January 14, 2021

CANCELLATION NOTICE OF THE REGULAR MEETING AND CALL AND NOTICE OF A SPECIAL MEETING OF THE LEGAL, GOVERNMENT AND ENVIRONMENTAL AFFAIRS COMMITTEE OF THE BURBANK-GLENDALE-PASADENA AIRPORT AUTHORITY

The Airport Authority administrative offices will be closed on Monday, January 18, 2021, in observance of Martin Luther King, Jr., Day. Therefore, the regular meeting of the Legal, Government and Environmental Affairs Committee scheduled for Monday, January 18, 2021, at 9:30 a.m., or immediately following the Commission meeting, in the Burbank Room of Hollywood Burbank Airport, has been cancelled.

NOTICE is hereby given that a special meeting of the Legal, Government and Environmental Affairs Committee will be held Tuesday, January 19, 2021, at 9:30 a.m., or immediately following the Commission meeting, in the Burbank Room of Hollywood Burbank Airport, 2627 N. Hollywood Way, Burbank, California 91505.

Pursuant to Governor Newsom's Executive Order N-29-20, members of the Commission or staff may participate in this meeting via teleconference. In the interest of maintaining appropriate social distancing, members of the public may observe and participate in the meeting telephonically through the following number:

Dial In: (701) 802-5334

Access Code 2451017

Terri Williams, Board Secretary
Burbank-Glendale-Pasadena Airport Authority

2627 N. Hollywood Way • Burbank, California 91505 • (818) 840-8840 • Fax: (818) 848-1173

SPECIAL MEETING
OF THE
LEGAL, GOVERNMENT AND ENVIRONMENTAL AFFAIRS COMMITTEE
Burbank Room
Tuesday, January 19, 2021
9:30 a.m., or Immediately Following
the Conclusion of the
Commission Meeting

As a result of the convening of this meeting of the Legal, Government and Environmental Affairs Committee, each Committee member in attendance is entitled to receive and shall be provided $200.

▼ ▼ ▼

The public comment period is the opportunity for members of the public to address the Committee on agenda items and on airport-related non-agenda matters that are within the Committee's subject matter jurisdiction. At the discretion of the presiding officer, public comment on an agenda item may be presented when that item is reached.

Members of the public are requested to observe the following decorum when attending or participating in meetings of the Committee:

- ***Turn off cellular telephones and pagers.***
- ***Refrain from disorderly or boisterous conduct, including loud, threatening, profane, or abusive language, clapping, whistling, stamping, or other acts that disrupt or otherwise render unfeasible the orderly conduct of the meeting.***
- ***If you desire to address the Committee during the public comment period, fill out a speaker request card and present it to the Board Secretary.***
- ***Confine remarks to agenda items or to airport-related non-agenda matters that are within the Committee's subject matter jurisdiction.***
- ***Limit comments to five minutes or to such other period of time as may be specified by the presiding officer.***

▼ ▼ ▼

The following activities are prohibited:

- ***Allocation of speaker time to another person.***
- ***Video presentations requiring use of Authority equipment.***

▼ ▼ ▼

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the Authority to the Committee less than 72 hours prior to that meeting are available for public inspection at Hollywood Burbank Airport (2627 N. Hollywood Way, Burbank) in the administrative office during normal business hours.

▼ ▼ ▼

In accordance with the Americans with Disabilities Act of 1990, if you require a disability-related modification or accommodation to attend or participate in this meeting, including auxiliary aids or services, please call the Board Secretary at (818) 840-8840 at least 48 hours prior to the meeting.

A G E N D A

Tuesday, January 19, 2021

1. Approval of Agenda

2. Public Comment

3. Approval of Minutes

   a. November 16, 2020 ***[See page 1]***

4. Items for Discussion

   a. State of California Legislative Report and 2021 Legislative Calendar (Arnold & Associates) ***[No staff report]***

      A State Legislative Report and Legislative Calendar is attached. Staff along with representatives from Arnold and Associates will update the Committee on current State legislative activities.

5. Items for Information

   a. Update – PFAS Phase 2 Report to LARWQCB ***[No staff report]***

      Staff will update the Committee on the report findings of the Phase 2 investigation.

   b. EPA Past Cost Recovery Claim ***[No staff report]***

      Staff will update the Committee on the status of the claim.

   c. Committee Pending Items ***[See page 3]***

6. Closed Session

   a. Conference with Real Property Negotiators
      (California Government Code Section 54956.8)

      Property: Bob Hope Airport Leaseholds
      Authority Negotiator: Executive Director
      Negotiating Party: Delux Public Charter LLC
      Under Negotiation: Price and Terms of Payment

7. Adjournment

**MINUTES OF THE REGULAR MEETING OF THE
LEGAL, GOVERNMENT AND ENVIRONMENTAL AFFAIRS COMMITTEE
BURBANK-GLENDALE-PASADENA AIRPORT AUTHORITY**

MONDAY, NOVEMBER 16, 2020

A regular meeting of the Legal, Government and Environmental Affairs Committee was called to order on this date in the Burbank Room, 2627 N. Hollywood Way, Burbank, California, at 10:30 a.m., by Chairman Wiggins.

AB 23 Disclosure: The Assistant Board Secretary announced that, as a result of the convening of this meeting of the Legal, Government and Environmental Affairs Committee, each Committee member in attendance is entitled to receive and shall be provided $200.

ROLL CALL

Present:	Commissioners Wiggins, Agajanian (via teleconference) and Madison (via teleconference)
Absent:	None
Also Present:	Staff: Frank Miller, Executive Director; Patrick Lammerding, Deputy Executive Director, Planning and Development; Pamela Marcello, Senior Director, Government and Public Affairs Airport Authority Counsel: Terence R. Boga of Richards, Watson & Gershon and Tom Ryan of McDermott, Will & Emery
1. Approval of Agenda	The agenda was approved as presented.
2. Public Comment	There were no public speakers.
3. Approval of Minutes	
a. October 19, 2020	Commissioner Agajanian (via teleconference) moved approval of the minutes of the October 19, 2020 meeting, seconded by Commissioner Madison (via teleconference). There being no objection, a voice vote was taken to accommodate those participating via teleconference. The motion was approved (3-0).
4. Items for Discussion	
a. Citizen's Advisory Committee	Based on the input received from the Committee at the September 21st meeting, Staff and legal counsel presented to the Committee a draft resolution for recommendation to the Commission for the establishment of a 12-member Citizen's Advisory Committee ("CAC") comprised of representatives from Burbank, Glendale, Pasadena, and Los

	Angeles. The proposed CAC would be tasked with gathering public input on airplane noise issues.
Motion	Commissioner Madison (via teleconference) moved the Committee recommendation, seconded by Commissioner Agajanian (via teleconference).
Motion Approved	There being no objection, a voice vote was taken to accommodate those participating via teleconference. The motion was approved (3-0).

5. Items for Information

a. Committee Pending Items	Staff informed the Committee of future pending items that will come to the Committee for review.

6. Adjournment	There being no further business, the meeting adjourned at 10:45 a.m.

Arnold and Associates, Inc.
Legislative Advocates and Consultants

Phone: (916) 446-2646◊Fax: (916) 446-6095 ◊1127 11th Street, Suite 820, Sacramento, CA 95814

Legislative Update for January 19th meeting:

I. Legislature Returned to Sacramento for the 2020 -2021 Legislative Session
   a. Legislature convened on December 7, 2020
   b. Democratic super majority in the State Senate and Assembly.
   c. Bill introduction deadline is February 19, 2021
   d. The date of the Governor's State of the State Address has not been announced yet.

II. Governor's Prosed Budget - $227.2 billion fiscal blueprint with a $15 Billion surplus
   a. Highlights from the Governor's Budget proposal
      i. Education – $89.2 Billion
         1. The upward revision of General Fund revenues has resulted in significant increases in the Proposition 98 Guarantee. Proposition 98 funding for K-12 schools and community colleges for 2021-22 is $85.8 billion. This represents an increased investment of $14.9 billion in schools and community colleges above the level funded in the 2020 Budget Act, and the highest level of funding for K-14 schools ever. When combined with a one-time supplemental allocation of $2.3 billion and the benefit of CalSTRS and CalPERS rates ($1.1 billion), the state funding available to schools increases to $89.2 billion.
      ii. $4.4 billion for emergency response for COVID-19
         1. $2 billion for testing
         2. $473 million for contact tracing
         3. $372 million for vaccines
      iii. New $2.4 billion "Golden State Stimulus" giving $600 stimulus payments to recipients of the state's Earned Income Tax Credit in 2019. Approximately 4 million Californians will be eligible including undocumented workers.

iv. Economic Recovery Package
    1. $247 million for small business tax credits, grants, micro-grants, loans
    2. $430 million for CalCompetes credits and grants
    3. More aid for Job creators such as Main Street Hiring Tax Credit, Loan Guarantees, IBank, Sales Tax Exclusions, and CA Dream Fund
    4. $1.5 billion for ZEV infrastructure: charging stations and incentives to improve access to ZEV
    5. $500 million for infill infrastructure grants to local governments for projects leading to long-term housing development

v. "Immediate Action Package" The Governor has requested immediate budget approved by the Legislature for the following:
    1. $2 billion to reopen K-12 Schools
    2. $575 million small business grants
    3. $71 million fee waivers for small business (to benefit service industry, i.e., restaurants/hair and nail salons/gyms)

vi. TRANSPORTION
    1. California State Department of Transportation (Caltrans)
        a. The Budget includes total funding of $20.6 billion for all departments and programs administered within the California State Transportation Agency.
    2. High Speed Rail
        a. The High-Speed Rail Authority continues to construct the Central Valley segment to provide electrified High-Speed Rail from Merced to Bakersfield with Proposition 1A bonds, federal funds, and 25 percent of the continuously appropriated Cap and Trade auction proceeds.

III. Key Bills – tracking 11 bills so far
    a. Hazardous Waste – several bills have been introduced relating to hazardous waste facilities and clean-up.
    b. Greenhouse Gas Reduction funding for High Speed Rail – bill to transfer funds to K-12 education
    c. Sea level rise – several bills relating to sea level rise. These bills may be of more importance to airports located along the coastline.
    d. Employment – tracking bills relating to contact tracing and rights and benefits for telecommuting employees.

Arnold and Associates, Inc.
Legislative Advocates and Consultants

2021 Legislative Calendar

Jan. 1	Statutes take effect.
Jan. 6	**Legislature reconvenes.**
Jan. 10	Budget must be submitted by Governor.
Jan. 22	**Last day to submit bill requests to the Office of Legislature Counsel**.
Feb. 19	**Last day for bills to be introduced.**
March 25	Spring Recess begins upon adjournment of session.
Apr. 5	Legislature reconvenes from Spring Recess.
Apr. 30	**Last day for policy committees to hear and report to fiscal committees fiscal bills.**
May 7	**Last day for policy committees to hear and report to the floor nonfiscal bills introduced in their house.**
May 14	**Last day for policy committees to meet prior to June 1**
May 21	**Last day for fiscal committees to hear and report bills to the floor bills introduced in their house. Last day for fiscal committees to meet prior to June 7**
June 1-4	Floor session only. No committees, other than conference or Rules committee, may meet for any purpose
June 4	Last day for bills to be passed out of the house of origin.
June 7	Committee meetings may resume.
June 15	**Budget bill must be passed by midnight.**
July 14	**Last day for policy committee to meet and report bills**
July 16	Summer Recess begins upon adjournment, provided Budget Bill has been passed.
Aug. 16	Legislature reconvenes from Summer Recess.
Aug. 27	**Last day for fiscal committees to meet and report bills to the floor**
Aug 30 – Sept 10	Floor Session Only. No committee, other than conference and Rules committees, may meet for any purpose.
Sept. 3	Last day to amend bills on the Floor.
Sept. 10	**Last day for each house to pass bills.**
Oct. 10	**Last day for Governor to sign or veto bills passed by Legislature on or before Sept. 10th**

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Prepared for

Burbank-Glendale-Pasadena Airport Authority
2627 Hollywood Way
Burbank, California 91505

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) GROUNDWATER AND SUPPLEMENTAL SOIL INVESTIGATION REPORT

Hollywood Burbank Airport

Prepared by

Geosyntec consultants

engineers | scientists | innovators

65 N. Raymond Avenue
Pasadena, California 91103

Project Number: WR2693

11 December 2020

Per- and Polyfluoroalkyl Substances (PFAS) Groundwater and Supplemental Soil Investigation Report

Hollywood Burbank Airport
Burbank, California

Prepared by

Geosyntec Consultants, Inc.
65 N. Raymond Avenue, Suite 200
Pasadena, California 91103

Mital Desai
Senior Professional

Ravi Arulanantham, Ph.D.
Senior Principal

Syed Rehan, P.E., BCEE
Senior Principal

Project Number: WR2693

11 December 2020

Geosyntec
consultants

CERTIFICATION STATEMENT

I, Mark Hardyment, certify under penalty of law that this document and all attachments were prepared under my direction or supervision, in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant civil penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

12/10/20

Mark Hardyment
Director, Transportation & Environmental Programs
Hollywood Burbank Airport

Date

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LIST OF ACRONYMS AND ABBREVIATIONS

AFD	Airport Fire Department
AFFF	aqueous film-forming foam
ARFF	Aircraft Rescue Firefighting
AST	aboveground storage tank
bgs	below ground surface
BOU	Burbank Operable Unit
COC	chain of custody
DoD	Department of Defense
DoT	Department of Transportation
ELAP	Environmental Laboratory Accreditation Program
FAA	Federal Aviation Administration
FTA	Fire Training Areas
ft	feet
HASP	Health and Safety Plan
HDPE	high-density polyethylene
IDW	investigation derived waste
LACDPH	Los Angeles County Department of Public Health
LARWQCB	Los Angeles Regional Water Quality Control Board
LMCO	Lockheed Martin Corporation, Inc.
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NHOU	North Hollywood Operable Unit
PFAS	per- and polyfluoroalkyl substances
PFHpA	Perfluoroheptanoic acid
PFHxA	Perfluorohexanoic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
PFPeA	Perfluoropentanoic acid
QA/QC	quality assurance/quality control
QSM	Quality Systems Manual
RL	Reporting Limit

SFV	San Fernando Valley
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

1. INTRODUCTION

1.1 Terms of Reference

On behalf of the Burbank-Glendale-Pasadena Airport Authority (the Authority), Geosyntec Consultants, Inc. (Geosyntec) has prepared this *Per- and Polyfluoroalkyl Substances (PFAS) Groundwater and Supplemental Soil Investigation Report* (the Report) for the Hollywood Burbank Airport[1] (the Airport) to fulfill the requirements of *Water Code Section 13267 Order WQ 2019-0005-DWQ for the Determination of the Presence of Per- and Polyfluoroalkyl Substances at Bob Hope, Airport ID BUR, Los Angeles County, T10000012771* (the Order). The Order was issued by the State Water Resources Control Board and transmitted to the Authority by the Los Angeles Regional Water Quality Control Board (LARWQCB) and was dated 20 March 2019. The Order required (i) the preparation of a Work Plan to conduct a site investigation to determine whether soil or groundwater is impacted by PFAS, and (ii) to provide a final sampling and analysis report (LARWQCB, 2019a).

In accordance with the Order, Geosyntec prepared the *Per- and Polyfluoroalkyl Substances (PFAS) Investigation Work Plan* (Soil Work Plan) dated 11 June 2019 to perform soil investigation at four locations (SB-1 through SB-4) where PFAS may have potentially released in the subsurface at the Airport (Geosyntec, 2019a). The Soil Work Plan was approved by the LARWQCB (LARWQCB, 2019b) in a letter dated 20 August 2019 (the Letter) with the following additional scope that was either indicated in the Letter or agreed upon between the LARWQCB and the Airport during phone conversations (also documented in an email dated 26 November 2019 from Jake Sneider of Geosyntec to Nicole Alkov of the LARWQCB).

1. Add an additional soil sample location (SB-5) near the aqueous film-forming foam (AFFF) aboveground storage tank (AST) in the fuel farm area;
2. Add two soil sample locations (SB-6 and SB-7) at the two former burn pits[2];
3. Drill each of the now seven locations to 50 feet (ft) below ground surface (bgs) instead of the proposed 30 ft bgs, while collecting and analyzing soil samples at the surface (at 1 ft bgs), then every 5 ft to 30 ft bgs, then every 10 ft to 50 ft bgs.

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[1] The Order refers to the Airport as "Bob Hope" based on the FAA's Airport Master Record's website. Although the Airport's legal name is the Bob Hope Airport, the Airport is now publicly referred to as the Hollywood Burbank Airport and will be referred to as such in this Work Plan. The Authority owns and operates the Hollywood Burbank Airport.

[2] After submittal of the Soil Work Plan, further due diligence work conducted by the Airport staff revealed that there were two former burn pit areas potentially used by former occupants of the Airport to conduct training activities utilizing fire-suppression materials potentially including AFFF. Upon learning of these burn pit areas, Airport staff instructed Geosyntec to conduct sampling in these areas in addition to the scope proposed in the Soil Work Plan and to also notify the LARWQCB.

Geosyntec implemented the Soil Work Plan including the additional scope and submitted the *PFAS Soils Investigation Report* to the LARWQCB on 6 February 2020 (Geosyntec, 2020).

In addition to the above, the Letter also required the preparation of separate groundwater sampling work plan to investigate the presence of PFAS in groundwater monitoring wells within the immediate/surrounding area of the Airport. In accordance with this requirement, Geosyntec prepared *PFAS Groundwater Sampling Work Plan* (GW Work Plan) and submitted to the LARWQCB on 27 November 2019 (Geosyntec, 2019b). The GW Work Plan proposed collecting and analyzing groundwater samples from six selected existing monitoring wells (owned by Lockheed Martin Corporation [LMCO]) screened in the first occurring groundwater unit located within and in the close vicinity of the Airport via low flow sampling. The LARWQCB approved the GW Work Plan in its letter dated 20 April 2020 and requested collection and analysis of an additional grab groundwater sample from the former soil sample location SB-5 via a temporary well or Hydropunch™ (LARWQCB, 2020). To be able to understand the grab groundwater data from that sampling location, it was further decided (after discussion with the Airport) to also collect soil samples at the SB-5 adjacent location at every 10-foot interval starting from 60[3] ft bgs to the depth of groundwater.

This document reports the implementation of the GW Work Plan including the additional scope listed above.

On behalf of Geosyntec, the investigation was managed by Mital Desai and Julia Loper. The Report was prepared by Mital Desai and Julia Loper and senior review was provided by Ravi Arulanantham and Syed Rehan P.E., in accordance with Geosyntec's quality assurance policies.

1.2 Objectives

The purpose of this Report is to present the results of the PFAS groundwater and soil investigation that was performed pursuant to the GW Work Plan and pertaining additional scope. The Report and its attachments include:

- Scaled maps of the investigation locations;
- Data tables showing the analytical results;

[3] Since SB-5 was already sampled to 44 ft bgs, a sampling next to that original SB-5 location was proposed to be sample from 60 ft bgs to groundwater.

- Boring logs describing subsurface materials encountered;
- Laboratory reports with chain-of custody (COC) documentation;
- Permits from Los Angeles County Department of Public Health (LACDPH); and
- Evaluation of the data, conclusions, and recommendations.

1.3 Report Organization

The remainder of this Report is organized into the following sections:

- Section 2, "*Airport Description and Background*," which describes Airport, historical PFAS storage and use, geology, and hydrogeology;
- Section 3, "GW *Work Plan Implementation*," which describes detail of limited soil and groundwater investigation;
- Section 4, "*Results of Soil and Groundwater Investigation*," which describes the results of investigation as well as Quality Assurance/Quality Control (QA/QC) samples;
- Section 6, "*Conclusion and Recommendation*," and
- Section 7, "*References*."

2. AIRPORT DESCRIPTION AND BACKGROUND

2.1 Airport and Vicinity Description

The Airport is located in the eastern part of the San Fernando Valley, west of the Verdugo Mountains and north of the Santa Monica Mountains on approximately 555 acres at the northwestern corner of the City of Burbank within a developed, urbanized region[4] (Figure 1). The Airport has been in use for commercial, general, and military aviation services since the 1930s. The Authority acquired the initial Airport property in 1978; prior to that, the Airport was owned and operated by LMCO or its predecessors in interest. LMCO also formerly operated industrial facilities to north, south, east, and west of the Airport.

The Airport has two intersecting runways: runway 8/26 runs east-west and is approximately 5,800 feet long; and runway 15/33 runs north-south and is approximately 6,900 feet long. There is one passenger terminal building with two passenger terminals and a total of 14 gates located south of runway 8/26 and east of runway 15/33.

The Airport is fully developed and mostly paved. The terrain of the Airport is relatively flat with surface grading directing stormwater/surface water to the Lockheed Channel, which drains to the Burbank Western Channel, which then flows into the Los Angeles River (RS&H, 2016). Land use immediately surrounding the Airport is primarily industrial, with some commercial and low to high density residential areas generally to the southeast.

The Airport is located within both the North Hollywood Operable Unit and Burbank Operable Unit (BOU) of the San Fernando Valley (SFV) Superfund Area 1. The SFV Area 1 site consists of an area of volatile organic compound (VOC)-contaminated groundwater encompassing approximately 13 square miles beneath the Cities of North Hollywood and Burbank.

The prevalence of former and current industrial land uses in the areas surrounding the Airport suggest that other sources of PFAS may be present.

2.2 Airport Geology

The Airport is located in the San Fernando Valley, which is a Tertiary-Quaternary age sediment-filled basin within the Transverse Ranges geomorphic provinces of southern California (RS&H, 2016). The soils underlying the Airport consist of compacted fill underlain by younger Holocene and late Pleistocene alluvial fan deposits (Geosyntec,

[4] A portion of the Airport property is located within the City of Los Angeles; see Figure 1.

2017), (RS&H, 2016). The alluvium extends to depths of more than 100 ft bgs and consists of unconsolidated gravel, sand, and silt (RS&H, 2016).

2.3 Airport Hydrogeology

The Airport is located within the San Fernando Valley Groundwater basin, which is comprised of water-bearing alluvium overlying bedrock. Groundwater flow at the Airport is towards the southeast. Offsite downgradient groundwater monitoring wells measured in 2017 indicated groundwater underlying the Airport ranges in depth from approximately 230 to 290 ft bgs (Tetra Tech, 2017).

There are operating extraction wells that are part of the BOU treatment system located downgradient of the Airport. The BOU extraction wells are active pumping wells and likely capture groundwater flowing beneath the Airport. A recent capture zone evaluation indicates the BOU extraction wells exert hydraulic containment of the VOC plumes originating from the BOU that underly the Airport (Tetra Tech, 2017).

2.4 Potential On-Site Sources of PFAS

The Federal Aviation Administration (FAA) mandates that federally regulated airports, such as the Hollywood Burbank Airport, maintain and have ready Aircraft Rescue and Firefighting (ARFF) vehicles and has published guidance on types of aircraft fire extinguishing agents, such as AFFF. Thus, AFFF has been used at various airports as a fire-extinguishing agent to prevent, extinguish, or control fires of flammable and combustible liquids such as crude oil, gasoline, and fuel oils. AFFF generates foam that retains water, separates fuel from flame, and ultimately results in fast reduction and containment of fires. AFFF products are diluted prior to use. Currently, the FAA requires that all certified Part 139 airports including the Airport, use AFFF that meet military specifications (MIL-PRF-24385) which contains PFAS compounds (FAA, 2019a). However, due to growing concern over the use and discharge of AFFF at airports, a mandate has been included within the FAA Reauthorization Act of 2018 (FAA, 2019b), directing the FAA to stop requiring the use of fluorinated foam no later than 3 years from the date of enactment (or on October 4, 2021).

Potential areas of PFAS releases were evaluated in the Soil Work Plan using information provided by the Authority regarding current and historical locations for AFFF storage, use, and potential release at the Airport. These potential areas, the corresponding soil investigation location and its results (from 2019 investigation) are discussed in the next section.

2.5 Previous Investigation Summary

As indicated in the Soil Work Plan, the Airport does not have a live-fire drill site (also known as fire training areas [FTA]), in which AFFF may be used to put out live fires in a controlled burn scenario. However, Airport Fire Department (AFD) performs refraction testing, testing of ARFF trucks and routine and non-routine training during which small quantities of AFFF have been used. The above table describes such potential areas and its corresponding soil investigation locations. As noted in Section 1.1, Geosyntec implemented the Soil Work Plan and investigated these seven locations (SB-1 through

Soil Investigation Scope Area	Description of Past Potential Release	Soil Sample Investigation Location
Unpaved area near the T-Hangars	AFFF was reportedly used during refraction testing[5] and Airport Fire Department (AFD) training activities.	SB-1
Unpaved former B-6 property	AFFF was reportedly used during AFD training activities	SB-2
Unpaved dirt lot area north of the Delta Ramp	AFFF was reportedly used during AFD training activities	SB-3
Southwest Flight 1455 (SW 1455) incident area	A one-time use of AFFF was reported to prevent fires at the incident site (the sample location was selected based on historical photographs indicating an area where AFFF was released that was unpaved at the time of the incident).	SB-4
1,500-gallon AFFF AST located at the Fuel Farm area	AFFF may have potentially released during filling or testing operations from this AST, though no release is documented.	SB-5
Two former burn pit areas including the Former Civil Air Patrol Fire Pit and the Former Bunker Simulated Gasoline Fire Pit.	Two former burn pit areas (identified and mapped using historical documents) may have been used by former occupants of the Airport property to conduct training activities utilizing fire-suppression materials potentially including AFFF. The sample locations were placed at the approximate center of each burn pit area.	SB-6 (Former Civil Air Patrol Fire Pit) SB-7 (Former Bunker Simulated Gasoline Fire Pit)

[5] Refraction testing of each ARFF truck operated by the AFD is conducted annually. During this testing, approximately 100 gallons of AFFF is released onto the land surface and tested with a refractometer to evaluate that the foam mixture coming from every appurtenance on each truck matches the required concentration specifications as required by federal FAA standards.

SB-7) of potential PFAS release. The results (Table 1, Figure 2) of this investigation (Geosyntec, 2020) are summarized as follows:

- PFAS compounds were detected at SB-1 (unpaved area near the T-Hangars where AFFF was used during refraction testing and AFD training activities) in 1 and 10 ft bgs soil samples. PFAS were not detected below 10 ft bgs. The results indicate minor release(s) with impact limited to shallow soils at the T-Hangar area.
- With the exception of a few sporadic detections of PFAS in surface and shallow soil samples, PFAS were not detected below 15 ft bgs at SB-2, SB-4 and SB-6. The detections were limited to five, one and four PFAS compounds at locations SB-2 (former B-6 property where AFFF was used during AFD training activities), SB-4 (SW1455 incident area) and SB-6 (former Civil Air Patrol Fire Pit) respectively and at concentrations less than 5 ng/g. The sporadic and less than 5 ng/g detections are not indicative of a release but perhaps indicative of background conditions (although there are no naturally occurring levels of PFAS, background conditions mean anthropogenic background representative of impacts from other industrial sources[6] including aerially deposited PFAS over several years) and due to fairly widespread detection of these compounds observed in environmental samples.
- Four PFAS compounds were sporadically detected at SB-7 (former Bunker Simulated Gasoline Fire Pit); majority of the detections were below 5 ng/g. PFAS was not detected below a depth of 40 ft bgs at SB-7. The sporadic and detections of less than 5 ng/g are not indicative of a release but perhaps indicative of background conditions (defined in the above bullet) and due to fairly widespread detection of these compounds observed in environmental samples.
- PFAS concentrations decreased with depth but were detected through the soil column down to the termination depth at SB-3 (unpaved dirt lot area north of the Delta ramp where AFFF was used during AFD training activities) and SB-5 (1,500-gallon AFFF AST located at the Fuel Farm). However, PFAS were detected at SB-3 at and below 21 ft bgs in concentrations of less than 5 ng/g with the exception of 6:2 Fluorotelomersulfonic acid (6:2 FTS). On the other hand, detections of Perfluorohexanoic acid (PFHxA) and Perfluoropentanoic acid (PFPeA) were generally above 5 ng/g in the entire soil column investigated at SB-5.

In summary, with the exception of SB-3 and SB-5, the data is not indicative of a major release and at some locations are perhaps indicative of background conditions of an industrial land use of more than 80 years. At SB-3, the PFAS detections generally show

[6] The use of PFAS in the US predates World War II.

a decreasing trend with depth, and groundwater in this area is relatively deep (approximately 230 to 290 ft bgs) therefore groundwater impacts from SB-3 are not likely. Further investigation was however proposed in the GW Work Plan to evaluate the groundwater impacts at SB-5 and generally in the vicinity of the Airport as described in Sections 3 and 4.

3. GW WORK PLAN IMPLEMENTATION

3.1 Overview

As indicated in Section 1.1, the investigation included the following scope:

- Collection and analysis of groundwater samples from six selected existing monitoring wells (Figure 2) via low flow sampling;
- Collection and analysis of soil samples from a location adjacent to the previous soil sample location SB-5 (co-located boring is identified as SB-5A, Figure 2) at every 10-foot interval starting from 60 ft bgs to the groundwater; and
- Collection and analysis of a grab groundwater sample from SB-5A via a temporary well or Hydropunch™.

The six groundwater monitoring wells used for sampling were selected from the available LMCO's active monitoring well network in the vicinity of the Airport. Criteria used to select the wells included a) the ability to collect groundwater samples from the first occurring groundwater unit (water table) within and in the close vicinity of the Airport, and b) with logistical challenges (e.g. access issues) that the Authority believes can be resolved in a reasonable time frame and manner. The groundwater and soils investigation described in this section was performed between 8 September 2020 and 17 September 2020 in accordance with the procedures and precautions described in the GW Work Plan and in accordance with the California State Water Quality Control Boards' Per- and Polyfluoroalkyl Substances (PFAS) Sampling Guidelines for Non-Drinking Water dated September 2020 (Guidelines).

3.2 Pre-Field Activities

A project-specific health and safety plan (HASP) was prepared in general accordance with the most current Occupational Safety and Health Administration regulations, including 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response. The HASP was maintained at the Airport and implemented during the activities described herein. Prior to beginning of the fieldwork each day, a tailgate safety meeting was conducted and signed by all field personnel. The entire field team (contractors as well as Geosyntec field staff) was made aware of precautions specific to PFAS sampling including 1) equipment/material that are acceptable/not acceptable for use in PFAS sampling and 2) preventing cross-contamination during the implementation of the scope. Additional health and safety measures related to COVID-19 were amended to the HASP and discussed with the field team.

A drilling permit was obtained from the Los Angeles County Department of Public Health (LACDPH) to conduct drilling activities at SB-5A (Appendix A). In addition, field work

was performed after extensive planning and coordination with the Airport Airfield Operations and other airport management entities to gain access to investigation locations and to conduct work safely.

Prior to the commencement of fieldwork, Dig Alert was notified, and underground utility clearance was completed at investigation location SB-5A. A combination of electromagnetic induction and ground penetrating radar was employed to screen the borehole locations. The boring location was further cleared by hand auger to 5 ft bgs.

3.3 Soil Investigation

After hand augering to a depth of 5 ft bgs, a sonic drill rig (TSI150CC) was advanced by Cascade Drilling Technical Services at location SB-5A via 7-inch core barrel telescoping to 6-inch to a target depth of 250 ft bgs or groundwater. The core barrel produces a relatively undisturbed sample which is then extruded into a clear plastic sleeve. The clear plastic is cut open (length wise) to allow for sampling and logging.

Soil samples were collected for laboratory analysis in 10-foot intervals from 60 ft bgs to 160 ft bgs until refusal was encountered at 165 ft bgs. The soil samples were collected from the center of the plastic sleeve to obtain the undisturbed core. Soil samples were placed in the high-density polyethylene (HDPE) containers provided by the laboratory and were capped immediately and labelled using a ball-point pen.

After samples were collected, the continuous core was logged starting[7] from 50 ft bgs in accordance with the Unified Soil Classification System (USCS) under the supervision of a California Professional Geologist (PG), see Appendix B for boring log of SB-5A.

Subsurface conditions (i.e. encountering large cobbles) resulted in drilling refusal at 165 ft bgs. An effort to drill through the refusal caused the drill rod to snap at about 70 ft bgs, leaving almost 100 feet of tooling in the ground. After multiple attempts, all tooling except for the drilling shoe were retrieved. The borehole could not be advanced without retrieving the shoe. After discussion with Nicole Alkov of the LARWQCB, who was present at the Site at that time, a decision was made to abandon the borehole at a depth of 165 ft bgs. The borehole was backfilled with Portland cement grout via tremie pipe and capped with concrete to match the existing surface. As a result of refusal at 165 ft bgs, groundwater was not encountered which is relatively deep (approximately 230 to 290 ft bgs).

[7] SB-5 was already logged to 44 ft bgs during the soil PFAS investigation in 2019 and therefore logging at nearby SB-5A began at 50 ft bgs.

3.3.1 Sample Handling

Soil samples were labeled with a unique identifier based on the sample location (SB-5A), followed by a hyphen and the depth of sample in ft bgs (e.g., soil sample collected at a depth of 60 ft bgs was designated as SB-5A-60). The samples were logged on laboratory Chain of Custody (COC) forms and placed in a sealed ice chest with double-bagged ice for shipment to the laboratory.

3.3.2 Laboratory Analysis

Soil samples were analyzed for 23 PFAS analytes via Modified USEPA Method 537 by Eurofins Test America (Eurofins) of Sacramento, CA, consistent with the Order. Sample bottles and PFAS-free water were provided by Eurofins. Eurofins is accredited by the California Environmental Laboratory Accreditation Program (ELAP) for PFAS analyses in compliance with Department of Defense (DOD) Table B-15 of Quality System Manual (QSM) Version 5.1 or later.

3.3.3 Decontamination Procedures

Non-dedicated reusable large sampling equipment (e.g., core barrels) was decontaminated before initiation of sampling operations and between depth intervals using potable water and a high-pressure washer.

Smaller equipment (e.g. drill shoe, hand auger) were decontaminated via a "three-bucket-wash" method. The equipment was first washed using a solution of Liquinox® made with potable water, followed by a first rinse using distilled water and a second rinse with laboratory-certified, PFAS-free water.

3.3.4 Location Mapping

The location of the soil boring SB-5A was mapped in the field by measuring distances to nearby structures and/or features.

3.4 Groundwater Investigation

Groundwater samples were collected from the six selected existing groundwater monitoring wells (Table 2, Figure 2) in general accordance with the *Revised Final Focused Feasibility Study Groundwater Monitoring Sampling and Analysis Plan* for BOU dated 29 March 2019 (Brown and Caldwell/SLR International, 2019).

Fourteen (14) days prior to collecting samples, dedicated pumps and tubing installed in five out of six wells were removed because the material of construction of these pumps, its components or its tubing were not compatible for PFAS sampling. Based on the

hydraulic conductivity in the area and professional judgement, 14 days was ample time for the standing water column to be replaced with fresh formation water. Well C-1-CW06 had dedicated pump (QED's Well Wizard® Zero Model # P1101HM-Z) and HDPE tubing which are compatible for PFAS sampling and were therefore not removed.

After 14 days of pump removal, groundwater sampling was performed using low-flow sampling techniques via the following equipment:

- A-1-CW03R, A-1-CW09, C-1-CW03 and C-1-CW08 – non-dedicated 3-inch Grundfos Model # 5SQ450 with disposable HDPE tubing
- B-6-CW10 - non-dedicated QED Sample Pro bladder[8] pump with disposable HDPE tubing
- C-1-CW06 – dedicated QED's Well Wizard® Zero Model # P1101HM-Z with HDPE tubing

Groundwater was purged via submersible pumps at a range of 200 to 600 ml per minute with little to no water level drawdown until the field water quality parameters such pH, electrical conductivity (EC), temperature, oxidation-reduction potential (ORP), dissolved oxygen (DO), total dissolved solids (TDS) and turbidity levels of the purge water stabilized to approximately within the following metrics:

- ±0.1 units for pH;
- ±3% for EC;
- ±10 mV for ORP;
- ±3% for temperature;
- ±10% for turbidity; and
- ±10% for DO

The groundwater level at each well was also measured (Table 2) prior to and during the purging. The groundwater monitoring logs with the field water quality parameter measurements is provided in Appendix C. Once steady-state conditions were reached during purging, groundwater samples were collected in 250-ml HDPE bottles (2 bottles

[8] An obstruction was encountered in this well not allowing the 3-inch Grundos pump to reach the desired depth for sampling. Consequently, a smaller diameter QED Sample Pro Bladder pump was used with LDPE bladder to perform purging and sampling at this well.

per sample) with unlined (no Teflon) polyethylene screw caps for PFAS and for general water chemistry parameters as described in the Order.

The dedicated pumps and tubing removed from the five wells were reinstalled in each well after samples were collected.

3.4.1 Groundwater Sample Handling

The groundwater samples were designated using the monitoring well's ID (e.g., the groundwater sample collected from A-1-CW09 was designated as A-1-CW09 and the groundwater collected from B-6-CW10 was designated as B-6-CW10). The groundwater samples were labeled with unique identifiers as described above, logged on COC forms, and placed in a sealed ice chest with ice for shipment to the laboratory.

3.4.2 Laboratory Analyses

Groundwater samples were analyzed for the mandatory 23 PFAS analytes by Eurofins via Modified USEPA Method 537 compliant with the Order. Sample bottles and PFAS free water was also provided by the laboratory.

In addition to the PFAS analytes, groundwater samples were analyzed for the following general water chemistry parameters by ELAP certified Eurofins Calscience of Garden Grove, California, as indicated in Table 4 of the Order:

- Total dissolved solids via Standard Method (SM) 2540C;
- Chloride, sulfate, and nitrate-nitrogen by United States Environmental Protection Agency (USEPA) 300;
- Carbonate and bicarbonate by SM2320B; and
- Calcium, magnesium, potassium and sodium by USEPA 6010B.

3.4.3 Decontamination

Before collecting groundwater samples, non-dedicated equipment was decontaminated prior to and between each location. Non-dedicated sampling equipment (e.g., water level probes, submersible pump) were decontaminated by the "three-bucket-wash" method. The equipment was first washed using a solution of Liquinox® made with potable water, followed by a first rinse using distilled water and a second rinse using laboratory-certified, PFAS-free water. Although instead of buckets, PVC tubes were used that were long enough to submerge the entire pump. The pump was inserted in the PVC tubes and was allowed to run while recirculating the solution and rinse waters for approximately three minutes for a thorough decontamination.

3.5 Quality Assurance/ Quality Control (QA/QC) Samples

The following QA/QC samples were collected during this investigation.

3.5.1 Field Duplicates

Field duplicates are samples collected in the same manner and at the same time and location as the primary sample. Field duplicates are used to assess field and analytical precision and sample heterogeneity. One field duplicate was collected for every 10 primary soil and groundwater samples.

3.5.2 Matrix Spike and Matrix Spike Duplicate Samples

Matrix spike and matrix spike duplicate (MS/MSD) samples are aliquots of environmental samples that are spiked with a known concentration of PFAS by the laboratory. MS/MSD samples are used to assess interferences caused by the sample matrix. MS/MSD samples were collected in the same manner and at the same time and location as a primary sample (i.e., additional sample mass). MS/MSD samples were collected such that the samples appear visually similar (e.g., color, grain size), to the primary sample. One MS/MSD sample was collected for every 20 primary soil and groundwater samples.

3.5.3 Blanks

Three types of blank samples were collected during this investigation and each was shipped and handled in the same manner as primary environmental samples. The types of blank samples collected include the following:

Equipment Blanks: Equipment blanks are used to assess potential presence of field cross-contamination. Equipment blanks were prepared by pouring PFAS-free water over or through decontaminated reusable field sampling equipment (e.g. core barrel, submersible pumps) and collecting the rinsate in a sample container. One equipment blank was collected each day of sampling. A total of 5 equipment blanks were collected during the soil and groundwater investigation.

Field Blanks: Field blanks are used to assess ambient contamination within the field and laboratory. Field blanks were prepared by filling a sample container with PFAS-free water in the field in the same manner as environmental samples. Field blanks are an effective way of assessing potential cross-contamination as a result of sample handling. One field blank was collected each day of sampling for a total of 5 field blanks.

Temperature Blanks: Temperature blanks are used to assess the temperature of samples during shipping. Temperature blanks were provided by the laboratory by filling a sample container with water prior to shipment of the sample containers. The blank was kept in

the cooler during sampling and shipment to the laboratory. Once the cooler was returned to the laboratory, the temperature of the blank was measured to ensure that recommended sample storage criteria were met (typically less than 6 degrees Celsius).

3.6 Investigation-Derived Waste

Soil cuttings, purge water and decontamination water constitute investigation derived waste (IDW) generated during this investigation. The IDW were contained in Department of Transportation (DOT)-approved 55- gallon drums, properly labeled and stored at a pre-assigned drum storage area located inside the Fuel Farm (for soil IDW) and maintenance yard (for water IDW). The IDW was characterized, profiled, and appropriately disposed of (manifest included in Appendix D).

4. RESULTS

This section describes the results of soil and groundwater investigation performed pursuant to the GW Work Plan and additional scopes described in Section 1.1 and 3.1. The laboratory reports are provided in Appendix E and F for soil and groundwater respectively and are summarized in Table 1 and 3 respectively.

4.1 Soil

The results of soil investigation at SB-5A (co-located with SB-5) are presented in Table 1 and described below:

- Three of the 23 target PFAS compounds were detected in soil samples collected at SB-5A: PFHxA, PFPeA, and Perfluoroheptanoic acid (PFHpA) from 60 to 120 ft bgs. PFAS were not detected in soil samples below 120 ft bgs. The detections from 90 to 120 ft bgs were below 5 ng/g. Although subsurface impacts are evident from 1500-gallon AFFF AST area , the concentrations show decreasing trend with depth (based on results from SB-5 and SB-5A), and indicates (based on results from SB-5A) that the impacts are limited to 120 ft bgs and do not extend to the groundwater which is approximately 230 to 290 ft bgs.

4.2 Groundwater

The results of groundwater investigation are presented in Table 3 and summarized below. The detections in groundwater monitoring wells are likely from other sources not related to Airport's use of AFFF as explained below as well as in Section 5.1:

- At A-1-CW03R, twelve of the 23 target analytes were detected in groundwater sample ranging from 1.8 ng/L to 120 ng/L. Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS) were detected at 7.4 and 15 ng/L respectively. The location of this groundwater monitoring well is hydraulically downgradient of SB-4 (SW 1455 incident area), however, based on the soil results at SB-4 (i.e. only PFOS was detected upto 15 ft bgs, highest concentrations of PFOS was 1.7 ng/L at 5 ft bgs, PFAS compounds were not detected below 15 ft bgs and groundwater is at approximately 220 ft bgs), SW1455 incident area does not appear to be the source of groundwater impact at A-1-CW03R.

