Hexafluoropropylene oxide dimer acid	EPA 533	Certified
DW09.29250	Nonafluoro-3,6-dioxaheptanoic acid	EPA 533	Certified
DW09.29300	Perfluoro(2-ethoxyethane)sulfonic acid	EPA 533	Certified
DW09.29350	Perfluoro-3-methoxypropanoic acid	EPA 533	Certified
DW09.29400	Perfluoro-4-methoxybutanoic acid	EPA 533	Certified
DW09.29450	Perfluorobutanesulfonic acid	EPA 533	Certified
DW09.29500	Perfluorobutanoic acid	EPA 533	Certified
DW09.29550	Perfluorodecanoic acid	EPA 533	Certified
DW09.29600	Perfluorododecanoic acid	EPA 533	Certified
DW09.29650	Perfluoroheptanesulfonic acid	EPA 533	Certified
DW09.29700	Perfluoroheptanoic acid	EPA 533	Certified
DW09.29750	Perfluorohexanesulfonic acid	EPA 533	Certified
DW09.29800	Perfluorohexanoic acid	EPA 533	Certified
DW09.29850	Perfluorononanoic acid	EPA 533	Certified
DW09.29900	Perfluorooctanesulfonic acid (PFOS)	EPA 533	Certified
DW09.29950	Perfluorooctanoic acid (PFOA)	EPA 533	Certified
DW09.30000	Perfluoropentanesulfonic acid	EPA 533	Certified
DW09.30050	Perfluoropentanoic acid	EPA 533	Certified
DW09.30100	Perfluoroundecanoic acid	EPA 533	Certified

Please find enclosed an updated annual certified parameter list (ACPL) for FY25. This will replace the FY25 ACPL that was recently mailed to your facility. Please review it carefully and notify this office immediately if any discrepancies are noted. If there are any discrepancies, please contact the OQA to verify information and make arrangements for a new ACPL within 7 business days of receipt. Any updates not received within 7 days may require a full modification package.

Once a laboratory obtains initial certification in the New Jersey Environmental Laboratory Certification Program it is required to analyze Proficiency Testing (PT) samples on the Department's annual schedule for all parameters/methods that require PT analysis. The schedule can be found on



our website at <https://dep.nj.gov/dsr/oqa/proficiency-testing/>. After your initial certification has been granted, failure to acceptably analyze PTs on the Department's schedule may result in enforcement action being initiated, which may include suspension of certification and/or assessment of penalties.

This letter does not preclude the State of New Jersey or any of its agencies from initiation of administrative or judicial enforcement action, or from assessing penalties with respect to any violations. Be advised that the Office of Quality Assurance may return to your laboratory in the near future to verify compliance with these requirements.

If you have any questions regarding this document or the Department's findings, please contact Ryan Compton at ryan.compton@dep.nj.gov or (609) 633-0845 to discuss your concerns or for an informal review.

Sincerely,



Michele M. Potter
Manager

Enclosure: Updated FY25 ACPL
FY25 Certificate



New Jersey Department of Environment Protection
Environmental Laboratory Certification Program

Annual Certified Parameter List and Current Status

Effective as of 10/01/2024 until 6/30/2025

Laboratory Name: GARDEN STATE LABS - LAKEHURST LAB Laboratory Number: 15041 Activity ID: SLC 240004
200 UNION AVE
LAKEHURST BORO NJ 08733

Category: DW09 —Organic Parameters - Chromatography/MS

Status	Code	Parameter	Technique	Approved Methods
Certified	DW09.28900	11-chloroicoisofluoro-3-oxaundecane-1-sulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.28950	1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29000	1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29050	1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29100	4,8-dioxa-3H-perfluorononanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29150	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29200	Hexafluoropropylene oxide dimer acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29250	Nonafluoro-3,6-dioxahexanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29300	Perfluoro(2-ethoxyethane)sulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29350	Perfluoro-3-methoxypropanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29400	Perfluoro-4-methoxybutanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29450	Perfluorobutanesulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29500	Perfluorobutanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29550	Perfluorodecanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29600	Perfluorododecanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29650	Perfluoroheptanesulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29700	Perfluoroheptanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29750	Perfluorohexanesulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29800	Perfluorohexanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29850	Perfluorononanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29900	Perfluorooctanesulfonic acid (PFOS)	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.29950	Perfluorooctanoic acid (PFOA)	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.30000	Perfluoropentanesulfonic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533
Certified	DW09.30050	Perfluoropentanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

New Jersey Department of Environment Protection
Environmental Laboratory Certification Program

Annual Certified Parameter List and Current Status

Effective as of 10/01/2024 until 6/30/2025

Laboratory Name: GARDEN STATE LABS - LAKEHURST LAB Laboratory Number: 15041 Activity ID: SLC 240004
200 UNION AVE
LAKEHURST BORO NJ 08733

Category: DW09 –Organic Parameters - Chromatography/MS

Status	Code	Parameter	Technique	Approved Methods
Certified	DW09.30100	Perfluoroundecanoic acid	LC MS/MS, Electrospray Ionization, Isotope Dilution	EPA 533


Michele M. Potter, Manager

*State of New Jersey
Department of Environmental Protection*

Certifies That

GARDEN STATE LABS – LAKEHURST LAB

Laboratory Certification ID # 15041

*having duly met the requirements of the
Regulations Governing the Certification of
Laboratories and Environmental Measurements N.J.A.C. 7:18
et. seq.*

*is hereby approved as a
State Certified Environmental Laboratory
to perform the analyses as indicated on the Annual Certified
Parameter List which must accompany this certificate to be valid*

Expires June 30, 2025



A handwritten signature in blue ink, appearing to read "M. Potter".

Michele M. Potter
Manager