IMMEDIATE RESPONSE ACTION
STATUS REPORT NO. 1
NANTUCKET MEMORIAL AIRPORT
14 AIRPORT ROAD
NANTUCKET, MASSACHUSETTS

RTN 4-28219

Prepared for:

Nantucket Memorial Airport
Nantucket, Massachusetts

Prepared by:

WESTON SOLUTIONS, INC.
43 N. Main Street
Concord, New Hampshire 03301

2 June 2020

Work Order No. 15295.001.008

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LIST OF ACRONYMS

ACK	Nantucket Memorial Airport
AFFF	aqueous film-forming foam
CFR	Code of Federal Regulation
CMR	Code of Massachusetts Regulations
Commission	Nantucket Memorial Airport Commission
Disposal Site or Site	14 Airport Road Nantucket, Massachusetts
ELLE	Eurofins Lancaster Laboratories Environmental
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
F3	fluorine-free foam
IRA	Immediate Response Action
LSP	Licensed Site Professional
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
ng/L	nanograms per liter
PFAS	per- and polyfluoroalkyl substances
POET	point-of-entry treatment
RTN	Release Tracking Number
WESTON®	Weston Solutions, Inc.

SECTION 1

INTRODUCTION

1. INTRODUCTION

On behalf of the Nantucket Memorial Airport Commission (the "Commission"), owner and operator of the Nantucket Memorial Airport (ACK), Weston Solutions, Inc. (WESTON®) has prepared this Immediate Response Action (IRA) Status Report for the Disposal Site associated with Release Tracking Number (RTN) 4-28219. This IRA Status Report was prepared in accordance with the Massachusetts Contingency Plan (MCP), 310 Code of Massachusetts Regulations (CMR) 40.0425, and as required by the Massachusetts Department of Environmental Protection (MassDEP). This report is submitted to MassDEP via the online filing system under Transmittal Form BWSC-105 and covers the period from 2 May 2020 to 2 June 2020.

The person or entity assuming responsibility for conducting the IRA is the current owner of the property:

Nantucket Memorial Airport
c/o Mr. Tom Rafter, Airport Manager
14 Airport Road
Nantucket, MA 02554
(508) 325-5300

For the purposes of this report, the "Site" is defined as the area located within the legal property boundaries of 14 Airport Road in Nantucket, Massachusetts (**Figure 1**). The "Disposal Site" for RTN 4-28219 includes additional properties to the south of the airport property (**Figure 2**) where contaminants potentially-related to ACK have been identified in groundwater. The extent of the Disposal Site is estimated and will be further defined through investigations to be conducted as part of the Comprehensive Site Assessment.

SECTION 2

DESCRIPTION OF THE SITE AND RELEASE

2. DESCRIPTION OF THE SITE AND RELEASE

2.1 GENERAL DISPOSAL SITE INFORMATION

The Disposal Site includes multiple parcels of land, the majority of which are in use by ACK while the remainder are commercial or residential in nature. The location of the Site is presented on **Figure 1** and a detailed site plan is presented as **Figure 2**.

The Site is a cleared area that includes runways, taxiways, a fuel farm, numerous buildings related to airport operations (terminal, hangers, maintenance, administration, etc.) and lots occupied by commercial aviation-related tenants. North and west of ACK are residential and commercial properties, while to the east, the land is largely undeveloped. A line of beachfront homes are located to the south, between ACK and the Atlantic Ocean. Wannacomet Water Company supplies municipal water to ACK and many of the surrounding properties. Wannacomet obtains its water from four groundwater supply wells located within the Sole Source Aquifer that underlies the entire island of Nantucket. One private water supply well was identified on ACK property and serves a hangar located north of the ACK administration buildings.

As many as 22 private drinking water supply wells are located within 500 ft and downgradient (south) of the Airport in a residential area along Madequecham Valley Road. These homes are primarily seasonal vacation homes inhabited by adult and child receptors during the summer months.

A second residential area that may be serviced by private drinking water wells is located crossgradient (west) of the Airport along Monohansett Road and Okorwaw Avenue. These homes are within close proximity of known aqueous film-forming foam (AFFF) release areas Runway 6 Runup and South Ramp at Taxiway J (**Figure 2**). It is not known if these homes are also seasonal, or if they are occupied year-round.

2.2 DESCRIPTION OF THE RELEASE

In February 2020, per- and polyfluoroalkyl substances (PFAS) were detected in the drinking water well at a home located on Medequecham Valley Road, south of the Airport, at a concentration

exceeding the RCGW-1 criterion. Subsequent sampling has identified additional homes along Medequecham Valley Road that have PFAS in their water supply wells.

At this time, some of the releases are believed to be associated with AFFF that ACK discharged as part of the Federal Aviation Administration-required testing and training events described in detail in the 2020 IRA Plan (WESTON, 2020). Per 14 Code of Federal Regulation (CFR) §139.315-319, ACK has used AFFF (1) as part of its storage of readiness and reserve; and (2) during required drills, training, testing, and maintenance activities. Under 14 CFR §139.321 and National Fire Protection Association 407, ACK has also stored AFFF for fire suppression readiness at the airport's fuel farm. Aqueous film-forming foam is not believed to have been used for any emergencies at the Airport since at least 1989, and no known accidental releases are known to have occurred. Further, as ACK is in the process of switching to fluorine-free foam (F3), any potential release(s) are believed to be historical. ACK has recently taken delivery of an E-1 AFFF testing system for its aircraft rescue and firefighting vehicles, and is in the process of converting its fuel farm fire suppression systems to an F3 system that is anticipated to be completed by May 2021. At this point, no future AFFF release to the environment is anticipated unless as part of a response to an aircraft incident before the conversion to F3 is completed. A list of known AFFF release events as well as a general location map is provided below. However, it should be noted that other potential sources of PFAS in groundwater have not yet been properly investigated and therefore cannot be ruled out. Further investigations will be performed to determine the full nature and extent of the PFAS impacts and identify the source(s) as part of future Comprehensive Response Actions.