- At A-1-CW09 (located hydraulically downgradient of the Airport), ten of the 23 target analytes were detected in groundwater sample ranging from 1.8 ng/L to 21 ng/L. PFOA and PFOS were detected at 3.0 and 3.4 ng/L respectively. A potential PFAS release, from Airport's operation, in the immediate vicinity of this well is not known.

- At B-6-CW10, eight of the 23 target analytes were detected in groundwater sample ranging from 73 ng/L to 670 ng/L. PFOA was detected at 170 ng/g. PFOS was not detected. A potential PFAS release, from Airport's operation, in the close vicinity of this well is not known. The location of this groundwater monitoring well is hydraulically downgradient of SB-1 (near the T-Hangars were AFFF may have been released), SB-2 (former B-6 property where small quantities of AFFF may have been released during training activities), and SB-5/5A (location of 1500-gallon AFFF AST). Based on the soil sampling results at these locations described in Section 2.5 (for SB-1, SB-2 and SB-5) and 4.1 (for SB-5A), these areas do not appear to be the source of groundwater impact at B-6-CW10.

- At C-1-CW03 and C-1-CW08, five and seven of the 23 target analytes were detected in groundwater samples at levels below 5 ng/L. PFOA and PFOS were in the range of non-detect to 4.4 ng/L. The locations of these groundwater monitoring wells are in the vicinity (upgradient and cross gradient) of SB-3 (unpaved dirt lot area north of the Delta Ramp where a minor quantity of AFFF was potentially released during AFD training activities). Although four out of 23 target analytes were detected at SB-3 in the entire soil column investigated (48 ft bgs), the concentrations at and below 21 ft bgs were less than 5 ng/g with the exception of 6:2 FTS. The striking difference between the soil (at SB-3) and groundwater (at C-1-CW03 and C-1-CW08) data is the composition of the PFAS compounds present in them. While 6:2 FTS is the predominant PFAS present in the soil (indicating potential release of newer AFFF formulations), it is non-detect in groundwater of both the samples. Based on this difference in composition and the depth to groundwater (245 to 255 ft bgs), the apparent release at SB-3 while impacted the shallow soil it does not appear to have impacted the groundwater.

- At C-1-CW06, four of the 23 target analytes were detected in groundwater sample ranging from 1.9 ng/L to 5.4 ng/L. PFOA and PFOS were not detected. The location of this groundwater monitoring well is in the vicinity of SB-7 (former Bunker Simulated Gasoline Fire Pit). Based on the sporadic and detections of less than 5 ng/g of four analytes (out of 23 analyzed) at SB-7, groundwater at depth of 235 ft bgs, the potential release at SB-7 does not appear to have impacted the groundwater.

4.3 QA/QC Samples

A QA/QC program was implemented that included testing of blank samples (equipment, field, and laboratory method blanks), field duplicates, and MS/MSD duplicates. PFAS were detected in field QC samples (Equipment Blank, Field blank) above the RL for one day (8 September 2020) of the sampling program, indicating potential contamination in

the field[9] or laboratory contamination. PFAS were not detected in the field QA/QC samples for remainder of the sampling event. The QA/QC blank results are presented in Table 4 and the MS/MSD results are presented in Table 5.

4.4 Data Validation

The laboratory data were reviewed and validated by Geosyntec's in-house data validation specialists (Appendix G). The data were validated at a USEPA Stage 2A data validation level, based on the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, January 2017 (EPA 540-R-2017-002); and USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Organic Methods Data Review, April 2016 (USEPA-542-B-2016-001), as well as by the pertinent methods referenced by the data package and professional and technical judgment.

The laboratory reported data were qualified but are consider acceptable for use in evaluating the results of this investigation. Data should be used within the limitations of the applied qualifications as detailed in Appendix G.

[9] Despite following the precautions for PFAS sampling in accordance with the Guidelines, the field blank sample collected on 8 September had unusually high concentrations of PFOA. This could be potentially related to the poor air quality from a number of wildfires in the area. However, PFOA was not detected in the primary sample.

5. CONCLUSIONS AND RECOMMENDATIONS

This Report presents the results of the groundwater and limited soil investigation that was performed pursuant to the LARWQCB-approved GW Work Plan and the additional scope described in 1.1 and 3.1. Based on the results of the current investigation and the soil investigation performed in 2019, we provide the following conclusions and recommendations.

5.1 Conclusions

Between the soil and groundwater investigations performed at the known or suspect locations of PFAS usage and/or releases at the Airport in 2019 and 2020, the following is concluded for each potential release area:

- AFFF use near the T-Hangars (SB-1) - PFAS compounds were primarily detected in the surface sample (1 ft bgs) and not detected below 10 ft bgs. The results indicate minor release(s) with impact limited to shallow soils and no impact to groundwater.
- AFFF use at the former B-6 property (SB-2) - With the exception of a few sporadic detections of PFAS in surface and shallow soil samples, PFAS were not detected below 5 ft bgs. The sporadic and detections of less than 5 ng/g are not indicative of a release but perhaps indicative of background conditions and also due to fairly widespread detection of these compounds in environmental samples.

- AFFF use north of the Delta Ramp (SB-3) - PFAS concentrations decreased with depth but were detected throughout the soil column down to the termination depth at SB-3 (48 ft bgs). However, PFAS were detected at and below 21 ft bgs in concentrations of less than 5 ng/g with the exception of 6:2 FTS. Although soil impacts are evident at this location, the concentration indicate decreasing trend with depth, the groundwater is deep (245 to 255 ft bgs) and the groundwater concentration at C-1-CW03 and C-1-CW08 do not appear to be impacted from the shallow soil impacts (striking difference between the soil and groundwater composition is observed as discussed in Section 4.2).

- AFFF use at SW1455 incident area (SB-4) – PFOS was the only analyte detected in shallow soils (upto 15 ft bgs) at concentrations less than 5 ng/g. The sporadic and detections of less than 5 ng/g are not indicative of a release but perhaps indicative of background conditions and also due to fairly widespread detection of these compounds in environmental samples.

- 1,500-gallon AFFF AST (SB-5/SB-5A) - PFAS concentrations and number of detected analytes decreased with depth until they reached non-detects level below 120 ft bgs (upto the investigated depth of 160 ft bgs). Although soil impacts are evident at this location, the concentrations indicate decreasing trend with depth and the impacts does not appear to extend beyond 120 ft bgs or reach groundwater.

- Former Civil Air Patrol Fire Pit (SB-6) and former Bunker Simulated Gasoline Fire Pit (SB-7) - Four PFAS compounds were sporadically detected and majority of the detections were below 5 ng/g. The sporadic and detections of less than 5 ng/g are not indicative of a release but perhaps indicative of background conditions and also due to fairly widespread detection of these compounds in environmental samples.

The following is concluded for the groundwater:

- As indicated in the Soil Work Plan and in Section 2.5, Airport does not have a live-fire drill site (or FTA), in which AFFF is used to put out live fires in a controlled burn scenario. The AFFF use/release at the Airport are related to non-FTA such as emergency response location, AFFF storage tanks, fire department testing and training etc. A study performed by Anderson et al to evaluate PFAS occurrence from historical AFFF release at a diverse group of non-FTA sites on active United States Air Force installation indicated that across all sites and media, PFOS was the predominant PFAS detected followed by PFHxS. PFOA was detected but generally at much lower concentrations (Anderson et al., 2016). This profile is also consistent with previous investigation of AFFF-impacted groundwater at FTAs associated with U.S. military installation wherein PFOS and PFHxS are the prominent PFASs detected, followed by PFOA. (Barzen-Hanson and Field, 2015; Moody et al., 2003). The groundwater results from the monitoring wells sampled and presented herein including the BOU[10] extraction wells (Table 6) indicate predominance of PFHxA, followed by PFPeA, followed by PFBA. The significant difference in chemical composition in groundwater from the cited studies to that observed near the vicinity of the Airport, indicates that the groundwater is not likely impacted from AFFF-use/potential release at the Airport but likely from other sources.

[10] Based on the data obtained from Burbank Operable Unit database (https://sdwis.waterboards.ca.gov/PDWW/JSP/MonitoringResults.jsp?tinwsys_is_number=2608&tinwsys_st_code=CA&counter=0).

5.2 Recommendations

The nature and occurrence of PFAS chemicals in soils and groundwater at potential PFAS source areas have been characterized in compliance with, and fulfillment of, the requirements of the Order. Based on the findings and conclusions presented above although soil impacts are observed at certain locations, they do not extend to the groundwater that is relatively deep at the Site. Therefore, Geosyntec recommends no additional investigations at the Airport at this time.

6. REFERENCES

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TABLES

TABLE 1
2019 and 2020 Soil Investigation Results
Hollywood Burbank Airport

Location	Sample Date	Depth (ft bgs)	4:2 Fluorotelomersulfonic acid (FTS)	6:2 FTS	8:2 FTS	N-ethylperfluorooctanesulfonamido-acetic acid (NEtFOSAA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluoroheptanesulfonic Acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)
SB-1	12/10/2019	1	< 2.1	**390**	**4.4**	**2.9 J-**	< 2.1	**14**	< 0.62	< 0.62	**34**	**13**	**77**	< 0.62	**17**	**6.4**	< 3.1	**96**
		5	< 1.9	< 1.9	< 2.9	< 1.9 UJ	< 1.9	< 1.9	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 2.9	< 0.57
		10	< 2.1	< 2.1	< 3.2	< 2.1	< 2.1	< 2.1	< 0.63	< 0.63	**0.95**	**0.82**	**9.9**	< 0.63	< 0.63	< 0.63	< 3.2	**13**
		15	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 3.0	< 0.60
		20	< 2.1	< 2.1	< 3.2	< 2.1	< 2.1	< 2.1	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 3.2	< 0.64
		25	< 2.1	< 2.1	< 3.2	< 2.1	< 2.1	< 2.1	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 3.2	< 0.64
		25 (Duplicate)	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 3.0	< 0.61
		30	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 3.0	< 0.59
		40	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 3.0	< 0.59
		50	< 2.4	< 2.4	< 3.6	< 2.4	< 2.4	< 2.4	< 0.72	< 0.72	< 0.72	< 0.72	< 0.72	< 0.72	< 0.72	< 0.72	< 3.6	< 0.72
SB-2	12/10/2019	1	< 2.1	< 2.1	< 3.2	< 2.1	< 2.1	< 2.1	< 0.64	< 0.64	**1.9**	**3.1**	< 0.64	< 0.64	**2.3**	< 0.64	< 3.2	< 0.64
		5	< 2.0	< 2.0	< 3.1	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	< 0.61	< 0.61	**1.2**	< 0.61	< 0.61	< 0.61	< 3.1	**1.3**
		10	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 3.0	< 0.60
		15	< 1.9	< 1.9	< 2.9	< 1.9	< 1.9	< 1.9	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 2.9	< 0.58
		15 (Duplicate)	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 3.0	< 0.61
		20	< 2.0	< 2.0	< 2.9	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 2.9	< 0.59
		25	< 2.0	< 2.0	< 3.1	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 3.1	< 0.61
		25 (Duplicate)	< 1.9	< 1.9	< 2.8	< 1.9	< 1.9	< 1.9	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 2.8	< 0.57
		30	< 1.9	< 1.9	< 2.8	< 1.9	< 1.9	< 1.9	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 2.8	< 0.57
		40	< 2.1	< 2.1	< 3.1	< 2.1	< 2.1	< 2.1	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 3.1	< 0.63
		48	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 3.0	< 0.59
SB-3	12/11/2019	1	< 2.1	**160**	**160**	< 2.1	< 2.1	**2.2 J**	**3.6**	**1.8**	**18 J**	**48 J**	**19**	**5**	**130**	**17 J**	< 3.2	**15**
		5	< 2.0	**240**	< 2.9	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	**4.6**	**3.4**	**2.6**	< 0.59	< 0.59	**7.1**	< 2.9	**3.6**
		5 (Duplicate)	< 2.0	**250**	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	**6.2**	**3.7**	**3.3**	< 0.61	< 0.61	**7.8**	< 3.0	**4.7**
		10	< 2.0	**250**	< 3.0	< 2.0	< 2.0	**2.4**	< 0.60	< 0.60	**6.8**	**3.3**	**5.4**	< 0.60	< 0.60	**7.2**	< 3.0	**7.3**
		15	< 1.9	**100**	< 2.8	< 1.9	< 1.9	**2.1**	< 0.57	< 0.57	**6.7**	**2.0**	**4.7**	< 0.57	< 0.57	**2.3**	< 2.8	**6.0**
		21	< 2.0	**88**	< 2.9	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	**4.1**	**4.3**	**2.0**	< 0.59	< 0.59	**1.9**	< 2.9	**2.4**
		25	< 1.9	**63**	< 2.8	< 1.9	< 1.9	< 1.9	< 0.56	< 0.56	**2.8**	**1.9**	**1.7**	< 0.56	< 0.56	**0.99**	< 2.8	**1.8**
		25 (Duplicate)	< 2.0	**77**	< 2.9	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	**3.8**	**2.5**	**2.1**	< 0.59	< 0.59	**1.2**	< 2.9	**2.1**
		30	< 2.0	**47**	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	**3.2**	**2.3**	**2.2**	< 0.59	< 0.59	< 0.59	< 3.0	**2.2**
		40	< 1.9	**32**	< 2.9	< 1.9	< 1.9	< 1.9	< 0.57	< 0.57	**2.1**	< 0.57	**2.4**	< 0.57	< 0.57	< 0.57	< 2.9	**2.8**
		48	< 2.0	**50**	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	**2.6**	< 0.60	**4.5**	< 0.60	< 0.60	< 0.60	< 3.0	**4.1**

TABLE 1
2019 and 2020 Soil Investigation Results
Hollywood Burbank Airport

Location	Sample Date	Depth (ft bgs)	4:2 Fluorotelomersulfonic acid (FTS)	6:2 FTS	8:2 FTS	N-ethylperfluorooctanesulfonamido-acetic acid (NEtFOSAA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluoroheptanesulfonic Acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)
SB-4	12/9/2019	1	< 2.2	< 2.2	< 3.3	< 2.2	< 2.2	< 2.2	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 3.3	< 0.66
		5	< 2.1	< 2.1	< 3.1	< 2.1	< 2.1	< 2.1	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	**1.7**	< 0.63	< 3.1	< 0.63
		10	< 2.1	< 2.1	< 3.2	< 2.1	< 2.1	< 2.1	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	< 0.64	**0.69**	< 0.64	< 3.2	< 0.64
		15	< 2.2	< 2.2	< 3.2	< 2.2	< 2.2	< 2.2	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	**0.79**	< 0.65	< 3.2	< 0.65
		20	< 2.1	< 2.1	< 3.1	< 2.1	< 2.1	< 2.1	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 0.63	< 3.1	< 0.63
		25	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 3.0	< 0.60
		30	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 3.0	< 0.60
		40	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 3.0	< 0.59
		50	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 3.0	< 0.60
SB-5	12/9/2019	1	< 2.1	**12**	**15.0**	< 2.1	< 2.1	**2.9**	< 0.63	< 0.63	**3.9**	**4.3**	**8.0**	**0.71**	**4.9**	**2.2**	< 3.1	**15**
		5	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	**2.2**	**0.96**	**4.7**	< 0.61	**0.75**	< 0.61	< 3.0	**5.9**
		10	< 2.0	< 2.0	< 3.0	< 2.0	**3**	**5.9**	< 0.59	< 0.59	**12**	**2.3**	**38**	< 0.59	< 0.59	< 0.59	**3.9**	**35**
		15	< 2.1	**15 J**	< 3.1	< 2.1	**4 J**	**8.2 J**	< 0.62	< 0.62	**5.9 J**	**2.1 J**	**25**	< 0.62	< 0.62	< 0.62	< 3.1	**38**
		15 (Duplicate)	< 1.9	**26 J**	< 2.8	< 1.9	**2.5 J**	**5.3 J**	< 0.57	< 0.57	**11 J**	**4.7 J**	**24**	< 0.57	< 0.57	**1.3**	< 2.8	**29**
		20	< 2.0	**4.5**	< 3.0	< 2.0	**3.7**	**6.4**	< 0.61	< 0.61	**2**	< 0.61	**14**	< 0.61	< 0.61	< 0.61	< 3.0	**23**
		25	**3**	**25**	< 2.9	< 1.9	**23**	**14**	< 0.58	< 0.58	**7.1**	**3.5**	**50**	< 0.58	< 0.58	**1.1**	**4.7**	**46**
		30	< 1.9	< 1.9	< 2.8	< 1.9	**6.6**	**7.0**	< 0.57	< 0.57	**1.9**	< 0.57	**21**	< 0.57	< 0.57	< 0.57	< 2.8	**26**
		40	< 2.1	< 2.1	< 3.1	< 2.1	< 2.1	**3.0**	< 0.62	< 0.62	**1.4**	< 0.62	**13**	< 0.62	< 0.62	< 0.62	< 3.1	**16**
		44	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	**4.7**	< 0.60	< 0.60	< 0.60	< 3.0	**6.7**
SB-5A	9/8/2020	60	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	**1.1**	< 0.61	**3.9**	< 0.61	< 0.61	< 0.61	< 3.0	**2.7**
		70	< 2.0 UJ	< 2.1 UJ	< 3.1 UJ	< 2.1 UJ	< 2.1 UJ	< 2.1 UJ	< 0.62 UJ	< 0.62 UJ	**1.5 J**	< 0.62 UJ	**6.3 J**	< 0.62 UJ	< 0.62 UJ	< 0.62 UJ	< 3.1 UJ	**6.1 J**
	9/9/2020	80	< 2.0	< 2.1	< 3.1	< 2.1	< 2.1	< 2.1	< 0.62	< 0.62	**2.8**	< 0.62	**6.4**	< 0.62	< 0.62	< 0.62	< 3.1	**7.4**
		80 (duplicate)	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	**2.8**	< 0.61	**7.2**	< 0.61	< 0.61	< 0.61	< 3.0	**7.7**
		90	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	**1.1**	< 0.60	**3.0**	< 0.60	< 0.60	< 0.60	< 3.0	**2.6**
		100	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	**1.2**	< 0.61	**5.5**	< 0.61	< 0.61	< 0.61	< 3.0	**3.3**
		110	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	**2.8**	< 0.60	< 0.60	< 0.60	< 3.0	**3.7**
		120	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	**2.4**	< 0.60	< 0.60	< 0.60	< 3.0	**2.9**
		130	< 2.3	< 2.3	< 3.4	< 2.3	< 2.3	< 2.3	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 3.4	< 0.69
	9/10/2020	140	< 2.0	< 2.0	<2.0	< 2.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.49	< 0.20	< 0.20	< 0.20
		150	< 2.0	< 2.0	<2.0	< 2.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.51	< 0.20	< 0.20	< 0.20
		160	< 1.9	< 1.9	< 1.9	< 1.9	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.48	< 0.19	< 0.19	< 0.19

Location	Sample Date	Depth (ft bgs)	4:2 Fluorotelomersulfonic acid (FTS)	6:2 FTS	8:2 FTS	N-ethylperfluorooctanesulfonamido-acetic acid (NEtFOSAA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluoroheptanesulfonic Acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)
SB-6	12/12/2019	1	< 2.2	< 2.2	< 3.3	< 2.2	< 2.2	< 2.2	< 0.67	< 0.67	< 0.67	**3.3**	< 0.67	< 0.67	< 0.67	**2.5**	< 3.3	< 0.67
		5	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 3.0	< 0.61
		10	< 1.9	< 1.9	< 2.9	< 1.9	< 1.9	< 1.9	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 2.9	< 0.58
		15	< 2.1	< 2.1	< 3.1	< 2.1	< 2.1	< 2.1	< 0.63	< 0.63	< 0.63	< 0.63	**1.5**	< 0.63	< 0.63	< 0.63	< 3.1	**0.75**
		20	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 3.0	< 0.59
		25	< 2.1	< 2.1	< 3.1	< 2.1	< 2.1	< 2.1	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 3.1	< 0.62
		30	< 1.9	< 1.9	< 2.9	< 1.9	< 1.9	< 1.9	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 0.58	< 2.9	< 0.58
		36	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 3.0	< 0.61
SB-7	12/11/2019	1	< 2.1	< 2.1	< 3.1	< 2.1	< 2.1	< 2.1	< 0.63	< 0.63	< 0.63	**1.3**	< 0.63	< 0.63	**7.3**	< 0.63	< 3.1	**0.67 J**
		1 (Duplicate)	< 2.0	< 2.0	< 3.1	< 2.0	< 2.0	< 2.0	< 0.61	< 0.61	< 0.61	**1.2**	< 0.61	< 0.61	**7.1**	< 0.61	< 3.1	< 0.61 UJ
		5	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	**15**	< 0.60	< 0.60	< 0.60	**4.2**	< 3.0	**0.78**
		10	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 3.0	< 0.60
		15	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	**0.78 J**	< 0.59	< 0.59	< 0.59	< 0.59	< 3.0	< 0.59
		15 (Duplicate)	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	< 0.59 UJ	< 0.59	< 0.59	< 0.59	< 0.59	< 3.0	< 0.59
		20	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 3.0	< 0.59
		25	< 1.9	< 1.9	< 2.9	< 1.9	< 1.9	< 1.9	< 0.58	< 0.58	< 0.58	**0.95**	< 0.58	< 0.58	< 0.58	< 0.58	< 2.9	< 0.58
		30	< 2.2	< 2.2	< 3.2	< 2.2	< 2.2	< 2.2	< 0.65	< 0.65	< 0.65	**1.7**	< 0.65	< 0.65	< 0.65	< 0.65	< 3.2	< 0.65
		40	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 0.60	< 0.60	< 0.60	**1.7**	< 0.60	< 0.60	**1.4**	**0.63**	< 3.0	< 0.60
		50	< 2.2	< 2.2	< 3.3	< 2.2	< 2.2	< 2.2	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 3.3	< 0.66

Notes:
1. Per- and Polyfluoroalkyl Substances (PFAS) were analyzed using Modified USEPA Method 537.
2. Non-Detects (ND) are reported as less than (<) the laboratory reporting limit (RL).
3. Units are in nanogram per gram (ng/g).
4. Results for PFAS compounds with detections above RL are presented herein.
5. ft bgs = feet below ground surface.
6. The values reported herein are validated and appropriate qualifiers are applied as described below:
J = estimated result.
J- = the result is considered estimated with a low bias.
UJ = the non-detect result was considered estimated less than the RL.

TABLE 2
Groundwater Monitoring Well Details
Hollywood Burbank Airport

Well ID	Longitude	Latitude	Screen Interval (ft bgs)	Well Casing Elevation (ft MSL)	Measured Groundwater Depth, Sep 2020 (ft btoc)	Groundwater Elevation, Sep 2020 (ft MSL)
A-1-CW03R	-118.3477984	34.19599564	245 - 285	685.09	219.02	466.07
A-1-CW09	-118.3492954	34.19165819	187 - 227	673.8	207.79	466.01
B-6-CW10	-118.3537748	34.19943291	203 - 253	710.11	233.82	476.29
C-1-CW03	-118.3673061	34.20169313	259 - 280	740.39	253.17	487.22
C-1-CW06	-118.3700434	34.19644946	232 - 252	720.91	235.07	485.84
C-1-CW08	-118.3640485	34.19983052	245 - 285	731.31	246.91	484.4

Notes:
1. Well construction details are courtesy of the *Annual Groundwater Monitoring Report, Second Quarter 2019, Burbank Operable Unit* dated September 2019 (Tetra Tech, 2019).
2. ft bgs = feet below ground surface
3. MSL = Mean Sea Level
4. btoc = below top of casing

TABLE 3
Groundwater Investigation Results
Hollywood Burbank Airport

Location	Sample Date	Water Chemistry									PFAS											
		Chloride	Nitrate as nitrogen	Sulfate	Calcium	Magnesium	Potassium	Sodium	Alkalinity and Bicarbonate (as CaCO3)	Total Dissolved Solids (TDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorohexanesulfanoic acid (PFHxS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanesulfonamide (FOSA)
A-1-CW03R	9/16/2020	**43 F1**	**0.15**	**21**	**38.8**	**11.7**	**6.32**	**26.5**	**135**	**325**	**40**	**86**	**120**	**13**	**7.4**	**1.8**	**3.3**	**20**	**10**	**11**	**15**	**2.4**
A-1-CW09	9/16/2020	**93**	**27**	**84**	**139**	**34.9**	**5.77**	**37.9**	**273**	**875**	**8.9**	**15**	**21**	**2.8**	**2.8**	<1.8	<1.8	**7.1**	**2.3**	**7.4**	**3.4**	**1.8**
A-1-CW09 (duplicate)	9/16/2020	**93**	**27**	**84**	**139**	**34.9**	**5.77**	**37.9**	**273**	**875**	**9.3**	**15**	**21**	**2.6**	**3.0**	<1.8	<1.8	**7.4**	**2.2**	**5.8**	**3.3**	**2.1**
B-6-CW10	9/17/2020	**41**	**5.6**	**67**	**91.9**	**23.9**	**5.25**	**31.3**	**263**	**480 H**	**310**	**670**	**670**	**210**	**170**	< 17	< 17	**73**	**120**	**390**	< 17	< 17
C-1-CW03	9/17/2020	**55**	**14**	**77**	**98.8**	**25.1**	**5.41**	**31.2**	**238**	**530 H**	< 4.1	**2.6**	**1.9**	< 1.7	< 1.7	< 1.7	< 1.7	**3.0**	**1.7**	< 1.7	**1.9**	< 1.7
C-1-CW06	9/17/2020	**22**	**11**	**43**	**96.3**	**22.3**	**4.94**	**29.2**	**282**	**450 H**	**5.4**	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	**1.9**	< 1.7	**3.6**	< 1.7	**3.1**
C-1-CW08	9/17/2020	**49**	**10**	**77**	**101**	**25.2**	**5.33**	**32.3**	**265**	**490 H**	**7.6**	**6.1**	**4.6**	< 1.7	**2.6**	< 1.7	< 3.0	**3.0**	< 1.7	**2.4**	**4.4**	< 1.7

Notes:
1. Per- and Polyfluoroalkyl Substances (PFAS) were analyzed using Modified USEPA Method 537.
2. Non-Detects (ND) are reported as less than (<) the laboratory reporting limit (RL).
3. Water Chemistry units are in milligram/liter (mg/l). PFAS units are in nanogram per liter (ng/L).
4. Results for PFAS compounds with detections above RL are presented herein.
5. The PFAS results reported herein are validated and qualifiers are applied as appropriate.
6. Laboratory applied qualifiers for water chemistry parameters are shown in this table:
F1 = MS and/or MSD recovery exceeds control limits.
H = Sample was prepped or analyzed beyond the specific holding time

TABLE 4
QA/QC Field Blank Results
Hollywood Burbank Airport

Analyte	Equipment Blank (EB)					Field Blank (FB)				
	9/8/2020	9/9/2020	9/10/2020	9/16/2020	9/17/2020	9/8/2020	9/9/2020	9/10/2020	9/16/2020	9/17/2020
Perfluoropentanoic acid (PFPeA)	**2.0**	< 1.6	< 1.8	< 1.8	< 1.7	**9.3**	< 1.6	< 1.8	< 1.8	< 1.6
Perfluorohexanoic acid (PFHxA)	**2.9**	< 1.6	< 1.8	< 1.8	< 1.7	**31**	< 1.6	< 1.8	< 1.8	< 1.6
Perfluoroheptanoic acid (PFHpA)	< 1.6	< 1.6	< 1.8	< 1.8	< 1.7	**6.0**	< 1.6	< 1.8	< 1.8	< 1.6
Perfluorooctanoic acid (PFOA)	< 1.6	< 1.6	< 1.8	< 1.8	< 1.7	**240**	< 1.6	< 1.8	< 1.8	< 1.6

Notes:
1. Per- and Polyfluoroalkyl Substances (PFAS) were analyzed using modified USEPA Method 537.
2. Non-Detects (ND) are reported as less than (<) the laboratory reporting limit (RL).
3. Units are in nanogram per liter (ng/L).

TABLE 5
QA/QC MS/MSD Results
Hollywood Burbank Airport

Analyte	SB-5A-70 12/10/2019						SB-5A-150 12/10/2019						A-1-CW03R 12/11/2019						RPD Limit
	MS	MS % Rec	MSD	MSD % Rec	MS/MSD Limits	RPD	MS	MS % Rec	MSD	MSD % Rec	MS/MSD Limits	RPD	MS	MS % Rec	MSD	MSD % Rec	MS/MSD Limits	RPD	
4:2 FTS	**23.7**	**102**	**10.9**	**47**	**50-138**	**74**	ND	**87**	ND	**91**	**68-143**	**6**	**34.5**	**98**	**34.4**	**93**	**79-139**	**3**	**30**
6:2 FTS	**23.2**	**98**	**10.7**	**45**	**51-141**	**74**	ND	**91**	ND	**97**	**73-139**	**7**	**35.5**	**94**	**35.0**	**89**	**59-175**	**3**	**30**
8:2 FTS	**26.1**	**109**	**10.4**	**43**	**45-153**	**86**	ND	**98**	ND	**101**	**75-135**	**4**	**39.2**	**114**	**35.3**	**104**	**75-135**	**7**	**30**
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	**29.5**	**118**	**13.5**	**54**	**45-150**	**74**	ND	**98**	ND	**98**	**72-132**	**1**	**34.3**	**95**	**36.9**	**108**	**76-136**	**15**	**30**
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	**27.9**	**112**	**11.9**	**48**	**47-159**	**80**	**2.07**	**106**	**2.20**	**112**	**72-132**	**6**	**38.7**	**108**	**36.9**	**108**	**76-136**	**3**	**30**
Perfluorobutanesulfonic acid (PFBS)	**24.8**	**107**	**11.0**	**44**	**63-138**	**77**	**1.70**	**99**	**1.79**	**103**	**69-129**	**5**	**57.6**	**120**	**59.8**	**123**	**< 3.0**	**4**	**30**
Perfluorobutanoic acid (PFBA)	**24.4**	**92**	**11.3**	**39**	**46-196**	**73**	**2.13**	**106**	**2.11**	**105**	**76-136**	**1**	**83.2**	**120**	**81.4**	**112**	**76-136**	**2**	**30**
Perfluorodecanesulfonic acid (PFDS)	**24.6**	**103**	**10.7**	**45**	**60-143**	**79**	**1.96**	**104**	**1.96**	**104**	**71-131**	**0**	**31.8**	**92**	**31.8**	**90**	**71-131**	**0**	**30**
lyfluoroalkyl Substances (PFAS) were analyzed using Modified USEPA	**24.9**	**100**	**11.1**	**45**	**59-138**	**77**	**1.98**	**101**	**1.99**	**102**	**72-132**	**1**	**38.9**	**99**	**42.6**	**107**	**76-136**	**9**	**30**
Perfluorododecanoic acid (PFDoA)	**26.7**	**107**	**12.4**	**50**	**56-146**	**73**	**2.12**	**109**	**1.93**	**98**	**71-131**	**9**	**37.6**	**103**	**40.8**	**108**	**71-131**	**8**	**30**
Perfluoroheptanesulfonic Acid (PFHpS)	**24.2**	**102**	**10.6**	**45**	**70-132**	**78**	**1.91**	**103**	**1.93**	**103**	**76-136**	**1**	**35.8**	**105**	**37.9**	**108**	**76-136**	**6**	**30**
Perfluoroheptanoic acid (PFHpA)	**28.4**	**108**	**14.3**	**51**	**58-159**	**66**	**1.89**	**97**	**1.91**	**97**	**71-131**	**1**	**51.8**	**108**	**50.4**	**102**	**72-132**	**3**	**30**
Perfluorohexanesulfonic acid (PFHxS)	**24.7**	**104**	**10.8**	**45**	**57-138**	**78**	**1.66**	**93**	**1.69**	**94**	**62-122**	**2**	**44.7**	**102**	**46.0**	**103**	**59-119**	**3**	**30**
Perfluorohexanoic acid (PFHxA)	**31.4**	**101**	**16.3**	**40**	**57-144**	**63**	**1.98**	**101**	**1.93**	**98**	**71-131**	**3**	**151**	**90**	**167**	**132**	**73-133**	**10**	**30**
Perfluorononanoic acid (PFNA)	**27.6**	**111**	**12.4**	**50**	**62-146**	**76**	**1.89**	**97**	**2.08**	**106**	**73-133**	**10**	**38.9**	**103**	**38.5**	**100**	**75-135**	**1**	**30**
Perfluorooctanesulfonamide (FOSA)	**23.7**	**95**	**11.0**	**44**	**44-146**	**73**	**1.97**	**101**	**2.08**	**106**	**77-137**	**5**	**44.0**	**116**	**46.2**	**119**	**73-133**	**5**	**30**
Perfluorooctanesulfonic acid (PFOS)	**22.4**	**94**	**9.6**	**40**	**54-131**	**80**	**2.00**	**110**	**1.95**	**107**	**68-141**	**3**	**46.1**	**92**	**49.0**	**98**	**70-130**	**6**	**30**
Perfluorooctanoic acid (PFOA)	**24.8**	**100**	**11.1**	**44**	**59-136**	**77**	**1.88**	**96**	**1.93**	**98**	**72-132**	**3**	**43.0**	**99**	**44.7**	**101**	**70-130**	**4**	**30**
Perfluoropentanesulfonic acid (PFPeS)	**24.9**	**104**	**11.7**	**48**	**63-149**	**72**	**1.90**	**104**	**1.81**	**98**	**66-126**	**5**	**50.6**	**120**	**51.0**	**117**	**66-126**	**1**	**30**
Perfluoropentanoic acid (PFPeA)	**26.7**	**83**	**13.7**	**30**	**65-144**	**64**	**1.87**	**96**	**1.87**	**95**	**69-129**	**0**	**119**	**92**	**115**	**79**	**71-131**	**3**	**30**
Perfluorotetradecanoic acid (PFTeA)	**25.5**	**102**	**11.3**	**45**	**61-149**	**77**	**1.84**	**94**	**1.83**	**93**	**67-127**	**1**	**35.2**	**98**	**33.4**	**90**	**70-130**	**5**	**30**
Perfluorotridecanoic acid (PFTriA)	**26.7**	**107**	**12.5**	**50**	**60-151**	**72**	**2.00**	**102**	**1.97**	**100**	**71-131**	**2**	**33.0**	**92**	**35.2**	**96**	**71-131**	**7**	**30**
Perfluoroundecanoic acid (PFUnA)	**25.9**	**104**	**11.3**	**45**	**56-144**	**79**	**1.95**	**100**	**2.07**	**105**	**66-126**	**6**	**40.9**	**111**	**39.2**	**103**	**68-128**	**4**	**30**

Notes:
1. Per- and Polyfluoroalkyl Substances (PFAS) were analyzed using Modified USEPA Method 537.
2. Non-Detects (ND) are reported as less than (<) the laboratory reporting limit (RL).
3. Units are in nanogram per gram (ng/g).
4. ft bgs = feet below ground surface
5. MS = matrix spike
6. MSD = matrix spike duplicate
7. RPD = relative percent difference

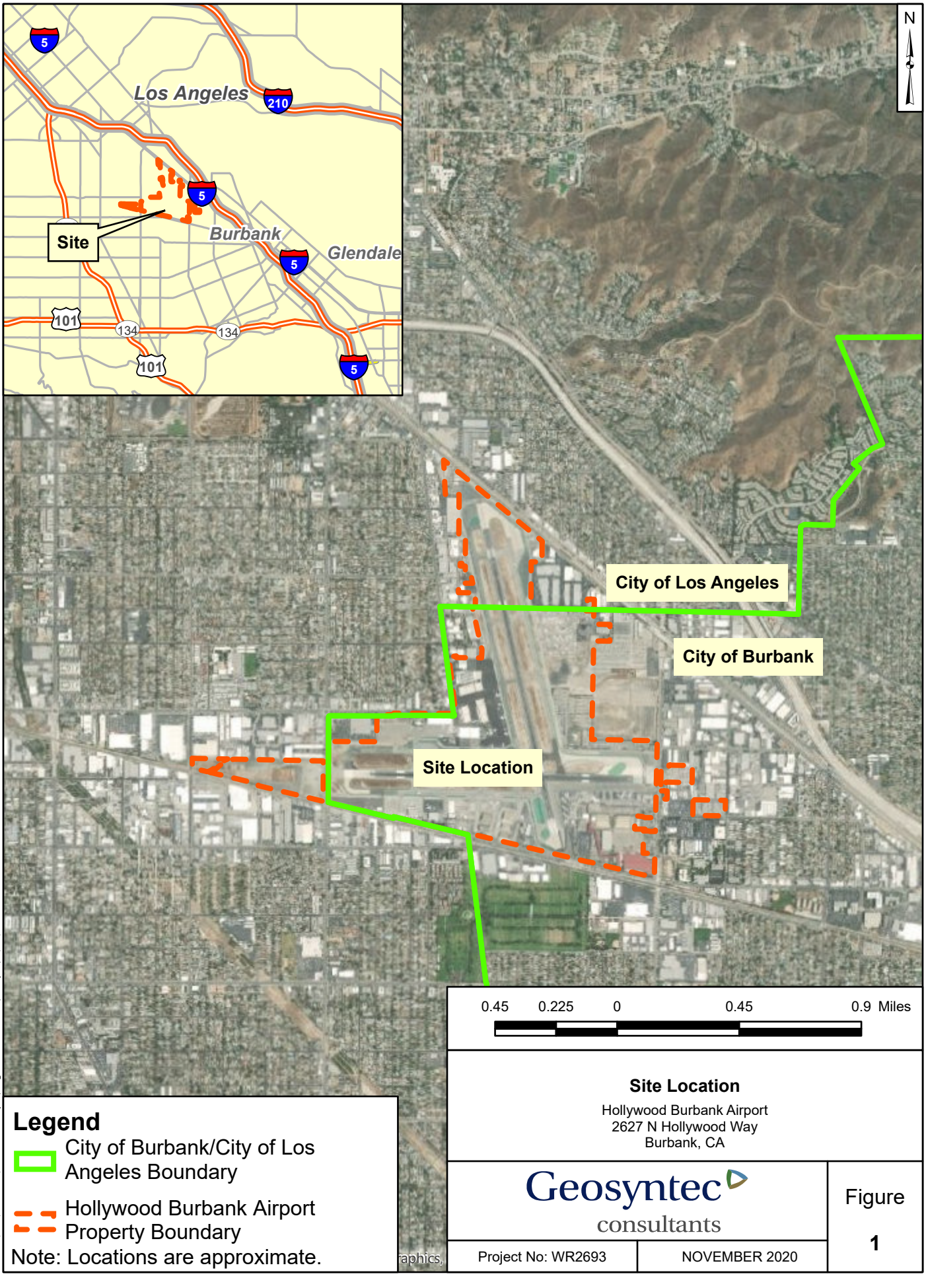
TABLE 6
BOU Extraction Well PFAS Data
Hollywood Burbank Airport

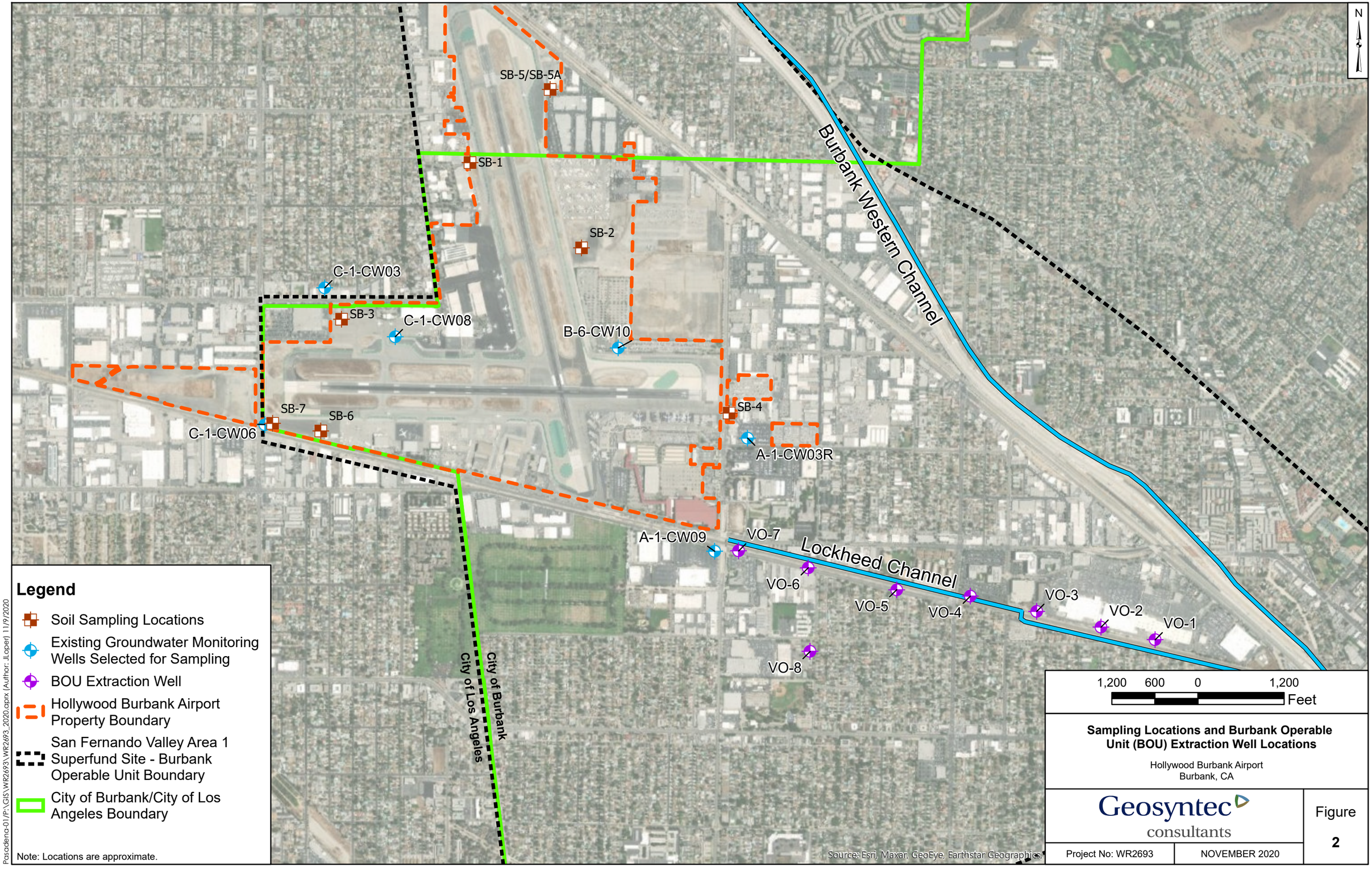
Location	Sample Date	PFAS								
		Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoropentanesulfonic acid (PFPeS)	Perflurohexanesulfanoic acid (PFHxS)	Perfluorooctanesulfonic acid (PFOS)
VO-1	Nov-17	**8.88**	**14.0**	**9.62**	< 2	< 2	**2.42**	< 2	**4.80**	< 2
	May-19	--	--	**69**	**9.4**	< 10	**10**	--	**20**	< 10
	May-20	--	--	**11**	**2.2**	< 2	**2.7**	--	**4.6**	< 2
VO-2	Nov-17	< 5	**4.83**	**3.17**	< 2	< 2	< 2	< 2	< 2	< 2
	May-19	--	--	< 10	< 10	< 10	< 10	--	< 10	< 10
	May-20	--	--	**3.6**	< 2	< 2	< 2	--	< 2	< 2
VO-3	Nov-17	< 5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	May-19	--	--	**15**	< 10	< 10	< 10	--	< 10	< 10
	May-20	--	--	**14**	**6.9**	**3.5**	< 2	--	**11**	< 2
VO-4	Nov-17	**6.18**	**20.1**	**12.0**	**2.28**	< 2	**2.13**	< 2	**8.22**	< 2
	May-19	--	--	**12**	< 10	< 10	< 10	--	**11**	< 10
	Jan-20	--	--	**11**	**2.8**	< 2	< 2	--	**11**	< 2
VO-5	Nov-17	**9.32**	**22.2**	**32.1**	**5.69**	**3.37**	**5.88**	**3.2**	**18.0**	< 2
	May-19	--	--	**73**	< 10	< 10	< 10	--	**22**	< 10
	May-20	--	--	**24**	**3.4**	**2.7**	**5**	--	**9.4**	**2.2**
VO-6	Nov-17	**11.6**	**12.1**	**16.3**	**3.03**	**3.06**	**3.76**	< 2	**8.15**	**4.6**
	May-19	--	--	**12**	< 10	< 10	< 10	--	**14**	< 10
	May-20	--	--	**8.3**	**3.7**	**5**	**2.3**	--	**17**	**1.7**
VO-7	Nov-17	**12.1**	**7.61**	**7.2**	**2.57**	**3.41**	**3.01**	< 2	**6.96**	**5.57**
	May-19	--	--	< 10	< 10	< 10	< 10	--	< 10	< 10
	Jun-20	--	--	**5.2**	**2**	**3.3**	**2**	--	**5.8**	**7.2**
VO-8	Nov-17	< 5	**2.36**	**2.39**	< 2	< 2	< 2	< 2	**2.50**	**2.41**
	May-19	--	--	< 10	< 10	< 10	< 10	--	< 10	< 10
	May-20	--	--	**14**	< 2	< 2	**7.5**	--	**11**	**2**

Notes:

1. Data sourced from the Burbank Operable Unit database:
https://sdwis.waterboards.ca.gov/PDWW/JSP/MonitoringResults.jsp?tinwsys_is_number=2608&tinwsys_st_code=CA&counter=0
2. Units are in nanogram per liter (ng/L).
3. -- Indicates compound was not analyzed during that sampling period.