AFFF Application Area	Approximate Timeframe of Application	Estimated Volume of AFFF Concentrate Applied
RW6 Run-up	1995-2015	25-50 gallons
South Ramp at J	2015-2018	25-50 gallons
Fuel Farm	198-2013	~200 gallons
South Ramp at B	1995-2015	25-50 gallons
Sand Pit	1989-1994, 2008	150-300 gallons
RW15/33 Midpoint	1989-2013	~625 gallons
Strojny Lot	2015-2019	600-750 gallons
RW24 Approach	1995-2015	275-550 gallons

As mentioned above, the presence of PFAS in groundwater was first confirmed in February 2020 and subsequently reported to MassDEP. Concentrations of PFAS were observed to exceed Category RCGW-1 Reportable Concentrations of 20 nanograms per liter (ng/L) for the six PFAS compounds (perfluoroheptanoic acid, perfluorohexanesulfonic acid, perfluorooctanoic acid, perfluorooctanesulfonic acid, perfluorononanoic acid, and perfluorodecanoic acid) individually or summed in drinking water and hereafter referred to as "PFAS6." This constituted a 2-hour Reportable Condition pursuant to 310 CMR 40.0311(6); where an oil or hazardous material concentration in a private drinking water supply well is present at concentrations equal or exceeding the RCGW-1 criterion, even though the home was unoccupied at the time of sample collection. In response, MassDEP assigned RTN 4-0028219 to this release. MassDEP verbally approved initial IRA activities, including design and installation of a point-of-entry treatment (POET) system for the impacted residence. The detection of PFAS in the drinking water supply represents a Critical Exposure Pathway as defined by the MCP. Additional details and the results of this effort can be found in the 2020 IRA Plan (WESTON, 2020).

Ongoing investigation efforts at the Disposal Site are focused on identifying other private water supply wells that could be impacted by the presence of PFAS in groundwater related to the use of AFFF at the Airport and mitigating any impacts that are discovered. A complicating factor in this effort is that the homes located downgradient of the Airport are seasonal and are opening for the season at different times.

SECTION 3

ASSESSMENT AND REMEDIAL ACTION STATUS

3. ASSESSMENT AND REMEDIAL ACTION STATUS

The information provided in this section addresses the requirements of the MCP as detailed in 310 CMR 40.0425(3)(a) through (e). Additional details regarding the actions completed previously are outlined below and can be found in the submitted reports, as cited.

3.1 STATUS OF ASSESSMENT ACTIVITIES

On 6 May 2020, WESTON oversaw installation of the POET system at Property UE comprised of a whole house sediment filter followed by two in-line, 65-inch tall ion exchange resin absorbers each containing 3 cubic feet of adsorptive media, and a flow totalizer. The resin vessels are located in unused shower stalls allowing for easy access for maintenance and monitoring during the operational season and removal during the off season. Sample ports were installed at locations prior to the first vessel (raw water from the well), between the first and second vessel (partially treated), and after the treatment system (finished water for consumption) to allow for development of a breakthrough curve during the maintenance and monitoring period. Although post-installation confirmatory samples are usually collected a minimum of a week following installation to allow the system to equilibrate, confirmatory samples were collected immediately post-installation due to the logistics of returning to the Island. The samples were collected at locations pre-, mid-, and post-ion exchange vessels, packed in an ice filled cooler and submitted under standard chain-of-custody procedures to Eurofins Lancaster Laboratories Environmental (ELLE) for analysis of PFAS via the United States Environmental Protection Agency (EPA) Method 537 Version 1.1.

The effluent sample contained a concentration of perfluorooctanesulfonic acid of 0.55 ng/L, which the laboratory flagged as an estimated value greater than or equal to the Method Detection Limit and less than the Limit of Quantitation (**Table 1**). As the residence became occupied on 18 May 2020, bottled water continues to be delivered until a second confirmatory sampling event can be scheduled, likely in June 2020. Following receipt of analytical results indicating the POET removing PFAS6 down to below laboratory detection levels in the effluent, bottled water delivery will be suspended.

Concurrent to POET installation at Property UE, WESTON completed sampling of drinking water supplies for PFAS at four (4) additional residences including Properties XA, DX, QO, and IB. The drinking water sampling procedure included purging the water from the supply well via an

unfiltered inside tap or exterior water spigot for 15 to 20 minutes to clear the water pipes and confirm multiple pump cycles. The samples were packed in an ice-filled cooler and submitted under standard chain-of-custody procedures to ELLE for analysis of PFAS via EPA Method 537 Version 1.1.

In an effort to expedite the potential POET design and installation process and where access to the interior of the home was granted, site evaluations for the purpose of designing and sizing the potential POET systems were also conducted. Site evaluations were completed at three (3) of the residences including Properties XA, QO, and IB. In addition to assessing the specifications of the well (i.e., yield) and potential system location information, a water supply sample was collected in duplicate for analysis of water quality parameters including various metals, bacteria, etc.

Per- and polyfluoroalkyl substances were detected in drinking water at concentrations exceeding RCGW-1 standards at Properties XA, QO, and IB. Immediately upon identification of drinking water PFAS concentrations, the affected residents were notified via electronic mail of the analytical results and instructed to cease use of the water for consumptive purposes. WESTON arranged for free delivery of bottled water to Properties XA, QO, and IB. Bottled water delivery for Property DX will be scheduled to coincide with the anticipated occupancy date. Additionally, MassDEP suggested that affected residents be warned of a potential dermal exposure risk during showering. However, in the process of relaying this information to the affected residents, it was determined that MassDEP did not have the necessary data and information from the Massachusetts Office of Research and Standards to make this determination. Per further direction from MassDEP, the guidance regarding the inhalation risk during showering will be forthcoming and in the interim, POET system design and installations are being expedited. Subsequently, written letters were mailed to the respective property owners summarizing the analytical results, providing a copy of the laboratory analytical report specific to each residence, and whom to contact with questions.

The next drinking water sampling event has been scheduled for June 2020 and will include as many of the remaining homes along Medequecham Valley Road as possible based on resident occupancy and receipt of signed Access Agreements.

3.1.1 Field Quality Assurance and Quality Control

Quality assurance and quality control sampling was conducted during the sampling event. A field blank was collected using laboratory-provided sample containers and PFAS-free deionized water. The field blank was prepared in the field and accompanied the drinking water samples in the same cooler. A trip blank provided by the laboratory was maintained in the same cooler as the drinking water samples. Per- and polyfluoroalkyl substances were not detected in either the field or trip blank samples.

3.2 NOTIFICATION TO RESIDENTS AND ACCESS AGREEMENTS

As described above, a complicating factor for gaining access to potentially-impacted homes to collect potable water samples is that the homes located along Medequecham Valley Road are seasonal and many are not currently occupied. Many are rental or seasonal homes belonging to out-of-state owners. On 20 December 2019, letters were mailed to the owners of 22 residences along Madequecham Valley Road downgradient of the ACK via certified mail. Each mailing included a letter that explained the reason for contact, a request for access to their property to obtain drinking water samples, a brief questionnaire about their well construction and use, and how best to contact them. As of the May 2020 IRA Plan submittal, contact had been made with 11 of the 22 property owners; Access Agreements have been fully executed for nine (9) residents; and two (2) residents have declined to sign an Access Agreement, but have provided a completed questionnaire and indicated they are willing to have their wells tested. Since submittal of the IRA Plan, four (4) additional Access Agreements have been obtained including one property owner whose initial mailing was returned undeliverable.

Because of the COVID-19 pandemic and the relatively mild winter and early spring, it is possible that the seasonal residents will begin to arrive earlier than usual. In an effort to contact residents as soon as they arrive, WESTON attempted to contact potentially-impacted residents that have been unresponsive by going door-to-door during the May 6, 2020 sampling event and left another copy of the brief letter to each resident that outlined the background of the situation, a request to contact WESTON to collect a sample, and a recommendation to use bottled water until the results of that sample are collected.

3.3 SIGNIFICANT NEW SITE INFORMATION

No significant new site information has been obtained beyond that discussed in this document.

3.4 MANAGEMENT OF REMEDIATION WASTE

No remediation waste has been generated at the Site during the period of performance covered by this IRA Status Report.

3.5 CONCLUSIONS AND LICENSED SITE PROFESSIONAL OPINION

This IRA is being conducted in response to the detection of PFAS in groundwater and drinking water representing an Imminent Hazard condition at a Critical Exposure Pathway. Mitigation measures for affected residences with total PFAS6 concentrations above 20 ng/L are being taken; including provision of bottled water and installation of POET systems. One POET system has been installed at Property UE while three (3) additional POET systems are currently being designed and scheduled for installation. Bottled water is currently being provided to all residents with detected concentrations of PFAS6 even if below 20 ng/L.

Under the Licensed Site Professional of record (James J. Soukup, #5888), this IRA Plan was prepared in accordance with 310 CMR 40.0411, 40.0414, and 40.0425. His seal and signature are included on the Immediate Response Action Transmittal Form BWSC-105 submitted concurrently with this IRA Plan via the eDEP online filing system.

SECTION 4

REFERENCES

4. REFERENCES

14 C.F.R. §139.315-319 and §139.321

Federal Aviation Administration, 2006. *National Part 139 CertAlert No. 16-05: Update on Mil-Spec Aqueous Film Forming Foam (AFFF).* September 1.