FIGURES


Los Angeles
Burbank
Glendale
Site
5
210
101
134
N
City of Los Angeles
City of Burbank
Site Location
0.45 0.225 0 0.45 0.9 Miles
Legend
City of Burbank/City of Los Angeles Boundary
Hollywood Burbank Airport Property Boundary
Note: Locations are approximate.
Site Location
Hollywood Burbank Airport
2627 N Hollywood Way
Burbank, CA
Geosyntec consultants
Project No: WR2693
NOVEMBER 2020
Figure 1
PAS P:\GIS\WR2693\WR2693rev.aprx, Fig1_Site_Location, JLoper, 1/27/2020 11:33 AM


N
SB-5/SB-5A
SB-1
SB-2
C-1-CW03
SB-3
C-1-CW08
B-6-CW10
SB-7
SB-6
C-1-CW06
SB-4
A-1-CW03R
A-1-CW09
VO-7
VO-6
VO-5
VO-4
VO-3
VO-2
VO-1
VO-8
Burbank Western Channel
Lockheed Channel
City of Burbank
City of Los Angeles
Legend
Soil Sampling Locations
Existing Groundwater Monitoring Wells Selected for Sampling
BOU Extraction Well
Hollywood Burbank Airport Property Boundary
San Fernando Valley Area 1 Superfund Site - Burbank Operable Unit Boundary
City of Burbank/City of Los Angeles Boundary
Note: Locations are approximate.
Source: Esri, Maxar, GeoEye, Earthstar Geographics
1,200 600 0 1,200
Feet
Sampling Locations and Burbank Operable Unit (BOU) Extraction Well Locations
Hollywood Burbank Airport
Burbank, CA
Geosyntec consultants
Figure
2
Project No: WR2693
NOVEMBER 2020
Pasadena-01/P:\GIS\WR2693\WR2693_2020.aprx (Author: JLoper) 11/9/2020

APPENDIX A

LACDPH Permit

ENVIRONMENTAL HEALTH

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
BUR PFAS Investigation / WR2693 7617 Arvilla Ave	Burbank	91505	mdesai@geosyntec.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	**WORK PLAN APPROVED** FOR: 1 soil boring	**PERMIT NUMBER:**	SR0231904	**DATE:**	August 26, 2020

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Soil borings shall be sealed pursuant to Section 9 and Appendix B of *California Well Standards - Bulletins 74-90 & Bulletins 74-81* respectively.
  - For Portland cement, it shall be mixed at a ratio of one 94-pound sack of Portland cement 5 to 6 gallons of 'clean' water.
  - ***Up to 6%*** of bentonite may be added to the cement mixture at a ratio of two (2) pounds of bentonite one (1) gallon of 'clean' water, or in accordance with the manufacturer's specification.
  - No hydrated bentonite permitted.
- Sealing materials shall be applied under pressure - from *the bottom of the well or boring proceeding upward in one continuous operation via a tremie pipe or equivalent* - to prevent freefall, jamming or "bridging", voids, dilution of sealing materials, and/or prevent separation of aggregate from sealants.
- Drill cuttings and wastewater shall be disposed of in accordance with all applicable federal, State, and local requirements.
- Sealing materials shall meet *National Sanitation Foundation (NSF 61)* standard.
- Provide temporary cover to the borehole opening whenever work is interrupted.
- Borings or exploration holes must comply with all applicable requirements published in the *California Well Standards (Bulletins 74-81 and 74-90 combined)* and the *Los Angeles County Code, Title 11.*

REHS NO: 5841

Quang Ly, REHS

APPENDIX B

Boring Logs

PROJECT PFAS Investigation
PROJECT LOCATION Burbank, CA
PROJECT NUMBER WR2693

KEY SHEET - CLASSIFICATIONS AND SYMBOLS

GS FORM: KEY 09/99

EMPIRICAL CORRELATIONS WITH STANDARD PENETRATION RESISTANCE N VALUES *

	N VALUE * (BLOWS/FT)	CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH (TONS/SQ FT)
FINE GRAINED SOILS	0 - 2	VERY SOFT	<0.25
	3 - 4	SOFT	0.25 - 0.50
	5 - 8	FIRM	0.50 - 1.00
	9 - 15	STIFF	1.00 - 2.00
	16 - 30	VERY STIFF	2.00 - 4.00
	31 - 50	HARD	>4.00
	>50	VERY HARD	

	N VALUE * (BLOWS/FT)	RELATIVE DENSITY
COARSE GRAINED SOILS	0 - 4	VERY LOOSE
	5 - 10	LOOSE
	11 - 30	MEDIUM DENSE
	31 - 50	DENSE
	>50	VERY DENSE

* ASTM D 1586; NUMBER OF BLOWS OF 140 POUND HAMMER FALLING 30 INCHES TO DRIVE A 2 IN. O.D., 1.4 IN. I.D. SAMPLER ONE FOOT.

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

MAJOR DIVISIONS			SYMBOLS	DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL COARSER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO.4 SIEVE	CLEAN GRAVELS — LITTLE OR NO FINES	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES — APPRECIABLE AMOUNT OF FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING NO.4 SIEVE	CLEAN SANDS — LITTLE OR NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES — APPRECIABLE AMOUNT OF FINES	SM	SILTY SANDS, SAND-SILT MIXTURES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL FINER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILT
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT

NOTE: DUAL SYMBOLS USED FOR BORDERLINE CLASSIFICATIONS

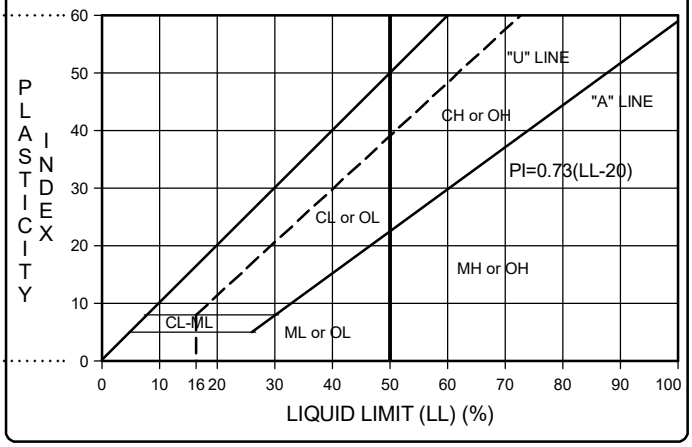
PARTICLE SIZE IDENTIFICATION

USCS (SOILS ONLY) *		SEDIMENTARY (ROCK ONLY)	
BOULDER	>300 mm	BOULDER	>256 mm
COBBLE	75 - 300 mm	COBBLE	64 - 256 mm
GRAVEL: COARSE	20 - 75 mm	PEBBLE	4 - 64 mm
GRAVEL: FINE	4.75 - 20 mm	GRANULE	2 - 4 mm
		SAND: V. COARSE	1 - 2 mm
SAND: COARSE	2 - 4.75 mm	SAND: COARSE	0.5 - 1 mm
SAND: MEDIUM	0.42 - 2 mm	SAND: MEDIUM	0.25 - 0.5 mm
SAND: FINE	0.074 - 0.42 mm	SAND: FINE	0.125 - 0.25 mm
		SAND: V. FINE	0.063 - 0.125 mm
SILT/CLAY	<0.074 mm	SILT	0.004 - 0.063 mm
		CLAY	<0.004 mm

* WELL GRADED - HAVING WIDE RANGE OF GRAIN SIZES AND APPRECIABLE AMOUNTS OF ALL INTERMEDIATE PARTICLE SIZES
* POORLY GRADED - PREDOMINANTLY ONE GRAIN SIZE, OR HAVING A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING

PERCENTAGE OF PARTICLE TYPE IN DECREASING ORDER OF PARTICLE SIZE (GRAVEL,SAND,FINES)

PLASTICITY CHART



OTHER MATERIAL SYMBOLS

- Siltstone
- Sandstone
- Siltstone/Claystone
- Claystone
- Shale
- Siltstone/Sandstone
- Conglomerate
- Granite
- Sand
- Silt
- Silty Sand to Sand with Silt
- Landslide Debris
- Artificial Fill
- Refuse

WELL SYMBOLS

- BENTONITE SEAL
- GROUT
- FILTER PACK
- SAND PACK
- NATIVE/SLUFF
- CONCRETE
- CENTRAL-IZER

SAMPLER AND OTHER SYMBOLS

- BULK SAMPLE
- STANDARD PENETRATION TEST
- SHELBY TUBE
- CORE SAMPLE
- MODIFIED CALIFORNIA SAMPLE
- DRIVE SAMPLE

- Water Level at Time Drilling, or as Shown
- Static Water Level
- Pump Inlet
- Loss Drilling Fluid
- MSL: Mean Sea Level
- AGS: Above Ground Surface
- BGS: Below Ground Surface
- BTOC: Below Top of Casing
- HSA: Hollow Stem Auger

KEY_BURBANK_SB-5A.GPJ GEOSNTEC.GDT 11/6/20

Geosyntec consultants
2100 Main St
Suite 150
Huntington Beach, CA 92648
Tel: (714) 969-0800
Fax: (714) 969-0820

GS FORM: WELL BORE 01/04

BOREHOLE LOG

BORING SB-5A
START DRILL DATE Sep 8, 20
FINISH DRILL DATE Sep 11, 20
LOCATION Burbank, CA
PROJECT PFAS Investigation
NUMBER WR2693

ELEVATION DATA:
GROUND SURF. (Ft)
TOP OF CASING (Ft)
DATUM

DEPTH (ft-bgs)	DESCRIPTION (1) Unit/Formation, Mem. (2) USCS Name (3) Color (4) Moisture (5) Percent Grain Size (6) Plasticity (7) Density/Consistency (8) Structure (9) Other (Mineralization, Discoloration, Odor, etc.)	GRAPHIC LOG	WELL LOG	GROUNDWATER OR STRUCTURE	ELEVATION (ft)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT	RECOVERY (%)	PID/FID (ppm)	TIME (00:00)	COMMENTS (1) Rig Behavior (2) Air Monitoring
	For lithology shallower than 50 ft bgs, see boring log SB-5.											
50	Poorly-graded SAND with SILT (SP-SM); pale brown (10YR, 6/3); moist; fine to coarse sand; higher percentage fine and medium sand; (10, 80, 10)										1325	Few cobbles 4" in diameter.
55	Silty SAND with GRAVEL (SM); yellowish brown (10YR, 5/2); moist; fine to coarse sand; higher percentage fine sand; angular gravel up to 3-inch; (15, 70, 15)											Few cobbles 4" in diameter; some pulverization.
60						SB-5A-60			100		1433	Few cobbles 4" in diameter.
	Well-graded SAND with GRAVEL (SW); yellowish brown (10YR, 5/4); moist; fine to coarse sand; angular gravel up to 3-inch; (30, 70, TR)											Few cobbles 4" in diameter.
65												
	Poorly-graded SAND with GRAVEL (SP); yellowish brown (10YR, 5/4); moist; fine to coarse sand; higher percentage coarse sand; angular gravel up to 3-inch; (30, 70, TR)											Few cobbles 4" in diameter.
70						SB-5A-70			100		0741	Boring paused at 70 ft bgs on 9/8/2020. Resumed on 9/9/2020.
	Poorly-graded SAND with GRAVEL (SP-SM); dark grayish brown (10YR, 4/2); moist; fine to coarse sand; higher percentage coarse sand; angular gravel up to 3-inch; (5, 80, 15)											Few cobbles 4" in diameter.
75	Poorly-graded SAND (SP); brown (10YR, 5/3); moist; fine to coarse sand; higher percentage coarse sand; (10, 85, 5)											Few cobbles 4" in diameter.
	Silty SAND with GRAVEL (SM); grayish brown (10YR, 5/2); moist; fine to coarse sand; higher percentage medium sand; angular gravel up to 3-inch; (20, 70, 10)											High pulverization.
80	Poorly-graded SAND with GRAVEL (SP); brown (10YR, 5/3); moist; fine to coarse sand; higher percentage coarse sand; angular gravel up to 3-inch; (20, 80, TR)					SB-5A-80 SB-5A-80-DUP			100		0850	
												High pulverization at 83 ft bgs.
85												Few cobbles 4" in diameter.
	Poorly-graded SAND with GRAVEL (SP); brown (10YR, 4/3); moist; fine to coarse sand; higher percentage coarse sand; angular gravel											Many cobbles 4-7" in diameter; high pulverization.
90												

CONTRACTOR CASCADE
EQUIPMENT TSI150CC
DRILL MTHD Sonic LAR
DIAMETER 7" to 6" telescopic core barrel
LOGGER J. Loper
REVIEWER S. Siciliano (PG, CEG)

LATITUDE 34°12'33" N
EASTING 118°21'25" W
COORDINATE SYSTEM:

NOTES:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

07-WELL BORE BURBANK_SB-5A.GPJ GEOSNTEC.GDT 11/6/20

Geosyntec consultants
2100 Main St
Suite 150
Huntington Beach, CA 92648
Tel: (714) 969-0800
Fax: (714) 969-0820

GS FORM: WELL BORE 01/04

BOREHOLE LOG

BORING SB-5A
START DRILL DATE Sep 8, 20
FINISH DRILL DATE Sep 11, 20
LOCATION Burbank, CA
PROJECT PFAS Investigation
NUMBER WR2693

ELEVATION DATA:
GROUND SURF. (Ft)
TOP OF CASING (Ft)
DATUM

DEPTH (ft-bgs)	DESCRIPTION (1) Unit/Formation, Mem. 2) USCS Name 3) Color 4) Moisture 5) Percent Grain Size 6) Plasticity 7) Density/Consistency 8) Structure 9) Other (Mineralization, Discoloration, Odor, etc.)	GRAPHIC LOG	WELL LOG	GROUNDWATER OR STRUCTURE	ELEVATION (ft)	SAMPLE NO.	TYPE	BLOW COUNT	RECOVERY (%)	PID/FID (ppm)	TIME (00:00)	COMMENTS (1) Rig Behavior 2) Air Monitoring
	up to 3-inch; (30, 70, TR)					SB-5A-90			100		0947	High pulverization from 90-91 ft bgs; mostly rock powder. Few cobbles 4-5" in diameter; high pulverization.
95	Poorly-graded SAND with GRAVEL (SP); grayish brown (10YR, 5/2); moist; fine to coarse sand; higher percentage medium to coarse sand; angular gravel up to 3-inch; (30, 65, 5)										0947	Some soil collected in bucket, not in collection sleeve; high pulverization, especially at 97-98 ft bgs.
100	Increasing percentage of coarse SAND; brown (10YR, 4/3)					SB-5A-100			80		0947	
											1307	High pulverization from 102.5-104 ft bgs; mostly rock powder. Few cobbles 4-5" in diameter. Few cobbles 4" in diameter.
105	Poorly-graded SAND with GRAVEL (SP); brown (10YR, 5/3); moist; fine to coarse sand; higher percentage medium sand; angular gravel up to 3-inch; (45, 55, TR)		NR								1307	
	Soil not captured in bag; no recovery										1307	
	Poorly-graded SAND with GRAVEL (SP-SM); grayish brown (10YR, 5/2); moist; fine to coarse sand; higher percentage fine to medium sand; angular gravel up to 3-inch; (15, 75, 10)											
110	Brown (10YR, 4/3)					SB-5A-110					1307	Few cobbles 4-5" in diameter. High pulverization from 109.5-110 ft bgs and 111-115 ft bgs.
115	Poorly-graded SAND with GRAVEL (SP-SM); grayish brown (10YR, 5/2); moist; fine to coarse sand; higher percentage coarse sand; angular gravel up to 3-inch; (20, 70, 10)										1454	High pulverization from 115-119 ft bgs.
120						SB-5A-120			100		1528	High pulverization from 120-125 ft bgs; mostly rock powder from 121.5-125 ft bgs.
125	Poorly-graded SAND with GRAVEL (SP-SM); grayish brown (10YR, 5/2); moist; fine to coarse sand; higher percentage coarse sand; angular gravel up to 3-inch; (15, 75, 10)											Few cobbles 4" in diameter; high pulverization.
130						SB-5A-130					1528	
	Dark yellowish brown (10YR, 4/4)										0854	Boring paused at 132.5 ft bgs on 9/9/2020. Resumed on 9/10/2020.
135												

CONTRACTOR CASCADE
EQUIPMENT TSI150CC
DRILL MTHD Sonic LAR
DIAMETER 7" to 6" telescopic core barrel
LOGGER J. Loper
REVIEWER S. Siciliano (PG, CEG)

LATITUDE 34°12'33" N
EASTING 118°21'25" W
COORDINATE SYSTEM:

NOTES:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

07-WELL BORE BURBANK_SB-5A.GPJ GEOSNTEC.GDT 11/6/20

Geosyntec consultants
2100 Main St
Suite 150
Huntington Beach, CA 92648
Tel: (714) 969-0800
Fax: (714) 969-0820

GS FORM: WELL BORE 01/04

BOREHOLE LOG

BORING SB-5A
START DRILL DATE Sep 8, 20
FINISH DRILL DATE Sep 11, 20
LOCATION Burbank, CA
PROJECT PFAS Investigation
NUMBER WR2693

ELEVATION DATA:
GROUND SURF. (Ft)
TOP OF CASING (Ft)
DATUM

DEPTH (ft-bgs)	DESCRIPTION (1) Unit/Formation, Mem. (2) USCS Name (3) Color (4) Moisture (5) Percent Grain Size (6) Plasticity (7) Density/Consistency (8) Structure (9) Other (Mineralization, Discoloration, Odor, etc.)	GRAPHIC LOG	WELL LOG	GROUNDWATER OR STRUCTURE	ELEVATION (ft)	SAMPLE NO.	TYPE	BLOW COUNT	RECOVERY (%)	PID/FID (ppm)	TIME (00:00)	COMMENTS (1) Rig Behavior (2) Air Monitoring
											0926	Few cobbles 4" in diameter; some pulverization.
	Poorly-graded SAND with GRAVEL (SP-SM); dark yellowish brown (10YR, 4/4); moist; fine to coarse sand; higher percentage coarse sand; angular gravel up to 3-inch; (30, 60, 10)											
140	Poorly-graded SAND with GRAVEL (SP-SM); dark yellowish brown (10YR, 4/4); moist; fine to coarse sand; higher percentage coarse sand; angular gravel up to 3-inch; (15, 80, 5)					SB-5A-140					0926	High pulverization at 140 ft bgs.
145	Poorly-graded SAND with GRAVEL (SP-SM); dark yellowish brown (10YR, 4/4); moist; fine to coarse sand; higher percentage coarse sand; angular gravel up to 3-inch; (20, 75, 5)											High pulverization.
	Poorly-graded SAND with GRAVEL (SP); dark grayish brown (10YR, 4/2); moist; medium to coarse sand; angular gravel up to 3-inch; (40, 65, 0)										1026	High pulverization.
150	Poorly-graded SAND (SP-SM); brown (10YR, 5/3); moist; fine to coarse sand; higher percentage medium sand; (10, 85, 5)					SB-5A-150			75		1026	
	Increasing percentage of coarse SAND; dark yellowish brown (10YR, 4/4)											
155	Poorly-graded SAND with GRAVEL (SP); grayish brown (10YR, 5/2); moist; fine to coarse sand; higher percentage fine to medium sand; angular gravel up to 3-inch; (40, 65, 0)										1026	High pulverization at 154 ft bgs. High pulverization.
160	Refusal; soil not recovered					SB-5A-160					1026	Boring paused at 160 ft bgs on 9/10/2020. Resumed on 9/11/2020.
165	Total Depth: 165 ft bgs. Groundwater not encountered; borehole backfilled with portland cement and capped with concrete.											Boring completed on 9/11/2020 at 15:45.
170												
175												
180												

CONTRACTOR CASCADE
EQUIPMENT TSI150CC
DRILL MTHD Sonic LAR
DIAMETER 7" to 6" telescopic core barrel
LOGGER J. Loper
REVIEWER S. Siciliano (PG, CEG)

LATITUDE 34°12'33" N
EASTING 118°21'25" W
COORDINATE SYSTEM:

NOTES:

SEE KEY SHEET FOR SYMBOLS AND ABBREVIATIONS

07-WELL BORE BURBANK_SB-5A.GPJ GEOSNTEC.GDT 11/6/20

Geosyntec consultants

APPENDIX C

Groundwater Monitoring Logs

LOW FLOW WELL MONITORING DATA SHEET

Project #: 200916BR-1	Client: Grosvenor
Sampler: BR	Gauging Date: 9.16.20
Well I.D.: A-1-CW03R	Well Diameter (in.): 2 3 4 6 8 (5)
Total Well Depth (ft.):	Depth to Water (ft.): 219.02
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI PIONIER

Purge Method: 3" Grundfos Pump Peristaltic Pump Bladder Pump
Sampling Method: Dedicated Tubing New Tubing Other

Start Purge Time: 1032 Flow Rate: 600 ml/min Pump Depth: 264.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1035	23.6	7.27	310	42	2.60	-9.9	1,800	219.09
1038	24.1	7.11	377	20	1.12	-48.9	3,600	219.09
1041	24.3	7.04	391	13	1.04	-55.1	5,400	219.09
1044	24.5	7.09	449	9	0.79	-70.5	7,200	219.09
1047	24.6	7.07	452	8	0.78	-67.9	9,000	219.09
1050	24.7	7.08	457	8	0.80	-67.2	10,800	219.09

Did well dewater? Yes (No) Amount actually evacuated:

Sampling Time: Sampling Date: 9.16.20

Sample I.D.: A-1-CW03R Laboratory:

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See C.o.C.

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 200916-BN1	Client: Geosyntec
Sampler: BN	Gauging Date: 9.16.20
Well I.D.: A-1-CW09	Well Diameter (in.): 2 3 4 6 8 (5)
Total Well Depth (ft.):	Depth to Water (ft.): 207.79
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI pro plus

Purge Method: 3" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other

Start Purge Time: 0842 Flow Rate: 600 mL/min Pump Depth: 221.5'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0845	22.1	8.72	1161	217	4.76	67.0	1,800	207.80
0848	22.1	7.93	1158	62	4.28	60.2	3,600	207.80
0851	22.4	7.23	1159	34	3.93	62.6	5,400	207.80
0854	22.3	7.15	1160	22	3.73	61.2	7,200	207.80
0857	22.6	7.14	1160	15	3.55	58.7	9,000	207.80
0900	22.4	7.16	1162	14	3.56	57.7	10,800	207.80
0903	22.2	7.14	1156	14	3.54	59.6	12,600	207.80

Did well dewater? Yes (No) Amount actually evacuated: 12,600 mL

Sampling Time: 0904 Sampling Date: 9.16.20

Sample I.D.: A-1-CW009 Laboratory:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 200916-BM1	Client: Geosyntec
Sampler: BM	Gauging Date: 9.17.20
Well I.D.: B-6-CMW10	Well Diameter (in.): 2 3 4 6 8 (5)
Total Well Depth (ft.):	Depth to Water (ft.): 23.82
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI pro plus

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other

Start Purge Time: 1255 Flow Rate: 200 mL/min Pump Depth: 250

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1258	26.4	7.94	777	12	3.47	58.6	600	23.84
1301	26.9	7.57	788	6	2.98	61.9	1,200	23.84
1304	27.0	7.35	794	5	2.97	58.4	1,800	23.84
1307	27.1	7.33	799	5	2.94	58.1	2,400	23.84
1310	21.1	7.32	801	5	2.95	57.2	3,000	23.84

Did well dewater? Yes (No) Amount actually evacuated: 3,000 mL

Sampling Time: 1311 Sampling Date: 9.17.20

Sample I.D.: B-6-CMW10 Laboratory:

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 200916-BM1	Client: Geosyntec
Sampler: BF	Gauging Date: 9.16.20
Well I.D.: C.1-CW03	Well Diameter (in.): 2 3 4 6 8 5
Total Well Depth (ft.):	Depth to Water (ft.): 253.17
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI Pinplay

Purge Method: 3" Grundfos Pump Peristaltic Pump Bladder Pump
Sampling Method: Dedicated Tubing New Tubing Other

Start Purge Time: 0958 Flow Rate: 600 mL/min Pump Depth: 274.5

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1001	23	7.13	783	36	4.25	20.5	1800	253.29
1004	22.9	6.99	846	28	5.14	60.6	3600	25330
1007	22.6	6.97	870	22	4.96	69.7	5400 5,400	25330
1010	22.7	6.96	871	17	4.01	64.6	7,200	25330
1013	22.7	6.98	865	16	3.97	63.8	9,000	25330
1016	22.7	6.98	867	17	3.95	63.2	10,800	25330

Did well dewater? Yes No Amount actually evacuated: 10,800

Sampling Time: 1017 Sampling Date: 9.17.20

Sample I.D.: C.1-CW03 Laboratory:

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See Cont.

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 200916.BM	Client: Geosyntec
Sampler: BV	Gauging Date: 9.17.20
Well I.D.: C-1-CW06	Well Diameter (in.): 2 3 4 6 8 (5)
Total Well Depth (ft.):	Depth to Water (ft.): 235.07
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI pro plus

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other

Start Purge Time: 1108 Flow Rate: 200 mL/min Pump Depth: 248

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
1111	25.1	7.62	819	8	2.18	36.1	600	235.07
1114	25.2	7.17	788	5	1.70	31.0	1,200	235.09
1117	25.1	7.13	778	3	1.79	36.3	1,800	235.09
1120	24.9	7.16	774	3	1.81	37.2	2,400	235.09
1123	25.0	7.16	772	3	1.84	36.8	3,000	235.09

Did well dewater? Yes (No) Amount actually evacuated: 3,000 mL

Sampling Time: 1124 Sampling Date: 9.17.20

Sample I.D.: C-1-CW06 Laboratory:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 200916-BN	Client: Geosyntec
Sampler: BN	Gauging Date: 9.16.20
Well I.D.: C-1-CW08	Well Diameter (in.): 2 3 4 6 8 (5)
Total Well Depth (ft.):	Depth to Water (ft.): 246.91
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI PID pkg

Purge Method: 3" Grundfos Pump Peristaltic Pump Bladder Pump
Sampling Method: Dedicated Tubing New Tubing Other

Start Purge Time: 0809 Flow Rate: 600 mL/min Pump Depth: 277'

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
0812	21.1	7.35	946	116	5.13	78.6	1,800	247.03
0815	21.6	6.96	830	99	4.07	72.8	3,600	247.05
0818	21.9	6.93	858	67	3.16	68.0	5,400	247.05
0821	22.4	6.96	853	59	2.73	68.5	7,200	247.05
0824	22.5	6.98	846	61	2.75	69.4	9,000	247.05
0827	22.5	6.97	844	58	2.77	69.1	10,800	247.05

Did well dewater? Yes (No) Amount actually evacuated: 10,800mL

Sampling Time: 0828	Sampling Date: 9.17.20
Sample I.D.: C-1-CW08	Laboratory:
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See C.O.C
Equipment Blank I.D.: @ Time	Duplicate I.D.:

APPENDIX D

Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
CAD980695647	1	888-423-6060	1020201012

GENERATOR

5. Generator's Name and Mailing Address
Burbank -Glendale -Pasadena Airport Authority
2627 Hollywood Way
Burbank CA 91505
Attn: Maggie Martinez

Generator's Site Address (if different than mailing address)

Generator's Phone: 818 729-2226

6. Transporter 1 Company Name
American Integrated Services, Inc.

U.S. EPA ID Number
CAR000148338

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Crosby & Overton, Inc.
1630 W. 17th Street
Long Beach CA 90813

U.S. EPA ID Number
CAD028409019

Facility's Phone: 562 432-5465

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. Non-Hazardous Waste Liquid (Ocean Water)	1	DM	55	G	
	2. Non-Hazardous Waste Solid (Soil)	7	DM	3500	P	
	3.					
	4.					

13. Special Handling Instructions and Additional Information
Wear proper PPE while handling. Weights and volume are approximate.
Project # : 40048-1 Profile # : 9b1.) 114425 9b2.) 114424

D194045

INT'L

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: X R PORTER — Signature: X — Month 10 Day 20 Year 20

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JOSE PEREZ — Signature — Month 10 Day 20 Year 20

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

H141 H141

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Tony Tham — Signature — Month 10 Day 20 Year 20

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

Geosyntec consultants

APPENDIX E

Soils Laboratory Data

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-64470-1
Client Project/Site: PFAS - Hollywood Burbank Airport

For:
Geosyntec Consultants, Inc.
65 N. Raymond Avenue
Suite 200
Pasadena, California 91103

Attn: Mital Desai

Authorized for release by:
9/30/2020 11:39:16 AM

Laura Turpen, Project Manager I
(916)374-4414
Laura.Turpen@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Geosyntec Consultants, Inc. Job ID: 320-64470-1
Project/Site: PFAS - Hollywood Burbank Airport

Qualifiers

LCMS

Qualifier	Qualifier Description
*5	Isotope dilution analyte is outside acceptance limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 320-64470-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-64470-1

Comments
No additional comments.

Receipt
The samples were received on 9/10/2020 at 11:05 and 11:09 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.2º C and 3.4º C.

LCMS
Method EPA 537 (Mod): The recovery for several labeled isotopes in sample EB-200208 (320-64470-1) are outside the QC acceptance limits. Due to an entry error, the required DOD clean-up step was not performed during the initial preparation of this sample and the extract was not usable. Sufficient sample was not available to re-extract a third time.

The recovery for labeled isotope 13C8-FOSA was below 10% in sample EB-200208 (320-64470-1). The signal to noise was greater than 10:1, indicating the analysis had sufficient sensitivity to accurately quantify and correct the associated native compound for that recovery.

Method EPA 537 (Mod): Target analyte Perfluorooctanoic acid (PFOA) was detected in field blank sample FB-200208 (320-64470-2) and required a 10 fold dilution. Due to an entry error, the required DOD clean-up step was not performed during the initial preparation of this sample and the extract was not usable. Sufficient sample was not available to re-extract a third time.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3535_PFC: The MS/MSD for prep batch 410-43643 were performed on a different client's sample and were re-extracted and reported from an unrelated batch.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Client Sample ID: EB-200208 — Lab Sample ID: 320-64470-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	2.0		1.6		ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.9		1.6		ng/L	1		EPA 537 (Mod)	Total/NA

Client Sample ID: FB-200208 — Lab Sample ID: 320-64470-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	9.3		1.7		ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	31		1.7		ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.0		1.7		ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	240		17		ng/L	10		EPA 537 (Mod)	Total/NA

Client Sample ID: SB-5A-60 — Lab Sample ID: 320-64470-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	2.7		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.9		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.1		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA

Client Sample ID: SB-5A-70 — Lab Sample ID: 320-64470-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	6.1	F2 F1	0.62		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.3	F2 F1	0.62		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.5	F2 F1	0.62		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA

Client Sample ID: EB-200209 — Lab Sample ID: 320-64470-5

No Detections.

Client Sample ID: FB-200209 — Lab Sample ID: 320-64470-6

No Detections.

Client Sample ID: SB-5A-80 — Lab Sample ID: 320-64470-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	7.4		0.62		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.4		0.62		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.8		0.62		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA

Client Sample ID: SB-5A-80-DUP — Lab Sample ID: 320-64470-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	7.7		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	7.2		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.8		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA

Client Sample ID: SB-5A-90 — Lab Sample ID: 320-64470-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	2.6		0.60		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		0.60		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.1		0.60		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Client Sample ID: SB-5A-100 — Lab Sample ID: 320-64470-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	3.3		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.5		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2		0.61		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA

Client Sample ID: SB-5A-110 — Lab Sample ID: 320-64470-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	3.7		0.60		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.8		0.60		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA

Client Sample ID: SB-5A-120 — Lab Sample ID: 320-64470-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	2.9		0.60		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.4		0.60		ug/Kg	1	☼	EPA 537 (Mod)	Total/NA

Client Sample ID: SB-5A-130 — Lab Sample ID: 320-64470-13

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Client Sample ID: EB-200208
Date Collected: 09/08/20 14:10
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-1
Matrix: Water

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		3.9		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluoropentanoic acid (PFPeA)	**2.0**		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorohexanoic acid (PFHxA)	**2.9**		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorooctanoic acid (PFOA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorononanoic acid (PFNA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorodecanoic acid (PFDA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorododecanoic acid (PFDoA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
Perfluorooctanesulfonamide (FOSA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.4		ng/L		09/14/20 17:09	09/16/20 18:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
4:2 FTS	ND		1.6		ng/L		09/14/20 17:09	09/16/20 18:02	1
6:2 FTS	ND		3.9		ng/L		09/14/20 17:09	09/16/20 18:02	1
8:2 FTS	ND		2.4		ng/L		09/14/20 17:09	09/16/20 18:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*116*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C5 PFPeA	*127*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C4 PFHpA	*151*	**5*	*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C2 PFTeDA	*78*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C3 PFBS	*117*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C8 FOSA	*3*	**5*	*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
M2-6:2 FTS	*203*	**5*	*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
M2-4:2 FTS	*237*	**5*	*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
M2-8:2 FTS	*121*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
d5-NEtFOSAA	*93*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
d3-NMeFOSAA	*84*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C6 PFDA	*90*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C2-PFDoDA	*68*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C5 PFHxA	*118*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C7 PFUnA	*82*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C8 PFOA	*120*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C9 PFNA	*183*	**5*	*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C3 PFHxS	*103*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*
13C8 PFOS	*122*		*50 - 150*	*09/14/20 17:09*	*09/16/20 18:02*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Client Sample ID: FB-200208

Date Collected: 09/08/20 12:20
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-2

Matrix: Water

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.2		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluoropentanoic acid (PFPeA)	**9.3**		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorohexanoic acid (PFHxA)	**31**		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluoroheptanoic acid (PFHpA)	**6.0**		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
Perfluorooctanesulfonamide (FOSA)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.5		ng/L		09/14/20 17:09	09/15/20 18:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
4:2 FTS	ND		1.7		ng/L		09/14/20 17:09	09/15/20 18:13	1
6:2 FTS	ND		4.2		ng/L		09/14/20 17:09	09/15/20 18:13	1
8:2 FTS	ND		2.5		ng/L		09/14/20 17:09	09/15/20 18:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*92*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C5 PFPeA	*98*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C4 PFHpA	*103*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C2 PFTeDA	*65*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C3 PFBS	*99*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C8 FOSA	*58*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
M2-6:2 FTS	*103*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
M2-4:2 FTS	*94*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
M2-8:2 FTS	*78*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
d5-NEtFOSAA	*70*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
d3-NMeFOSAA	*78*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C6 PFDA	*77*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C2-PFDoDA	*70*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C5 PFHxA	*93*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C7 PFUnA	*71*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C8 PFOA	*100*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C9 PFNA	*88*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C3 PFHxS	*103*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*
13C8 PFOS	*87*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:13*	*1*

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**240**		17		ng/L		09/14/20 17:09	09/15/20 22:08	10

Client Sample ID: FB-200208

Date Collected: 09/08/20 12:20
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-2

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	117		50 - 150	09/14/20 17:09	09/15/20 22:08	10

Client Sample ID: SB-5A-60

Date Collected: 09/08/20 13:25
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-3

Matrix: Solid
Percent Solids: 95.6

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluoropentanoic acid (PFPeA)	**2.7**		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorohexanoic acid (PFHxA)	**3.9**		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluoroheptanoic acid (PFHpA)	**1.1**		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorooctanoic acid (PFOA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorononanoic acid (PFNA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorodecanoic acid (PFDA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluoroundecanoic acid (PFUnA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorododecanoic acid (PFDoA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorotridecanoic acid (PFTriA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
Perfluorooctanesulfonamide (FOSA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
4:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
6:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1
8:2 FTS	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/24/20 09:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	85		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C5 PFPeA	85		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C4 PFHpA	76		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C2 PFTeDA	85		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C3 PFBS	84		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C8 FOSA	96		50 - 150	09/17/20 18:17	09/24/20 09:36	1
M2-6:2 FTS	88		50 - 150	09/17/20 18:17	09/24/20 09:36	1
M2-4:2 FTS	79		50 - 150	09/17/20 18:17	09/24/20 09:36	1
M2-8:2 FTS	86		50 - 150	09/17/20 18:17	09/24/20 09:36	1
d5-NEtFOSAA	85		50 - 150	09/17/20 18:17	09/24/20 09:36	1
d3-NMeFOSAA	83		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C6 PFDA	86		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C2-PFDoDA	85		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C5 PFHxA	79		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C7 PFUnA	92		50 - 150	09/17/20 18:17	09/24/20 09:36	1
13C8 PFOA	82		50 - 150	09/17/20 18:17	09/24/20 09:36	1

Client Sample ID: SB-5A-60 — Lab Sample ID: 320-64470-3

Date Collected: 09/08/20 13:25 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 95.6**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C9 PFNA	*83*		*50 - 150*	*09/17/20 18:17*	*09/24/20 09:36*	*1*
13C3 PFHxS	*82*		*50 - 150*	*09/17/20 18:17*	*09/24/20 09:36*	*1*
13C8 PFOS	*81*		*50 - 150*	*09/17/20 18:17*	*09/24/20 09:36*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**4.4**		1.0		%			09/15/20 20:21	1
Percent Solids	**95.6**		1.0		%			09/15/20 20:21	1

Client Sample ID: SB-5A-70 — Lab Sample ID: 320-64470-4

Date Collected: 09/08/20 14:35 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 96.5**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	F2 F1	2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluoropentanoic acid (PFPeA)	**6.1**	**F2 F1**	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorohexanoic acid (PFHxA)	**6.3**	**F2 F1**	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluoroheptanoic acid (PFHpA)	**1.5**	**F2 F1**	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorooctanoic acid (PFOA)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorononanoic acid (PFNA)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorodecanoic acid (PFDA)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluoroundecanoic acid (PFUnA)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorododecanoic acid (PFDoA)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorotridecanoic acid (PFTriA)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorotetradecanoic acid (PFTeA)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorobutanesulfonic acid (PFBS)	ND	F2 F1	2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluoropentanesulfonic acid (PFPeS)	ND	F2 F1	3.1		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorohexanesulfonic acid (PFHxS)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorooctanesulfonic acid (PFOS)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorodecanesulfonic acid (PFDS)	ND	F2 F1	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
Perfluorooctanesulfonamide (FOSA)	ND	F2	0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	F2	2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	F2	2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
4:2 FTS	ND	F2 F1	2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
6:2 FTS	ND	F2 F1	2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1
8:2 FTS	ND	F2 F1	3.1		ug/Kg	☼	09/17/20 18:17	09/23/20 01:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*96*		*50 - 150*	*09/17/20 18:17*	*09/23/20 01:34*	*1*
13C5 PFPeA	*96*		*50 - 150*	*09/17/20 18:17*	*09/23/20 01:34*	*1*
13C4 PFHpA	*86*		*50 - 150*	*09/17/20 18:17*	*09/23/20 01:34*	*1*
13C2 PFTeDA	*93*		*50 - 150*	*09/17/20 18:17*	*09/23/20 01:34*	*1*
13C3 PFBS	*97*		*50 - 150*	*09/17/20 18:17*	*09/23/20 01:34*	*1*
13C8 FOSA	*93*		*50 - 150*	*09/17/20 18:17*	*09/23/20 01:34*	*1*
M2-6:2 FTS	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 01:34*	*1*
M2-4:2 FTS	*87*		*50 - 150*	*09/17/20 18:17*	*09/23/20 01:34*	*1*