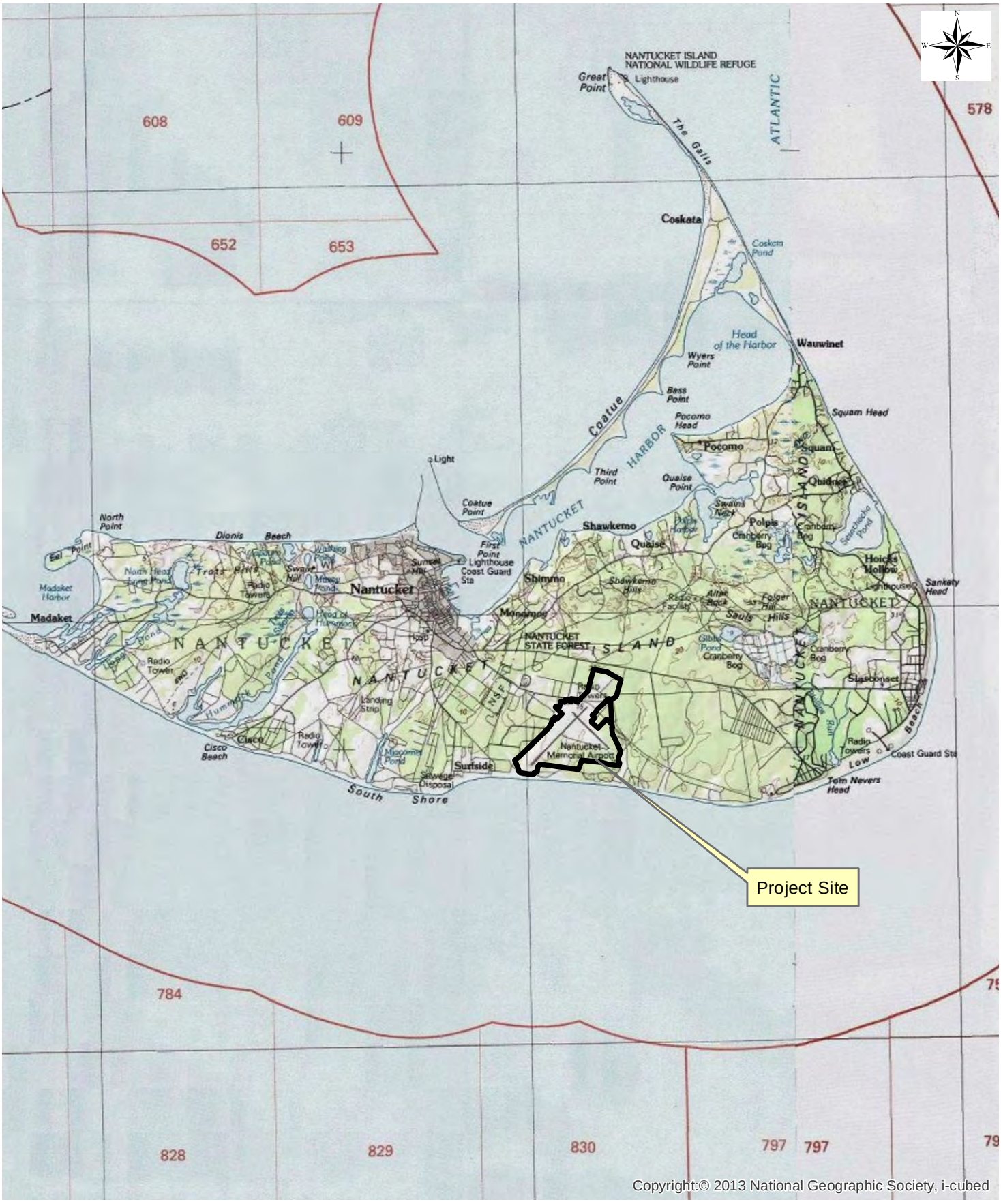
Massachusetts Department of Environmental Protection (MassDEP). 2014. *310 CMR 40: Massachusetts Contingency Plan.* April 25.

MassDEP Bureau of Waste Site Cleanup, Phase I Site Assessment Map. http://maps.massgis.state.ma.us/images/dep/mcp/mcp.htm. Accessed April 13, 2020.

Town and County of Nantucket. *Online GIS Maps*. https://www.nantucket-ma.gov/151/GIS-Maps. Accessed March and April 2020.

Weston Solutions, Inc. (WESTON). 2020. *Immediate Response Action Plan*. *Nantucket Memorial Airport, 14 Airport Road, Nantucket, Massachusetts. RTN 4-28219.* April 29.

FIGURES



SCALE:

0 5,000 10,000 20,000

Feet

TITLE:

NANTUCKET MEMORIAL AIRPORT
SITE LOCATION MAP

PROJECT:
NANTUCKET MEMORIAL AIRPORT
14 AIRPORT RD, NANTUCKET, MA 02554

CLIENT NAME:
NANTUCKET MEMORIAL AIRPORT

WESTON SOLUTIONS

DATE:
4/15/2020

FIGURE #:
1

TABLE

Table 1
Summary of Per- and Polyfluoroalkyl Substances in Drinking Water
Nantucket Memorial Airport
14 Airport Road, Nantucket, MA 02554
Release Tracking Number 4-28219

Airport-owned housing, not redacted

					Sample Location ID	Property XA [redacted]	Property DX [redacted]	Property QO [redacted]	Property UE (60 MVR)					Property IB [redacted]	Field Quality Control Samples	DUPLICATE	FIELD BLANK		TRIP BLANK	
											Pre POET	Mid POET	Post POET			QA-01				
	Sample Date	CAS No.	DW (ng/L)	GW-1 (ng/L)	5/6/2020	5/6/2020	5/6/2020	2/18/2020	2/18/2020 (DUP)	5/6/2020	5/6/2020	5/6/2020	5/6/2020			5/6/2020	2/17/2020 (Kanarek)	5/6/2020 (Woodman)	2/11/2020	5/6/2020
Carboxylic Acids (ng/L)	Perfluorobutanoic Acid (PFBA) [4]	375-22-4	na	na	--	--	--	--	--	--	--	--	--			--	<1.7	--	--	--
	Perfluoropentanoic Acid (PFPeA) [5]	2706-90-3	na	na	--	--	--	--	--	--	--	--	--			--	<0.42	--	--	--
	Perfluorohexanoic Acid (PFHxA) [6]	307-24-4	na	na	**9.5**	<0.43	**410**	**160**	**170**	**180**	**0.73J**	<0.45	**99**			**430**	<0.42	<0.45	<0.46	<0.46
	Perfluoroheptanoic Acid (PFHpA) [7]	375-85-9	20	20	**3.7**	<0.43	**42**	**56**	**55**	**70**	<0.44	<0.45	**88**			**45**	<0.42	<0.45	<0.46	<0.46
	Perfluoro-Octanoic Acid (PFOA) [8]	335-67-1	20	20	**7.5**	<0.43	**300**	**11**	**11**	**12**	<0.44	<0.45	**20**			**300**	<0.42	<0.45	<0.46	<0.46
	Perfluorononanoic Acid (PFNA) [9]	375-95-1	20	20	<0.43	<0.43	**0.53J**	**5.6**	**5.5**	**6**	<0.44	<0.45	**15**			**0.57J**	<0.42	<0.45	<0.46	<0.46
	Perfluorodecanoic Acid (PFDA) [10]	335-76-2	20	20	<0.43	<0.43	<0.43	**2.3**	**2.4**	**2.4**	<0.44	<0.45	**2.0**			<0.43	<0.42	<0.45	<0.46	<0.46
Sulfonates / Sulfonic Acids (ng/L)	Perfluorobutanesulfonic Acid (PFBS) [4S]	375-73-5	na	na	**11**	<0.43	**140**	**2.3**	**2.4**	**2.3**	<0.44	<0.45	**1.6J**			**140**	<0.42	<0.45	<0.46	<0.46
	Perfluoropentanesulfonate [5S]	2706-91-4	na	na	--	--	--	--	--	--	--	--	--			--	<0.42	--	--	--
	Perfluorohexanesulfonic Acid (PFHxS) [6S]	355-46-4	20	20	**87**	**4.8**	**400**	**37**	**39**	**40**	**0.54J**	<0.45	**26**			**410**	<0.42	<0.45	<0.46	<0.46
	Perfluoroheptanesulfonic Acid (PFHpS) [7S]	375-92-8	na	na	--	--	--	--	--	--	--	--	--			--	<0.42	--	--	--
	Perfluorooctanesulfonic Acid (PFOS) [8S]	1763-23-1	20	20	**530**	**6.2**	**8.5**	**48**	**50**	**50**	**2.0**	**0.55J**	**81**			**9.1**	<0.42	<0.45	<0.46	<0.46
Precursors (ng/L)	4:2-Fluorotelomersulfonic acid (4:2 FtS)	757124-72-4	na	na	--	--	--	--	--	--	--	--	--			--	<0.42	--	--	--
Parameter Calculations	**Total of PFAS6 Compounds**	na	20	20	**628**	**11**	**751**	**160**	**163**	**180**	**1.27**	**0.55**	**232**			**765**	ND	ND	ND	ND
	Total Measured PFAS	na	na	na	**649**	**11**	**1301**	**322**	**335**	**363**	**1.27**	**0.55**	**333**			**1335**	ND	ND	ND	ND
	% PFAS6 Compounds vs. Total PFAS	na	na	na	96.8%	100.0%	57.7%	49.6%	48.6%	49.7%	100.0%	100.0%	69.8%			57.3%	na	na	na	na

Definitions:

[4] = Number of fluorinated carbon chains for perfluorinated carboxylic acids
[4S] = Number of fluorinated carbon chains for perfluorinated sulfonates
ng/L = nanogram per liter, equivalent to parts per trillion
CAS No. = Chemical Abstract Service registry number
na = not applicable/standard has not been established
-- = Analysis not conducted
POET = point-of-entry treatment system
PFAS = per- and polyfluoroalkyl substances
ND = Not detected
J = Estimated value is greater than or equal to the Method Detection Limit and less than the Limit of Quantitation
DUP = duplicate sample
PFAS6 = Massachusetts Department of Environmental Protection regulates six PFAS compounds including PFHpA, PFOA, PFNA, PFDA, PFHxS, and PFOS.
MVR = Madequecham Valley Road

Notes:

Bold font indicates compound detected above the laboratory reporting limit.
Gray shading indicates detected concentration meets or exceeds GW-1.

APPENDIX A

LABORATORY ANALYTICAL DATA

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Weston Solutions, Inc.
43 N Main St
Concord NH 03301

Report Date: May 19, 2020 15:06

Project: Nantucket

Account #: 31222
Group Number: 2098990
PO Number: 0102971
State of Sample Origin: MA

Electronic Copy To Weston Solutions, Inc. Attn: Lisa Krammer

Respectfully Submitted,

Elizabeth M. Zanar
Project Manager

(717) 556-7290

A previous version of this report was generated on 05/19/2020 12:50.

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
IB-SPG-050620 Grab Potable Water	05/06/2020 09:24	1311843
DX-SPG-050620 Grab Potable Water	05/06/2020 10:56	1311844
XA-SPG-050620 Grab Potable Water	05/06/2020 12:42	1311845
QO-BFCT-050620 Grab Potable Water	05/06/2020 14:51	1311846
QA-01-050620 Grab Potable Water	05/06/2020 14:50	1311847
Field Blank Grab Water	05/06/2020 16:47	1311848
UE-CONF-EFF Grab Potable Water	05/06/2020 16:45	1311849
UE-CONF-MID Grab Potable Water	05/06/2020 16:51	1311850
UE-CONF-INF Grab Potable Water	05/06/2020 17:01	1311851
TRIP BLANK Grab Water	05/01/2020 08:00	1311852