Client Sample ID: SB-5A-70 — Lab Sample ID: 320-64470-4

Date Collected: 09/08/20 14:35 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 96.5**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	99		50 - 150	09/17/20 18:17	09/23/20 01:34	1
d5-NEtFOSAA	82		50 - 150	09/17/20 18:17	09/23/20 01:34	1
d3-NMeFOSAA	81		50 - 150	09/17/20 18:17	09/23/20 01:34	1
13C6 PFDA	94		50 - 150	09/17/20 18:17	09/23/20 01:34	1
13C2-PFDoDA	92		50 - 150	09/17/20 18:17	09/23/20 01:34	1
13C5 PFHxA	90		50 - 150	09/17/20 18:17	09/23/20 01:34	1
13C7 PFUnA	96		50 - 150	09/17/20 18:17	09/23/20 01:34	1
13C8 PFOA	97		50 - 150	09/17/20 18:17	09/23/20 01:34	1
13C9 PFNA	97		50 - 150	09/17/20 18:17	09/23/20 01:34	1
13C3 PFHxS	93		50 - 150	09/17/20 18:17	09/23/20 01:34	1
13C8 PFOS	97		50 - 150	09/17/20 18:17	09/23/20 01:34	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.5		1.0		%			09/15/20 20:21	1
Percent Solids	96.5		1.0		%			09/15/20 20:21	1

Client Sample ID: EB-200209 — Lab Sample ID: 320-64470-5

Date Collected: 09/09/20 11:04 — **Matrix: Water**
Date Received: 09/10/20 11:05

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.1		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluoropentanoic acid (PFPeA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorohexanoic acid (PFHxA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorooctanoic acid (PFOA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorononanoic acid (PFNA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorodecanoic acid (PFDA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorododecanoic acid (PFDoA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
Perfluorooctanesulfonamide (FOSA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.4		ng/L		09/14/20 17:09	09/15/20 18:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
4:2 FTS	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:22	1
6:2 FTS	ND		4.1		ng/L		09/14/20 17:09	09/15/20 18:22	1
8:2 FTS	ND		2.4		ng/L		09/14/20 17:09	09/15/20 18:22	1

Client Sample ID: EB-200209 — Lab Sample ID: 320-64470-5

Date Collected: 09/09/20 11:04 — **Matrix: Water**
Date Received: 09/10/20 11:05

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*87*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C5 PFPeA	*95*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C4 PFHpA	*92*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C2 PFTeDA	*58*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C3 PFBS	*95*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C8 FOSA	*54*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
M2-6:2 FTS	*100*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
M2-4:2 FTS	*93*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
M2-8:2 FTS	*75*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
d5-NEtFOSAA	*73*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
d3-NMeFOSAA	*74*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C6 PFDA	*75*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C2-PFDoDA	*67*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C5 PFHxA	*91*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C7 PFUnA	*77*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C8 PFOA	*95*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C9 PFNA	*89*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C3 PFHxS	*94*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*
13C8 PFOS	*88*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:22*	*1*

Client Sample ID: FB-200209 — Lab Sample ID: 320-64470-6

Date Collected: 09/09/20 11:08 — **Matrix: Water**
Date Received: 09/10/20 11:05

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.1		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluoropentanoic acid (PFPeA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorohexanoic acid (PFHxA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorooctanoic acid (PFOA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorononanoic acid (PFNA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorodecanoic acid (PFDA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorododecanoic acid (PFDoA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
Perfluorooctanesulfonamide (FOSA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.4		ng/L		09/14/20 17:09	09/15/20 18:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
4:2 FTS	ND		1.6		ng/L		09/14/20 17:09	09/15/20 18:31	1
6:2 FTS	ND		4.1		ng/L		09/14/20 17:09	09/15/20 18:31	1

Client Sample ID: FB-200209
Date Collected: 09/09/20 11:08
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-6
Matrix: Water

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	ND		2.4		ng/L		09/14/20 17:09	09/15/20 18:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*99*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C5 PFPeA	*104*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C4 PFHpA	*104*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C2 PFTeDA	*73*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C3 PFBS	*106*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C8 FOSA	*68*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
M2-6:2 FTS	*115*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
M2-4:2 FTS	*111*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
M2-8:2 FTS	*91*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
d5-NEtFOSAA	*77*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
d3-NMeFOSAA	*78*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C6 PFDA	*86*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C2-PFDoDA	*81*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C5 PFHxA	*97*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C7 PFUnA	*82*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C8 PFOA	*106*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C9 PFNA	*98*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C3 PFHxS	*109*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*
13C8 PFOS	*97*		*50 - 150*	*09/14/20 17:09*	*09/15/20 18:31*	*1*

Client Sample ID: SB-5A-80
Date Collected: 09/09/20 07:39
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-7
Matrix: Solid
Percent Solids: 95.1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluoropentanoic acid (PFPeA)	**7.4**		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorohexanoic acid (PFHxA)	**6.4**		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluoroheptanoic acid (PFHpA)	**2.8**		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorooctanoic acid (PFOA)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorononanoic acid (PFNA)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorodecanoic acid (PFDA)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluoroundecanoic acid (PFUnA)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorododecanoic acid (PFDoA)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorotridecanoic acid (PFTriA)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.1		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
Perfluorooctanesulfonamide (FOSA)	ND		0.62		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1

Client Sample ID: SB-5A-80
Lab Sample ID: 320-64470-7
Date Collected: 09/09/20 07:39
Matrix: Solid
Date Received: 09/10/20 11:05
Percent Solids: 95.1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
4:2 FTS	ND		2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
6:2 FTS	ND		2.1		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1
8:2 FTS	ND		3.1		ug/Kg	☼	09/17/20 18:17	09/23/20 02:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C5 PFPeA	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C4 PFHpA	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C2 PFTeDA	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C3 PFBS	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C8 FOSA	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
M2-6:2 FTS	*104*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
M2-4:2 FTS	*88*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
M2-8:2 FTS	*111*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
d5-NEtFOSAA	*96*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
d3-NMeFOSAA	*92*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C6 PFDA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C2-PFDoDA	*97*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C5 PFHxA	*95*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C7 PFUnA	*102*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C8 PFOA	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C9 PFNA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C3 PFHxS	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*
13C8 PFOS	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:02*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**4.9**		1.0		%			09/15/20 20:21	1
Percent Solids	**95.1**		1.0		%			09/15/20 20:21	1

Client Sample ID: SB-5A-80-DUP
Lab Sample ID: 320-64470-8
Date Collected: 09/09/20 07:39
Matrix: Solid
Date Received: 09/10/20 11:05
Percent Solids: 96.8

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluoropentanoic acid (PFPeA)	**7.7**		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorohexanoic acid (PFHxA)	**7.2**		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluoroheptanoic acid (PFHpA)	**2.8**		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorooctanoic acid (PFOA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorononanoic acid (PFNA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorodecanoic acid (PFDA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluoroundecanoic acid (PFUnA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorododecanoic acid (PFDoA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorotridecanoic acid (PFTriA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1

Client Sample ID: SB-5A-80-DUP
Lab Sample ID: 320-64470-8
Date Collected: 09/09/20 07:39 **Matrix: Solid**
Date Received: 09/10/20 11:05 **Percent Solids: 96.8**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
Perfluorooctanesulfonamide (FOSA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
4:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
6:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1
8:2 FTS	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*103*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C5 PFPeA	*103*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C4 PFHpA	*95*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C2 PFTeDA	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C3 PFBS	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C8 FOSA	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
M2-6:2 FTS	*106*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
M2-4:2 FTS	*89*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
M2-8:2 FTS	*109*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
d5-NEtFOSAA	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
d3-NMeFOSAA	*95*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C6 PFDA	*103*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C2-PFDoDA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C5 PFHxA	*95*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C7 PFUnA	*103*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C8 PFOA	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C9 PFNA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C3 PFHxS	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*
13C8 PFOS	*97*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:11*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**3.2**		1.0		%			09/15/20 20:21	1
Percent Solids	**96.8**		1.0		%			09/15/20 20:21	1

Client Sample ID: SB-5A-90
Lab Sample ID: 320-64470-9
Date Collected: 09/09/20 08:45 **Matrix: Solid**
Date Received: 09/10/20 11:05 **Percent Solids: 97.9**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluoropentanoic acid (PFPeA)	**2.6**		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorohexanoic acid (PFHxA)	**3.0**		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluoroheptanoic acid (PFHpA)	**1.1**		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1

Client Sample ID: SB-5A-90 **Lab Sample ID: 320-64470-9**
Date Collected: 09/09/20 08:45 **Matrix: Solid**
Date Received: 09/10/20 11:05 **Percent Solids: 97.9**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorononanoic acid (PFNA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorodecanoic acid (PFDA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluoroundecanoic acid (PFUnA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorododecanoic acid (PFDoA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorotridecanoic acid (PFTriA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
Perfluorooctanesulfonamide (FOSA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
4:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
6:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1
8:2 FTS	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*102*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C5 PFPeA	*104*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C4 PFHpA	*95*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C2 PFTeDA	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C3 PFBS	*102*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C8 FOSA	*101*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
M2-6:2 FTS	*102*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
M2-4:2 FTS	*96*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
M2-8:2 FTS	*101*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
d5-NEtFOSAA	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
d3-NMeFOSAA	*87*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C6 PFDA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C2-PFDoDA	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C5 PFHxA	*97*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C7 PFUnA	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C8 PFOA	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C9 PFNA	*96*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C3 PFHxS	*102*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*
13C8 PFOS	*102*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**2.1**		1.0		%			09/15/20 20:21	1
Percent Solids	**97.9**		1.0		%			09/15/20 20:21	1

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Client Sample ID: SB-5A-100
Date Collected: 09/09/20 09:47
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-10
Matrix: Solid
Percent Solids: 96.9

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluoropentanoic acid (PFPeA)	**3.3**		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorohexanoic acid (PFHxA)	**5.5**		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluoroheptanoic acid (PFHpA)	**1.2**		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorooctanoic acid (PFOA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorononanoic acid (PFNA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorodecanoic acid (PFDA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluoroundecanoic acid (PFUnA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorododecanoic acid (PFDoA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorotridecanoic acid (PFTriA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
Perfluorooctanesulfonamide (FOSA)	ND		0.61		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
4:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
6:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1
8:2 FTS	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*92*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C5 PFPeA	*91*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C4 PFHpA	*84*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C2 PFTeDA	*87*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C3 PFBS	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C8 FOSA	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
M2-6:2 FTS	*93*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
M2-4:2 FTS	*83*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
M2-8:2 FTS	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
d5-NEtFOSAA	*81*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
d3-NMeFOSAA	*75*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C6 PFDA	*92*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C2-PFDoDA	*87*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C5 PFHxA	*86*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C7 PFUnA	*91*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C8 PFOA	*91*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C9 PFNA	*90*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C3 PFHxS	*90*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*
13C8 PFOS	*91*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:29*	*1*

Client Sample ID: SB-5A-100 — Lab Sample ID: 320-64470-10

Date Collected: 09/09/20 09:47 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 96.9**

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**3.1**		1.0		%			09/15/20 20:21	1
Percent Solids	**96.9**		1.0		%			09/15/20 20:21	1

Client Sample ID: SB-5A-110 — Lab Sample ID: 320-64470-11

Date Collected: 09/09/20 13:09 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 96.7**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluoropentanoic acid (PFPeA)	**3.7**		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorohexanoic acid (PFHxA)	**2.8**		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluoroheptanoic acid (PFHpA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorooctanoic acid (PFOA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorononanoic acid (PFNA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorodecanoic acid (PFDA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluoroundecanoic acid (PFUnA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorododecanoic acid (PFDoA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorotridecanoic acid (PFTriA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
Perfluorooctanesulfonamide (FOSA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
4:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
6:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1
8:2 FTS	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
13C5 PFPeA	*98*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
13C4 PFHpA	*90*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
13C2 PFTeDA	*96*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
13C3 PFBS	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
13C8 FOSA	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
M2-6:2 FTS	*101*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
M2-4:2 FTS	*92*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
M2-8:2 FTS	*112*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
d5-NEtFOSAA	*86*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
d3-NMeFOSAA	*83*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
13C6 PFDA	*101*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
13C2-PFDoDA	*93*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*
13C5 PFHxA	*93*		*50 - 150*	*09/17/20 18:17*	*09/23/20 02:38*	*1*

Client Sample ID: SB-5A-110 — Lab Sample ID: 320-64470-11

Date Collected: 09/09/20 13:09 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 96.7**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C7 PFUnA	103		50 - 150	09/17/20 18:17	09/23/20 02:38	1
13C8 PFOA	97		50 - 150	09/17/20 18:17	09/23/20 02:38	1
13C9 PFNA	99		50 - 150	09/17/20 18:17	09/23/20 02:38	1
13C3 PFHxS	98		50 - 150	09/17/20 18:17	09/23/20 02:38	1
13C8 PFOS	101		50 - 150	09/17/20 18:17	09/23/20 02:38	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**3.3**		1.0		%			09/15/20 20:21	1
Percent Solids	**96.7**		1.0		%			09/15/20 20:21	1

Client Sample ID: SB-5A-120 — Lab Sample ID: 320-64470-12

Date Collected: 09/09/20 14:50 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 98.7**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluoropentanoic acid (PFPeA)	**2.9**		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorohexanoic acid (PFHxA)	**2.4**		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluoroheptanoic acid (PFHpA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorooctanoic acid (PFOA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorononanoic acid (PFNA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorodecanoic acid (PFDA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluoroundecanoic acid (PFUnA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorododecanoic acid (PFDoA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorotridecanoic acid (PFTriA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
Perfluorooctanesulfonamide (FOSA)	ND		0.60		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
4:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
6:2 FTS	ND		2.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1
8:2 FTS	ND		3.0		ug/Kg	☼	09/17/20 18:17	09/23/20 02:47	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	102		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C5 PFPeA	104		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C4 PFHpA	92		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C2 PFTeDA	99		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C3 PFBS	102		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C8 FOSA	98		50 - 150	09/17/20 18:17	09/23/20 02:47	1

Client Sample ID: SB-5A-120 — Lab Sample ID: 320-64470-12

Date Collected: 09/09/20 14:50 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 98.7**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	106		50 - 150	09/17/20 18:17	09/23/20 02:47	1
M2-4:2 FTS	95		50 - 150	09/17/20 18:17	09/23/20 02:47	1
M2-8:2 FTS	102		50 - 150	09/17/20 18:17	09/23/20 02:47	1
d5-NEtFOSAA	88		50 - 150	09/17/20 18:17	09/23/20 02:47	1
d3-NMeFOSAA	87		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C6 PFDA	96		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C2-PFDoDA	96		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C5 PFHxA	97		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C7 PFUnA	100		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C8 PFOA	103		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C9 PFNA	101		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C3 PFHxS	98		50 - 150	09/17/20 18:17	09/23/20 02:47	1
13C8 PFOS	100		50 - 150	09/17/20 18:17	09/23/20 02:47	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.3		1.0		%			09/15/20 20:21	1
Percent Solids	98.7		1.0		%			09/15/20 20:21	1

Client Sample ID: SB-5A-130 — Lab Sample ID: 320-64470-13

Date Collected: 09/09/20 15:35 — **Matrix: Solid**
Date Received: 09/10/20 11:05 — **Percent Solids: 84.8**

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.3		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluoropentanoic acid (PFPeA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorohexanoic acid (PFHxA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluoroheptanoic acid (PFHpA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorooctanoic acid (PFOA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorononanoic acid (PFNA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorodecanoic acid (PFDA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluoroundecanoic acid (PFUnA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorododecanoic acid (PFDoA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorotridecanoic acid (PFTriA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.3		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.4		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
Perfluorooctanesulfonamide (FOSA)	ND		0.69		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.3		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.3		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
4:2 FTS	ND		2.3		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1
6:2 FTS	ND		2.3		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1

Client Sample ID: SB-5A-130
Date Collected: 09/09/20 15:35
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-13
Matrix: Solid
Percent Solids: 84.8

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
8:2 FTS	ND		3.4		ug/Kg	☼	09/17/20 18:17	09/23/20 03:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C5 PFPeA	*95*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C4 PFHpA	*91*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C2 PFTeDA	*103*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C3 PFBS	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C8 FOSA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
M2-6:2 FTS	*104*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
M2-4:2 FTS	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
M2-8:2 FTS	*114*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
d5-NEtFOSAA	*103*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
d3-NMeFOSAA	*99*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C6 PFDA	*106*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C2-PFDoDA	*97*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C5 PFHxA	*96*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C7 PFUnA	*107*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C8 PFOA	*100*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C9 PFNA	*94*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C3 PFHxS	*96*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*
13C8 PFOS	*95*		*50 - 150*	*09/17/20 18:17*	*09/23/20 03:05*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.2**		1.0		%			09/15/20 20:21	1
Percent Solids	**84.8**		1.0		%			09/15/20 20:21	1

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-150)	PFPeA (50-150)	C4PFHA (50-150)	PFTDA (50-150)	C3PFBS (50-150)	PFOSA (50-150)	M262FTS (50-150)	M242FTS (50-150)
320-64470-3	SB-5A-60	85	85	76	85	84	96	88	79
320-64470-4	SB-5A-70	96	96	86	93	97	93	100	87
320-64470-4 MS	SB-5A-70	95	95	93	98	94	100	97	94
320-64470-4 MSD	SB-5A-70	97	98	90	97	96	99	99	93
320-64470-7	SB-5A-80	100	98	94	98	98	98	104	88
320-64470-8	SB-5A-80-DUP	103	103	95	100	100	100	106	89
320-64470-9	SB-5A-90	102	104	95	94	102	101	102	96
320-64470-10	SB-5A-100	92	91	84	87	94	94	93	83
320-64470-11	SB-5A-110	99	98	90	96	100	100	101	92
320-64470-12	SB-5A-120	102	104	92	99	102	98	106	95
320-64470-13	SB-5A-130	99	95	91	103	99	99	104	94
LCS 410-45095/2-B	Lab Control Sample	98	96	93	103	101	98	101	94
MB 410-45095/1-B	Method Blank	94	94	86	99	94	96	98	91

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M282FTS (50-150)	d5NEFOS (50-150)	d3NMFOS (50-150)	C6PFDA (50-150)	PFDoDA (50-150)	13C5PHA (50-150)	13C7PUA (50-150)	C8PFOA (50-150)
320-64470-3	SB-5A-60	86	85	83	86	85	79	92	82
320-64470-4	SB-5A-70	99	82	81	94	92	90	96	97
320-64470-4 MS	SB-5A-70	95	94	99	100	98	92	97	96
320-64470-4 MSD	SB-5A-70	102	95	98	96	97	95	105	97
320-64470-7	SB-5A-80	111	96	92	99	97	95	102	98
320-64470-8	SB-5A-80-DUP	109	94	95	103	99	95	103	98
320-64470-9	SB-5A-90	101	94	87	99	94	97	100	98
320-64470-10	SB-5A-100	98	81	75	92	87	86	91	91
320-64470-11	SB-5A-110	112	86	83	101	93	93	103	97
320-64470-12	SB-5A-120	102	88	87	96	96	97	100	103
320-64470-13	SB-5A-130	114	103	99	106	97	96	107	100
LCS 410-45095/2-B	Lab Control Sample	109	105	105	101	99	95	100	99
MB 410-45095/1-B	Method Blank	110	100	97	103	99	90	100	93

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	C9PFNA (50-150)	C3PFHS (50-150)	C8PFOS (50-150)
320-64470-3	SB-5A-60	83	82	81
320-64470-4	SB-5A-70	97	93	97
320-64470-4 MS	SB-5A-70	89	93	94
320-64470-4 MSD	SB-5A-70	94	97	98
320-64470-7	SB-5A-80	99	99	99
320-64470-8	SB-5A-80-DUP	99	98	97
320-64470-9	SB-5A-90	96	102	102
320-64470-10	SB-5A-100	90	90	91
320-64470-11	SB-5A-110	99	98	101
320-64470-12	SB-5A-120	101	98	100
320-64470-13	SB-5A-130	94	96	95
LCS 410-45095/2-B	Lab Control Sample	96	96	99
MB 410-45095/1-B	Method Blank	93	94	91

Surrogate Legend

PFBA = 13C4 PFBA

PFPeA = 13C5 PFPeA

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc. Job ID: 320-64470-1
Project/Site: PFAS - Hollywood Burbank Airport

C4PFHA = 13C4 PFHpA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFOSA = 13C8 FOSA
M262FTS = M2-6:2 FTS
M242FTS = M2-4:2 FTS
M282FTS = M2-8:2 FTS
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoDA
13C5PHA = 13C5 PFHxA
13C7PUA = 13C7 PFUnA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	C4PFHA	PFTDA	C3PFBS	PFOSA	M262FTS	M242FTS
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)
320-64470-1	EB-200208	116	127	151 *5	78	117	3 *5	203 *5	237 *5
320-64470-2	FB-200208	92	98	103	65	99	58	103	94
320-64470-2 - DL	FB-200208								
320-64470-5	EB-200209	87	95	92	58	95	54	100	93
320-64470-6	FB-200209	99	104	104	73	106	68	115	111
LCS 410-43643/2-A	Lab Control Sample	86	92	96	62	93	60	99	86
MB 410-43643/1-A	Method Blank	102	111	105	82	109	73	119	111

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M282FTS	d5NEFOS	d3NMFOS	C6PFDA	PFDoDA	13C5PHA	13C7PUA	C8PFOA
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)
320-64470-1	EB-200208	121	93	84	90	68	118	82	120
320-64470-2	FB-200208	78	70	78	77	70	93	71	100
320-64470-2 - DL	FB-200208								117
320-64470-5	EB-200209	75	73	74	75	67	91	77	95
320-64470-6	FB-200209	91	77	78	86	81	97	82	106
LCS 410-43643/2-A	Lab Control Sample	74	68	73	76	69	87	69	96
MB 410-43643/1-A	Method Blank	91	88	86	89	87	101	89	110

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C9PFNA	C3PFHS	C8PFOS					
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)					
320-64470-1	EB-200208	183 *5	103	122					
320-64470-2	FB-200208	88	103	87					
320-64470-2 - DL	FB-200208								
320-64470-5	EB-200209	89	94	88					
320-64470-6	FB-200209	98	109	97					
LCS 410-43643/2-A	Lab Control Sample	89	94	89					
MB 410-43643/1-A	Method Blank	101	111	105					

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
C4PFHA = 13C4 PFHpA

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc.
Job ID: 320-64470-1
Project/Site: PFAS - Hollywood Burbank Airport

PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFOSA = 13C8 FOSA
M262FTS = M2-6:2 FTS
M242FTS = M2-4:2 FTS
M282FTS = M2-8:2 FTS
d5NEFOS = d5-NEtFOSAA
d3NMFOS = d3-NMeFOSAA
C6PFDA = 13C6 PFDA
PFDoDA = 13C2-PFDoDA
13C5PHA = 13C5 PFHxA
13C7PUA = 13C7 PFUnA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Lab Sample ID: MB 410-43643/1-A
Matrix: Water
Analysis Batch: 43906

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43643

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluoropentanoic acid (PFPeA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		3.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
4:2 FTS	ND		2.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
6:2 FTS	ND		5.0		ng/L		09/14/20 17:09	09/15/20 21:50	1
8:2 FTS	ND		3.0		ng/L		09/14/20 17:09	09/15/20 21:50	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*102*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C5 PFPeA	*111*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C4 PFHpA	*105*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C2 PFTeDA	*82*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C3 PFBS	*109*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C8 FOSA	*73*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
M2-6:2 FTS	*119*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
M2-4:2 FTS	*111*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
M2-8:2 FTS	*91*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
d5-NEtFOSAA	*88*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
d3-NMeFOSAA	*86*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C6 PFDA	*89*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C2-PFDoDA	*87*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C5 PFHxA	*101*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C7 PFUnA	*89*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C8 PFOA	*110*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C9 PFNA	*101*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C3 PFHxS	*111*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*
13C8 PFOS	*105*		*50 - 150*	*09/14/20 17:09*	*09/15/20 21:50*	*1*

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 410-43643/2-A
Matrix: Water
Analysis Batch: 43906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43643

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	25.6	22.5		ng/L		88	61 - 153
Perfluoropentanoic acid (PFPeA)	25.6	21.6		ng/L		84	72 - 138
Perfluorohexanoic acid (PFHxA)	25.6	23.1		ng/L		90	67 - 132
Perfluoroheptanoic acid (PFHpA)	25.6	23.3		ng/L		91	64 - 146
Perfluorooctanoic acid (PFOA)	25.6	22.7		ng/L		89	64 - 132
Perfluorononanoic acid (PFNA)	25.6	22.9		ng/L		90	66 - 139
Perfluorodecanoic acid (PFDA)	25.6	21.9		ng/L		86	61 - 132
Perfluoroundecanoic acid (PFUnA)	25.6	25.4		ng/L		99	61 - 136
Perfluorododecanoic acid (PFDoA)	25.6	25.1		ng/L		98	62 - 136
Perfluorotridecanoic acid (PFTriA)	25.6	24.9		ng/L		97	46 - 143
Perfluorotetradecanoic acid (PFTeA)	25.6	25.8		ng/L		101	65 - 140
Perfluorobutanesulfonic acid (PFBS)	22.6	21.8		ng/L		96	66 - 135
Perfluoropentanesulfonic acid (PFPeS)	24.0	21.9		ng/L		91	71 - 137
Perfluorohexanesulfonic acid (PFHxS)	24.2	21.8		ng/L		90	62 - 132
Perfluoroheptanesulfonic Acid (PFHpS)	24.4	21.3		ng/L		88	68 - 132
Perfluorooctanesulfonic acid (PFOS)	24.5	20.3		ng/L		83	54 - 129
Perfluorodecanesulfonic acid (PFDS)	24.7	23.2		ng/L		94	50 - 137
Perfluorooctanesulfonamide (FOSA)	25.6	24.3		ng/L		95	58 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.6	27.5		ng/L		107	53 - 138
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.6	28.5		ng/L		111	59 - 144
4:2 FTS	23.9	22.6		ng/L		95	59 - 129
6:2 FTS	24.3	20.8		ng/L		86	56 - 135
8:2 FTS	24.5	21.5		ng/L		88	52 - 141

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*86*		*50 - 150*
13C5 PFPeA	*92*		*50 - 150*
13C4 PFHpA	*96*		*50 - 150*
13C2 PFTeDA	*62*		*50 - 150*
13C3 PFBS	*93*		*50 - 150*
13C8 FOSA	*60*		*50 - 150*
M2-6:2 FTS	*99*		*50 - 150*
M2-4:2 FTS	*86*		*50 - 150*
M2-8:2 FTS	*74*		*50 - 150*
d5-NEtFOSAA	*68*		*50 - 150*
d3-NMeFOSAA	*73*		*50 - 150*
13C6 PFDA	*76*		*50 - 150*
13C2-PFDoDA	*69*		*50 - 150*
13C5 PFHxA	*87*		*50 - 150*

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 410-43643/2-A
Matrix: Water
Analysis Batch: 43906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43643

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C7 PFUnA	69		50 - 150
13C8 PFOA	96		50 - 150
13C9 PFNA	89		50 - 150
13C3 PFHxS	94		50 - 150
13C8 PFOS	89		50 - 150

Lab Sample ID: MB 410-45095/1-B
Matrix: Solid
Analysis Batch: 46642

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluoropentanoic acid (PFPeA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorohexanoic acid (PFHxA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluoroheptanoic acid (PFHpA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorooctanoic acid (PFOA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorononanoic acid (PFNA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorodecanoic acid (PFDA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluoroundecanoic acid (PFUnA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorododecanoic acid (PFDoA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorotridecanoic acid (PFTriA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluoropentanesulfonic acid (PFPeS)	ND		3.0		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
Perfluorooctanesulfonamide (FOSA)	ND		0.60		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
4:2 FTS	ND		2.0		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
6:2 FTS	ND		2.0		ug/Kg		09/17/20 18:17	09/23/20 01:07	1
8:2 FTS	ND		3.0		ug/Kg		09/17/20 18:17	09/23/20 01:07	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	94		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C5 PFPeA	94		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C4 PFHpA	86		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C2 PFTeDA	99		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C3 PFBS	94		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C8 FOSA	96		50 - 150	09/17/20 18:17	09/23/20 01:07	1
M2-6:2 FTS	98		50 - 150	09/17/20 18:17	09/23/20 01:07	1
M2-4:2 FTS	91		50 - 150	09/17/20 18:17	09/23/20 01:07	1
M2-8:2 FTS	110		50 - 150	09/17/20 18:17	09/23/20 01:07	1
d5-NEtFOSAA	100		50 - 150	09/17/20 18:17	09/23/20 01:07	1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: MB 410-45095/1-B
Matrix: Solid
Analysis Batch: 46642

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45095

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	97		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C6 PFDA	103		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C2-PFDoDA	99		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C5 PFHxA	90		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C7 PFUnA	100		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C8 PFOA	93		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C9 PFNA	93		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C3 PFHxS	94		50 - 150	09/17/20 18:17	09/23/20 01:07	1
13C8 PFOS	91		50 - 150	09/17/20 18:17	09/23/20 01:07	1

Lab Sample ID: LCS 410-45095/2-B
Matrix: Solid
Analysis Batch: 46642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45095

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	25.0	23.8		ug/Kg		95	46 - 196
Perfluoropentanoic acid (PFPeA)	25.0	23.7		ug/Kg		95	65 - 144
Perfluorohexanoic acid (PFHxA)	25.0	26.8		ug/Kg		107	57 - 144
Perfluoroheptanoic acid (PFHpA)	25.0	26.2		ug/Kg		105	58 - 159
Perfluorooctanoic acid (PFOA)	25.0	24.6		ug/Kg		98	59 - 136
Perfluorononanoic acid (PFNA)	25.0	26.3		ug/Kg		105	62 - 146
Perfluorodecanoic acid (PFDA)	25.0	25.7		ug/Kg		103	59 - 138
Perfluoroundecanoic acid (PFUnA)	25.0	26.3		ug/Kg		105	56 - 144
Perfluorododecanoic acid (PFDoA)	25.0	26.6		ug/Kg		106	56 - 146
Perfluorotridecanoic acid (PFTriA)	25.0	26.1		ug/Kg		105	60 - 151
Perfluorotetradecanoic acid (PFTeA)	25.0	24.8		ug/Kg		99	61 - 149
Perfluorobutanesulfonic acid (PFBS)	22.1	22.9		ug/Kg		103	63 - 138
Perfluoropentanesulfonic acid (PFPeS)	23.5	23.5		ug/Kg		100	63 - 149
Perfluorohexanesulfonic acid (PFHxS)	23.6	23.4		ug/Kg		99	57 - 138
Perfluoroheptanesulfonic Acid (PFHpS)	23.8	24.2		ug/Kg		102	70 - 132
Perfluorooctanesulfonic acid (PFOS)	23.9	21.8		ug/Kg		91	54 - 131
Perfluorodecanesulfonic acid (PFDS)	24.1	24.7		ug/Kg		103	60 - 143
Perfluorooctanesulfonamide (FOSA)	25.0	25.4		ug/Kg		101	44 - 146
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	31.8		ug/Kg		127	45 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	30.0		ug/Kg		120	47 - 159
4:2 FTS	23.4	22.7		ug/Kg		97	50 - 138
6:2 FTS	23.7	22.8		ug/Kg		96	51 - 141
8:2 FTS	24.0	23.0		ug/Kg		96	45 - 153

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	98		50 - 150
13C5 PFPeA	96		50 - 150
13C4 PFHpA	93		50 - 150
13C2 PFTeDA	103		50 - 150
13C3 PFBS	101		50 - 150
13C8 FOSA	98		50 - 150
M2-6:2 FTS	101		50 - 150
M2-4:2 FTS	94		50 - 150
M2-8:2 FTS	109		50 - 150
d5-NEtFOSAA	105		50 - 150
d3-NMeFOSAA	105		50 - 150
13C6 PFDA	101		50 - 150
13C2-PFDoDA	99		50 - 150
13C5 PFHxA	95		50 - 150
13C7 PFUnA	100		50 - 150
13C8 PFOA	99		50 - 150
13C9 PFNA	96		50 - 150
13C3 PFHxS	96		50 - 150
13C8 PFOS	99		50 - 150

Lab Sample ID: 320-64470-4 MS
Matrix: Solid
Analysis Batch: 46642

Client Sample ID: SB-5A-70
Prep Type: Total/NA
Prep Batch: 45095

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	ND	F2 F1	24.9	24.4		ug/Kg	☼	92	46 - 196
Perfluoropentanoic acid (PFPeA)	6.1	F2 F1	24.9	26.7		ug/Kg	☼	83	65 - 144
Perfluorohexanoic acid (PFHxA)	6.3	F2 F1	24.9	31.4		ug/Kg	☼	101	57 - 144
Perfluoroheptanoic acid (PFHpA)	1.5	F2 F1	24.9	28.4		ug/Kg	☼	108	58 - 159
Perfluorooctanoic acid (PFOA)	ND	F2 F1	24.9	24.8		ug/Kg	☼	100	59 - 136
Perfluorononanoic acid (PFNA)	ND	F2 F1	24.9	27.6		ug/Kg	☼	111	62 - 146
Perfluorodecanoic acid (PFDA)	ND	F2 F1	24.9	24.9		ug/Kg	☼	100	59 - 138
Perfluoroundecanoic acid (PFUnA)	ND	F2 F1	24.9	25.9		ug/Kg	☼	104	56 - 144
Perfluorododecanoic acid (PFDoA)	ND	F2 F1	24.9	26.7		ug/Kg	☼	107	56 - 146
Perfluorotridecanoic acid (PFTriA)	ND	F2 F1	24.9	26.7		ug/Kg	☼	107	60 - 151
Perfluorotetradecanoic acid (PFTeA)	ND	F2 F1	24.9	25.5		ug/Kg	☼	102	61 - 149
Perfluorobutanesulfonic acid (PFBS)	ND	F2 F1	22.0	24.8		ug/Kg	☼	107	63 - 138
Perfluoropentanesulfonic acid (PFPeS)	ND	F2 F1	23.4	24.9		ug/Kg	☼	104	63 - 149
Perfluorohexanesulfonic acid (PFHxS)	ND	F2 F1	23.5	24.7		ug/Kg	☼	104	57 - 138
Perfluoroheptanesulfonic Acid (PFHpS)	ND	F2 F1	23.7	24.2		ug/Kg	☼	102	70 - 132
Perfluorooctanesulfonic acid (PFOS)	ND	F2 F1	23.8	22.4		ug/Kg	☼	94	54 - 131
Perfluorodecanesulfonic acid (PFDS)	ND	F2 F1	24.0	24.6		ug/Kg	☼	103	60 - 143
Perfluorooctanesulfonamide (FOSA)	ND	F2	24.9	23.7		ug/Kg	☼	95	44 - 146

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: 320-64470-4 MS
Matrix: Solid
Analysis Batch: 46642

Client Sample ID: SB-5A-70
Prep Type: Total/NA
Prep Batch: 45095

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	F2	24.9	29.5		ug/Kg	☼	118	45 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	F2	24.9	27.9		ug/Kg	☼	112	47 - 159
4:2 FTS	ND	F2 F1	23.3	23.7		ug/Kg	☼	102	50 - 138
6:2 FTS	ND	F2 F1	23.6	23.2		ug/Kg	☼	98	51 - 141
8:2 FTS	ND	F2 F1	23.9	26.1		ug/Kg	☼	109	45 - 153

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*95*		*50 - 150*
13C5 PFPeA	*95*		*50 - 150*
13C4 PFHpA	*93*		*50 - 150*
13C2 PFTeDA	*98*		*50 - 150*
13C3 PFBS	*94*		*50 - 150*
13C8 FOSA	*100*		*50 - 150*
M2-6:2 FTS	*97*		*50 - 150*
M2-4:2 FTS	*94*		*50 - 150*
M2-8:2 FTS	*95*		*50 - 150*
d5-NEtFOSAA	*94*		*50 - 150*
d3-NMeFOSAA	*99*		*50 - 150*
13C6 PFDA	*100*		*50 - 150*
13C2-PFDoDA	*98*		*50 - 150*
13C5 PFHxA	*92*		*50 - 150*
13C7 PFUnA	*97*		*50 - 150*
13C8 PFOA	*96*		*50 - 150*
13C9 PFNA	*89*		*50 - 150*
13C3 PFHxS	*93*		*50 - 150*
13C8 PFOS	*94*		*50 - 150*

Lab Sample ID: 320-64470-4 MSD
Matrix: Solid
Analysis Batch: 46642

Client Sample ID: SB-5A-70
Prep Type: Total/NA
Prep Batch: 45095

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	ND	F2 F1	24.9	11.3	F2 F1	ug/Kg	☼	39	46 - 196	73	30
Perfluoropentanoic acid (PFPeA)	6.1	F2 F1	24.9	13.7	F2 F1	ug/Kg	☼	30	65 - 144	64	30
Perfluorohexanoic acid (PFHxA)	6.3	F2 F1	24.9	16.3	F2 F1	ug/Kg	☼	40	57 - 144	63	30
Perfluoroheptanoic acid (PFHpA)	1.5	F2 F1	24.9	14.3	F2 F1	ug/Kg	☼	51	58 - 159	66	30
Perfluorooctanoic acid (PFOA)	ND	F2 F1	24.9	11.1	F2 F1	ug/Kg	☼	44	59 - 136	77	30
Perfluorononanoic acid (PFNA)	ND	F2 F1	24.9	12.4	F2 F1	ug/Kg	☼	50	62 - 146	76	30
Perfluorodecanoic acid (PFDA)	ND	F2 F1	24.9	11.1	F2 F1	ug/Kg	☼	45	59 - 138	77	30
Perfluoroundecanoic acid (PFUnA)	ND	F2 F1	24.9	11.3	F2 F1	ug/Kg	☼	45	56 - 144	79	30
Perfluorododecanoic acid (PFDoA)	ND	F2 F1	24.9	12.4	F2 F1	ug/Kg	☼	50	56 - 146	73	30
Perfluorotridecanoic acid (PFTriA)	ND	F2 F1	24.9	12.5	F2 F1	ug/Kg	☼	50	60 - 151	72	30
Perfluorotetradecanoic acid (PFTeA)	ND	F2 F1	24.9	11.3	F2 F1	ug/Kg	☼	45	61 - 149	77	30
Perfluorobutanesulfonic acid (PFBS)	ND	F2 F1	22.0	11.0	F2 F1	ug/Kg	☼	44	63 - 138	77	30

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: 320-64470-4 MSD
Matrix: Solid
Analysis Batch: 46642

Client Sample ID: SB-5A-70
Prep Type: Total/NA
Prep Batch: 45095

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoropentanesulfonic acid (PFPeS)	ND	F2 F1	23.4	11.7	F2 F1	ug/Kg	☼	48	63 - 149	72	30
Perfluorohexanesulfonic acid (PFHxS)	ND	F2 F1	23.5	10.8	F2 F1	ug/Kg	☼	45	57 - 138	78	30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	F2 F1	23.7	10.6	F2 F1	ug/Kg	☼	45	70 - 132	78	30
Perfluorooctanesulfonic acid (PFOS)	ND	F2 F1	23.8	9.60	F2 F1	ug/Kg	☼	40	54 - 131	80	30
Perfluorodecanesulfonic acid (PFDS)	ND	F2 F1	24.0	10.7	F2 F1	ug/Kg	☼	45	60 - 143	79	30
Perfluorooctanesulfonamide (FOSA)	ND	F2	24.9	11.0	F2	ug/Kg	☼	44	44 - 146	73	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND	F2	24.9	13.5	F2	ug/Kg	☼	54	45 - 150	74	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND	F2	24.9	11.9	F2	ug/Kg	☼	48	47 - 159	80	30
4:2 FTS	ND	F2 F1	23.3	10.9	F2 F1	ug/Kg	☼	47	50 - 138	74	30
6:2 FTS	ND	F2 F1	23.6	10.7	F2 F1	ug/Kg	☼	45	51 - 141	74	30
8:2 FTS	ND	F2 F1	23.9	10.4	F2 F1	ug/Kg	☼	43	45 - 153	86	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*97*		*50 - 150*
13C5 PFPeA	*98*		*50 - 150*
13C4 PFHpA	*90*		*50 - 150*
13C2 PFTeDA	*97*		*50 - 150*
13C3 PFBS	*96*		*50 - 150*
13C8 FOSA	*99*		*50 - 150*
M2-6:2 FTS	*99*		*50 - 150*
M2-4:2 FTS	*93*		*50 - 150*
M2-8:2 FTS	*102*		*50 - 150*
d5-NEtFOSAA	*95*		*50 - 150*
d3-NMeFOSAA	*98*		*50 - 150*
13C6 PFDA	*96*		*50 - 150*
13C2-PFDoDA	*97*		*50 - 150*
13C5 PFHxA	*95*		*50 - 150*
13C7 PFUnA	*105*		*50 - 150*
13C8 PFOA	*97*		*50 - 150*
13C9 PFNA	*94*		*50 - 150*
13C3 PFHxS	*97*		*50 - 150*
13C8 PFOS	*98*		*50 - 150*

LCMS

Prep Batch: 43643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-1	EB-200208	Total/NA	Water	537 IDA	
320-64470-2	FB-200208	Total/NA	Water	537 IDA	
320-64470-2 - DL	FB-200208	Total/NA	Water	537 IDA	
320-64470-5	EB-200209	Total/NA	Water	537 IDA	
320-64470-6	FB-200209	Total/NA	Water	537 IDA	
MB 410-43643/1-A	Method Blank	Total/NA	Water	537 IDA	
LCS 410-43643/2-A	Lab Control Sample	Total/NA	Water	537 IDA	

Analysis Batch: 43906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-2	FB-200208	Total/NA	Water	EPA 537 (Mod)	43643
320-64470-2 - DL	FB-200208	Total/NA	Water	EPA 537 (Mod)	43643
320-64470-5	EB-200209	Total/NA	Water	EPA 537 (Mod)	43643
320-64470-6	FB-200209	Total/NA	Water	EPA 537 (Mod)	43643
MB 410-43643/1-A	Method Blank	Total/NA	Water	EPA 537 (Mod)	43643
LCS 410-43643/2-A	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	43643

Analysis Batch: 44488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-1	EB-200208	Total/NA	Water	EPA 537 (Mod)	43643

Prep Batch: 45095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-3	SB-5A-60	Total/NA	Solid	SHAKE	
320-64470-4	SB-5A-70	Total/NA	Solid	SHAKE	
320-64470-7	SB-5A-80	Total/NA	Solid	SHAKE	
320-64470-8	SB-5A-80-DUP	Total/NA	Solid	SHAKE	
320-64470-9	SB-5A-90	Total/NA	Solid	SHAKE	
320-64470-10	SB-5A-100	Total/NA	Solid	SHAKE	
320-64470-11	SB-5A-110	Total/NA	Solid	SHAKE	
320-64470-12	SB-5A-120	Total/NA	Solid	SHAKE	
320-64470-13	SB-5A-130	Total/NA	Solid	SHAKE	
MB 410-45095/1-B	Method Blank	Total/NA	Solid	SHAKE	
LCS 410-45095/2-B	Lab Control Sample	Total/NA	Solid	SHAKE	
320-64470-4 MS	SB-5A-70	Total/NA	Solid	SHAKE	
320-64470-4 MSD	SB-5A-70	Total/NA	Solid	SHAKE	