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

REVISED

Sample Description: **IB-SPG-050620 Grab Potable Water Nantucket**

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 09:24

Weston Solutions, Inc.
ELLE Sample #: PW 1311843
ELLE Group #: 2098990
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.43	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.43	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	1.6 J	0.43	1
14070	Perfluorodecanoic acid[1]	335-76-2	2.0	0.43	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.43	1
14070	Perfluoroheptanoic acid[1]	375-85-9	88	4.3	10
14070	Perfluorohexanesulfonic acid[1]	355-46-4	26	0.43	1
14070	Perfluorohexanoic acid[1]	307-24-4	99	4.3	10
14070	Perfluorononanoic acid[1]	375-95-1	15	0.43	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	81	4.3	10
14070	Perfluorooctanoic acid[1]	335-67-1	20	0.43	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.43	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.43	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.43	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/12/2020 15:24	Marissa C Drexinger	1
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/14/2020 00:06	Archie H Covely	10
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

REVISED

Sample Description: **DX-SPG-050620 Grab Potable Water Nantucket**

Project Name: **Nantucket**

Weston Solutions, Inc.
ELLE Sample #: PW 1311844
ELLE Group #: 2098990
Matrix: Potable Water

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 10:56

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.43	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.43	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	0.43	1
14070	Perfluorodecanoic acid[1]	335-76-2	N.D.	0.43	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.43	1
14070	Perfluoroheptanoic acid[1]	375-85-9	N.D.	0.43	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	4.8	0.43	1
14070	Perfluorohexanoic acid[1]	307-24-4	N.D.	0.43	1
14070	Perfluorononanoic acid[1]	375-95-1	N.D.	0.43	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	6.2	0.43	1
14070	Perfluorooctanoic acid[1]	335-67-1	N.D.	0.43	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.43	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.43	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.43	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/12/2020 15:36	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

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Analysis Report

REVISED

Sample Description: **XA-SPG-050620 Grab Potable Water Nantucket**

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 12:42

Weston Solutions, Inc.
ELLE Sample #: PW 1311845
ELLE Group #: 2098990
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.43	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.43	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	11	0.43	1
14070	Perfluorodecanoic acid[1]	335-76-2	N.D.	0.43	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.43	1
14070	Perfluoroheptanoic acid[1]	375-85-9	3.7	0.43	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	87	4.3	10
14070	Perfluorohexanoic acid[1]	307-24-4	9.5	0.43	1
14070	Perfluorononanoic acid[1]	375-95-1	N.D.	0.43	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	530	4.3	10
14070	Perfluorooctanoic acid[1]	335-67-1	7.5	0.43	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.43	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.43	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.43	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/13/2020 18:31	Archie H Covely	1
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/14/2020 00:17	Archie H Covely	10
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

REVISED

Sample Description: **QO-BFCT-050620 Grab Potable Water Nantucket**

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 14:51

Weston Solutions, Inc.
ELLE Sample #: PW 1311846
ELLE Group #: 2098990
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.43	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.43	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	140	4.3	10
14070	Perfluorodecanoic acid[1]	335-76-2	N.D.	0.43	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.43	1
14070	Perfluoroheptanoic acid[1]	375-85-9	42	0.43	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	400	4.3	10
14070	Perfluorohexanoic acid[1]	307-24-4	410	4.3	10
14070	Perfluorononanoic acid[1]	375-95-1	0.53 J	0.43	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	8.5	0.43	1
14070	Perfluorooctanoic acid[1]	335-67-1	300	4.3	10
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.43	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.43	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.43	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/13/2020 18:43	Archie H Covely	1
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/14/2020 00:29	Archie H Covely	10
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

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Analysis Report

REVISED

Sample Description: **QA-01-050620 Grab Potable Water Nantucket**

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 14:50

Weston Solutions, Inc.
ELLE Sample #: PW 1311847
ELLE Group #: 2098990
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.43	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.43	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	140	4.3	10
14070	Perfluorodecanoic acid[1]	335-76-2	N.D.	0.43	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.43	1
14070	Perfluoroheptanoic acid[1]	375-85-9	45	0.43	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	410	4.3	10
14070	Perfluorohexanoic acid[1]	307-24-4	430	4.3	10
14070	Perfluorononanoic acid[1]	375-95-1	0.57 J	0.43	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	9.1	0.43	1
14070	Perfluorooctanoic acid[1]	335-67-1	300	4.3	10
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.43	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.43	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.43	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/13/2020 18:54	Archie H Covely	1
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/14/2020 00:40	Archie H Covely	10
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

REVISED

Sample Description: **Field Blank Grab Water**
Nantucket

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 16:47

Weston Solutions, Inc.
ELLE Sample #: PW 1311848
ELLE Group #: 2098990
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.45	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.45	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	0.45	1
14070	Perfluorodecanoic acid[1]	335-76-2	N.D.	0.45	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.45	1
14070	Perfluoroheptanoic acid[1]	375-85-9	N.D.	0.45	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	0.45	1
14070	Perfluorohexanoic acid[1]	307-24-4	N.D.	0.45	1
14070	Perfluorononanoic acid[1]	375-95-1	N.D.	0.45	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	0.45	1
14070	Perfluorooctanoic acid[1]	335-67-1	N.D.	0.45	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.45	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.45	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.45	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/13/2020 19:06	Archie H Covely	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

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Analysis Report

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Sample Description: **UE-CONF-EFF Grab Potable Water Nantucket**

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 16:45

Weston Solutions, Inc.
ELLE Sample #: PW 1311849
ELLE Group #: 2098990
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.45	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.45	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	0.45	1
14070	Perfluorodecanoic acid[1]	335-76-2	N.D.	0.45	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.45	1
14070	Perfluoroheptanoic acid[1]	375-85-9	N.D.	0.45	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	0.45	1
14070	Perfluorohexanoic acid[1]	307-24-4	N.D.	0.45	1
14070	Perfluorononanoic acid[1]	375-95-1	N.D.	0.45	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	0.55 J	0.45	1
14070	Perfluorooctanoic acid[1]	335-67-1	N.D.	0.45	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.45	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.45	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.45	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/13/2020 19:17	Archie H Covely	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