Cleanup Batch: 45100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-3	SB-5A-60	Total/NA	Solid	Extract Aliquot	45095
320-64470-4	SB-5A-70	Total/NA	Solid	Extract Aliquot	45095
320-64470-7	SB-5A-80	Total/NA	Solid	Extract Aliquot	45095
320-64470-8	SB-5A-80-DUP	Total/NA	Solid	Extract Aliquot	45095
320-64470-9	SB-5A-90	Total/NA	Solid	Extract Aliquot	45095
320-64470-10	SB-5A-100	Total/NA	Solid	Extract Aliquot	45095
320-64470-11	SB-5A-110	Total/NA	Solid	Extract Aliquot	45095
320-64470-12	SB-5A-120	Total/NA	Solid	Extract Aliquot	45095
320-64470-13	SB-5A-130	Total/NA	Solid	Extract Aliquot	45095
MB 410-45095/1-B	Method Blank	Total/NA	Solid	Extract Aliquot	45095
LCS 410-45095/2-B	Lab Control Sample	Total/NA	Solid	Extract Aliquot	45095
320-64470-4 MS	SB-5A-70	Total/NA	Solid	Extract Aliquot	45095

LCMS (Continued)

Cleanup Batch: 45100 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-4 MSD	SB-5A-70	Total/NA	Solid	Extract Aliquot	45095

Analysis Batch: 46642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-4	SB-5A-70	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-7	SB-5A-80	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-8	SB-5A-80-DUP	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-9	SB-5A-90	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-10	SB-5A-100	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-11	SB-5A-110	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-12	SB-5A-120	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-13	SB-5A-130	Total/NA	Solid	EPA 537 (Mod)	45100
MB 410-45095/1-B	Method Blank	Total/NA	Solid	EPA 537 (Mod)	45100
LCS 410-45095/2-B	Lab Control Sample	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-4 MS	SB-5A-70	Total/NA	Solid	EPA 537 (Mod)	45100
320-64470-4 MSD	SB-5A-70	Total/NA	Solid	EPA 537 (Mod)	45100

Analysis Batch: 47281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-3	SB-5A-60	Total/NA	Solid	EPA 537 (Mod)	45100

General Chemistry

Analysis Batch: 44183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64470-3	SB-5A-60	Total/NA	Solid	Moisture	
320-64470-4	SB-5A-70	Total/NA	Solid	Moisture	
320-64470-7	SB-5A-80	Total/NA	Solid	Moisture	
320-64470-8	SB-5A-80-DUP	Total/NA	Solid	Moisture	
320-64470-9	SB-5A-90	Total/NA	Solid	Moisture	
320-64470-10	SB-5A-100	Total/NA	Solid	Moisture	
320-64470-11	SB-5A-110	Total/NA	Solid	Moisture	
320-64470-12	SB-5A-120	Total/NA	Solid	Moisture	
320-64470-13	SB-5A-130	Total/NA	Solid	Moisture	

Client Sample ID: EB-200208
Lab Sample ID: 320-64470-1
Date Collected: 09/08/20 14:10
Matrix: Water
Date Received: 09/10/20 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			317.4 mL	1 mL	43643	09/14/20 17:09	QLP7	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			44488	09/16/20 18:02	PY4D	ELLE

Client Sample ID: FB-200208
Lab Sample ID: 320-64470-2
Date Collected: 09/08/20 12:20
Matrix: Water
Date Received: 09/10/20 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			298.4 mL	1 mL	43643	09/14/20 17:09	QLP7	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			43906	09/15/20 18:13	GG3Y	ELLE
Total/NA	Prep	537 IDA	DL		298.4 mL	1 mL	43643	09/14/20 17:09	QLP7	ELLE
Total/NA	Analysis	EPA 537 (Mod)	DL	10			43906	09/15/20 22:08	GG3Y	ELLE

Client Sample ID: SB-5A-60
Lab Sample ID: 320-64470-3
Date Collected: 09/08/20 13:25
Matrix: Solid
Date Received: 09/10/20 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-60
Lab Sample ID: 320-64470-3
Date Collected: 09/08/20 13:25
Matrix: Solid
Date Received: 09/10/20 11:05
Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.03 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			47281	09/24/20 09:36	UCD3	ELLE

Client Sample ID: SB-5A-70
Lab Sample ID: 320-64470-4
Date Collected: 09/08/20 14:35
Matrix: Solid
Date Received: 09/10/20 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-70
Lab Sample ID: 320-64470-4
Date Collected: 09/08/20 14:35
Matrix: Solid
Date Received: 09/10/20 11:05
Percent Solids: 96.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.01 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			46642	09/23/20 01:34	GG3Y	ELLE

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Client Sample ID: EB-200209
Date Collected: 09/09/20 11:04
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			308.4 mL	1 mL	43643	09/14/20 17:09	QLP7	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			43906	09/15/20 18:22	GG3Y	ELLE

Client Sample ID: FB-200209
Date Collected: 09/09/20 11:08
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			307.8 mL	1 mL	43643	09/14/20 17:09	QLP7	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			43906	09/15/20 18:31	GG3Y	ELLE

Client Sample ID: SB-5A-80
Date Collected: 09/09/20 07:39
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-80
Date Collected: 09/09/20 07:39
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-7
Matrix: Solid
Percent Solids: 95.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.02 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			46642	09/23/20 02:02	GG3Y	ELLE

Client Sample ID: SB-5A-80-DUP
Date Collected: 09/09/20 07:39
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-80-DUP
Date Collected: 09/09/20 07:39
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-8
Matrix: Solid
Percent Solids: 96.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.02 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			46642	09/23/20 02:11	GG3Y	ELLE

Client Sample ID: SB-5A-90
Date Collected: 09/09/20 08:45
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-90
Date Collected: 09/09/20 08:45
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-9
Matrix: Solid
Percent Solids: 97.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.02 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			46642	09/23/20 02:20	GG3Y	ELLE

Client Sample ID: SB-5A-100
Date Collected: 09/09/20 09:47
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-100
Date Collected: 09/09/20 09:47
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-10
Matrix: Solid
Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.02 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			46642	09/23/20 02:29	GG3Y	ELLE

Client Sample ID: SB-5A-110
Date Collected: 09/09/20 13:09
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-110
Date Collected: 09/09/20 13:09
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-11
Matrix: Solid
Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.04 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			46642	09/23/20 02:38	GG3Y	ELLE

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Client Sample ID: SB-5A-120
Date Collected: 09/09/20 14:50
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-120
Date Collected: 09/09/20 14:50
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-12
Matrix: Solid
Percent Solids: 98.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.01 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			46642	09/23/20 02:47	GG3Y	ELLE

Client Sample ID: SB-5A-130
Date Collected: 09/09/20 15:35
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			44183	09/15/20 20:21	OEL4	ELLE

Client Sample ID: SB-5A-130
Date Collected: 09/09/20 15:35
Date Received: 09/10/20 11:05

Lab Sample ID: 320-64470-13
Matrix: Solid
Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.03 g	4 mL	45095	09/17/20 18:17	NP8L	ELLE
Total/NA	Cleanup	Extract Aliquot			2 mL	1 mL	45100	09/17/20 18:24	NP8L	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1			46642	09/23/20 03:05	GG3Y	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 320-64470-1
Project/Site: PFAS - Hollywood Burbank Airport

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2792	01-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64470-1

Method	Method Description	Protocol	Laboratory
EPA 537 (Mod)	EPA 537 mod QSM 5.1, Table B-15	EPA	ELLE
Moisture	Percent Moisture	EPA	ELLE
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
Extract Aliquot	Preparation, Extract Aliquot	None	ELLE
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Geosyntec Consultants, Inc.
Job ID: 320-64470-1
Project/Site: PFAS - Hollywood Burbank Airport

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-64470-1	EB-200208	Water	09/08/20 14:10	09/10/20 11:05	
320-64470-2	FB-200208	Water	09/08/20 12:20	09/10/20 11:05	
320-64470-3	SB-5A-60	Solid	09/08/20 13:25	09/10/20 11:05	
320-64470-4	SB-5A-70	Solid	09/08/20 14:35	09/10/20 11:05	
320-64470-5	EB-200209	Water	09/09/20 11:04	09/10/20 11:05	
320-64470-6	FB-200209	Water	09/09/20 11:08	09/10/20 11:05	
320-64470-7	SB-5A-80	Solid	09/09/20 07:39	09/10/20 11:05	
320-64470-8	SB-5A-80-DUP	Solid	09/09/20 07:39	09/10/20 11:05	
320-64470-9	SB-5A-90	Solid	09/09/20 08:45	09/10/20 11:05	
320-64470-10	SB-5A-100	Solid	09/09/20 09:47	09/10/20 11:05	
320-64470-11	SB-5A-110	Solid	09/09/20 13:09	09/10/20 11:05	
320-64470-12	SB-5A-120	Solid	09/09/20 14:50	09/10/20 11:05	
320-64470-13	SB-5A-130	Solid	09/09/20 15:35	09/10/20 11:05	

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CHAIN OF CUSTODY

Page 1 of 1

320-64470 Chain of Custody

702 Electronic Drive	Phone: 215-355-3900
Horsham, PA 19044-0962	Fax: 215-355-7231
Client/Acct. No.	Geosyntec Consultants
Address	65 N. Raymond Ave
	Suite 200
City/State/Zip	Pasadena, CA 91103
Phone/Fax	626-449-0664
Client Contact:	Mital Desai

Bill to/Report to (if different)

Sampling Site Address (if different) Include State: Burbank, CA

P.O. No. WR2693 – 02A PWSID #:

Quote # 57005935

e-mail: mdesai@geosyntec.com

#____Ascorbic/HCL Vials #____HCl Vials

_ $Na_2S_2O_3$ _____

#____Na OH/Zn acetate pH _____

_ HNO_3 pH _____

_ H_2SO_4 pH _____

#____NaOH pH _____

#____Unpreserved

#____HCl #____NH4Cl #____MeOH

#____DI Water

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT	ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
EB- 200908	9/8/20	1410	X		WW	2							2		PFAS (23 analytes as required by CA ELAP)	
FB- 200908		1220	X		WW	2							2		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 60		1325	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 70		1435	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 70		1435	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	MS/MSD
~~SB-5A-~~ 85			X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
~~SB-5A-~~ 85			X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
~~SB-5A-~~ 100			X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
~~SB-5A-~~ 85			X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
~~SB-5A-~~ 90			X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	

SAMPLEDBY: (Name/Company)
J. Loper, Geosyntec

TAT: ☒ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD
☒ Standard + QC ☐ Forms ☒ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials | Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

	DATE	TIME		DATE	TIME
RELINQUISHED BY SAMPLER 1. Julia Loper	9/8/20	1726	RECEIVED BY 1.		
RELINQUISHED BY 2.			RECEIVED BY 2.		
RELINQUISHED BY 3.			RECEIVED BY 3.		
RELINQUISHED BY 4.			RECEIVED BY 4.		
RELINQUISHED BY 5.			RECEIVED BY 5.	9/10/2020	1109

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☒ FEDEX ☐ OTHER _____

Custody Seal Number

Rec'd Temp: 2.2 Initials: PM Ice: Y / N Location: ____

COMMENTS:

Hazardous: yes / no

eurofins | QC

CHAIN OF CUSTODY

Page 1 of ___

Lab LIMS No:

Bill to/Report to (if different)

LAB USE ONLY:

MATRIX CODES: DW: DRINKING WATER; GW: GROUND WATER; WW: WASTEWATER; SO: SOIL; SL: SLUDGE; OIL: OIL; SOL: NON SOIL SOLID; MI: MISCELLANEOUS; X: OTHER

#____Ascorbic/HCL Vials #____HCl Vials

_ $Na_2S_2O_3$_____

#____Na OH/Zn acetate pH _____

_ HNO_3 pH _____

_ H_2SO_4 pH _____

#____NaOH pH _____

#____Unpreserved

#____HCl #_____NH4Cl #_____MeOH

#_____DI Water

702 Electronic Drive Phone: 215-355-3900
Horsham, PA 19044-0962 Fax: 215-355-7231

Sampling Site Address (if different) Include State: Burbank, CA

Client/Acct. No. Geosyntec Consultants
Address 65 N. Raymond Ave
Suite 200
City/State/Zip Pasadena, CA 91103
Phone/Fax 626-449-0664
Client Contact: Mital Desai

P.O. No. WR2693 – 02A PWSID #:
Quote # 57005935
e-mail: mdesai@geosyntec.com

PROJECT

FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	Zn Ac	UNPRE	BACT	ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
EB- 200909	9/9/20	1104	X		WW	~~2~~ 1							~~2~~ 1		PFAS (23 analytes as required by CA ELAP)	
FB- 200909		1108	X		WW	~~2~~ 1							~~2~~ 1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 80		0739	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 80 - DUP		0739	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 90		0845	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 100		~~1408~~ 0947	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 110		1309	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 120		1450	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 130		1535	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
~~SB-5A-~~ (50)			X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	

SAMPLED BY: (Name/Company)
J. Loper, Geosyntec

TAT: ☒ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD
■ Standard + QC ☐ Forms ☒ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials | Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. Julia Loper	9/9/20	1613	1.		
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5.	DATE 9/10/20	TIME 1105

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☒ FEDEX ☐ OTHER _____

Custody Seal Number

Rec'd Temp 2.2 Initials: RM Ice (Y) / N Location: ___

COMMENTS: 34

Hazardous: yes / no

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 320-64470-1

Login Number: 64470
List Number: 2
Creator: Phillips, Ann-Marie E

List Source: Eurofins Lancaster Laboratories Env
List Creation: 09/10/20 05:46 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-64510-1
Client Project/Site: PFAS - Hollywood Burbank Airport

For:
Geosyntec Consultants, Inc.
65 N. Raymond Avenue
Suite 200
Pasadena, California 91103

Attn: Mital Desai

Authorized for release by:
9/18/2020 12:27:25 PM

Laura Turpen, Project Manager I
(916)374-4414
Laura.Turpen@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Geosyntec Consultants, Inc. Job ID: 320-64510-1
Project/Site: PFAS - Hollywood Burbank Airport

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Job ID: 320-64510-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-64510-1

Comments
No additional comments.

Receipt
The samples were received on 9/11/2020 10:15 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.0º C.

LCMS
Method EPA 537(Mod): The first level standard from the initial calibration curve is used to evaluate the tune criteria. The instrument mass windows are set at +/- 0.5amu; therefore, detection of the analyte serves as verification that the assigned mass is within +/- 0.5amu of the true value, which meets the DoD/DOE QSM tune criterion.

Method EPA 537(Mod): Internal standard (ISTD) response of 13C2 PFOA for the following sample was outside control limits: (320-64510-A-4-B MS). Because the associated parent and matrix spike duplicate sample has ISTD response within limits and the matrix spike target analytes meet % recovery limits, the data is reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with: preparation batch 320-412160.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Geosyntec Consultants, Inc.
Job ID: 320-64510-1
Project/Site: PFAS - Hollywood Burbank Airport

Client Sample ID: EB-200910 — Lab Sample ID: 320-64510-1

No Detections.

Client Sample ID: FB-200910 — Lab Sample ID: 320-64510-2

No Detections.

Client Sample ID: SB-5A-140 — Lab Sample ID: 320-64510-3

No Detections.

Client Sample ID: SB-5A-150 — Lab Sample ID: 320-64510-4

No Detections.

Client Sample ID: SB-5A-160 — Lab Sample ID: 320-64510-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Client Sample ID: EB-200910
Date Collected: 09/10/20 12:20
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-1
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.5		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluoropentanoic acid (PFPeA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorohexanoic acid (PFHxA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorooctanoic acid (PFOA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.5		ng/L		09/15/20 04:37	09/15/20 19:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.5		ng/L		09/15/20 04:37	09/15/20 19:42	1
4:2 FTS	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1
6:2 FTS	ND		4.5		ng/L		09/15/20 04:37	09/15/20 19:42	1
8:2 FTS	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*88*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C5 PFPeA	*88*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C2 PFHxA	*86*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C4 PFHpA	*88*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C4 PFOA	*85*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C5 PFNA	*91*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C2 PFDA	*83*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C2 PFUnA	*96*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C2 PFDoA	*78*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C2 PFTeDA	*73*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C3 PFBS	*96*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
18O2 PFHxS	*95*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C4 PFOS	*92*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
13C8 FOSA	*84*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
d3-NMeFOSAA	*85*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
d5-NEtFOSAA	*94*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
M2-6:2 FTS	*126*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
M2-8:2 FTS	*116*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*
M2-4:2 FTS	*116*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:42*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Client Sample ID: FB-200910
Date Collected: 09/10/20 12:23
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-2
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.5		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluoropentanoic acid (PFPeA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorohexanoic acid (PFHxA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorooctanoic acid (PFOA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.5		ng/L		09/15/20 04:37	09/15/20 19:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.5		ng/L		09/15/20 04:37	09/15/20 19:51	1
4:2 FTS	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1
6:2 FTS	ND		4.5		ng/L		09/15/20 04:37	09/15/20 19:51	1
8:2 FTS	ND		1.8		ng/L		09/15/20 04:37	09/15/20 19:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*79*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C5 PFPeA	*82*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C2 PFHxA	*83*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C4 PFHpA	*82*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C4 PFOA	*75*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C5 PFNA	*81*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C2 PFDA	*78*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C2 PFUnA	*77*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C2 PFDoA	*72*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C2 PFTeDA	*62*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C3 PFBS	*84*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
18O2 PFHxS	*88*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C4 PFOS	*81*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
13C8 FOSA	*75*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
d3-NMeFOSAA	*72*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
d5-NEtFOSAA	*72*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
M2-6:2 FTS	*83*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
M2-8:2 FTS	*90*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*
M2-4:2 FTS	*83*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:51*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Client Sample ID: SB-5A-140
Date Collected: 09/10/20 09:21
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-3
Matrix: Solid
Percent Solids: 94.6

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluoropentanoic acid (PFPeA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorohexanoic acid (PFHxA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorooctanoic acid (PFOA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorononanoic acid (PFNA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorodecanoic acid (PFDA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorododecanoic acid (PFDoA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorotridecanoic acid (PFTriA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.49		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
Perfluorooctanesulfonamide (FOSA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
4:2 FTS	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
6:2 FTS	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1
8:2 FTS	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*83*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C5 PFPeA	*85*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C2 PFHxA	*83*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C4 PFHpA	*88*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C4 PFOA	*87*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C5 PFNA	*87*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C2 PFDA	*87*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C2 PFUnA	*91*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C2 PFDoA	*86*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C2 PFTeDA	*78*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C3 PFBS	*76*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
18O2 PFHxS	*78*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C4 PFOS	*80*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
13C8 FOSA	*81*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
d3-NMeFOSAA	*82*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
d5-NEtFOSAA	*84*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
M2-6:2 FTS	*94*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
M2-8:2 FTS	*85*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*
M2-4:2 FTS	*92*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:50*	*1*

Client Sample ID: SB-5A-140 — Lab Sample ID: 320-64510-3

Date Collected: 09/10/20 09:21 — **Matrix: Solid**
Date Received: 09/11/20 10:15 — **Percent Solids: 94.6**

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.4		0.1		%			09/14/20 14:16	1
Percent Solids	94.6		0.1		%			09/14/20 14:16	1

Client Sample ID: SB-5A-150 — Lab Sample ID: 320-64510-4

Date Collected: 09/10/20 10:18 — **Matrix: Solid**
Date Received: 09/11/20 10:15 — **Percent Solids: 96.6**

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluoropentanoic acid (PFPeA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorohexanoic acid (PFHxA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorooctanoic acid (PFOA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorononanoic acid (PFNA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorodecanoic acid (PFDA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorododecanoic acid (PFDoA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorotridecanoic acid (PFTriA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.51		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
Perfluorooctanesulfonamide (FOSA)	ND		0.20		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
4:2 FTS	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
6:2 FTS	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1
8:2 FTS	ND		2.0		ug/Kg	☼	09/15/20 05:01	09/17/20 16:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*64*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C5 PFPeA	*65*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C2 PFHxA	*63*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C4 PFHpA	*71*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C4 PFOA	*67*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C5 PFNA	*69*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C2 PFDA	*69*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C2 PFUnA	*65*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C2 PFDoA	*65*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C2 PFTeDA	*62*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C3 PFBS	*61*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
18O2 PFHxS	*64*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C4 PFOS	*63*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*
13C8 FOSA	*64*		*50 - 150*	*09/15/20 05:01*	*09/17/20 16:22*	*1*

Client Sample ID: SB-5A-150 — Lab Sample ID: 320-64510-4

Date Collected: 09/10/20 10:18 — **Matrix: Solid**
Date Received: 09/11/20 10:15 — **Percent Solids: 96.6**

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	61		50 - 150	09/15/20 05:01	09/17/20 16:22	1
d5-NEtFOSAA	62		50 - 150	09/15/20 05:01	09/17/20 16:22	1
M2-6:2 FTS	74		50 - 150	09/15/20 05:01	09/17/20 16:22	1
M2-8:2 FTS	66		50 - 150	09/15/20 05:01	09/17/20 16:22	1
M2-4:2 FTS	70		50 - 150	09/15/20 05:01	09/17/20 16:22	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.4		0.1		%			09/14/20 14:16	1
Percent Solids	96.6		0.1		%			09/14/20 14:16	1

Client Sample ID: SB-5A-160 — Lab Sample ID: 320-64510-5

Date Collected: 09/10/20 10:20 — **Matrix: Solid**
Date Received: 09/11/20 10:15 — **Percent Solids: 97.2**

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluoropentanoic acid (PFPeA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorohexanoic acid (PFHxA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluoroheptanoic acid (PFHpA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorooctanoic acid (PFOA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorononanoic acid (PFNA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorodecanoic acid (PFDA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluoroundecanoic acid (PFUnA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorododecanoic acid (PFDoA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorotridecanoic acid (PFTriA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.48		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
Perfluorooctanesulfonamide (FOSA)	ND		0.19		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.9		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.9		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
4:2 FTS	ND		1.9		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
6:2 FTS	ND		1.9		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1
8:2 FTS	ND		1.9		ug/Kg	☼	09/15/20 05:01	09/17/20 16:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	85		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C5 PFPeA	87		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C2 PFHxA	82		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C4 PFHpA	91		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C4 PFOA	83		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C5 PFNA	94		50 - 150	09/15/20 05:01	09/17/20 16:59	1

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Client Sample ID: SB-5A-160
Date Collected: 09/10/20 10:20
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-5
Matrix: Solid
Percent Solids: 97.2

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	89		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C2 PFUnA	85		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C2 PFDoA	86		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C2 PFTeDA	85		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C3 PFBS	75		50 - 150	09/15/20 05:01	09/17/20 16:59	1
18O2 PFHxS	78		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C4 PFOS	80		50 - 150	09/15/20 05:01	09/17/20 16:59	1
13C8 FOSA	84		50 - 150	09/15/20 05:01	09/17/20 16:59	1
d3-NMeFOSAA	78		50 - 150	09/15/20 05:01	09/17/20 16:59	1
d5-NEtFOSAA	82		50 - 150	09/15/20 05:01	09/17/20 16:59	1
M2-6:2 FTS	88		50 - 150	09/15/20 05:01	09/17/20 16:59	1
M2-8:2 FTS	86		50 - 150	09/15/20 05:01	09/17/20 16:59	1
M2-4:2 FTS	80		50 - 150	09/15/20 05:01	09/17/20 16:59	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.8		0.1		%			09/14/20 14:16	1
Percent Solids	97.2		0.1		%			09/14/20 14:16	1

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-150)	PFPeA (50-150)	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)
320-64510-3	SB-5A-140	83	85	83	88	87	87	87	91
320-64510-4	SB-5A-150	64	65	63	71	67	69	69	65
320-64510-4 MS	SB-5A-150	60	62	59	66	61	68	62	62
320-64510-4 MSD	SB-5A-150	74	76	74	79	73	77	75	77
320-64510-5	SB-5A-160	85	87	82	91	83	94	89	85
LCS 320-412162/2-A	Lab Control Sample	66	68	63	73	70	71	72	68
MB 320-412162/1-A	Method Blank	64	65	62	65	63	67	66	66

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (50-150)	PFTDA (50-150)	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	PFOSA (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)
320-64510-3	SB-5A-140	86	78	76	78	80	81	82	84
320-64510-4	SB-5A-150	65	62	61	64	63	64	61	62
320-64510-4 MS	SB-5A-150	61	61	57	61	59	60	58	62
320-64510-4 MSD	SB-5A-150	78	76	70	73	71	73	68	74
320-64510-5	SB-5A-160	86	85	75	78	80	84	78	82
LCS 320-412162/2-A	Lab Control Sample	67	70	69	73	73	67	62	68
MB 320-412162/1-A	Method Blank	66	64	66	67	66	62	62	67

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	M262FTS (50-150)	M282FTS (50-150)	M242FTS (50-150)
320-64510-3	SB-5A-140	94	85	92
320-64510-4	SB-5A-150	74	66	70
320-64510-4 MS	SB-5A-150	68	60	67
320-64510-4 MSD	SB-5A-150	80	77	79
320-64510-5	SB-5A-160	88	86	80
LCS 320-412162/2-A	Lab Control Sample	92	76	83
MB 320-412162/1-A	Method Blank	93	72	86

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc. Job ID: 320-64510-1
Project/Site: PFAS - Hollywood Burbank Airport

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-150)	PFPeA (50-150)	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)
320-64510-1	EB-200910	88	88	86	88	85	91	83	96
320-64510-2	FB-200910	79	82	83	82	75	81	78	77
LCS 320-412160/2-A	Lab Control Sample	86	87	94	90	79	84	86	82
LCSD 320-412160/3-A	Lab Control Sample Dup	81	87	88	87	81	79	81	85
MB 320-412160/1-A	Method Blank	79	79	82	79	78	79	78	80

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (50-150)	PFTDA (50-150)	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	PFOSA (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)
320-64510-1	EB-200910	78	73	96	95	92	84	85	94
320-64510-2	FB-200910	72	62	84	88	81	75	72	72
LCS 320-412160/2-A	Lab Control Sample	77	74	91	97	90	82	77	79
LCSD 320-412160/3-A	Lab Control Sample Dup	73	66	88	90	86	78	76	76
MB 320-412160/1-A	Method Blank	68	68	88	83	79	76	75	75

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	M262FTS (50-150)	M282FTS (50-150)	M242FTS (50-150)
320-64510-1	EB-200910	126	116	116
320-64510-2	FB-200910	83	90	83
LCS 320-412160/2-A	Lab Control Sample	86	87	96
LCSD 320-412160/3-A	Lab Control Sample Dup	86	87	83
MB 320-412160/1-A	Method Blank	82	84	88

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Lab Sample ID: MB 320-412160/1-A
Matrix: Water
Analysis Batch: 412401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412160

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluoropentanoic acid (PFPeA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		5.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		5.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
4:2 FTS	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
6:2 FTS	ND		5.0		ng/L		09/15/20 04:37	09/15/20 19:14	1
8:2 FTS	ND		2.0		ng/L		09/15/20 04:37	09/15/20 19:14	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*79*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C5 PFPeA	*79*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C2 PFHxA	*82*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C4 PFHpA	*79*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C4 PFOA	*78*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C5 PFNA	*79*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C2 PFDA	*78*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C2 PFUnA	*80*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C2 PFDoA	*68*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C2 PFTeDA	*68*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C3 PFBS	*88*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
18O2 PFHxS	*83*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C4 PFOS	*79*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
13C8 FOSA	*76*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
d3-NMeFOSAA	*75*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
d5-NEtFOSAA	*75*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
M2-6:2 FTS	*82*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
M2-8:2 FTS	*84*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*
M2-4:2 FTS	*88*		*50 - 150*	*09/15/20 04:37*	*09/15/20 19:14*	*1*

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-412160/2-A
Matrix: Water
Analysis Batch: 412401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412160

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	44.1		ng/L		110	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	40.1		ng/L		100	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	39.4		ng/L		99	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	40.1		ng/L		100	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	43.5		ng/L		109	70 - 130
Perfluorononanoic acid (PFNA)	40.0	41.6		ng/L		104	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	40.9		ng/L		102	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	40.1		ng/L		100	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	40.8		ng/L		102	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	39.8		ng/L		99	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	40.2		ng/L		101	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	35.7		ng/L		101	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.5	42.1		ng/L		112	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.2		ng/L		94	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.7		ng/L		104	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	40.2		ng/L		108	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	38.1		ng/L		99	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	44.6		ng/L		112	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	43.1		ng/L		108	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.5		ng/L		99	76 - 136
4:2 FTS	37.4	33.7		ng/L		90	79 - 139
6:2 FTS	37.9	38.0		ng/L		100	59 - 175
8:2 FTS	38.3	37.6		ng/L		98	75 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*86*		*50 - 150*
13C5 PFPeA	*87*		*50 - 150*
13C2 PFHxA	*94*		*50 - 150*
13C4 PFHpA	*90*		*50 - 150*
13C4 PFOA	*79*		*50 - 150*
13C5 PFNA	*84*		*50 - 150*
13C2 PFDA	*86*		*50 - 150*
13C2 PFUnA	*82*		*50 - 150*
13C2 PFDoA	*77*		*50 - 150*
13C2 PFTeDA	*74*		*50 - 150*
13C3 PFBS	*91*		*50 - 150*
18O2 PFHxS	*97*		*50 - 150*
13C4 PFOS	*90*		*50 - 150*
13C8 FOSA	*82*		*50 - 150*

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-412160/2-A
Matrix: Water
Analysis Batch: 412401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412160

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
d3-NMeFOSAA	*77*		*50 - 150*
d5-NEtFOSAA	*79*		*50 - 150*
M2-6:2 FTS	*86*		*50 - 150*
M2-8:2 FTS	*87*		*50 - 150*
M2-4:2 FTS	*96*		*50 - 150*

Lab Sample ID: LCSD 320-412160/3-A
Matrix: Water
Analysis Batch: 412401

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 412160

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	46.1		ng/L		115	76 - 136	5	30
Perfluoropentanoic acid (PFPeA)			40.0	37.1		ng/L		93	71 - 131	8	30
Perfluorohexanoic acid (PFHxA)			40.0	40.5		ng/L		101	73 - 133	3	30
Perfluoroheptanoic acid (PFHpA)			40.0	39.8		ng/L		100	72 - 132	1	30
Perfluorooctanoic acid (PFOA)			40.0	40.9		ng/L		102	70 - 130	6	30
Perfluorononanoic acid (PFNA)			40.0	42.7		ng/L		107	75 - 135	3	30
Perfluorodecanoic acid (PFDA)			40.0	42.9		ng/L		107	76 - 136	5	30
Perfluoroundecanoic acid (PFUnA)			40.0	40.2		ng/L		100	68 - 128	0	30
Perfluorododecanoic acid (PFDoA)			40.0	46.2		ng/L		115	71 - 131	12	30
Perfluorotridecanoic acid (PFTriA)			40.0	43.0		ng/L		107	71 - 131	8	30
Perfluorotetradecanoic acid (PFTeA)			40.0	41.8		ng/L		104	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)			35.4	36.7		ng/L		104	67 - 127	3	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	42.7		ng/L		114	66 - 126	1	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	36.5		ng/L		100	59 - 119	7	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	41.1		ng/L		108	76 - 136	3	30
Perfluorooctanesulfonic acid (PFOS)			37.1	40.5		ng/L		109	70 - 130	1	30
Perfluorodecanesulfonic acid (PFDS)			38.6	38.0		ng/L		98	71 - 131	0	30
Perfluorooctanesulfonamide (FOSA)			40.0	43.7		ng/L		109	73 - 133	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	41.3		ng/L		103	76 - 136	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	41.3		ng/L		103	76 - 136	4	30
4:2 FTS			37.4	38.3		ng/L		102	79 - 139	13	30
6:2 FTS			37.9	38.1		ng/L		101	59 - 175	0	30
8:2 FTS			38.3	39.1		ng/L		102	75 - 135	4	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	*81*		*50 - 150*
13C5 PFPeA	*87*		*50 - 150*
13C2 PFHxA	*88*		*50 - 150*

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCSD 320-412160/3-A
Matrix: Water
Analysis Batch: 412401

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 412160

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFHpA	*87*		*50 - 150*
13C4 PFOA	*81*		*50 - 150*
13C5 PFNA	*79*		*50 - 150*
13C2 PFDA	*81*		*50 - 150*
13C2 PFUnA	*85*		*50 - 150*
13C2 PFDoA	*73*		*50 - 150*
13C2 PFTeDA	*66*		*50 - 150*
13C3 PFBS	*88*		*50 - 150*
18O2 PFHxS	*90*		*50 - 150*
13C4 PFOS	*86*		*50 - 150*
13C8 FOSA	*78*		*50 - 150*
d3-NMeFOSAA	*76*		*50 - 150*
d5-NEtFOSAA	*76*		*50 - 150*
M2-6:2 FTS	*86*		*50 - 150*
M2-8:2 FTS	*87*		*50 - 150*
M2-4:2 FTS	*83*		*50 - 150*

Lab Sample ID: MB 320-412162/1-A
Matrix: Solid
Analysis Batch: 413201

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412162

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluoropentanoic acid (PFPeA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorohexanoic acid (PFHxA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorooctanoic acid (PFOA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorononanoic acid (PFNA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorodecanoic acid (PFDA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorododecanoic acid (PFDoA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorotridecanoic acid (PFTriA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.50		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
Perfluorooctanesulfonamide (FOSA)	ND		0.20		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
4:2 FTS	ND		2.0		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
6:2 FTS	ND		2.0		ug/Kg		09/15/20 05:01	09/17/20 16:03	1
8:2 FTS	ND		2.0		ug/Kg		09/15/20 05:01	09/17/20 16:03	1

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	64		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C5 PFPeA	65		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C2 PFHxA	62		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C4 PFHpA	65		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C4 PFOA	63		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C5 PFNA	67		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C2 PFDA	66		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C2 PFUnA	66		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C2 PFDoA	66		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C2 PFTeDA	64		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C3 PFBS	66		50 - 150	09/15/20 05:01	09/17/20 16:03	1
18O2 PFHxS	67		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C4 PFOS	66		50 - 150	09/15/20 05:01	09/17/20 16:03	1
13C8 FOSA	62		50 - 150	09/15/20 05:01	09/17/20 16:03	1
d3-NMeFOSAA	62		50 - 150	09/15/20 05:01	09/17/20 16:03	1
d5-NEtFOSAA	67		50 - 150	09/15/20 05:01	09/17/20 16:03	1
M2-6:2 FTS	93		50 - 150	09/15/20 05:01	09/17/20 16:03	1
M2-8:2 FTS	72		50 - 150	09/15/20 05:01	09/17/20 16:03	1
M2-4:2 FTS	86		50 - 150	09/15/20 05:01	09/17/20 16:03	1

Lab Sample ID: LCS 320-412162/2-A
Matrix: Solid
Analysis Batch: 413201

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412162

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	2.00	2.18		ug/Kg		109	76 - 136
Perfluoropentanoic acid (PFPeA)	2.00	1.89		ug/Kg		95	69 - 129
Perfluorohexanoic acid (PFHxA)	2.00	2.07		ug/Kg		104	71 - 131
Perfluoroheptanoic acid (PFHpA)	2.00	1.90		ug/Kg		95	71 - 131
Perfluorooctanoic acid (PFOA)	2.00	2.05		ug/Kg		103	72 - 132
Perfluorononanoic acid (PFNA)	2.00	2.07		ug/Kg		104	73 - 133
Perfluorodecanoic acid (PFDA)	2.00	2.03		ug/Kg		101	72 - 132
Perfluoroundecanoic acid (PFUnA)	2.00	2.01		ug/Kg		100	66 - 126
Perfluorododecanoic acid (PFDoA)	2.00	2.07		ug/Kg		104	71 - 131
Perfluorotridecanoic acid (PFTriA)	2.00	2.16		ug/Kg		108	71 - 131
Perfluorotetradecanoic acid (PFTeA)	2.00	1.91		ug/Kg		96	67 - 127
Perfluorobutanesulfonic acid (PFBS)	1.77	1.81		ug/Kg		102	69 - 129
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.83		ug/Kg		97	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.72		ug/Kg		95	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	1.90	2.04		ug/Kg		107	76 - 136
Perfluorooctanesulfonic acid (PFOS)	1.86	2.05		ug/Kg		110	68 - 141
Perfluorodecanesulfonic acid (PFDS)	1.93	1.86		ug/Kg		97	71 - 131
Perfluorooctanesulfonamide (FOSA)	2.00	1.98		ug/Kg		99	77 - 137

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-412162/2-A
Matrix: Solid
Analysis Batch: 413201

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412162

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.27		ug/Kg		114	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.90	J	ug/Kg		95	72 - 132
4:2 FTS	1.87	1.60	J	ug/Kg		85	68 - 143
6:2 FTS	1.90	1.75	J	ug/Kg		92	73 - 139
8:2 FTS	1.92	1.75	J	ug/Kg		91	75 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*66*		*50 - 150*
13C5 PFPeA	*68*		*50 - 150*
13C2 PFHxA	*63*		*50 - 150*
13C4 PFHpA	*73*		*50 - 150*
13C4 PFOA	*70*		*50 - 150*
13C5 PFNA	*71*		*50 - 150*
13C2 PFDA	*72*		*50 - 150*
13C2 PFUnA	*68*		*50 - 150*
13C2 PFDoA	*67*		*50 - 150*
13C2 PFTeDA	*70*		*50 - 150*
13C3 PFBS	*69*		*50 - 150*
18O2 PFHxS	*73*		*50 - 150*
13C4 PFOS	*73*		*50 - 150*
13C8 FOSA	*67*		*50 - 150*
d3-NMeFOSAA	*62*		*50 - 150*
d5-NEtFOSAA	*68*		*50 - 150*
M2-6:2 FTS	*92*		*50 - 150*
M2-8:2 FTS	*76*		*50 - 150*
M2-4:2 FTS	*83*		*50 - 150*

Lab Sample ID: 320-64510-4 MS
Matrix: Solid
Analysis Batch: 413201

Client Sample ID: SB-5A-150
Prep Type: Total/NA
Prep Batch: 412162

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	ND		1.95	2.13		ug/Kg	☼	106	76 - 136
Perfluoropentanoic acid (PFPeA)	ND		1.95	1.87		ug/Kg	☼	96	69 - 129
Perfluorohexanoic acid (PFHxA)	ND		1.95	1.98		ug/Kg	☼	101	71 - 131
Perfluoroheptanoic acid (PFHpA)	ND		1.95	1.89		ug/Kg	☼	97	71 - 131
Perfluorooctanoic acid (PFOA)	ND		1.95	1.88		ug/Kg	☼	96	72 - 132
Perfluorononanoic acid (PFNA)	ND		1.95	1.89		ug/Kg	☼	97	73 - 133
Perfluorodecanoic acid (PFDA)	ND		1.95	1.98		ug/Kg	☼	101	72 - 132
Perfluoroundecanoic acid (PFUnA)	ND		1.95	1.95		ug/Kg	☼	100	66 - 126
Perfluorododecanoic acid (PFDoA)	ND		1.95	2.12		ug/Kg	☼	109	71 - 131
Perfluorotridecanoic acid (PFTriA)	ND		1.95	2.00		ug/Kg	☼	102	71 - 131
Perfluorotetradecanoic acid (PFTeA)	ND		1.95	1.84		ug/Kg	☼	94	67 - 127
Perfluorobutanesulfonic acid (PFBS)	ND		1.73	1.70		ug/Kg	☼	99	69 - 129

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: 320-64510-4 MS
Matrix: Solid
Analysis Batch: 413201

Client Sample ID: SB-5A-150
Prep Type: Total/NA
Prep Batch: 412162

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanesulfonic acid (PFPeS)	ND		1.83	1.90		ug/Kg	☼	104	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	ND		1.78	1.66		ug/Kg	☼	93	62 - 122
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.86	1.91		ug/Kg	☼	103	76 - 136
Perfluorooctanesulfonic acid (PFOS)	ND		1.81	2.00		ug/Kg	☼	110	68 - 141
Perfluorodecanesulfonic acid (PFDS)	ND		1.88	1.96		ug/Kg	☼	104	71 - 131
Perfluorooctanesulfonamide (FOSA)	ND		1.95	1.97		ug/Kg	☼	101	77 - 137
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.95	2.07		ug/Kg	☼	106	72 - 132
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.95	ND		ug/Kg	☼	98	72 - 132
4:2 FTS	ND		1.82	ND		ug/Kg	☼	87	68 - 143
6:2 FTS	ND		1.85	ND		ug/Kg	☼	91	73 - 139
8:2 FTS	ND		1.87	ND		ug/Kg	☼	98	75 - 135

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*60*		*50 - 150*
13C5 PFPeA	*62*		*50 - 150*
13C2 PFHxA	*59*		*50 - 150*
13C4 PFHpA	*66*		*50 - 150*
13C4 PFOA	*61*		*50 - 150*
13C5 PFNA	*68*		*50 - 150*
13C2 PFDA	*62*		*50 - 150*
13C2 PFUnA	*62*		*50 - 150*
13C2 PFDoA	*61*		*50 - 150*
13C2 PFTeDA	*61*		*50 - 150*
13C3 PFBS	*57*		*50 - 150*
18O2 PFHxS	*61*		*50 - 150*
13C4 PFOS	*59*		*50 - 150*
13C8 FOSA	*60*		*50 - 150*
d3-NMeFOSAA	*58*		*50 - 150*
d5-NEtFOSAA	*62*		*50 - 150*
M2-6:2 FTS	*68*		*50 - 150*
M2-8:2 FTS	*60*		*50 - 150*
M2-4:2 FTS	*67*		*50 - 150*

Lab Sample ID: 320-64510-4 MSD
Matrix: Solid
Analysis Batch: 413201

Client Sample ID: SB-5A-150
Prep Type: Total/NA
Prep Batch: 412162

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	ND		1.96	2.11		ug/Kg	☼	105	76 - 136	1	30
Perfluoropentanoic acid (PFPeA)	ND		1.96	1.87		ug/Kg	☼	95	69 - 129	0	30
Perfluorohexanoic acid (PFHxA)	ND		1.96	1.93		ug/Kg	☼	98	71 - 131	3	30
Perfluoroheptanoic acid (PFHpA)	ND		1.96	1.91		ug/Kg	☼	97	71 - 131	1	30
Perfluorooctanoic acid (PFOA)	ND		1.96	1.93		ug/Kg	☼	98	72 - 132	3	30

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: 320-64510-4 MSD
Matrix: Solid
Analysis Batch: 413201