REVISED

Sample Description: **UE-CONF-MID Grab Potable Water Nantucket**

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 16:51

Weston Solutions, Inc.
ELLE Sample #: PW 1311850
ELLE Group #: 2098990
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.44	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.44	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	0.44	1
14070	Perfluorodecanoic acid[1]	335-76-2	N.D.	0.44	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.44	1
14070	Perfluoroheptanoic acid[1]	375-85-9	N.D.	0.44	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	0.54 J	0.44	1
14070	Perfluorohexanoic acid[1]	307-24-4	0.73 J	0.44	1
14070	Perfluorononanoic acid[1]	375-95-1	N.D.	0.44	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	2.0	0.44	1
14070	Perfluorooctanoic acid[1]	335-67-1	N.D.	0.44	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.44	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.44	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.44	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20135012	05/16/2020 00:57	Mark Collare	1
14381	DW PFAS Prep	EPA 537 Version 1.1	2	20135012	05/14/2020 15:15	Isaac Phillips-Cary	1

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Analysis Report

REVISED

Sample Description: **UE-CONF-INF Grab Potable Water Nantucket**

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/06/2020 17:01

Weston Solutions, Inc.
ELLE Sample #: PW 1311851
ELLE Group #: 2098990
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.44	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.44	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	2.3	0.44	1
14070	Perfluorodecanoic acid[1]	335-76-2	2.4	0.44	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.44	1
14070	Perfluoroheptanoic acid[1]	375-85-9	70	0.44	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	40	0.44	1
14070	Perfluorohexanoic acid[1]	307-24-4	180	4.4	10
14070	Perfluorononanoic acid[1]	375-95-1	6.0	0.44	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	50	0.44	1
14070	Perfluorooctanoic acid[1]	335-67-1	12	0.44	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.44	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.44	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.44	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/13/2020 19:40	Archie H Covely	1
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/14/2020 00:52	Archie H Covely	10
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

REVISED

Sample Description: **TRIP BLANK Grab Water**
Nantucket

Project Name: **Nantucket**

Submittal Date/Time: 05/08/2020 10:26
Collection Date/Time: 05/01/2020 08:00

Weston Solutions, Inc.
ELLE Sample #: PW 1311852
ELLE Group #: 2098990
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	N.D.	0.46	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	N.D.	0.46	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	N.D.	0.46	1
14070	Perfluorodecanoic acid[1]	335-76-2	N.D.	0.46	1
14070	Perfluorododecanoic acid[1]	307-55-1	N.D.	0.46	1
14070	Perfluoroheptanoic acid[1]	375-85-9	N.D.	0.46	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	N.D.	0.46	1
14070	Perfluorohexanoic acid[1]	307-24-4	N.D.	0.46	1
14070	Perfluorononanoic acid[1]	375-95-1	N.D.	0.46	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	N.D.	0.46	1
14070	Perfluorooctanoic acid[1]	335-67-1	N.D.	0.46	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	N.D.	0.46	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	N.D.	0.46	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	N.D.	0.46	1

Sample Comments

State of Massachusetts Laboratory Certification M-PA009

[1] = This analyte was not on the laboratory's MA DEP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	PFAS in Drinking Water	EPA 537 Version 1.1	1	20131002	05/13/2020 19:52	Archie H Covely	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	20131002	05/10/2020 15:00	Eric Hockley	1

REVISED

Quality Control Summary

Client Name: Weston Solutions, Inc. Group Number: 2098990
Reported: 05/19/2020 15:06

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ng/l	ng/l
Batch number: 20131002	Sample number(s): 1311843-1311849,1311851-1311852	
NEtFOSAA	N.D.	0.50
NMeFOSAA	N.D.	0.50
Perfluorobutanesulfonic acid	N.D.	0.50
Perfluorodecanoic acid	N.D.	0.50
Perfluorododecanoic acid	N.D.	0.50
Perfluoroheptanoic acid	N.D.	0.50
Perfluorohexanesulfonic acid	N.D.	0.50
Perfluorohexanoic acid	N.D.	0.50
Perfluorononanoic acid	N.D.	0.50
Perfluorooctanesulfonic acid	N.D.	0.50
Perfluorooctanoic acid	N.D.	0.50
Perfluorotetradecanoic acid	N.D.	0.50
Perfluorotridecanoic acid	N.D.	0.50
Perfluoroundecanoic acid	N.D.	0.50
Batch number: 20135012	Sample number(s): 1311850	
NEtFOSAA	N.D.	0.50
NMeFOSAA	N.D.	0.50
Perfluorobutanesulfonic acid	N.D.	0.50
Perfluorodecanoic acid	N.D.	0.50
Perfluorododecanoic acid	N.D.	0.50
Perfluoroheptanoic acid	N.D.	0.50
Perfluorohexanesulfonic acid	N.D.	0.50
Perfluorohexanoic acid	N.D.	0.50
Perfluorononanoic acid	N.D.	0.50
Perfluorooctanesulfonic acid	N.D.	0.50
Perfluorooctanoic acid	N.D.	0.50
Perfluorotetradecanoic acid	N.D.	0.50
Perfluorotridecanoic acid	N.D.	0.50
Perfluoroundecanoic acid	N.D.	0.50