Client Sample ID: SB-5A-150
Prep Type: Total/NA
Prep Batch: 412162

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorononanoic acid (PFNA)	ND		1.96	2.08		ug/Kg	☼	106	73 - 133	10	30
Perfluorodecanoic acid (PFDA)	ND		1.96	1.99		ug/Kg	☼	102	72 - 132	1	30
Perfluoroundecanoic acid (PFUnA)	ND		1.96	2.07		ug/Kg	☼	105	66 - 126	6	30
Perfluorododecanoic acid (PFDoA)	ND		1.96	1.93		ug/Kg	☼	98	71 - 131	9	30
Perfluorotridecanoic acid (PFTriA)	ND		1.96	1.97		ug/Kg	☼	100	71 - 131	2	30
Perfluorotetradecanoic acid (PFTeA)	ND		1.96	1.83		ug/Kg	☼	93	67 - 127	1	30
Perfluorobutanesulfonic acid (PFBS)	ND		1.74	1.79		ug/Kg	☼	103	69 - 129	5	30
Perfluoropentanesulfonic acid (PFPeS)	ND		1.84	1.81		ug/Kg	☼	98	66 - 126	5	30
Perfluorohexanesulfonic acid (PFHxS)	ND		1.79	1.69		ug/Kg	☼	94	62 - 122	2	30
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.87	1.93		ug/Kg	☼	103	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)	ND		1.82	1.95		ug/Kg	☼	107	68 - 141	3	30
Perfluorodecanesulfonic acid (PFDS)	ND		1.89	1.96		ug/Kg	☼	104	71 - 131	0	30
Perfluorooctanesulfonamide (FOSA)	ND		1.96	2.08		ug/Kg	☼	106	77 - 137	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.96	2.20		ug/Kg	☼	112	72 - 132	6	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.96	ND		ug/Kg	☼	98	72 - 132	1	30
4:2 FTS	ND		1.83	ND		ug/Kg	☼	91	68 - 143	6	30
6:2 FTS	ND		1.86	ND		ug/Kg	☼	97	73 - 139	7	30
8:2 FTS	ND		1.88	ND		ug/Kg	☼	101	75 - 135	4	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*74*		*50 - 150*
13C5 PFPeA	*76*		*50 - 150*
13C2 PFHxA	*74*		*50 - 150*
13C4 PFHpA	*79*		*50 - 150*
13C4 PFOA	*73*		*50 - 150*
13C5 PFNA	*77*		*50 - 150*
13C2 PFDA	*75*		*50 - 150*
13C2 PFUnA	*77*		*50 - 150*
13C2 PFDoA	*78*		*50 - 150*
13C2 PFTeDA	*76*		*50 - 150*
13C3 PFBS	*70*		*50 - 150*
18O2 PFHxS	*73*		*50 - 150*
13C4 PFOS	*71*		*50 - 150*
13C8 FOSA	*73*		*50 - 150*
d3-NMeFOSAA	*68*		*50 - 150*
d5-NEtFOSAA	*74*		*50 - 150*
M2-6:2 FTS	*80*		*50 - 150*
M2-8:2 FTS	*77*		*50 - 150*
M2-4:2 FTS	*79*		*50 - 150*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Method: D 2216 - Percent Moisture

Lab Sample ID: 720-99789-D-4 DU
Matrix: Solid
Analysis Batch: 411971

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	6.4			6.8		%				5	20
Percent Solids	93.6			93.2		%				0.4	20

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

LCMS

Prep Batch: 412160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64510-1	EB-200910	Total/NA	Water	3535	
320-64510-2	FB-200910	Total/NA	Water	3535	
MB 320-412160/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-412160/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-412160/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Prep Batch: 412162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64510-3	SB-5A-140	Total/NA	Solid	SHAKE	
320-64510-4	SB-5A-150	Total/NA	Solid	SHAKE	
320-64510-5	SB-5A-160	Total/NA	Solid	SHAKE	
MB 320-412162/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-412162/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-64510-4 MS	SB-5A-150	Total/NA	Solid	SHAKE	
320-64510-4 MSD	SB-5A-150	Total/NA	Solid	SHAKE	

Analysis Batch: 412401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64510-1	EB-200910	Total/NA	Water	EPA 537(Mod)	412160
320-64510-2	FB-200910	Total/NA	Water	EPA 537(Mod)	412160
MB 320-412160/1-A	Method Blank	Total/NA	Water	EPA 537(Mod)	412160
LCS 320-412160/2-A	Lab Control Sample	Total/NA	Water	EPA 537(Mod)	412160
LCSD 320-412160/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 537(Mod)	412160

Analysis Batch: 413201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64510-3	SB-5A-140	Total/NA	Solid	EPA 537(Mod)	412162
320-64510-4	SB-5A-150	Total/NA	Solid	EPA 537(Mod)	412162
320-64510-5	SB-5A-160	Total/NA	Solid	EPA 537(Mod)	412162
MB 320-412162/1-A	Method Blank	Total/NA	Solid	EPA 537(Mod)	412162
LCS 320-412162/2-A	Lab Control Sample	Total/NA	Solid	EPA 537(Mod)	412162
320-64510-4 MS	SB-5A-150	Total/NA	Solid	EPA 537(Mod)	412162
320-64510-4 MSD	SB-5A-150	Total/NA	Solid	EPA 537(Mod)	412162

General Chemistry

Analysis Batch: 411971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64510-3	SB-5A-140	Total/NA	Solid	D 2216	
320-64510-4	SB-5A-150	Total/NA	Solid	D 2216	
320-64510-5	SB-5A-160	Total/NA	Solid	D 2216	
720-99789-D-4 DU	Duplicate	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Client Sample ID: EB-200910
Date Collected: 09/10/20 12:20
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			279 mL	10.0 mL	412160	09/15/20 04:37	EG	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			412401	09/15/20 19:42	S1M	TAL SAC

Client Sample ID: FB-200910
Date Collected: 09/10/20 12:23
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			280.6 mL	10.0 mL	412160	09/15/20 04:37	EG	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			412401	09/15/20 19:51	S1M	TAL SAC

Client Sample ID: SB-5A-140
Date Collected: 09/10/20 09:21
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411971	09/14/20 14:16	TCS	TAL SAC

Client Sample ID: SB-5A-140
Date Collected: 09/10/20 09:21
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-3
Matrix: Solid
Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.34 g	10.0 mL	412162	09/15/20 05:01	NSS	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			413201	09/17/20 16:50	D1R	TAL SAC

Client Sample ID: SB-5A-150
Date Collected: 09/10/20 10:18
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411971	09/14/20 14:16	TCS	TAL SAC

Client Sample ID: SB-5A-150
Date Collected: 09/10/20 10:18
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-4
Matrix: Solid
Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.08 g	10.0 mL	412162	09/15/20 05:01	NSS	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			413201	09/17/20 16:22	D1R	TAL SAC

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Client Sample ID: SB-5A-160
Date Collected: 09/10/20 10:20
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			411971	09/14/20 14:16	TCS	TAL SAC

Client Sample ID: SB-5A-160
Date Collected: 09/10/20 10:20
Date Received: 09/11/20 10:15

Lab Sample ID: 320-64510-5
Matrix: Solid
Percent Solids: 97.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.37 g	10.0 mL	412162	09/15/20 05:01	NSS	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			413201	09/17/20 16:59	D1R	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 320-64510-1
Project/Site: PFAS - Hollywood Burbank Airport

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2897	01-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Method	Method Description	Protocol	Laboratory
EPA 537(Mod)	PFAS for QSM 5.1, Table B-15	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64510-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-64510-1	EB-200910	Water	09/10/20 12:20	09/11/20 10:15	
320-64510-2	FB-200910	Water	09/10/20 12:23	09/11/20 10:15	
320-64510-3	SB-5A-140	Solid	09/10/20 09:21	09/11/20 10:15	
320-64510-4	SB-5A-150	Solid	09/10/20 10:18	09/11/20 10:15	
320-64510-5	SB-5A-160	Solid	09/10/20 10:20	09/11/20 10:15	

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CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No:

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

Bill to/Report to (if different)

LAB USE ONLY:

#____Ascorbic/HCL Vials #____HCl Vials
_ $Na_2S_2O_3$ _____
#____Na OH/Zn acetate pH _____
_ HNO_3 pH _____
_ H_2SO_4 pH _____
#____NaOH pH _____
#____Unpreserved
#____HCl #____NH4Cl #____MeOH
#____DI Water

Sampling Site Address (if different) Include State: Burbank, CA

P.O. No. WR2693 – 02A PWSID #:

Quote # 57005935

e-mail: mdesai@geosyntec.com

Client/Acct. No.	Geosyntec Consultants
Address	65 N. Raymond Ave
	Suite 200
City/State/Zip	Pasadena, CA 91103
Phone/Fax	626-449-0664
Client Contact:	Mital Desai

702 Electronic Drive Phone: 215-355-3900
Horsham, PA 19044-0962 Fax: 215-355-7231

PROJECT

FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT	ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
EB- ~~2010~~ 200910	9/10/20	1220	X		WW	1							1		PFAS (23 analytes as required by CA ELAP)	
FB- 200910		1223	X		WW	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 140		0921	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 150		1018	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
SB-5A- 160		1020	X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
~~SB-5A-~~			X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
~~SB-5A-~~			X		SO	1							1		PFAS (23 analytes as required by CA ELAP)	
~~SB-5A-~~			X		SO	1							1		PFAS (23 analytes as re	
~~SB-5A-~~			X		SO	1							1		PFAS (23 analytes as re	
~~SB-5A-~~			X		SO	1							1		PFAS (23 analytes as re	

320-64510 Chain of Custody

SAMPLED BY: (Name/Company)
J. Loper, Geosyntec

TAT: ☐ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD
■ Standard + QC ☐ Forms ☒ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Initials | Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1. J. Loper	9/10/20	1526	1. eta sac	09/11/20	1015
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5.	DATE	TIME

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☒ FEDEX ☐ OTHER _____

Custody Seal Number

Rec'd Temp: 16°C/20°C Initials: _____ Ice: Y / N Location: ____

COMMENTS:

Hazardous: yes / no

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 320-64510-1

Login Number: 64510
List Number: 1
Creator: Nuval, Mark-Anthony M

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Geosyntec consultants

APPENDIX F

Groundwater Laboratory Data

Geosyntec consultants

PFAS Results

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ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-64765-1
Client Project/Site: PFAS - Hollywood Burbank Airport

For:
Geosyntec Consultants, Inc.
65 N. Raymond Avenue
Suite 200
Pasadena, California 91103

Attn: Mital Desai

Authorized for release by:
9/29/2020 3:50:38 PM

Laura Turpen, Project Manager I
(916)374-4414
Laura.Turpen@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Geosyntec Consultants, Inc. Job ID: 320-64765-1
Project/Site: PFAS - Hollywood Burbank Airport

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64765-1

Job ID: 320-64765-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-64765-1

Comments
No additional comments.

Receipt
The samples were received on 9/18/2020 10:20 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2º C.

Receipt Exceptions

Samples C-1-CW08 (320-64765-3) and C-1-CW03 (320-64765-4) were received with discoloration.

LCMS
Method EPA 537(Mod): The first level standard from the initial calibration curve is used to evaluate the tune criteria. The instrument mass windows are set at +/- 0.5amu; therefore, detection of the analyte serves as verification that the assigned mass is within +/- 0.5amu of the true value, which meets the DoD/DOE QSM tune criterion.

Method EPA 537(Mod): Results for sample B-6-CW10 (320-64765-6) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-414308.

Method 3535: The following samples were orange and contained a thin layer of sediment at the bottom of the bottle prior to extraction: C-1-CW08 (320-64765-3) and C-1-CW03 (320-64765-4).

Method 3535: The following sample contained floating particulates in the sample bottle prior to extraction: B-6-CW10 (320-64765-6).

Method 3535: During the solid phase extraction process, the following samples contained non-settable particulates which clogged the solid phase extraction column: C-1-CW08 (320-64765-3), C-1-CW03 (320-64765-4) and B-6-CW10 (320-64765-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64765-1

Client Sample ID: FB-200917 — Lab Sample ID: 320-64765-1

No Detections.

Client Sample ID: EB-200917 — Lab Sample ID: 320-64765-2

No Detections.

Client Sample ID: C-1-CW08 — Lab Sample ID: 320-64765-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.6		4.2		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanoic acid (PFPeA)	6.1		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.6		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	2.6		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.0		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.4		1.7		ng/L	1		EPA 537(Mod)	Total/NA

Client Sample ID: C-1-CW03 — Lab Sample ID: 320-64765-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	2.6		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.9		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.0		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.7		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.9		1.7		ng/L	1		EPA 537(Mod)	Total/NA

Client Sample ID: C-1-CW06 — Lab Sample ID: 320-64765-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.4		4.2		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.9		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.6		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonamide (FOSA)	3.1		1.7		ng/L	1		EPA 537(Mod)	Total/NA

Client Sample ID: B-6-CW10 — Lab Sample ID: 320-64765-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	310		41		ng/L	10		EPA 537(Mod)	Total/NA
Perfluoropentanoic acid (PFPeA)	670		17		ng/L	10		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	670		17		ng/L	10		EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	210		17		ng/L	10		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	170		17		ng/L	10		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	73		17		ng/L	10		EPA 537(Mod)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	120		17		ng/L	10		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	390		17		ng/L	10		EPA 537(Mod)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64765-1

Client Sample ID: FB-200917
Date Collected: 09/17/20 07:35
Date Received: 09/18/20 10:20

Lab Sample ID: 320-64765-1
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.1		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluoropentanoic acid (PFPeA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorohexanoic acid (PFHxA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorooctanoic acid (PFOA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorononanoic acid (PFNA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorodecanoic acid (PFDA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorododecanoic acid (PFDoA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
Perfluorooctanesulfonamide (FOSA)	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.1		ng/L		09/21/20 13:10	09/24/20 16:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.1		ng/L		09/21/20 13:10	09/24/20 16:12	1
4:2 FTS	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1
6:2 FTS	ND		4.1		ng/L		09/21/20 13:10	09/24/20 16:12	1
8:2 FTS	ND		1.6		ng/L		09/21/20 13:10	09/24/20 16:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*99*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C5 PFPeA	*103*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C2 PFHxA	*101*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C4 PFHpA	*108*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C4 PFOA	*99*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C5 PFNA	*108*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C2 PFDA	*108*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C2 PFUnA	*114*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C2 PFDoA	*105*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C2 PFTeDA	*99*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C3 PFBS	*107*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
18O2 PFHxS	*106*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C4 PFOS	*104*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
13C8 FOSA	*97*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
d3-NMeFOSAA	*97*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
d5-NEtFOSAA	*100*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
M2-6:2 FTS	*111*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
M2-8:2 FTS	*109*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*
M2-4:2 FTS	*109*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:12*	*1*

Client: Geosyntec Consultants, Inc.
Job ID: 320-64765-1
Project/Site: PFAS - Hollywood Burbank Airport

Client Sample ID: EB-200917
Lab Sample ID: 320-64765-2
Date Collected: 09/17/20 07:36
Matrix: Water
Date Received: 09/18/20 10:20

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.3		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluoropentanoic acid (PFPeA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorohexanoic acid (PFHxA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorooctanoic acid (PFOA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
Perfluorooctanesulfonamide (FOSA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.3		ng/L		09/21/20 13:10	09/24/20 16:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.3		ng/L		09/21/20 13:10	09/24/20 16:21	1
4:2 FTS	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1
6:2 FTS	ND		4.3		ng/L		09/21/20 13:10	09/24/20 16:21	1
8:2 FTS	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C5 PFPeA	*98*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C2 PFHxA	*95*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C4 PFHpA	*96*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C4 PFOA	*94*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C5 PFNA	*101*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C2 PFDA	*105*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C2 PFUnA	*106*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C2 PFDoA	*104*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C2 PFTeDA	*101*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C3 PFBS	*99*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
18O2 PFHxS	*99*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C4 PFOS	*96*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
13C8 FOSA	*95*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
d3-NMeFOSAA	*112*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
d5-NEtFOSAA	*110*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
M2-6:2 FTS	*105*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
M2-8:2 FTS	*114*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*
M2-4:2 FTS	*99*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:21*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64765-1

Client Sample ID: C-1-CW08
Date Collected: 09/17/20 08:29
Date Received: 09/18/20 10:20

Lab Sample ID: 320-64765-3
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**7.6**		4.2		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluoropentanoic acid (PFPeA)	**6.1**		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorohexanoic acid (PFHxA)	**4.6**		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorooctanoic acid (PFOA)	**2.6**		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorobutanesulfonic acid (PFBS)	**3.0**		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorohexanesulfonic acid (PFHxS)	**2.4**		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorooctanesulfonic acid (PFOS)	**4.4**		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
Perfluorooctanesulfonamide (FOSA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.2		ng/L		09/21/20 13:10	09/24/20 16:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.2		ng/L		09/21/20 13:10	09/24/20 16:31	1
4:2 FTS	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1
6:2 FTS	ND		4.2		ng/L		09/21/20 13:10	09/24/20 16:31	1
8:2 FTS	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*67*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C5 PFPeA	*72*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C2 PFHxA	*71*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C4 PFHpA	*73*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C4 PFOA	*70*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C5 PFNA	*74*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C2 PFDA	*76*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C2 PFUnA	*75*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C2 PFDoA	*74*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C2 PFTeDA	*57*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C3 PFBS	*74*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
18O2 PFHxS	*74*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C4 PFOS	*68*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
13C8 FOSA	*69*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
d3-NMeFOSAA	*65*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
d5-NEtFOSAA	*71*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
M2-6:2 FTS	*75*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
M2-8:2 FTS	*77*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*
M2-4:2 FTS	*79*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:31*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64765-1

Client Sample ID: C-1-CW03
Date Collected: 09/17/20 10:21
Date Received: 09/18/20 10:20

Lab Sample ID: 320-64765-4
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.1		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluoropentanoic acid (PFPeA)	**2.6**		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorohexanoic acid (PFHxA)	**1.9**		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorooctanoic acid (PFOA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorobutanesulfonic acid (PFBS)	**3.0**		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluoropentanesulfonic acid (PFPeS)	**1.7**		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorooctanesulfonic acid (PFOS)	**1.9**		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
Perfluorooctanesulfonamide (FOSA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.1		ng/L		09/21/20 13:10	09/24/20 16:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.1		ng/L		09/21/20 13:10	09/24/20 16:40	1
4:2 FTS	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1
6:2 FTS	ND		4.1		ng/L		09/21/20 13:10	09/24/20 16:40	1
8:2 FTS	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*66*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C5 PFPeA	*67*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C2 PFHxA	*67*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C4 PFHpA	*70*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C4 PFOA	*67*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C5 PFNA	*71*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C2 PFDA	*71*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C2 PFUnA	*70*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C2 PFDoA	*67*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C2 PFTeDA	*64*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C3 PFBS	*68*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
18O2 PFHxS	*69*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C4 PFOS	*67*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
13C8 FOSA	*67*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
d3-NMeFOSAA	*64*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
d5-NEtFOSAA	*64*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
M2-6:2 FTS	*69*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
M2-8:2 FTS	*71*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*
M2-4:2 FTS	*71*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:40*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64765-1

Client Sample ID: C-1-CW06
Date Collected: 09/17/20 11:41
Date Received: 09/18/20 10:20

Lab Sample ID: 320-64765-5
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.4**		4.2		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluoropentanoic acid (PFPeA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorohexanoic acid (PFHxA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorooctanoic acid (PFOA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorobutanesulfonic acid (PFBS)	**1.9**		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorohexanesulfonic acid (PFHxS)	**3.6**		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
Perfluorooctanesulfonamide (FOSA)	**3.1**		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.2		ng/L		09/21/20 13:10	09/24/20 16:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.2		ng/L		09/21/20 13:10	09/24/20 16:49	1
4:2 FTS	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1
6:2 FTS	ND		4.2		ng/L		09/21/20 13:10	09/24/20 16:49	1
8:2 FTS	ND		1.7		ng/L		09/21/20 13:10	09/24/20 16:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C5 PFPeA	*96*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C2 PFHxA	*94*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C4 PFHpA	*98*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C4 PFOA	*91*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C5 PFNA	*97*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C2 PFDA	*97*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C2 PFUnA	*99*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C2 PFDoA	*87*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C2 PFTeDA	*74*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C3 PFBS	*94*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
18O2 PFHxS	*97*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C4 PFOS	*88*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
13C8 FOSA	*90*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
d3-NMeFOSAA	*78*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
d5-NEtFOSAA	*79*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
M2-6:2 FTS	*90*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
M2-8:2 FTS	*94*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*
M2-4:2 FTS	*102*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:49*	*1*

Client: Geosyntec Consultants, Inc.
Job ID: 320-64765-1
Project/Site: PFAS - Hollywood Burbank Airport

Client Sample ID: B-6-CW10
Lab Sample ID: 320-64765-6
Date Collected: 09/17/20 13:28
Matrix: Water
Date Received: 09/18/20 10:20

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**310**		41		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluoropentanoic acid (PFPeA)	**670**		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorohexanoic acid (PFHxA)	**670**		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluoroheptanoic acid (PFHpA)	**210**		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorooctanoic acid (PFOA)	**170**		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorononanoic acid (PFNA)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorodecanoic acid (PFDA)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluoroundecanoic acid (PFUnA)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorododecanoic acid (PFDoA)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorotridecanoic acid (PFTriA)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorotetradecanoic acid (PFTeA)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorobutanesulfonic acid (PFBS)	**73**		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluoropentanesulfonic acid (PFPeS)	**120**		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorohexanesulfonic acid (PFHxS)	**390**		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluoroheptanesulfonic Acid (PFHpS)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorooctanesulfonic acid (PFOS)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorodecanesulfonic acid (PFDS)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
Perfluorooctanesulfonamide (FOSA)	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		41		ng/L		09/21/20 13:10	09/24/20 16:58	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		41		ng/L		09/21/20 13:10	09/24/20 16:58	10
4:2 FTS	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10
6:2 FTS	ND		41		ng/L		09/21/20 13:10	09/24/20 16:58	10
8:2 FTS	ND		17		ng/L		09/21/20 13:10	09/24/20 16:58	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*80*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C5 PFPeA	*81*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C2 PFHxA	*81*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C4 PFHpA	*85*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C4 PFOA	*80*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C5 PFNA	*86*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C2 PFDA	*84*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C2 PFUnA	*82*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C2 PFDoA	*81*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C2 PFTeDA	*80*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C3 PFBS	*84*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
18O2 PFHxS	*84*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C4 PFOS	*79*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
13C8 FOSA	*79*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
d3-NMeFOSAA	*78*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
d5-NEtFOSAA	*80*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
M2-6:2 FTS	*83*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
M2-8:2 FTS	*86*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*
M2-4:2 FTS	*83*		*50 - 150*	*09/21/20 13:10*	*09/24/20 16:58*	*10*

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc.
Job ID: 320-64765-1
Project/Site: PFAS - Hollywood Burbank Airport

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Matrix: Water
Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-150)	PFPeA (50-150)	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)
320-64765-1	FB-200917	99	103	101	108	99	108	108	114
320-64765-2	EB-200917	95	98	95	96	94	101	105	106
320-64765-3	C-1-CW08	67	72	71	73	70	74	76	75
320-64765-4	C-1-CW03	66	67	67	70	67	71	71	70
320-64765-5	C-1-CW06	91	96	94	98	91	97	97	99
320-64765-6	B-6-CW10	80	81	81	85	80	86	84	82
LCS 320-414308/2-A	Lab Control Sample	103	110	109	112	104	112	110	110
LCSD 320-414308/3-A	Lab Control Sample Dup	93	97	96	99	93	101	102	107
MB 320-414308/1-A	Method Blank	91	95	92	97	90	99	101	100

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (50-150)	PFTDA (50-150)	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	PFOSA (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)
320-64765-1	FB-200917	105	99	107	106	104	97	97	100
320-64765-2	EB-200917	104	101	99	99	96	95	112	110
320-64765-3	C-1-CW08	74	57	74	74	68	69	65	71
320-64765-4	C-1-CW03	67	64	68	69	67	67	64	64
320-64765-5	C-1-CW06	87	74	94	97	88	90	78	79
320-64765-6	B-6-CW10	81	80	84	84	79	79	78	80
LCS 320-414308/2-A	Lab Control Sample	112	102	106	108	104	102	104	100
LCSD 320-414308/3-A	Lab Control Sample Dup	105	100	102	100	95	88	93	95
MB 320-414308/1-A	Method Blank	100	93	93	95	87	88	88	90

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	M262FTS (50-150)	M282FTS (50-150)	M242FTS (50-150)
320-64765-1	FB-200917	111	109	109
320-64765-2	EB-200917	105	114	99
320-64765-3	C-1-CW08	75	77	79
320-64765-4	C-1-CW03	69	71	71
320-64765-5	C-1-CW06	90	94	102
320-64765-6	B-6-CW10	83	86	83
LCS 320-414308/2-A	Lab Control Sample	110	109	114
LCSD 320-414308/3-A	Lab Control Sample Dup	98	102	103
MB 320-414308/1-A	Method Blank	95	97	92

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc.
Job ID: 320-64765-1
Project/Site: PFAS - Hollywood Burbank Airport

d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Lab Sample ID: MB 320-414308/1-A
Matrix: Water
Analysis Batch: 415666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414308

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluoropentanoic acid (PFPeA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		5.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		5.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
4:2 FTS	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
6:2 FTS	ND		5.0		ng/L		09/21/20 13:10	09/24/20 15:45	1
8:2 FTS	ND		2.0		ng/L		09/21/20 13:10	09/24/20 15:45	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*91*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C5 PFPeA	*95*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C2 PFHxA	*92*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C4 PFHpA	*97*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C4 PFOA	*90*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C5 PFNA	*99*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C2 PFDA	*101*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C2 PFUnA	*100*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C2 PFDoA	*100*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C2 PFTeDA	*93*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C3 PFBS	*93*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
18O2 PFHxS	*95*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C4 PFOS	*87*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
13C8 FOSA	*88*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
d3-NMeFOSAA	*88*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
d5-NEtFOSAA	*90*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
M2-6:2 FTS	*95*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
M2-8:2 FTS	*97*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*
M2-4:2 FTS	*92*		*50 - 150*	*09/21/20 13:10*	*09/24/20 15:45*	*1*

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-414308/2-A
Matrix: Water
Analysis Batch: 415666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414308

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	41.8		ng/L		104	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	35.9		ng/L		90	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	38.4		ng/L		96	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	37.2		ng/L		93	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	40.4		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	40.0	40.5		ng/L		101	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	41.2		ng/L		103	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	40.2		ng/L		101	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	41.4		ng/L		104	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	43.1		ng/L		108	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	42.6		ng/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	34.0		ng/L		96	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.5	37.3		ng/L		99	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.7		ng/L		93	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	40.7		ng/L		107	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	36.9		ng/L		99	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	39.7		ng/L		103	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	41.1		ng/L		103	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	38.9		ng/L		97	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.7		ng/L		97	76 - 136
4:2 FTS	37.4	35.6		ng/L		95	79 - 139
6:2 FTS	37.9	35.4		ng/L		93	59 - 175
8:2 FTS	38.3	40.0		ng/L		104	75 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*103*		*50 - 150*
13C5 PFPeA	*110*		*50 - 150*
13C2 PFHxA	*109*		*50 - 150*
13C4 PFHpA	*112*		*50 - 150*
13C4 PFOA	*104*		*50 - 150*
13C5 PFNA	*112*		*50 - 150*
13C2 PFDA	*110*		*50 - 150*
13C2 PFUnA	*110*		*50 - 150*
13C2 PFDoA	*112*		*50 - 150*
13C2 PFTeDA	*102*		*50 - 150*
13C3 PFBS	*106*		*50 - 150*
18O2 PFHxS	*108*		*50 - 150*
13C4 PFOS	*104*		*50 - 150*
13C8 FOSA	*102*		*50 - 150*

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-414308/2-A
Matrix: Water
Analysis Batch: 415666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414308

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
d3-NMeFOSAA	104		50 - 150
d5-NEtFOSAA	100		50 - 150
M2-6:2 FTS	110		50 - 150
M2-8:2 FTS	109		50 - 150
M2-4:2 FTS	114		50 - 150

Lab Sample ID: LCSD 320-414308/3-A
Matrix: Water
Analysis Batch: 415666

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 414308

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	42.5		ng/L		106	76 - 136	2	30
Perfluoropentanoic acid (PFPeA)			40.0	37.2		ng/L		93	71 - 131	3	30
Perfluorohexanoic acid (PFHxA)			40.0	39.0		ng/L		98	73 - 133	2	30
Perfluoroheptanoic acid (PFHpA)			40.0	38.0		ng/L		95	72 - 132	2	30
Perfluorooctanoic acid (PFOA)			40.0	41.6		ng/L		104	70 - 130	3	30
Perfluorononanoic acid (PFNA)			40.0	41.0		ng/L		103	75 - 135	1	30
Perfluorodecanoic acid (PFDA)			40.0	38.8		ng/L		97	76 - 136	6	30
Perfluoroundecanoic acid (PFUnA)			40.0	39.5		ng/L		99	68 - 128	2	30
Perfluorododecanoic acid (PFDoA)			40.0	41.2		ng/L		103	71 - 131	0	30
Perfluorotridecanoic acid (PFTriA)			40.0	39.8		ng/L		99	71 - 131	8	30
Perfluorotetradecanoic acid (PFTeA)			40.0	39.7		ng/L		99	70 - 130	7	30
Perfluorobutanesulfonic acid (PFBS)			35.4	32.9		ng/L		93	67 - 127	3	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	37.0		ng/L		99	66 - 126	1	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	33.4		ng/L		92	59 - 119	1	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	41.4		ng/L		109	76 - 136	2	30
Perfluorooctanesulfonic acid (PFOS)			37.1	37.9		ng/L		102	70 - 130	3	30
Perfluorodecanesulfonic acid (PFDS)			38.6	39.6		ng/L		103	71 - 131	0	30
Perfluorooctanesulfonamide (FOSA)			40.0	43.1		ng/L		108	73 - 133	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	40.4		ng/L		101	76 - 136	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	37.5		ng/L		94	76 - 136	3	30
4:2 FTS			37.4	35.0		ng/L		94	79 - 139	2	30
6:2 FTS			37.9	36.5		ng/L		96	59 - 175	3	30
8:2 FTS			38.3	38.6		ng/L		101	75 - 135	4	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	93		50 - 150
13C5 PFPeA	97		50 - 150
13C2 PFHxA	96		50 - 150

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCSD 320-414308/3-A
Matrix: Water
Analysis Batch: 415666

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 414308

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFHpA	99		50 - 150
13C4 PFOA	93		50 - 150
13C5 PFNA	101		50 - 150
13C2 PFDA	102		50 - 150
13C2 PFUnA	107		50 - 150
13C2 PFDoA	105		50 - 150
13C2 PFTeDA	100		50 - 150
13C3 PFBS	102		50 - 150
18O2 PFHxS	100		50 - 150
13C4 PFOS	95		50 - 150
13C8 FOSA	88		50 - 150
d3-NMeFOSAA	93		50 - 150
d5-NEtFOSAA	95		50 - 150
M2-6:2 FTS	98		50 - 150
M2-8:2 FTS	102		50 - 150
M2-4:2 FTS	103		50 - 150

QC Association Summary

Client: Geosyntec Consultants, Inc.
Job ID: 320-64765-1
Project/Site: PFAS - Hollywood Burbank Airport

LCMS

Prep Batch: 414308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64765-1	FB-200917	Total/NA	Water	3535	
320-64765-2	EB-200917	Total/NA	Water	3535	
320-64765-3	C-1-CW08	Total/NA	Water	3535	
320-64765-4	C-1-CW03	Total/NA	Water	3535	
320-64765-5	C-1-CW06	Total/NA	Water	3535	
320-64765-6	B-6-CW10	Total/NA	Water	3535	
MB 320-414308/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-414308/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-414308/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 415666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64765-1	FB-200917	Total/NA	Water	EPA 537(Mod)	414308
320-64765-2	EB-200917	Total/NA	Water	EPA 537(Mod)	414308
320-64765-3	C-1-CW08	Total/NA	Water	EPA 537(Mod)	414308
320-64765-4	C-1-CW03	Total/NA	Water	EPA 537(Mod)	414308
320-64765-5	C-1-CW06	Total/NA	Water	EPA 537(Mod)	414308
320-64765-6	B-6-CW10	Total/NA	Water	EPA 537(Mod)	414308
MB 320-414308/1-A	Method Blank	Total/NA	Water	EPA 537(Mod)	414308
LCS 320-414308/2-A	Lab Control Sample	Total/NA	Water	EPA 537(Mod)	414308
LCSD 320-414308/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 537(Mod)	414308

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Job ID: 320-64765-1
Project/Site: PFAS - Hollywood Burbank Airport

Client Sample ID: FB-200917
Lab Sample ID: 320-64765-1
Date Collected: 09/17/20 07:35
Matrix: Water
Date Received: 09/18/20 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			306 mL	10.0 mL	414308	09/21/20 13:10	LN	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			415666	09/24/20 16:12	A1C	TAL SAC

Client Sample ID: EB-200917
Lab Sample ID: 320-64765-2
Date Collected: 09/17/20 07:36
Matrix: Water
Date Received: 09/18/20 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			293.3 mL	10.0 mL	414308	09/21/20 13:10	LN	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			415666	09/24/20 16:21	A1C	TAL SAC

Client Sample ID: C-1-CW08
Lab Sample ID: 320-64765-3
Date Collected: 09/17/20 08:29
Matrix: Water
Date Received: 09/18/20 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			296 mL	10.0 mL	414308	09/21/20 13:10	LN	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			415666	09/24/20 16:31	A1C	TAL SAC

Client Sample ID: C-1-CW03
Lab Sample ID: 320-64765-4
Date Collected: 09/17/20 10:21
Matrix: Water
Date Received: 09/18/20 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			301.7 mL	10.0 mL	414308	09/21/20 13:10	LN	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			415666	09/24/20 16:40	A1C	TAL SAC

Client Sample ID: C-1-CW06
Lab Sample ID: 320-64765-5
Date Collected: 09/17/20 11:41
Matrix: Water
Date Received: 09/18/20 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			300.3 mL	10.0 mL	414308	09/21/20 13:10	LN	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			415666	09/24/20 16:49	A1C	TAL SAC

Client Sample ID: B-6-CW10
Lab Sample ID: 320-64765-6
Date Collected: 09/17/20 13:28
Matrix: Water
Date Received: 09/18/20 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			301.6 mL	10.0 mL	414308	09/21/20 13:10	LN	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		10			415666	09/24/20 16:58	A1C	TAL SAC

Laboratory References:
TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 320-64765-1
Project/Site: PFAS - Hollywood Burbank Airport

Laboratory: Eurofins TestAmerica, Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2897	01-31-22

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64765-1

Method	Method Description	Protocol	Laboratory
EPA 537(Mod)	PFAS for QSM 5.1, Table B-15	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64765-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-64765-1	FB-200917	Water	09/17/20 07:35	09/18/20 10:20	
320-64765-2	EB-200917	Water	09/17/20 07:36	09/18/20 10:20	
320-64765-3	C-1-CW08	Water	09/17/20 08:29	09/18/20 10:20	
320-64765-4	C-1-CW03	Water	09/17/20 10:21	09/18/20 10:20	
320-64765-5	C-1-CW06	Water	09/17/20 11:41	09/18/20 10:20	
320-64765-6	B-6-CW10	Water	09/17/20 13:28	09/18/20 10:20	

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CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No:

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

702 Electronic Drive
Horsham, PA 19044-0962
Phone: 215-355-3900
Fax: 215-355-7231

Bill to/Report to (if different)

Sampling Site Address (if different) Include State: Burbank, CA

LAB USE ONLY:

#____Ascorbic/HCL Vials #____HCl Vials
_ $Na_2S_2O_3$_____
#____Na OH/Zn acetate pH _____
_ HNO_3 pH _____
_ H_2SO_4 pH _____
#____NaOH pH _____
#____Unpreserved
#____HCl #_____NH4Cl #_____MeOH
#_____DI Water

Client/Acct. No.	Geosyntec Consultants
Address	65 N. Raymond Ave
	Suite 200
City/State/Zip	Pasadena, CA 91103
Phone/Fax	626-449-0664
Client Contact:	Mital Desai

P.O. No. WR2693 – 02A PWSID #:
Quote # 57005935
e-mail: mdesai@geosyntec.com

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT	ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
FB-200917	9/17/20	0735	X		~~GW~~ WW	2							2		PFAS (23 analytes as required by CA ELAP)	
EB-200917		0736	X		~~GW~~ WW	2							2		PFAS (23 analytes as required by CA ELAP)	
C-1-CW08		0829	X		GW	2							2		PFAS (23 analytes as required by CA ELAP)	
C-1-CW03		1021	X		GW	2							2		PFAS (23 analytes as required by CA ELAP)	
C-1-CW06		1141	X		GW	2							2		PFAS (23 analytes as required by CA ELAP)	
B-6-CW10		1328	X		GW	2							2		PFAS (23 analytes as required by CA ELAP)	
					GW	2							2		PFAS (23 analytes as required by CA ELAP)	
					GW	2							2		PFAS (23 analytes as required by CA ELAP)	
					GW	2							2		PFAS (23 analytes as required by CA ELAP)	
					GW	2							2		PFAS (23 analytes as required by CA ELAP)	

SAMPLED BY: (Name/Company)
J. Lopez

TAT: ☐ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD
■ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials | Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

	DATE	TIME		DATE	TIME
RELINQUISHED BY SAMPLER 1.	9/17/20		RECEIVED BY 1. eta sac	09/18/20	1020
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY	DATE	TIME
RELINQUISHED BY 3.	DATE	TIME		DATE	TIME
RELINQUISHED BY 4.	DATE	TIME		DATE	TIME
RELINQUISHED BY 5.	DATE	TIME		DATE	TIME

320-64765 Chain of Custody

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER _____

Custody Seal Number

Rec'd Temp.:_____ Initials:_____ Ice Y / N Location:____
COMMENTS:

Hazardous: yes / no

• (4/4) - ORANGE DISCOLORATION 09/18/20

1.7°C

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 320-64765-1

Login Number: 64765
List Number: 1
Creator: Nuval, Mark-Anthony M

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-64722-1
Client Project/Site: PFAS - Hollywood Burbank Airport

For:
Geosyntec Consultants, Inc.
65 N. Raymond Avenue
Suite 200
Pasadena, California 91103

Attn: Mital Desai

Authorized for release by:
9/29/2020 3:50:03 PM

Laura Turpen, Project Manager I
(916)374-4414
Laura.Turpen@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Geosyntec Consultants, Inc. Job ID: 320-64722-1
Project/Site: PFAS - Hollywood Burbank Airport

Qualifiers

LCMS

Qualifier	Qualifier Description
*5	Isotope dilution analyte is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 320-64722-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-64722-1

Comments
No additional comments.

Receipt
The samples were received on 9/17/2020 10:35 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.2º C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): EB-200916 (320-64722-3).
One of the two bottles had no collection time noted.

LCMS
Method EPA 537(Mod): The first level standard from the initial calibration curve is used to evaluate the tune criteria. The instrument mass windows are set at +/- 0.5amu; therefore, detection of the analyte serves as verification that the assigned mass is within +/- 0.5amu of the true value, which meets the DoD/DOE QSM tune criterion.

Method EPA 537(Mod): Several Isotope Dilution Analyte (IDA) recoveries associated with the following sample are below the method recommended limit: (CCB 320-413978/1). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method EPA 537(Mod): Isotope Dilution Analyte (IDA) recovery for M2-6:2 FTS is above the method recommended limit for the following sample: A-1-CW03R (320-64722-5). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries. The sample was re-analyzed with concurring results; therefore the data have been reported.

Method EPA 537(Mod): Isotope Dilution Analyte (IDA) recovery for M2-8:2 FTS is above the method recommended limit for the following samples: A-1-CW09 (320-64722-1), A-1-CW09-DUP (320-64722-2) and EB-200916 (320-64722-3). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries. The samples were re-analyzed with concurring results; therefore the data have been reported.

Method EPA 537(Mod): The method blank for preparation batch 320-413600 contained 6:2 FTS above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3535: The following samples contained a thin layer of sediment at the bottom of the bottles prior to extraction: A-1-CW03R (320-64722-5), A-1-CW03R (320-64722-5[MS]) and A-1-CW03R (320-64722-5[MSD]).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64722-1

Client Sample ID: A-1-CW09 — Lab Sample ID: 320-64722-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.9		4.6		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanoic acid (PFPeA)	15		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	21		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.8		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	2.8		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	7.1		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	2.3		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.4		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonamide (FOSA)	1.8		1.8		ng/L	1		EPA 537(Mod)	Total/NA

Client Sample ID: A-1-CW09-DUP — Lab Sample ID: 320-64722-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	9.3		4.6		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanoic acid (PFPeA)	15		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	21		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.6		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	3.0		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	7.4		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	2.2		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.8		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.3		1.8		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonamide (FOSA)	2.1		1.8		ng/L	1		EPA 537(Mod)	Total/NA

Client Sample ID: EB-200916 — Lab Sample ID: 320-64722-3

No Detections.

Client Sample ID: FB-200916 — Lab Sample ID: 320-64722-4

No Detections.

Client Sample ID: A-1-CW03R — Lab Sample ID: 320-64722-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	40		4.3		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanoic acid (PFPeA)	86		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanoic acid (PFHxA)	120		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA)	13		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	7.4		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.8		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorodecanoic acid (PFDA)	3.3		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	20		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	10		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	11		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	15		1.7		ng/L	1		EPA 537(Mod)	Total/NA
Perfluorooctanesulfonamide (FOSA)	2.4		1.7		ng/L	1		EPA 537(Mod)	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64722-1

Client Sample ID: A-1-CW09

Date Collected: 09/16/20 09:08
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-1

Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**8.9**		4.6		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluoropentanoic acid (PFPeA)	**15**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorohexanoic acid (PFHxA)	**21**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluoroheptanoic acid (PFHpA)	**2.8**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorooctanoic acid (PFOA)	**2.8**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorobutanesulfonic acid (PFBS)	**7.1**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluoropentanesulfonic acid (PFPeS)	**2.3**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorohexanesulfonic acid (PFHxS)	**7.4**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorooctanesulfonic acid (PFOS)	**3.4**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
Perfluorooctanesulfonamide (FOSA)	**1.8**		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.6		ng/L		09/18/20 11:48	09/21/20 01:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.6		ng/L		09/18/20 11:48	09/21/20 01:27	1
4:2 FTS	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1
6:2 FTS	ND		4.6		ng/L		09/18/20 11:48	09/21/20 01:27	1
8:2 FTS	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*77*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C5 PFPeA	*83*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C2 PFHxA	*84*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C4 PFHpA	*87*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C4 PFOA	*88*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C5 PFNA	*89*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C2 PFDA	*91*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C2 PFUnA	*84*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C2 PFDoA	*74*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C2 PFTeDA	*75*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C3 PFBS	*86*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
18O2 PFHxS	*91*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C4 PFOS	*91*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
13C8 FOSA	*91*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
d3-NMeFOSAA	*80*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
d5-NEtFOSAA	*72*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
M2-6:2 FTS	*98*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
M2-8:2 FTS	*250*	**5*	*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*
M2-4:2 FTS	*97*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:27*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64722-1

Client Sample ID: A-1-CW09-DUP
Date Collected: 09/16/20 09:08
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-2
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**9.3**		4.6		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluoropentanoic acid (PFPeA)	**15**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorohexanoic acid (PFHxA)	**21**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluoroheptanoic acid (PFHpA)	**2.6**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorooctanoic acid (PFOA)	**3.0**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorobutanesulfonic acid (PFBS)	**7.4**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluoropentanesulfonic acid (PFPeS)	**2.2**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorohexanesulfonic acid (PFHxS)	**5.8**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorooctanesulfonic acid (PFOS)	**3.3**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
Perfluorooctanesulfonamide (FOSA)	**2.1**		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.6		ng/L		09/18/20 11:48	09/21/20 01:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.6		ng/L		09/18/20 11:48	09/21/20 01:36	1
4:2 FTS	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1
6:2 FTS	ND		4.6		ng/L		09/18/20 11:48	09/21/20 01:36	1
8:2 FTS	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*77*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C5 PFPeA	*81*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C2 PFHxA	*81*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C4 PFHpA	*89*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C4 PFOA	*83*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C5 PFNA	*92*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C2 PFDA	*94*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C2 PFUnA	*83*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C2 PFDoA	*67*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C2 PFTeDA	*72*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C3 PFBS	*83*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
18O2 PFHxS	*91*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C4 PFOS	*91*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
13C8 FOSA	*94*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
d3-NMeFOSAA	*80*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
d5-NEtFOSAA	*72*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
M2-6:2 FTS	*98*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
M2-8:2 FTS	*246*	**5*	*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*
M2-4:2 FTS	*106*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:36*	*1*

Client: Geosyntec Consultants, Inc.
Job ID: 320-64722-1
Project/Site: PFAS - Hollywood Burbank Airport

Client Sample ID: EB-200916
Lab Sample ID: 320-64722-3
Date Collected: 09/16/20 07:52
Matrix: Water
Date Received: 09/17/20 10:35

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.4		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluoropentanoic acid (PFPeA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorohexanoic acid (PFHxA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorooctanoic acid (PFOA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.4		ng/L		09/18/20 11:48	09/21/20 01:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.4		ng/L		09/18/20 11:48	09/21/20 01:46	1
4:2 FTS	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1
6:2 FTS	ND		4.4		ng/L		09/18/20 11:48	09/21/20 01:46	1
8:2 FTS	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:46	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*87*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C5 PFPeA	*90*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C2 PFHxA	*88*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C4 PFHpA	*93*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C4 PFOA	*90*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C5 PFNA	*102*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C2 PFDA	*100*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C2 PFUnA	*94*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C2 PFDoA	*65*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C2 PFTeDA	*91*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C3 PFBS	*93*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
18O2 PFHxS	*98*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C4 PFOS	*97*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
13C8 FOSA	*95*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
d3-NMeFOSAA	*89*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
d5-NEtFOSAA	*75*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
M2-6:2 FTS	*105*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
M2-8:2 FTS	*218*	**5*	*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*
M2-4:2 FTS	*107*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:46*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64722-1

Client Sample ID: FB-200916
Date Collected: 09/16/20 07:42
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-4
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.4		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluoropentanoic acid (PFPeA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorohexanoic acid (PFHxA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorooctanoic acid (PFOA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.4		ng/L		09/18/20 11:48	09/21/20 01:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.4		ng/L		09/18/20 11:48	09/21/20 01:55	1
4:2 FTS	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1
6:2 FTS	ND		4.4		ng/L		09/18/20 11:48	09/21/20 01:55	1
8:2 FTS	ND		1.8		ng/L		09/18/20 11:48	09/21/20 01:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*86*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C5 PFPeA	*90*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C2 PFHxA	*85*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C4 PFHpA	*92*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C4 PFOA	*86*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C5 PFNA	*95*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C2 PFDA	*92*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C2 PFUnA	*90*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C2 PFDoA	*80*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C2 PFTeDA	*72*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C3 PFBS	*88*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
18O2 PFHxS	*97*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C4 PFOS	*93*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
13C8 FOSA	*85*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
d3-NMeFOSAA	*85*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
d5-NEtFOSAA	*77*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
M2-6:2 FTS	*102*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
M2-8:2 FTS	*93*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*
M2-4:2 FTS	*107*		*50 - 150*	*09/18/20 11:48*	*09/21/20 01:55*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64722-1

Client Sample ID: A-1-CW03R
Date Collected: 09/16/20 10:57
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-5
Matrix: Water

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**40**		4.3		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluoropentanoic acid (PFPeA)	**86**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorohexanoic acid (PFHxA)	**120**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluoroheptanoic acid (PFHpA)	**13**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorooctanoic acid (PFOA)	**7.4**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorononanoic acid (PFNA)	**1.8**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorodecanoic acid (PFDA)	**3.3**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorobutanesulfonic acid (PFBS)	**20**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluoropentanesulfonic acid (PFPeS)	**10**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorohexanesulfonic acid (PFHxS)	**11**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorooctanesulfonic acid (PFOS)	**15**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
Perfluorooctanesulfonamide (FOSA)	**2.4**		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.3		ng/L		09/18/20 11:48	09/21/20 02:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.3		ng/L		09/18/20 11:48	09/21/20 02:23	1
4:2 FTS	ND		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1
6:2 FTS	ND		4.3		ng/L		09/18/20 11:48	09/21/20 02:23	1
8:2 FTS	ND		1.7		ng/L		09/18/20 11:48	09/21/20 02:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*71*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C5 PFPeA	*80*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C2 PFHxA	*86*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C4 PFHpA	*94*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C4 PFOA	*92*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C5 PFNA	*100*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C2 PFDA	*94*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C2 PFUnA	*94*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C2 PFDoA	*85*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C2 PFTeDA	*70*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C3 PFBS	*89*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
18O2 PFHxS	*99*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C4 PFOS	*96*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
13C8 FOSA	*92*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
d3-NMeFOSAA	*85*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
d5-NEtFOSAA	*84*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
M2-6:2 FTS	*151*	**5*	*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
M2-8:2 FTS	*125*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*
M2-4:2 FTS	*143*		*50 - 150*	*09/18/20 11:48*	*09/21/20 02:23*	*1*

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc. Job ID: 320-64722-1
Project/Site: PFAS - Hollywood Burbank Airport

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-150)	PFPeA (50-150)	PFHxA (50-150)	C4PFHA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)	PFUnA (50-150)
320-64722-1	A-1-CW09	77	83	84	87	88	89	91	84
320-64722-2	A-1-CW09-DUP	77	81	81	89	83	92	94	83
320-64722-3	EB-200916	87	90	88	93	90	102	100	94
320-64722-4	FB-200916	86	90	85	92	86	95	92	90
320-64722-5	A-1-CW03R	71	80	86	94	92	100	94	94
320-64722-5 MS	A-1-CW03R	70	81	90	91	91	94	92	88
320-64722-5 MSD	A-1-CW03R	66	77	81	89	83	91	84	84
LCS 320-413600/2-A	Lab Control Sample	82	86	82	87	81	89	88	86
MB 320-413600/1-A	Method Blank	100	103	101	106	105	115	105	100

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (50-150)	PFTDA (50-150)	C3PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	PFOSA (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)
320-64722-1	A-1-CW09	74	75	86	91	91	91	80	72
320-64722-2	A-1-CW09-DUP	67	72	83	91	91	94	80	72
320-64722-3	EB-200916	65	91	93	98	97	95	89	75
320-64722-4	FB-200916	80	72	88	97	93	85	85	77
320-64722-5	A-1-CW03R	85	70	89	99	96	92	85	84
320-64722-5 MS	A-1-CW03R	81	67	88	96	95	90	80	81
320-64722-5 MSD	A-1-CW03R	77	62	83	93	89	80	74	72
LCS 320-413600/2-A	Lab Control Sample	79	65	85	93	87	77	79	73
MB 320-413600/1-A	Method Blank	90	69	104	111	104	101	84	83

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	M262FTS (50-150)	M282FTS (50-150)	M242FTS (50-150)
320-64722-1	A-1-CW09	98	250 *5	97
320-64722-2	A-1-CW09-DUP	98	246 *5	106
320-64722-3	EB-200916	105	218 *5	107
320-64722-4	FB-200916	102	93	107
320-64722-5	A-1-CW03R	151 *5	125	143
320-64722-5 MS	A-1-CW03R	130	117	147
320-64722-5 MSD	A-1-CW03R	127	112	140
LCS 320-413600/2-A	Lab Control Sample	89	90	100
MB 320-413600/1-A	Method Blank	111	126	114

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA

Isotope Dilution Summary

Client: Geosyntec Consultants, Inc.
Job ID: 320-64722-1
Project/Site: PFAS - Hollywood Burbank Airport

d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
M242FTS = M2-4:2 FTS

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15

Lab Sample ID: MB 320-413600/1-A
Matrix: Water
Analysis Batch: 414089

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluoropentanoic acid (PFPeA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		5.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		5.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
4:2 FTS	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
6:2 FTS	14.0		5.0		ng/L		09/18/20 11:48	09/21/20 00:40	1
8:2 FTS	ND		2.0		ng/L		09/18/20 11:48	09/21/20 00:40	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*100*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C5 PFPeA	*103*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C2 PFHxA	*101*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C4 PFHpA	*106*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C4 PFOA	*105*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C5 PFNA	*115*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C2 PFDA	*105*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C2 PFUnA	*100*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C2 PFDoA	*90*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C2 PFTeDA	*69*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C3 PFBS	*104*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
18O2 PFHxS	*111*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C4 PFOS	*104*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
13C8 FOSA	*101*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
d3-NMeFOSAA	*84*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
d5-NEtFOSAA	*83*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
M2-6:2 FTS	*111*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
M2-8:2 FTS	*126*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*
M2-4:2 FTS	*114*		*50 - 150*	*09/18/20 11:48*	*09/21/20 00:40*	*1*

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-413600/2-A
Matrix: Water
Analysis Batch: 414089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	42.9		ng/L		107	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	35.3		ng/L		88	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	42.1		ng/L		105	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	37.5		ng/L		94	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	39.0		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	40.0	39.8		ng/L		99	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	38.3		ng/L		96	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	40.7		ng/L		102	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	40.8		ng/L		102	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	35.6		ng/L		89	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	37.1		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	36.3		ng/L		103	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.5	38.5		ng/L		103	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	31.4		ng/L		86	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	37.1		ng/L		98	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	36.5		ng/L		98	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	34.3		ng/L		89	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	46.8		ng/L		117	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.8		ng/L		102	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	37.9		ng/L		95	76 - 136
4:2 FTS	37.4	33.4		ng/L		89	79 - 139
6:2 FTS	37.9	36.9		ng/L		97	59 - 175
8:2 FTS	38.3	36.1		ng/L		94	75 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*82*		*50 - 150*
13C5 PFPeA	*86*		*50 - 150*
13C2 PFHxA	*82*		*50 - 150*
13C4 PFHpA	*87*		*50 - 150*
13C4 PFOA	*81*		*50 - 150*
13C5 PFNA	*89*		*50 - 150*
13C2 PFDA	*88*		*50 - 150*
13C2 PFUnA	*86*		*50 - 150*
13C2 PFDoA	*79*		*50 - 150*
13C2 PFTeDA	*65*		*50 - 150*
13C3 PFBS	*85*		*50 - 150*
18O2 PFHxS	*93*		*50 - 150*
13C4 PFOS	*87*		*50 - 150*
13C8 FOSA	*77*		*50 - 150*

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-413600/2-A
Matrix: Water
Analysis Batch: 414089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413600

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
d3-NMeFOSAA	*79*		*50 - 150*
d5-NEtFOSAA	*73*		*50 - 150*
M2-6:2 FTS	*89*		*50 - 150*
M2-8:2 FTS	*90*		*50 - 150*
M2-4:2 FTS	*100*		*50 - 150*

Lab Sample ID: 320-64722-5 MS
Matrix: Water
Analysis Batch: 414089

Client Sample ID: A-1-CW03R
Prep Type: Total/NA
Prep Batch: 413600

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40		35.9	83.2		ng/L		120	76 - 136
Perfluoropentanoic acid (PFPeA)	86		35.9	119		ng/L		92	71 - 131
Perfluorohexanoic acid (PFHxA)	120		35.9	151		ng/L		90	73 - 133
Perfluoroheptanoic acid (PFHpA)	13		35.9	51.8		ng/L		108	72 - 132
Perfluorooctanoic acid (PFOA)	7.4		35.9	43.0		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	1.8		35.9	38.9		ng/L		103	75 - 135
Perfluorodecanoic acid (PFDA)	3.3		35.9	38.9		ng/L		99	76 - 136
Perfluoroundecanoic acid (PFUnA)	ND		35.9	40.9		ng/L		111	68 - 128
Perfluorododecanoic acid (PFDoA)	ND		35.9	37.6		ng/L		103	71 - 131
Perfluorotridecanoic acid (PFTriA)	ND		35.9	33.0		ng/L		92	71 - 131
Perfluorotetradecanoic acid (PFTeA)	ND		35.9	35.2		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	20		31.7	57.6		ng/L		120	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	10		33.7	50.6		ng/L		120	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	11		32.7	44.7		ng/L		102	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	ND		34.2	35.8		ng/L		105	76 - 136
Perfluorooctanesulfonic acid (PFOS)	15		33.3	46.1		ng/L		92	70 - 130
Perfluorodecanesulfonic acid (PFDS)	ND		34.6	31.8		ng/L		92	71 - 131
Perfluorooctanesulfonamide (FOSA)	2.4		35.9	44.0		ng/L		116	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		35.9	38.7		ng/L		108	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		35.9	34.3		ng/L		95	76 - 136
4:2 FTS	ND		33.5	34.5		ng/L		98	79 - 139
6:2 FTS	ND		34.0	35.5		ng/L		94	59 - 175
8:2 FTS	ND		34.4	39.2		ng/L		114	75 - 135

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	*70*		*50 - 150*
13C5 PFPeA	*81*		*50 - 150*
13C2 PFHxA	*90*		*50 - 150*

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: 320-64722-5 MS
Matrix: Water
Analysis Batch: 414089

Client Sample ID: A-1-CW03R
Prep Type: Total/NA
Prep Batch: 413600

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFHpA	91		50 - 150
13C4 PFOA	91		50 - 150
13C5 PFNA	94		50 - 150
13C2 PFDA	92		50 - 150
13C2 PFUnA	88		50 - 150
13C2 PFDoA	81		50 - 150
13C2 PFTeDA	67		50 - 150
13C3 PFBS	88		50 - 150
18O2 PFHxS	96		50 - 150
13C4 PFOS	95		50 - 150
13C8 FOSA	90		50 - 150
d3-NMeFOSAA	80		50 - 150
d5-NEtFOSAA	81		50 - 150
M2-6:2 FTS	130		50 - 150
M2-8:2 FTS	117		50 - 150
M2-4:2 FTS	147		50 - 150

Lab Sample ID: 320-64722-5 MSD
Matrix: Water
Analysis Batch: 414089

Client Sample ID: A-1-CW03R
Prep Type: Total/NA
Prep Batch: 413600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40		36.9	81.4		ng/L		112	76 - 136	2	30
Perfluoropentanoic acid (PFPeA)	86		36.9	115		ng/L		79	71 - 131	3	30
Perfluorohexanoic acid (PFHxA)	120		36.9	167		ng/L		132	73 - 133	10	30
Perfluoroheptanoic acid (PFHpA)	13		36.9	50.4		ng/L		102	72 - 132	3	30
Perfluorooctanoic acid (PFOA)	7.4		36.9	44.7		ng/L		101	70 - 130	4	30
Perfluorononanoic acid (PFNA)	1.8		36.9	38.5		ng/L		100	75 - 135	1	30
Perfluorodecanoic acid (PFDA)	3.3		36.9	42.6		ng/L		107	76 - 136	9	30
Perfluoroundecanoic acid (PFUnA)	ND		36.9	39.2		ng/L		103	68 - 128	4	30
Perfluorododecanoic acid (PFDoA)	ND		36.9	40.8		ng/L		108	71 - 131	8	30
Perfluorotridecanoic acid (PFTriA)	ND		36.9	35.2		ng/L		96	71 - 131	7	30
Perfluorotetradecanoic acid (PFTeA)	ND		36.9	33.4		ng/L		90	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	20		32.6	59.8		ng/L		123	67 - 127	4	30
Perfluoropentanesulfonic acid (PFPeS)	10		34.6	51.0		ng/L		117	66 - 126	1	30
Perfluorohexanesulfonic acid (PFHxS)	11		33.6	46.0		ng/L		103	59 - 119	3	30
Perfluoroheptanesulfonic Acid (PFHpS)	ND		35.1	37.9		ng/L		108	76 - 136	6	30
Perfluorooctanesulfonic acid (PFOS)	15		34.2	49.0		ng/L		98	70 - 130	6	30
Perfluorodecanesulfonic acid (PFDS)	ND		35.5	31.8		ng/L		90	71 - 131	0	30
Perfluorooctanesulfonamide (FOSA)	2.4		36.9	46.2		ng/L		119	73 - 133	5	30

Method: EPA 537(Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: 320-64722-5 MSD
Client Sample ID: A-1-CW03R
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 414089
Prep Batch: 413600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		36.9	39.9		ng/L		108	76 - 136	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		36.9	39.7		ng/L		108	76 - 136	15	30
4:2 FTS	ND		34.4	33.7		ng/L		93	79 - 139	3	30
6:2 FTS	ND		35.0	34.5		ng/L		89	59 - 175	3	30
8:2 FTS	ND		35.3	36.6		ng/L		104	75 - 135	7	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*66*		*50 - 150*
13C5 PFPeA	*77*		*50 - 150*
13C2 PFHxA	*81*		*50 - 150*
13C4 PFHpA	*89*		*50 - 150*
13C4 PFOA	*83*		*50 - 150*
13C5 PFNA	*91*		*50 - 150*
13C2 PFDA	*84*		*50 - 150*
13C2 PFUnA	*84*		*50 - 150*
13C2 PFDoA	*77*		*50 - 150*
13C2 PFTeDA	*62*		*50 - 150*
13C3 PFBS	*83*		*50 - 150*
18O2 PFHxS	*93*		*50 - 150*
13C4 PFOS	*89*		*50 - 150*
13C8 FOSA	*80*		*50 - 150*
d3-NMeFOSAA	*74*		*50 - 150*
d5-NEtFOSAA	*72*		*50 - 150*
M2-6:2 FTS	*127*		*50 - 150*
M2-8:2 FTS	*112*		*50 - 150*
M2-4:2 FTS	*140*		*50 - 150*

QC Association Summary

Client: Geosyntec Consultants, Inc.
Job ID: 320-64722-1
Project/Site: PFAS - Hollywood Burbank Airport

LCMS

Prep Batch: 413600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64722-1	A-1-CW09	Total/NA	Water	3535	
320-64722-2	A-1-CW09-DUP	Total/NA	Water	3535	
320-64722-3	EB-200916	Total/NA	Water	3535	
320-64722-4	FB-200916	Total/NA	Water	3535	
320-64722-5	A-1-CW03R	Total/NA	Water	3535	
MB 320-413600/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-413600/2-A	Lab Control Sample	Total/NA	Water	3535	
320-64722-5 MS	A-1-CW03R	Total/NA	Water	3535	
320-64722-5 MSD	A-1-CW03R	Total/NA	Water	3535	

Analysis Batch: 414089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-64722-1	A-1-CW09	Total/NA	Water	EPA 537(Mod)	413600
320-64722-2	A-1-CW09-DUP	Total/NA	Water	EPA 537(Mod)	413600
320-64722-3	EB-200916	Total/NA	Water	EPA 537(Mod)	413600
320-64722-4	FB-200916	Total/NA	Water	EPA 537(Mod)	413600
320-64722-5	A-1-CW03R	Total/NA	Water	EPA 537(Mod)	413600
MB 320-413600/1-A	Method Blank	Total/NA	Water	EPA 537(Mod)	413600
LCS 320-413600/2-A	Lab Control Sample	Total/NA	Water	EPA 537(Mod)	413600
320-64722-5 MS	A-1-CW03R	Total/NA	Water	EPA 537(Mod)	413600
320-64722-5 MSD	A-1-CW03R	Total/NA	Water	EPA 537(Mod)	413600

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64722-1

Client Sample ID: A-1-CW09
Date Collected: 09/16/20 09:08
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			274.5 mL	10.00 mL	413600	09/18/20 11:48	LA	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			414089	09/21/20 01:27	IK	TAL SAC

Client Sample ID: A-1-CW09-DUP
Date Collected: 09/16/20 09:08
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			273.6 mL	10.00 mL	413600	09/18/20 11:48	LA	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			414089	09/21/20 01:36	IK	TAL SAC

Client Sample ID: EB-200916
Date Collected: 09/16/20 07:52
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			284.6 mL	10.00 mL	413600	09/18/20 11:48	LA	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			414089	09/21/20 01:46	IK	TAL SAC

Client Sample ID: FB-200916
Date Collected: 09/16/20 07:42
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			282.4 mL	10.00 mL	413600	09/18/20 11:48	LA	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			414089	09/21/20 01:55	IK	TAL SAC

Client Sample ID: A-1-CW03R
Date Collected: 09/16/20 10:57
Date Received: 09/17/20 10:35

Lab Sample ID: 320-64722-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			293.7 mL	10.00 mL	413600	09/18/20 11:48	LA	TAL SAC
Total/NA	Analysis	EPA 537(Mod)		1			414089	09/21/20 02:23	IK	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 320-64722-1
Project/Site: PFAS - Hollywood Burbank Airport

Laboratory: Eurofins TestAmerica, Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2897	01-31-22

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64722-1

Method	Method Description	Protocol	Laboratory
EPA 537(Mod)	PFAS for QSM 5.1, Table B-15	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: PFAS - Hollywood Burbank Airport

Job ID: 320-64722-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-64722-1	A-1-CW09	Water	09/16/20 09:08	09/17/20 10:35	
320-64722-2	A-1-CW09-DUP	Water	09/16/20 09:08	09/17/20 10:35	
320-64722-3	EB-200916	Water	09/16/20 07:52	09/17/20 10:35	
320-64722-4	FB-200916	Water	09/16/20 07:42	09/17/20 10:35	
320-64722-5	A-1-CW03R	Water	09/16/20 10:57	09/17/20 10:35	

eurofins | QC

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No:

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

702 Electronic Drive
Horsham, PA 19044-0962
Phone: 215-355-3900
Fax: 215-355-7231

Bill to/Report to (if different)

Sampling Site Address (if different) Include State: Burbank, CA

Client/Acct. No.	Geosyntec Consultants
Address	65 N. Raymond Ave
	Suite 200
City/State/Zip	Pasadena, CA 91103
Phone/Fax	626-449-0664
Client Contact:	Mital Desai

P.O. No. WR2693 – 02A PWSID #:
Quote # 57005935
e-mail: mdesai@geosyntec.com

LAB USE ONLY:

#____Ascorbic/HCL Vials #____HCl Vials
_ $Na_2S_2O_3$_____
#____Na OH/Zn acetate pH _____
_ HNO_3 pH _____
_ H_2SO_4 pH _____
#____NaOH pH _____
#____Unpreserved
#____HCl #____NH4Cl #____MeOH
#____DI Water

LAB USE ONLY	PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	UNPRE	BACT	ANALYSIS REQUESTED	Field pH, Temp (°C), DO, Cl2, Cond. etc.
	A-1-CW09	9/16/20	0908	X		GW	2							2		PFAS (23 analytes as required by CA ELAP)	
	A-1-CW09-DUP		0908	X		GW	2							2		PFAS (23 analytes as required by CA ELAP)	
	EB-200916		0752	X		~~GW~~ WW	2							2		PFAS (23 analytes as required by CA ELAP)	
	FB-200916		0742	X		~~GW~~ WW	2							2		PFAS (23 analytes as required by CA ELAP)	
	A-1-CW03R		1057	X		GW	2							2		PFAS (23 analytes as required by CA ELAP)	
	A-1-CW03R		1057	X		GW	2							2		PFAS (23 analytes as required by CA ELAP)	MS/MSD
	~~B-6-CW10~~ JL			~~X~~		GW	2							2		PFAS (23 analytes as required by CA ELAP)	
						GW	2							2		PFAS (23 analytes as required by CA ELAP)	
	JL					GW	2							2		PFAS (23 analytes as required by CA ELAP)	
						GW	2							2		PFAS (23 analytes as required by CA ELAP)	

SAMPLED BY: (Name/Company) J Loper / Geosyntec

TAT: ☐ STANDARD (10 DAY)
or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD
■ Standard + QC ☐ Forms ☒ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:
Initials | Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

	DATE	TIME		DATE	TIME
RELINQUISHED BY SAMPLER 1.	9/16/20		RECEIVED BY 1.	09/17/20	10:35
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5.	DATE	TIME

DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☒ FEDEX ☐ OTHER _____

Custody Seal Number

Rec'd Temp.:_____ Initials:_____ Ice Y / N Location:____
COMMENTS:

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 320-64722-1

Login Number: 64722
List Number: 1
Creator: Her, David A

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Geosyntec consultants

Water Chemistry Results

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-38567-1
Client Project/Site: Burbank Airport

For:
Geosyntec Consultants, Inc.
65 N. Raymond Avenue
Suite 200
Pasadena, California 91103

Attn: Mital Desai

Authorized for release by:
9/29/2020 5:11:10 PM

Stephen Nowak, Project Manager I
(714)895-5494
Stephen.Nowak@eurofinset.com

Table of Contents

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

Job ID: 570-38567-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-38567-1

Comments
No additional comments.

Receipt
The samples were received on 9/16/2020 4:49 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.4º C.

HPLC/IC
Method 300.0: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 570-95146 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Chloride in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 6010B: Due to the high concentration of Calcium, Magnesium and Sodium the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 570-97577 and analytical batch 570-98065 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

Client Sample ID: A-1-CW09 — Lab Sample ID: 570-38567-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	93		1.0		mg/L	1		300.0	Total/NA
Nitrate as N	27		1.0		mg/L	10		300.0	Total/NA
Sulfate	84		10		mg/L	10		300.0	Total/NA
Calcium	139		2.00		mg/L	1		6010B	Total/NA
Magnesium	34.9		0.500		mg/L	1		6010B	Total/NA
Potassium	5.77		2.00		mg/L	1		6010B	Total/NA
Sodium	37.9		2.00		mg/L	1		6010B	Total/NA
Alkalinity, Total (As CaCO3)	273		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	273		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	875		1.00		mg/L	1		SM 2540C	Total/NA

Client Sample ID: A-1-CW03R — Lab Sample ID: 570-38567-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	43	F1	1.0		mg/L	1		300.0	Total/NA
Nitrate as N	0.15		0.10		mg/L	1		300.0	Total/NA
Sulfate	21		1.0		mg/L	1		300.0	Total/NA
Calcium	38.8		2.00		mg/L	1		6010B	Total/NA
Magnesium	11.7		0.500		mg/L	1		6010B	Total/NA
Potassium	6.32		2.00		mg/L	1		6010B	Total/NA
Sodium	26.5		2.00		mg/L	1		6010B	Total/NA
Alkalinity, Total (As CaCO3)	135		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	135		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	325		1.00		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: A-1-CW09
Date Collected: 09/16/20 09:08
Date Received: 09/16/20 16:49

Lab Sample ID: 570-38567-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	93		1.0		mg/L			09/17/20 10:47	1
Nitrate as N	27		1.0		mg/L			09/17/20 15:30	10
Sulfate	84		10		mg/L			09/17/20 15:30	10

Client Sample ID: A-1-CW03R
Date Collected: 09/16/20 10:57
Date Received: 09/16/20 16:49

Lab Sample ID: 570-38567-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43	F1	1.0		mg/L			09/17/20 11:05	1
Nitrate as N	0.15		0.10		mg/L			09/17/20 11:05	1
Sulfate	21		1.0		mg/L			09/17/20 11:05	1

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

Method: 6010B - Metals (ICP)

Client Sample ID: A-1-CW09
Date Collected: 09/16/20 09:08
Date Received: 09/16/20 16:49

Lab Sample ID: 570-38567-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	139		2.00		mg/L		09/28/20 07:00	09/29/20 11:08	1
Magnesium	34.9		0.500		mg/L		09/28/20 07:00	09/29/20 11:08	1
Potassium	5.77		2.00		mg/L		09/28/20 07:00	09/29/20 11:08	1
Sodium	37.9		2.00		mg/L		09/28/20 07:00	09/29/20 11:08	1

Client Sample ID: A-1-CW03R
Date Collected: 09/16/20 10:57
Date Received: 09/16/20 16:49

Lab Sample ID: 570-38567-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	38.8		2.00		mg/L		09/28/20 07:00	09/29/20 11:11	1
Magnesium	11.7		0.500		mg/L		09/28/20 07:00	09/29/20 11:11	1
Potassium	6.32		2.00		mg/L		09/28/20 07:00	09/29/20 11:11	1
Sodium	26.5		2.00		mg/L		09/28/20 07:00	09/29/20 11:11	1

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

General Chemistry

Client Sample ID: A-1-CW09
Date Collected: 09/16/20 09:08
Date Received: 09/16/20 16:49

Lab Sample ID: 570-38567-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	**273**		5.00		mg/L			09/25/20 20:11	1
Bicarbonate (as CaCO3)	**273**		5.00		mg/L			09/25/20 20:11	1
Carbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 20:11	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			09/25/20 20:11	1
Total Dissolved Solids	**875**		1.00		mg/L			09/21/20 20:29	1

Client Sample ID: A-1-CW03R
Date Collected: 09/16/20 10:57
Date Received: 09/16/20 16:49

Lab Sample ID: 570-38567-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	**135**		5.00		mg/L			09/25/20 20:24	1
Bicarbonate (as CaCO3)	**135**		5.00		mg/L			09/25/20 20:24	1
Carbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 20:24	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			09/25/20 20:24	1
Total Dissolved Solids	**325**		1.00		mg/L			09/21/20 20:29	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-95145/5
Matrix: Water
Analysis Batch: 95145

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10		mg/L			09/17/20 09:50	1

Lab Sample ID: LCS 570-95145/6
Matrix: Water
Analysis Batch: 95145

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			5.00	5.002		mg/L		100	90 - 110		

Lab Sample ID: LCSD 570-95145/7
Matrix: Water
Analysis Batch: 95145

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N			5.00	5.000		mg/L		100	90 - 110	0	15

Lab Sample ID: 570-38567-2 MS
Matrix: Water
Analysis Batch: 95145

Client Sample ID: A-1-CW03R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	0.15		5.00	5.286		mg/L		103	80 - 120		

Lab Sample ID: 570-38567-2 MSD
Matrix: Water
Analysis Batch: 95145

Client Sample ID: A-1-CW03R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.15		5.00	5.468		mg/L		106	80 - 120	3	20

Lab Sample ID: MB 570-95146/5
Matrix: Water
Analysis Batch: 95146

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			09/17/20 09:50	1
Sulfate	ND		1.0		mg/L			09/17/20 09:50	1

Lab Sample ID: LCS 570-95146/6
Matrix: Water
Analysis Batch: 95146

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			50.0	50.07		mg/L		100	90 - 110		
Sulfate			50.0	50.14		mg/L		100	90 - 110		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 570-95146/7
Matrix: Water
Analysis Batch: 95146

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			50.0	50.06		mg/L		100	90 - 110	0	15
Sulfate			50.0	50.14		mg/L		100	90 - 110	0	15

Lab Sample ID: 570-38567-2 MS
Matrix: Water
Analysis Batch: 95146

Client Sample ID: A-1-CW03R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	43	F1	50.0	102.1	E	mg/L		117	80 - 120
Sulfate	21		50.0	76.43		mg/L		110	80 - 120

Lab Sample ID: 570-38567-2 MSD
Matrix: Water
Analysis Batch: 95146

Client Sample ID: A-1-CW03R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	43	F1	50.0	104.6	E F1	mg/L		123	80 - 120	2	20
Sulfate	21		50.0	78.71		mg/L		115	80 - 120	3	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 570-97577/1-A
Matrix: Water
Analysis Batch: 98065

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 97577

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		2.00		mg/L		09/28/20 07:00	09/29/20 10:32	1
Magnesium	ND		0.500		mg/L		09/28/20 07:00	09/29/20 10:32	1
Potassium	ND		2.00		mg/L		09/28/20 07:00	09/29/20 10:32	1
Sodium	ND		2.00		mg/L		09/28/20 07:00	09/29/20 10:32	1

Lab Sample ID: LCS 570-97577/2-A
Matrix: Water
Analysis Batch: 98065

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 97577

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium			0.500	0.5102	J	mg/L		102	80 - 120
Magnesium			0.500	0.5124		mg/L		102	80 - 120
Potassium			5.00	4.941		mg/L		99	80 - 120
Sodium			5.00	5.983		mg/L		120	80 - 120

Lab Sample ID: LCSD 570-97577/3-A
Matrix: Water
Analysis Batch: 98065

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 97577

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium			0.500	0.5054	J	mg/L		101	80 - 120	1	20
Magnesium			0.500	0.5151		mg/L		103	80 - 120	1	20
Potassium			5.00	5.062		mg/L		101	80 - 120	2	20
Sodium			5.00	5.753		mg/L		115	80 - 120	4	20

Method: 6010B - Metals (ICP)

Lab Sample ID: 570-38240-F-1-B MS
Matrix: Water
Analysis Batch: 98065

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 97577

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	329		1.00	307.5	4	mg/L		-2142	77 - 113
Magnesium	82.0		1.00	78.39	4	mg/L		-360	56 - 140
Potassium	11.3		10.0	20.44		mg/L		91	83 - 131
Sodium	212		10.0	210.3	4	mg/L		-14	73 - 127

Lab Sample ID: 570-38240-F-1-C MSD
Matrix: Water
Analysis Batch: 98065

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 97577

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	329		1.00	313.0	4	mg/L		-1596	77 - 113	2	11
Magnesium	82.0		1.00	78.59	4	mg/L		-340	56 - 140	0	11
Potassium	11.3		10.0	20.68		mg/L		94	83 - 131	1	7
Sodium	212		10.0	210.1	4	mg/L		-15	73 - 127	0	9

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-97663/44
Matrix: Water
Analysis Batch: 97663

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	ND		5.00		mg/L			09/25/20 19:38	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 19:38	1
Carbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 19:38	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			09/25/20 19:38	1

Lab Sample ID: LCS 570-97663/42
Matrix: Water
Analysis Batch: 97663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total (As CaCO3)			100	98.37		mg/L		98	80 - 120

Lab Sample ID: LCSD 570-97663/43
Matrix: Water
Analysis Batch: 97663

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity, Total (As CaCO3)			100	98.88		mg/L		99	80 - 120	1	20

Lab Sample ID: 570-38567-1 DU
Matrix: Water
Analysis Batch: 97663

Client Sample ID: A-1-CW09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity, Total (As CaCO3)	273			270.5		mg/L				1	25
Bicarbonate (as CaCO3)	273			270.5		mg/L				1	25
Carbonate (as CaCO3)	ND			ND		mg/L				NC	25
Hydroxide (as CaCO3)	ND			ND		mg/L				NC	25

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 570-96197/1
Matrix: Water
Analysis Batch: 96197

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		1.00		mg/L			09/21/20 20:29	1

Lab Sample ID: LCS 570-96197/2
Matrix: Water
Analysis Batch: 96197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			100	105.0		mg/L		105	84 - 108		

Lab Sample ID: LCSD 570-96197/3
Matrix: Water
Analysis Batch: 96197

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids			100	95.00		mg/L		95	84 - 108	10	10

Lab Sample ID: 570-38561-A-3 DU
Matrix: Water
Analysis Batch: 96197

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1120			1080		mg/L				3	10

HPLC/IC

Analysis Batch: 95145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38567-1	A-1-CW09	Total/NA	Water	300.0	
570-38567-2	A-1-CW03R	Total/NA	Water	300.0	
MB 570-95145/5	Method Blank	Total/NA	Water	300.0	
LCS 570-95145/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-95145/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-38567-2 MS	A-1-CW03R	Total/NA	Water	300.0	
570-38567-2 MSD	A-1-CW03R	Total/NA	Water	300.0	

Analysis Batch: 95146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38567-1	A-1-CW09	Total/NA	Water	300.0	
570-38567-1	A-1-CW09	Total/NA	Water	300.0	
570-38567-2	A-1-CW03R	Total/NA	Water	300.0	
MB 570-95146/5	Method Blank	Total/NA	Water	300.0	
LCS 570-95146/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-95146/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-38567-2 MS	A-1-CW03R	Total/NA	Water	300.0	
570-38567-2 MSD	A-1-CW03R	Total/NA	Water	300.0	

Metals

Prep Batch: 97577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38567-1	A-1-CW09	Total/NA	Water	3010A	
570-38567-2	A-1-CW03R	Total/NA	Water	3010A	
MB 570-97577/1-A	Method Blank	Total/NA	Water	3010A	
LCS 570-97577/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 570-97577/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
570-38240-F-1-B MS	Matrix Spike	Total/NA	Water	3010A	
570-38240-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Analysis Batch: 98065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38567-1	A-1-CW09	Total/NA	Water	6010B	97577
570-38567-2	A-1-CW03R	Total/NA	Water	6010B	97577
MB 570-97577/1-A	Method Blank	Total/NA	Water	6010B	97577
LCS 570-97577/2-A	Lab Control Sample	Total/NA	Water	6010B	97577
LCSD 570-97577/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	97577
570-38240-F-1-B MS	Matrix Spike	Total/NA	Water	6010B	97577
570-38240-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010B	97577

General Chemistry

Analysis Batch: 96197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38567-1	A-1-CW09	Total/NA	Water	SM 2540C	
570-38567-2	A-1-CW03R	Total/NA	Water	SM 2540C	
MB 570-96197/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 570-96197/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 570-96197/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
570-38561-A-3 DU	Duplicate	Total/NA	Water	SM 2540C	

General Chemistry

Analysis Batch: 97663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38567-1	A-1-CW09	Total/NA	Water	SM 2320B	
570-38567-2	A-1-CW03R	Total/NA	Water	SM 2320B	
MB 570-97663/44	Method Blank	Total/NA	Water	SM 2320B	
LCS 570-97663/42	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 570-97663/43	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
570-38567-1 DU	A-1-CW09	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

Client Sample ID: A-1-CW09

Date Collected: 09/16/20 09:08
Date Received: 09/16/20 16:49

Lab Sample ID: 570-38567-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			95146	09/17/20 10:47	URMH	ECL 1
	Instrument ID: IC9									
Total/NA	Analysis	300.0		10			95145	09/17/20 15:30	URMH	ECL 1
	Instrument ID: IC9									
Total/NA	Analysis	300.0		10			95146	09/17/20 15:30	URMH	ECL 1
	Instrument ID: IC9									
Total/NA	Prep	3010A			50 mL	50 mL	97577	09/28/20 07:00	WL8G	ECL 1
Total/NA	Analysis	6010B		1			98065	09/29/20 11:08	ULPF	ECL 1
	Instrument ID: ICP8									
Total/NA	Analysis	SM 2320B		1	35 mL	35 mL	97663	09/25/20 20:11	UAPD	ECL 1
	Instrument ID: ManSciMantech									
Total/NA	Analysis	SM 2540C		1	20 mL	20 mL	96197	09/21/20 20:29	WN6Y	ECL 1
	Instrument ID: NOEQUIP									

Client Sample ID: A-1-CW03R

Date Collected: 09/16/20 10:57
Date Received: 09/16/20 16:49

Lab Sample ID: 570-38567-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			95145	09/17/20 11:05	URMH	ECL 1
	Instrument ID: IC9									
Total/NA	Analysis	300.0		1			95146	09/17/20 11:05	URMH	ECL 1
	Instrument ID: IC9									
Total/NA	Prep	3010A			50 mL	50 mL	97577	09/28/20 07:00	WL8G	ECL 1
Total/NA	Analysis	6010B		1			98065	09/29/20 11:11	ULPF	ECL 1
	Instrument ID: ICP8									
Total/NA	Analysis	SM 2320B		1	35 mL	35 mL	97663	09/25/20 20:24	UAPD	ECL 1
	Instrument ID: ManSciMantech									
Total/NA	Analysis	SM 2540C		1	20 mL	20 mL	96197	09/21/20 20:29	WN6Y	ECL 1
	Instrument ID: NOEQUIP									

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 570-38567-1
Project/Site: Burbank Airport

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2944	09-29-20

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	ECL 1
6010B	Metals (ICP)	SW846	ECL 1
SM 2320B	Alkalinity	SM	ECL 1
SM 2540C	Solids, Total Dissolved (TDS)	SM	ECL 1
3010A	Preparation, Total Metals	SW846	ECL 1

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport

Job ID: 570-38567-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-38567-1	A-1-CW09	Water	09/16/20 09:08	09/16/20 16:49	
570-38567-2	A-1-CW03R	Water	09/16/20 10:57	09/16/20 16:49	

58564

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7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

570-38567 Chain of Custody

CHAIN OF CUSTODY RECORD

DATE: 9/16/20

PAGE: 1 OF 1

LABORATORY CLIENT: Geosyntec

ADDRESS: 65 N. Raymond Ave #200

CITY: Pasadena STATE: CA ZIP: 91103

TEL:

E-MAIL: mdesai@geosyntec.com

CLIENT PROJECT NAME / NUMBER: Burbank Airport

P.O. NO.: WR2693 (OZA)

PROJECT CONTACT: Mital Desai

SAMPLER(S): (PRINT): J. Loper

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TDS (SM2540C)	Chloride, sulfate, nitrate-nitrogen (USEPA 300)	Carbonate and bicarbonate (SM2320B)	Calcium, magnesium, potassium, sodium (USEPA 6010B)
	A-1-CW09	9/16/20	0908	GW	3	2	1	N	X	X	X	X
	A-1-CW03R	9/16/20	1057	GW	3	2	1	N	X	X	X	X

Relinquished by: (Signature) J. Loper	Received by: (Signature/Affiliation) Danuyle GE	Date: 9/16/20	Time: 1649
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

48/44 SCB

06/02/14 Revision

9/29/2020

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 570-38567-1

Login Number: 38567
List Number: 1
Creator: Patel, Jayesh

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-38680-1
Client Project/Site: Burbank Airport (WR2693-02A)
Revision: 1

For:
Geosyntec Consultants, Inc.
65 N. Raymond Avenue
Suite 200
Pasadena, California 91103

Attn: Mital Desai

Authorized for release by:
10/5/2020 2:40:35 PM

Stephen Nowak, Project Manager I
(714)895-5494
Stephen.Nowak@eurofinset.com

Table of Contents

Definitions/Glossary

Client: Geosyntec Consultants, Inc. Job ID: 570-38680-1
Project/Site: Burbank Airport (WR2693-02A)

Qualifiers

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 570-38680-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-38680-1

Comments
No additional comments.