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Weston Solutions, Inc.
Reported: 05/19/2020 15:06

Group Number: 2098990

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 20131002	Sample number(s): 1311843-1311849,1311851-1311852								
NEtFOSAA	3.84	3.27	3.84	3.32	85	86	50-150	1	30
NMeFOSAA	3.84	3.02	3.84	3.32	79	86	50-150	10	30
Perfluorobutanesulfonic acid	3.40	3.01	3.40	3.03	88	89	50-150	1	30
Perfluorodecanoic acid	3.84	3.07	3.84	3.02	80	79	50-150	2	30
Perfluorododecanoic acid	3.84	3.02	3.84	2.93	79	76	50-150	3	30
Perfluoroheptanoic acid	3.84	3.03	3.84	3.19	79	83	50-150	5	30
Perfluorohexanesulfonic acid	3.50	2.98	3.50	2.99	85	85	50-150	0	30
Perfluorohexanoic acid	3.84	2.95	3.84	3.07	77	80	50-150	4	30
Perfluorononanoic acid	3.84	3.14	3.84	3.11	82	81	50-150	1	30
Perfluorooctanesulfonic acid	3.55	3.00	3.55	3.08	84	87	50-150	3	30
Perfluorooctanoic acid	3.84	3.40	3.84	3.64	89	95	50-150	7	30
Perfluorotetradecanoic acid	3.84	3.39	3.84	3.52	88	92	50-150	4	30
Perfluorotridecanoic acid	3.84	3.21	3.84	3.28	84	85	50-150	2	30
Perfluoroundecanoic acid	3.84	2.80	3.84	2.91	73	76	50-150	4	30
Batch number: 20135012	Sample number(s): 1311850								
NEtFOSAA	3.84	3.35	3.84	3.47	87	90	50-150	3	30
NMeFOSAA	3.84	3.65	3.84	3.68	95	96	50-150	1	30
Perfluorobutanesulfonic acid	3.40	3.30	3.40	3.15	97	93	50-150	5	30
Perfluorodecanoic acid	3.84	3.68	3.84	3.32	96	86	50-150	10	30
Perfluorododecanoic acid	3.84	3.46	3.84	3.51	90	91	50-150	1	30
Perfluoroheptanoic acid	3.84	3.92	3.84	3.63	102	94	50-150	8	30
Perfluorohexanesulfonic acid	3.50	3.47	3.50	3.41	99	97	50-150	2	30
Perfluorohexanoic acid	3.84	4.01	3.84	3.87	104	101	50-150	4	30
Perfluorononanoic acid	3.84	3.72	3.84	3.57	97	93	50-150	4	30
Perfluorooctanesulfonic acid	3.55	3.62	3.55	3.51	102	99	50-150	3	30
Perfluorooctanoic acid	3.84	3.73	3.84	3.71	97	97	50-150	0	30
Perfluorotetradecanoic acid	3.84	3.41	3.84	3.41	89	89	50-150	0	30
Perfluorotridecanoic acid	3.84	3.25	3.84	3.18	85	83	50-150	2	30
Perfluoroundecanoic acid	3.84	3.81	3.84	3.48	99	91	50-150	9	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: Weston Solutions, Inc.
Reported: 05/19/2020 15:06

Group Number: 2098990

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PFAS in Drinking Water
Batch number: 20131002

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
1311843	85	86	91
1311844	85	94	90
1311845	84	86	88
1311846	98	117	108
1311847	85	90	94
1311848	93	95	93
1311849	90	95	101
1311851	113	123	121
1311852	94	102	105
Blank	84	96	106
LCS	81	85	92
LCSD	89	89	99
Limits:	70-130	70-130	70-130

Analysis Name: PFAS in Drinking Water
Batch number: 20135012

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
1311850	107	93	91
Blank	104	95	94
LCS	103	97	94
LCSD	100	92	91
Limits:	70-130	70-130	70-130

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 31222 Group # 2098990 Sample # 1311843-52

COC # 605972

Client Information

Client: Weston Solutions, Inc.	Acct. #: 31222
Project Name/#: Nantucket	PWSID #: NA
Project Manager: Lisa Kammer	P.O. #: 0102971
Sampler: Nick Woodman	Quote #: 221624A

State where samples were collected: Massachusetts
For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☒ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PFAS 14 Compounds EPA 537.1	Remarks
IB-SPG-050620	05/06/20	0924	X		2	X	
DX-SPG-050620	05/06/20	1056	X		2	X	
XA-SPG-050620	05/06/20	1242	X		2	X	
QB-BFLT-050620	05/06/20	1451	X		2	X	Trizma
QA-01-050620	05/06/20	1450	X		2	X	
Field blank	05/06/20	16:47	X		1	X	Trizma
UE-CONF-EFF	05/06/20	16:45	X		2	X	
UE-CONF-MID	05/06/20	16:51	X		2	X	
UE-CONF-INF	05/06/20	17:01	X		2	X	
TRIP BLANK	5/6/20	0800	X		2	X	Trizma

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks
Non-chlorinated Potable water

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10

E-mail address: lisa.kammer@westonsolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	5/7/2020	1310	FedEx		
			[signature]	5/8/20	1026

EDD Required? Yes No
If yes, format: Excel

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 0.7 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 284044

Group Number(s): 2098990

Client: Weston Solutions, Inc.

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	05/08/2020
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	MA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): 2-250 m plastic bottles (Trizma)

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.7	DT	Wet	Y	Loose/Bag	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
IB-SPG-050620	5/06/2020 09:26	

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.