Receipt
The samples were received on 9/17/2020 4:13 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.5º C.

Receipt Exceptions
The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): IDW-200917 (570-38680-5).

GC/MS VOA
Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-97932.

Method 8260B: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: IDW-200917 (570-38680-5). Elevated reporting limits (RLs) are provided.

Method 8260B: The laboratory control sample (LCS) for analytical batch 570-97932 recovered outside control limits for the following analytes: Trichlorofluoromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method 300.0: Due to the high concentration of Nitrate as N, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 570-95155 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 6010B: Due to the high concentration of Calcium, Magnesium, and Sodium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 570-97886 and analytical batch 570-98711 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method SM 2540C: The following samples were analyzed outside of analytical holding time due to analyst scheduling oversight: C-1-CW08 (570-38680-1), C-1-CW03 (570-38680-2), C-1-CW06 (570-38680-3) and B-6-CW10 (570-38680-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

Client Sample ID: C-1-CW08 — Lab Sample ID: 570-38680-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	49		1.0		mg/L	1		300.0	Total/NA
Nitrate as N	10		1.0		mg/L	10		300.0	Total/NA
Sulfate	77		1.0		mg/L	1		300.0	Total/NA
Calcium	101		2.00		mg/L	1		6010B	Total/NA
Magnesium	25.2		0.500		mg/L	1		6010B	Total/NA
Potassium	5.33		2.00		mg/L	1		6010B	Total/NA
Sodium	32.3		2.00		mg/L	1		6010B	Total/NA
Alkalinity, Total (As CaCO3)	265		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	265		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	490	H	1.00		mg/L	1		SM 2540C	Total/NA

Client Sample ID: C-1-CW03 — Lab Sample ID: 570-38680-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	55		1.0		mg/L	1		300.0	Total/NA
Nitrate as N	14		1.0		mg/L	10		300.0	Total/NA
Sulfate	77		1.0		mg/L	1		300.0	Total/NA
Calcium	98.8		2.00		mg/L	1		6010B	Total/NA
Magnesium	25.1		0.500		mg/L	1		6010B	Total/NA
Potassium	5.41		2.00		mg/L	1		6010B	Total/NA
Sodium	31.2		2.00		mg/L	1		6010B	Total/NA
Alkalinity, Total (As CaCO3)	238		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	238		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	530	H	1.00		mg/L	1		SM 2540C	Total/NA

Client Sample ID: C-1-CW06 — Lab Sample ID: 570-38680-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	22		1.0		mg/L	1		300.0	Total/NA
Nitrate as N	11		1.0		mg/L	10		300.0	Total/NA
Sulfate	43		1.0		mg/L	1		300.0	Total/NA
Calcium	96.3		2.00		mg/L	1		6010B	Total/NA
Magnesium	22.3		0.500		mg/L	1		6010B	Total/NA
Potassium	4.94		2.00		mg/L	1		6010B	Total/NA
Sodium	29.2		2.00		mg/L	1		6010B	Total/NA
Alkalinity, Total (As CaCO3)	282		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	282		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	450	H	1.00		mg/L	1		SM 2540C	Total/NA

Client Sample ID: B-6-CW10 — Lab Sample ID: 570-38680-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	41		1.0		mg/L	1		300.0	Total/NA
Nitrate as N	5.6		0.10		mg/L	1		300.0	Total/NA
Sulfate	67		1.0		mg/L	1		300.0	Total/NA
Calcium	91.9		2.00		mg/L	1		6010B	Total/NA
Magnesium	23.9		0.500		mg/L	1		6010B	Total/NA
Potassium	5.25		2.00		mg/L	1		6010B	Total/NA
Sodium	31.3		2.00		mg/L	1		6010B	Total/NA
Alkalinity, Total (As CaCO3)	263		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate (as CaCO3)	263		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	480	H	1.00		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: C-1-CW08
Date Collected: 09/17/20 08:29
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	49		1.0		mg/L			09/17/20 17:36	1
Nitrate as N	10		1.0		mg/L			09/18/20 10:33	10
Sulfate	77		1.0		mg/L			09/17/20 17:36	1

Client Sample ID: C-1-CW03
Date Collected: 09/17/20 10:21
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	55		1.0		mg/L			09/17/20 17:56	1
Nitrate as N	14		1.0		mg/L			09/18/20 10:53	10
Sulfate	77		1.0		mg/L			09/17/20 17:56	1

Client Sample ID: C-1-CW06
Date Collected: 09/17/20 11:41
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-3
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		1.0		mg/L			09/17/20 18:17	1
Nitrate as N	11		1.0		mg/L			09/18/20 11:13	10
Sulfate	43		1.0		mg/L			09/17/20 18:17	1

Client Sample ID: B-6-CW10
Date Collected: 09/17/20 13:28
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-4
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41		1.0		mg/L			09/17/20 19:18	1
Nitrate as N	5.6		0.10		mg/L			09/17/20 19:18	1
Sulfate	67		1.0		mg/L			09/17/20 19:18	1

Method: 6010B - Metals (ICP)

Client Sample ID: C-1-CW08
Date Collected: 09/17/20 08:29
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	101		2.00		mg/L		09/29/20 08:00	09/30/20 20:25	1
Magnesium	25.2		0.500		mg/L		09/29/20 08:00	09/30/20 20:25	1
Potassium	5.33		2.00		mg/L		09/29/20 08:00	09/30/20 20:25	1
Sodium	32.3		2.00		mg/L		09/29/20 08:00	09/30/20 20:25	1

Client Sample ID: C-1-CW03
Date Collected: 09/17/20 10:21
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	98.8		2.00		mg/L		09/29/20 08:00	09/30/20 20:28	1
Magnesium	25.1		0.500		mg/L		09/29/20 08:00	09/30/20 20:28	1
Potassium	5.41		2.00		mg/L		09/29/20 08:00	09/30/20 20:28	1
Sodium	31.2		2.00		mg/L		09/29/20 08:00	09/30/20 20:28	1

Client Sample ID: C-1-CW06
Date Collected: 09/17/20 11:41
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-3
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	96.3		2.00		mg/L		09/29/20 08:00	09/30/20 20:30	1
Magnesium	22.3		0.500		mg/L		09/29/20 08:00	09/30/20 20:30	1
Potassium	4.94		2.00		mg/L		09/29/20 08:00	09/30/20 20:30	1
Sodium	29.2		2.00		mg/L		09/29/20 08:00	09/30/20 20:30	1

Client Sample ID: B-6-CW10
Date Collected: 09/17/20 13:28
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-4
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	91.9		2.00		mg/L		09/29/20 08:00	09/30/20 20:32	1
Magnesium	23.9		0.500		mg/L		09/29/20 08:00	09/30/20 20:32	1
Potassium	5.25		2.00		mg/L		09/29/20 08:00	09/30/20 20:32	1
Sodium	31.3		2.00		mg/L		09/29/20 08:00	09/30/20 20:32	1

General Chemistry

Client Sample ID: C-1-CW08
Date Collected: 09/17/20 08:29
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	**265**		5.00		mg/L			09/25/20 20:31	1
Bicarbonate (as CaCO3)	**265**		5.00		mg/L			09/25/20 20:31	1
Carbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 20:31	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			09/25/20 20:31	1
Total Dissolved Solids	**490**	**H**	1.00		mg/L			09/28/20 21:44	1

Client Sample ID: C-1-CW03
Date Collected: 09/17/20 10:21
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	**238**		5.00		mg/L			09/25/20 20:37	1
Bicarbonate (as CaCO3)	**238**		5.00		mg/L			09/25/20 20:37	1
Carbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 20:37	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			09/25/20 20:37	1
Total Dissolved Solids	**530**	**H**	1.00		mg/L			09/28/20 21:44	1

Client Sample ID: C-1-CW06
Date Collected: 09/17/20 11:41
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-3
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	**282**		5.00		mg/L			09/25/20 20:44	1
Bicarbonate (as CaCO3)	**282**		5.00		mg/L			09/25/20 20:44	1
Carbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 20:44	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			09/25/20 20:44	1
Total Dissolved Solids	**450**	**H**	1.00		mg/L			09/28/20 21:44	1

Client Sample ID: B-6-CW10
Date Collected: 09/17/20 13:28
Date Received: 09/17/20 16:13

Lab Sample ID: 570-38680-4
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	**263**		5.00		mg/L			09/25/20 20:50	1
Bicarbonate (as CaCO3)	**263**		5.00		mg/L			09/25/20 20:50	1
Carbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 20:50	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			09/25/20 20:50	1
Total Dissolved Solids	**480**	**H**	1.00		mg/L			09/28/20 21:44	1

Surrogate Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-129)	(77-120)	(80-128)	(80-120)
570-38680-5	IDW-200917	116	96	106	101
LCS 570-97932/3	Lab Control Sample	106	101	101	103
LCSD 570-97932/4	Lab Control Sample Dup	108	101	100	103
MB 570-97932/8	Method Blank	114	97	103	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-97932/8
Matrix: Water
Analysis Batch: 97932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0		ug/L			09/29/20 12:30	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/29/20 12:30	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			09/29/20 12:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10		ug/L			09/29/20 12:30	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/29/20 12:30	1
1,1-Dichloroethane	ND		1.0		ug/L			09/29/20 12:30	1
1,1-Dichloroethene	ND		1.0		ug/L			09/29/20 12:30	1
1,1-Dichloropropene	ND		1.0		ug/L			09/29/20 12:30	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/29/20 12:30	1
1,2,3-Trichloropropane	ND		5.0		ug/L			09/29/20 12:30	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/29/20 12:30	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/29/20 12:30	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/L			09/29/20 12:30	1
1,2-Dibromoethane	ND		1.0		ug/L			09/29/20 12:30	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/29/20 12:30	1
1,2-Dichloroethane	ND		0.50		ug/L			09/29/20 12:30	1
1,2-Dichloropropane	ND		1.0		ug/L			09/29/20 12:30	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/29/20 12:30	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/29/20 12:30	1
1,3-Dichloropropane	ND		1.0		ug/L			09/29/20 12:30	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/29/20 12:30	1
2,2-Dichloropropane	ND		1.0		ug/L			09/29/20 12:30	1
2-Butanone	ND		20		ug/L			09/29/20 12:30	1
2-Chlorotoluene	ND		1.0		ug/L			09/29/20 12:30	1
2-Hexanone	ND		10		ug/L			09/29/20 12:30	1
4-Chlorotoluene	ND		1.0		ug/L			09/29/20 12:30	1
4-Methyl-2-pentanone	ND		10		ug/L			09/29/20 12:30	1
Acetone	ND		20		ug/L			09/29/20 12:30	1
Benzene	ND		0.50		ug/L			09/29/20 12:30	1
Bromobenzene	ND		1.0		ug/L			09/29/20 12:30	1
Bromochloromethane	ND		2.0		ug/L			09/29/20 12:30	1
Bromodichloromethane	ND		1.0		ug/L			09/29/20 12:30	1
Bromoform	ND		5.0		ug/L			09/29/20 12:30	1
Bromomethane	ND		50		ug/L			09/29/20 12:30	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/29/20 12:30	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			09/29/20 12:30	1
Carbon disulfide	ND		10		ug/L			09/29/20 12:30	1
Carbon tetrachloride	ND		0.50		ug/L			09/29/20 12:30	1
Chlorobenzene	ND		1.0		ug/L			09/29/20 12:30	1
Chloroethane	ND		5.0		ug/L			09/29/20 12:30	1
Chloroform	ND		1.0		ug/L			09/29/20 12:30	1
Chloromethane	ND		10		ug/L			09/29/20 12:30	1
Dibromochloromethane	ND		2.0		ug/L			09/29/20 12:30	1
Dibromomethane	ND		1.0		ug/L			09/29/20 12:30	1
Dichlorodifluoromethane	ND		5.0		ug/L			09/29/20 12:30	1
Ethylbenzene	ND		1.0		ug/L			09/29/20 12:30	1
Isopropylbenzene	ND		1.0		ug/L			09/29/20 12:30	1
Methylene Chloride	ND		10		ug/L			09/29/20 12:30	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-97932/8
Matrix: Water
Analysis Batch: 97932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			09/29/20 12:30	1
Naphthalene	ND		10		ug/L			09/29/20 12:30	1
n-Butylbenzene	ND		1.0		ug/L			09/29/20 12:30	1
N-Propylbenzene	ND		1.0		ug/L			09/29/20 12:30	1
o-Xylene	ND		1.0		ug/L			09/29/20 12:30	1
m,p-Xylene	ND		2.0		ug/L			09/29/20 12:30	1
p-Isopropyltoluene	ND		1.0		ug/L			09/29/20 12:30	1
sec-Butylbenzene	ND		1.0		ug/L			09/29/20 12:30	1
Styrene	ND		1.0		ug/L			09/29/20 12:30	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/29/20 12:30	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			09/29/20 12:30	1
tert-Butylbenzene	ND		1.0		ug/L			09/29/20 12:30	1
Tetrachloroethene	ND		1.0		ug/L			09/29/20 12:30	1
Toluene	ND		1.0		ug/L			09/29/20 12:30	1
Trichloroethene	ND		1.0		ug/L			09/29/20 12:30	1
Trichlorofluoromethane	ND		10		ug/L			09/29/20 12:30	1
Vinyl acetate	ND		10		ug/L			09/29/20 12:30	1
Vinyl chloride	ND		0.50		ug/L			09/29/20 12:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*80 - 129*		*09/29/20 12:30*	*1*
4-Bromofluorobenzene (Surr)	*97*		*77 - 120*		*09/29/20 12:30*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 128*		*09/29/20 12:30*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/29/20 12:30*	*1*

Lab Sample ID: LCS 570-97932/3
Matrix: Water
Analysis Batch: 97932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	49.40		ug/L		99	80 - 126
1,1,1-Trichloroethane	50.0	50.12		ug/L		100	73 - 127
1,1,2,2-Tetrachloroethane	50.0	47.54		ug/L		95	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	49.38		ug/L		99	53 - 155
1,1,2-Trichloroethane	50.0	51.46		ug/L		103	80 - 120
1,1-Dichloroethane	50.0	54.53		ug/L		109	73 - 127
1,1-Dichloroethene	50.0	56.76		ug/L		114	64 - 136
1,1-Dichloropropene	50.0	57.95		ug/L		116	73 - 127
1,2,3-Trichlorobenzene	50.0	54.87		ug/L		110	76 - 130
1,2,3-Trichloropropane	50.0	44.13		ug/L		88	77 - 125
1,2,4-Trichlorobenzene	50.0	55.26		ug/L		111	74 - 134
1,2,4-Trimethylbenzene	50.0	53.77		ug/L		108	80 - 123
1,2-Dibromo-3-Chloropropane	50.0	43.38		ug/L		87	68 - 128
1,2-Dibromoethane	50.0	49.37		ug/L		99	80 - 120
1,2-Dichlorobenzene	50.0	52.38		ug/L		105	80 - 120
1,2-Dichloroethane	50.0	56.83		ug/L		114	75 - 123
1,2-Dichloropropane	50.0	56.11		ug/L		112	80 - 120
1,3,5-Trimethylbenzene	50.0	53.91		ug/L		108	80 - 126

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-97932/3
Matrix: Water
Analysis Batch: 97932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	50.0	52.97		ug/L		106	80 - 120
1,3-Dichloropropane	50.0	50.74		ug/L		101	80 - 120
1,4-Dichlorobenzene	50.0	53.31		ug/L		107	80 - 120
2,2-Dichloropropane	50.0	37.22		ug/L		74	53 - 155
2-Butanone	50.0	51.75		ug/L		103	53 - 137
2-Chlorotoluene	50.0	54.55		ug/L		109	80 - 121
2-Hexanone	50.0	50.36		ug/L		101	59 - 131
4-Chlorotoluene	50.0	55.45		ug/L		111	80 - 120
4-Methyl-2-pentanone	50.0	46.41		ug/L		93	68 - 122
Acetone	50.0	44.63		ug/L		89	50 - 150
Benzene	50.0	52.32		ug/L		105	78 - 120
Bromobenzene	50.0	52.73		ug/L		105	80 - 120
Bromochloromethane	50.0	51.89		ug/L		104	77 - 125
Bromodichloromethane	50.0	54.71		ug/L		109	80 - 125
Bromoform	50.0	50.18		ug/L		100	68 - 128
Bromomethane	50.0	50.35		ug/L		101	50 - 150
cis-1,2-Dichloroethene	50.0	52.68		ug/L		105	78 - 120
cis-1,3-Dichloropropene	50.0	47.76		ug/L		96	80 - 129
Carbon disulfide	50.0	53.39		ug/L		107	50 - 150
Carbon tetrachloride	50.0	53.56		ug/L		107	67 - 139
Chlorobenzene	50.0	53.74		ug/L		107	80 - 120
Chloroethane	50.0	51.05		ug/L		102	64 - 130
Chloroform	50.0	54.26		ug/L		109	77 - 120
Chloromethane	50.0	55.61		ug/L		111	56 - 128
Dibromochloromethane	50.0	52.92		ug/L		106	77 - 125
Dibromomethane	50.0	54.26		ug/L		109	80 - 120
Dichlorodifluoromethane	50.0	63.47		ug/L		127	50 - 150
Ethylbenzene	50.0	55.06		ug/L		110	80 - 120
Isopropylbenzene	50.0	55.60		ug/L		111	80 - 126
Methylene Chloride	50.0	49.62		ug/L		99	73 - 127
Methyl-t-Butyl Ether (MTBE)	50.0	42.37		ug/L		85	77 - 120
Naphthalene	50.0	48.42		ug/L		97	64 - 136
n-Butylbenzene	50.0	55.15		ug/L		110	78 - 132
N-Propylbenzene	50.0	56.87		ug/L		114	80 - 125
o-Xylene	50.0	54.13		ug/L		108	80 - 125
m,p-Xylene	100	111.2		ug/L		111	80 - 125
p-Isopropyltoluene	50.0	53.48		ug/L		107	80 - 129
sec-Butylbenzene	50.0	55.51		ug/L		111	80 - 125
Styrene	50.0	53.38		ug/L		107	80 - 122
trans-1,2-Dichloroethene	50.0	52.05		ug/L		104	70 - 130
trans-1,3-Dichloropropene	50.0	46.05		ug/L		92	78 - 132
tert-Butylbenzene	50.0	52.50		ug/L		105	80 - 125
Tetrachloroethene	50.0	57.44		ug/L		115	54 - 144
Toluene	50.0	54.25		ug/L		109	80 - 122
Trichloroethene	50.0	56.23		ug/L		112	77 - 125
Trichlorofluoromethane	50.0	71.20	* me	ug/L		142	69 - 141
Vinyl acetate	50.0	43.74		ug/L		87	50 - 150
Vinyl chloride	50.0	50.15		ug/L		100	63 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-97932/3
Matrix: Water
Analysis Batch: 97932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 129*
4-Bromofluorobenzene (Surr)	*101*		*77 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 128*
Toluene-d8 (Surr)	*103*		*80 - 120*

Lab Sample ID: LCSD 570-97932/4
Matrix: Water
Analysis Batch: 97932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			50.0	47.41		ug/L		95	80 - 126	4	30
1,1,1-Trichloroethane			50.0	47.95		ug/L		96	73 - 127	4	30
1,1,2,2-Tetrachloroethane			50.0	49.29		ug/L		99	76 - 120	4	28
1,1,2-Trichloro-1,2,2-trifluoroethane			50.0	44.67		ug/L		89	53 - 155	10	30
1,1,2-Trichloroethane			50.0	50.14		ug/L		100	80 - 120	3	30
1,1-Dichloroethane			50.0	51.57		ug/L		103	73 - 127	6	30
1,1-Dichloroethene			50.0	54.48		ug/L		109	64 - 136	4	30
1,1-Dichloropropene			50.0	53.59		ug/L		107	73 - 127	8	30
1,2,3-Trichlorobenzene			50.0	53.94		ug/L		108	76 - 130	2	30
1,2,3-Trichloropropane			50.0	46.61		ug/L		93	77 - 125	5	30
1,2,4-Trichlorobenzene			50.0	52.90		ug/L		106	74 - 134	4	30
1,2,4-Trimethylbenzene			50.0	50.27		ug/L		101	80 - 123	7	30
1,2-Dibromo-3-Chloropropane			50.0	46.55		ug/L		93	68 - 128	7	30
1,2-Dibromoethane			50.0	48.71		ug/L		97	80 - 120	1	30
1,2-Dichlorobenzene			50.0	50.01		ug/L		100	80 - 120	5	20
1,2-Dichloroethane			50.0	54.85		ug/L		110	75 - 123	4	24
1,2-Dichloropropane			50.0	53.50		ug/L		107	80 - 120	5	20
1,3,5-Trimethylbenzene			50.0	50.42		ug/L		101	80 - 126	7	20
1,3-Dichlorobenzene			50.0	49.73		ug/L		99	80 - 120	6	20
1,3-Dichloropropane			50.0	49.64		ug/L		99	80 - 120	2	20
1,4-Dichlorobenzene			50.0	50.46		ug/L		101	80 - 120	5	20
2,2-Dichloropropane			50.0	35.47		ug/L		71	53 - 155	5	30
2-Butanone			50.0	55.36		ug/L		111	53 - 137	7	30
2-Chlorotoluene			50.0	51.39		ug/L		103	80 - 121	6	20
2-Hexanone			50.0	54.05		ug/L		108	59 - 131	7	30
4-Chlorotoluene			50.0	51.94		ug/L		104	80 - 120	7	20
4-Methyl-2-pentanone			50.0	49.58		ug/L		99	68 - 122	7	30
Acetone			50.0	48.58		ug/L		97	50 - 150	8	30
Benzene			50.0	49.75		ug/L		99	78 - 120	5	21
Bromobenzene			50.0	50.82		ug/L		102	80 - 120	4	20
Bromochloromethane			50.0	50.74		ug/L		101	77 - 125	2	22
Bromodichloromethane			50.0	53.05		ug/L		106	80 - 125	3	20
Bromoform			50.0	50.13		ug/L		100	68 - 128	0	30
Bromomethane			50.0	47.04	J	ug/L		94	50 - 150	7	30
cis-1,2-Dichloroethene			50.0	50.61		ug/L		101	78 - 120	4	23
cis-1,3-Dichloropropene			50.0	45.93		ug/L		92	80 - 129	4	21
Carbon disulfide			50.0	51.33		ug/L		103	50 - 150	4	30
Carbon tetrachloride			50.0	50.19		ug/L		100	67 - 139	7	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-97932/4
Matrix: Water
Analysis Batch: 97932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene			50.0	50.74		ug/L		101	80 - 120	6	20
Chloroethane			50.0	47.99		ug/L		96	64 - 130	6	30
Chloroform			50.0	52.03		ug/L		104	77 - 120	4	23
Chloromethane			50.0	61.89		ug/L		124	56 - 128	11	30
Dibromochloromethane			50.0	51.53		ug/L		103	77 - 125	3	21
Dibromomethane			50.0	53.16		ug/L		106	80 - 120	2	20
Dichlorodifluoromethane			50.0	64.22		ug/L		128	50 - 150	1	30
Ethylbenzene			50.0	51.28		ug/L		103	80 - 120	7	20
Isopropylbenzene			50.0	51.85		ug/L		104	80 - 126	7	20
Methylene Chloride			50.0	49.10		ug/L		98	73 - 127	1	25
Methyl-t-Butyl Ether (MTBE)			50.0	42.59		ug/L		85	77 - 120	1	24
Naphthalene			50.0	50.15		ug/L		100	64 - 136	4	30
n-Butylbenzene			50.0	50.64		ug/L		101	78 - 132	9	23
N-Propylbenzene			50.0	52.67		ug/L		105	80 - 125	8	20
o-Xylene			50.0	51.31		ug/L		103	80 - 125	5	20
m,p-Xylene			100	103.7		ug/L		104	80 - 125	7	30
p-Isopropyltoluene			50.0	49.04		ug/L		98	80 - 129	9	20
sec-Butylbenzene			50.0	50.81		ug/L		102	80 - 125	9	20
Styrene			50.0	50.68		ug/L		101	80 - 122	5	20
trans-1,2-Dichloroethene			50.0	50.24		ug/L		100	70 - 130	4	30
trans-1,3-Dichloropropene			50.0	44.28		ug/L		89	78 - 132	4	22
tert-Butylbenzene			50.0	48.26		ug/L		97	80 - 125	8	20
Tetrachloroethene			50.0	51.61		ug/L		103	54 - 144	11	30
Toluene			50.0	51.22		ug/L		102	80 - 122	6	20
Trichloroethene			50.0	52.31		ug/L		105	77 - 125	7	22
Trichlorofluoromethane			50.0	60.28		ug/L		121	69 - 141	17	30
Vinyl acetate			50.0	45.16		ug/L		90	50 - 150	3	30
Vinyl chloride			50.0	47.81		ug/L		96	63 - 135	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 129*
4-Bromofluorobenzene (Surr)	*101*		*77 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 128*
Toluene-d8 (Surr)	*103*		*80 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-95155/5
Matrix: Water
Analysis Batch: 95155

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10		mg/L			09/17/20 09:56	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 570-95155/6
Matrix: Water
Analysis Batch: 95155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			5.00	4.832		mg/L		97	90 - 110		

Lab Sample ID: LCSD 570-95155/7
Matrix: Water
Analysis Batch: 95155

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N			5.00	4.833		mg/L		97	90 - 110	0	15

Lab Sample ID: MB 570-95156/5
Matrix: Water
Analysis Batch: 95156

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0		mg/L			09/17/20 09:56	1
Sulfate	ND		1.0		mg/L			09/17/20 09:56	1

Lab Sample ID: LCS 570-95156/6
Matrix: Water
Analysis Batch: 95156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			50.0	48.64		mg/L		97	90 - 110		
Sulfate			50.0	49.37		mg/L		99	90 - 110		

Lab Sample ID: LCSD 570-95156/7
Matrix: Water
Analysis Batch: 95156

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			50.0	48.63		mg/L		97	90 - 110	0	15
Sulfate			50.0	49.13		mg/L		98	90 - 110	0	15

Lab Sample ID: 570-38680-3 MS
Matrix: Water
Analysis Batch: 95156

Client Sample ID: C-1-CW06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	22		50.0	74.33		mg/L		106	80 - 120		
Sulfate	43		50.0	99.35		mg/L		113	80 - 120		

Lab Sample ID: 570-38680-3 MSD
Matrix: Water
Analysis Batch: 95156

Client Sample ID: C-1-CW06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	22		50.0	74.52		mg/L		106	80 - 120	0	20
Sulfate	43		50.0	99.52		mg/L		113	80 - 120	0	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 570-95445/5
Matrix: Water
Analysis Batch: 95445

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10		mg/L			09/18/20 09:11	1

Lab Sample ID: LCS 570-95445/6
Matrix: Water
Analysis Batch: 95445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			5.00	4.991		mg/L		100	90 - 110		

Lab Sample ID: LCSD 570-95445/7
Matrix: Water
Analysis Batch: 95445

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N			5.00	4.985		mg/L		100	90 - 110	0	15

Lab Sample ID: 570-38680-3 MS
Matrix: Water
Analysis Batch: 95445

Client Sample ID: C-1-CW06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	11		5.00	15.20		mg/L		93	80 - 120		

Lab Sample ID: 570-38680-3 MSD
Matrix: Water
Analysis Batch: 95445

Client Sample ID: C-1-CW06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	11		5.00	15.07		mg/L		90	80 - 120	1	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 570-97886/1-A
Matrix: Water
Analysis Batch: 98711

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 97886

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		2.00		mg/L		09/29/20 08:00	09/30/20 19:52	1
Magnesium	ND		0.500		mg/L		09/29/20 08:00	09/30/20 19:52	1
Potassium	ND		2.00		mg/L		09/29/20 08:00	09/30/20 19:52	1
Sodium	ND		2.00		mg/L		09/29/20 08:00	09/30/20 19:52	1

Lab Sample ID: LCS 570-97886/2-A
Matrix: Water
Analysis Batch: 98711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 97886

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Calcium			0.500	0.5262	J	mg/L		105	80 - 120		
Magnesium			0.500	0.5113		mg/L		102	80 - 120		
Potassium			5.00	5.032		mg/L		101	80 - 120		

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 570-97886/2-A
Matrix: Water
Analysis Batch: 98711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 97886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	5.00	4.795		mg/L		96	80 - 120

Lab Sample ID: LCSD 570-97886/3-A
Matrix: Water
Analysis Batch: 98711

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 97886

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	0.500	0.5154	J	mg/L		103	80 - 120	2	20
Magnesium	0.500	0.5120		mg/L		102	80 - 120	0	20
Potassium	5.00	4.956		mg/L		99	80 - 120	2	20
Sodium	5.00	4.736		mg/L		95	80 - 120	1	20

Lab Sample ID: 570-38371-D-1-A MS
Matrix: Water
Analysis Batch: 98711

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 97886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	89.4		0.500	90.71	4	mg/L		260	77 - 113
Magnesium	38.7		0.500	39.69	4	mg/L		196	56 - 140
Potassium	7.51		5.00	12.90		mg/L		108	83 - 131
Sodium	105		5.00	111.9	4	mg/L		132	73 - 127

Lab Sample ID: 570-38371-D-1-B MSD
Matrix: Water
Analysis Batch: 98711

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 97886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	89.4		0.500	91.08	4	mg/L		335	77 - 113	0	11
Magnesium	38.7		0.500	39.67	4	mg/L		191	56 - 140	0	11
Potassium	7.51		5.00	12.97		mg/L		109	83 - 131	1	7
Sodium	105		5.00	111.4	4	mg/L		121	73 - 127	1	9

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 570-97663/44
Matrix: Water
Analysis Batch: 97663

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (As CaCO3)	ND		5.00		mg/L			09/25/20 19:38	1
Bicarbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 19:38	1
Carbonate (as CaCO3)	ND		5.00		mg/L			09/25/20 19:38	1
Hydroxide (as CaCO3)	ND		5.00		mg/L			09/25/20 19:38	1

Lab Sample ID: LCS 570-97663/42
Matrix: Water
Analysis Batch: 97663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total (As CaCO3)	100	98.37		mg/L		98	80 - 120

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCSD 570-97663/43
Matrix: Water
Analysis Batch: 97663

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity, Total (As CaCO3)			100	98.88		mg/L		99	80 - 120	1	20

Lab Sample ID: 570-38567-B-1 DU
Matrix: Water
Analysis Batch: 97663

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity, Total (As CaCO3)	273			270.5		mg/L				1	25
Bicarbonate (as CaCO3)	273			270.5		mg/L				1	25
Carbonate (as CaCO3)	ND			ND		mg/L				NC	25
Hydroxide (as CaCO3)	ND			ND		mg/L				NC	25

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 570-97861/1
Matrix: Water
Analysis Batch: 97861

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		0.400		mg/L			09/28/20 21:44	1

Lab Sample ID: LCS 570-97861/2
Matrix: Water
Analysis Batch: 97861

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			100	87.50		mg/L		88	84 - 108		

Lab Sample ID: LCSD 570-97861/3
Matrix: Water
Analysis Batch: 97861

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids			100	90.00		mg/L		90	84 - 108	3	10

Lab Sample ID: 570-38972-Q-1 DU
Matrix: Water
Analysis Batch: 97861

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	4270			4235		mg/L				0.7	10

Marginal Exceedance (ME) Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 570-97932/3
Matrix: Water

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
1,1,1,2-Tetrachloroethane	50.0	49.40		ug/L	99	80 - 126	72 - 134	
1,1,1-Trichloroethane	50.0	50.12		ug/L	100	73 - 127	64 - 136	
1,1,2,2-Tetrachloroethane	50.0	47.54		ug/L	95	76 - 120	69 - 127	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	49.38		ug/L	99	53 - 155	36 - 172	
1,1,2-Trichloroethane	50.0	51.46		ug/L	103	80 - 120	73 - 127	
1,1-Dichloroethane	50.0	54.53		ug/L	109	73 - 127	64 - 136	
1,1-Dichloroethene	50.0	56.76		ug/L	114	64 - 136	52 - 148	
1,1-Dichloropropene	50.0	57.95		ug/L	116	73 - 127	64 - 136	
1,2,3-Trichlorobenzene	50.0	54.87		ug/L	110	76 - 130	67 - 139	
1,2,3-Trichloropropane	50.0	44.13		ug/L	88	77 - 125	69 - 133	
1,2,4-Trichlorobenzene	50.0	55.26		ug/L	111	74 - 134	64 - 144	
1,2,4-Trimethylbenzene	50.0	53.77		ug/L	108	80 - 123	73 - 130	
1,2-Dibromo-3-Chloropropane	50.0	43.38		ug/L	87	68 - 128	58 - 138	
1,2-Dibromoethane	50.0	49.37		ug/L	99	80 - 120	73 - 127	
1,2-Dichlorobenzene	50.0	52.38		ug/L	105	80 - 120	73 - 127	
1,2-Dichloroethane	50.0	56.83		ug/L	114	75 - 123	67 - 131	
1,2-Dichloropropane	50.0	56.11		ug/L	112	80 - 120	73 - 127	
1,3,5-Trimethylbenzene	50.0	53.91		ug/L	108	80 - 126	72 - 134	
1,3-Dichlorobenzene	50.0	52.97		ug/L	106	80 - 120	73 - 127	
1,3-Dichloropropane	50.0	50.74		ug/L	101	80 - 120	73 - 127	
1,4-Dichlorobenzene	50.0	53.31		ug/L	107	80 - 120	73 - 127	
2,2-Dichloropropane	50.0	37.22		ug/L	74	53 - 155	36 - 172	
2-Butanone	50.0	51.75		ug/L	103	53 - 137	39 - 151	
2-Chlorotoluene	50.0	54.55		ug/L	109	80 - 121	73 - 128	
2-Hexanone	50.0	50.36		ug/L	101	59 - 131	47 - 143	
4-Chlorotoluene	50.0	55.45		ug/L	111	80 - 120	73 - 127	
4-Methyl-2-pentanone	50.0	46.41		ug/L	93	68 - 122	59 - 131	
Acetone	50.0	44.63		ug/L	89	50 - 150	33 - 167	
Benzene	50.0	52.32		ug/L	105	78 - 120	71 - 127	
Bromobenzene	50.0	52.73		ug/L	105	80 - 120	73 - 127	
Bromochloromethane	50.0	51.89		ug/L	104	77 - 125	69 - 133	
Bromodichloromethane	50.0	54.71		ug/L	109	80 - 125	73 - 133	
Bromoform	50.0	50.18		ug/L	100	68 - 128	58 - 138	
Bromomethane	50.0	50.35		ug/L	101	50 - 150	33 - 167	
cis-1,2-Dichloroethene	50.0	52.68		ug/L	105	78 - 120	71 - 127	
cis-1,3-Dichloropropene	50.0	47.76		ug/L	96	80 - 129	72 - 137	
Carbon disulfide	50.0	53.39		ug/L	107	50 - 150	33 - 167	
Carbon tetrachloride	50.0	53.56		ug/L	107	67 - 139	55 - 151	
Chlorobenzene	50.0	53.74		ug/L	107	80 - 120	73 - 127	
Chloroethane	50.0	51.05		ug/L	102	64 - 130	53 - 141	
Chloroform	50.0	54.26		ug/L	109	77 - 120	70 - 127	
Chloromethane	50.0	55.61		ug/L	111	56 - 128	44 - 140	
Dibromochloromethane	50.0	52.92		ug/L	106	77 - 125	69 - 133	
Dibromomethane	50.0	54.26		ug/L	109	80 - 120	73 - 127	
Dichlorodifluoromethane	50.0	63.47		ug/L	127	50 - 150	33 - 167	
Ethylbenzene	50.0	55.06		ug/L	110	80 - 120	73 - 127	
Isopropylbenzene	50.0	55.60		ug/L	111	80 - 126	72 - 134	
Methylene Chloride	50.0	49.62		ug/L	99	73 - 127	64 - 136	
Methyl-t-Butyl Ether (MTBE)	50.0	42.37		ug/L	85	77 - 120	70 - 127	

Marginal Exceedance (ME) Summary

Client: Geosyntec Consultants, Inc. Job ID: 570-38680-1
Project/Site: Burbank Airport (WR2693-02A)

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-97932/3 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	%Rec	%Rec. Limits	ME %Rec. Limits	Marginal Exceedance Status
Naphthalene	50.0	48.42		ug/L	97	64 - 136	52 - 148	
n-Butylbenzene	50.0	55.15		ug/L	110	78 - 132	69 - 141	
N-Propylbenzene	50.0	56.87		ug/L	114	80 - 125	73 - 133	
o-Xylene	50.0	54.13		ug/L	108	80 - 125	73 - 133	
m,p-Xylene	100	111.2		ug/L	111	80 - 125	73 - 133	
p-Isopropyltoluene	50.0	53.48		ug/L	107	80 - 129	72 - 137	
sec-Butylbenzene	50.0	55.51		ug/L	111	80 - 125	73 - 133	
Styrene	50.0	53.38		ug/L	107	80 - 122	73 - 129	
trans-1,2-Dichloroethene	50.0	52.05		ug/L	104	70 - 130	60 - 140	
trans-1,3-Dichloropropene	50.0	46.05		ug/L	92	78 - 132	69 - 141	
tert-Butylbenzene	50.0	52.50		ug/L	105	80 - 125	73 - 133	
Tetrachloroethene	50.0	57.44		ug/L	115	54 - 144	39 - 159	
Toluene	50.0	54.25		ug/L	109	80 - 122	73 - 129	
Trichloroethene	50.0	56.23		ug/L	112	77 - 125	69 - 133	
Trichlorofluoromethane	50.0	71.20	* me	ug/L	142	69 - 141	57 - 153	ME
Vinyl acetate	50.0	43.74		ug/L	87	50 - 150	N/A	
Vinyl chloride	50.0	50.15		ug/L	100	63 - 135	51 - 147	

Summary

Number of Analytes Reported	Number of Marginal Exceedances Allowed	Number of Marginal Exceedances Found
66	3	1

ME = Marginal Exceedance

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

HPLC/IC

Analysis Batch: 95155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38680-3	C-1-CW06	Total/NA	Water	300.0	
570-38680-4	B-6-CW10	Total/NA	Water	300.0	

Analysis Batch: 95156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38680-1	C-1-CW08	Total/NA	Water	300.0	
570-38680-2	C-1-CW03	Total/NA	Water	300.0	
570-38680-3	C-1-CW06	Total/NA	Water	300.0	
570-38680-4	B-6-CW10	Total/NA	Water	300.0	

Analysis Batch: 95445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38680-1	C-1-CW08	Total/NA	Water	300.0	
570-38680-2	C-1-CW03	Total/NA	Water	300.0	
570-38680-3	C-1-CW06	Total/NA	Water	300.0	

Metals

Prep Batch: 97886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38680-1	C-1-CW08	Total/NA	Water	3010A	
570-38680-2	C-1-CW03	Total/NA	Water	3010A	
570-38680-3	C-1-CW06	Total/NA	Water	3010A	
570-38680-4	B-6-CW10	Total/NA	Water	3010A	

Analysis Batch: 98711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38680-1	C-1-CW08	Total/NA	Water	6010B	97886
570-38680-2	C-1-CW03	Total/NA	Water	6010B	97886
570-38680-3	C-1-CW06	Total/NA	Water	6010B	97886
570-38680-4	B-6-CW10	Total/NA	Water	6010B	97886

General Chemistry

Analysis Batch: 97663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38680-1	C-1-CW08	Total/NA	Water	SM 2320B	
570-38680-2	C-1-CW03	Total/NA	Water	SM 2320B	
570-38680-3	C-1-CW06	Total/NA	Water	SM 2320B	
570-38680-4	B-6-CW10	Total/NA	Water	SM 2320B	

Analysis Batch: 97861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-38680-1	C-1-CW08	Total/NA	Water	SM 2540C	
570-38680-2	C-1-CW03	Total/NA	Water	SM 2540C	
570-38680-3	C-1-CW06	Total/NA	Water	SM 2540C	
570-38680-4	B-6-CW10	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

Client Sample ID: C-1-CW08

Lab Sample ID: 570-38680-1

Date Collected: 09/17/20 08:29

Matrix: Water

Date Received: 09/17/20 16:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			95156	09/17/20 17:36	URMH	ECL 1
	Instrument ID: IC15									
Total/NA	Analysis	300.0		10			95445	09/18/20 10:33	P6WT	ECL 1
	Instrument ID: IC7									
Total/NA	Prep	3010A			50 mL	50 mL	97886	09/29/20 08:00	WL8G	ECL 1
Total/NA	Analysis	6010B		1			98711	09/30/20 20:25	OYW3	ECL 1
	Instrument ID: ICP8									
Total/NA	Analysis	SM 2320B		1	35 mL	35 mL	97663	09/25/20 20:31	UAPD	ECL 1
	Instrument ID: ManSciMantech									
Total/NA	Analysis	SM 2540C		1	20 mL	20 mL	97861	09/28/20 21:44	UAPD	ECL 1
	Instrument ID: NOEQUIP									

Client Sample ID: C-1-CW03

Lab Sample ID: 570-38680-2

Date Collected: 09/17/20 10:21

Matrix: Water

Date Received: 09/17/20 16:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			95156	09/17/20 17:56	URMH	ECL 1
	Instrument ID: IC15									
Total/NA	Analysis	300.0		10			95445	09/18/20 10:53	P6WT	ECL 1
	Instrument ID: IC7									
Total/NA	Prep	3010A			50 mL	50 mL	97886	09/29/20 08:00	WL8G	ECL 1
Total/NA	Analysis	6010B		1			98711	09/30/20 20:28	OYW3	ECL 1
	Instrument ID: ICP8									
Total/NA	Analysis	SM 2320B		1	35 mL	35 mL	97663	09/25/20 20:37	UAPD	ECL 1
	Instrument ID: ManSciMantech									
Total/NA	Analysis	SM 2540C		1	20 mL	20 mL	97861	09/28/20 21:44	UAPD	ECL 1
	Instrument ID: NOEQUIP									

Client Sample ID: C-1-CW06

Lab Sample ID: 570-38680-3

Date Collected: 09/17/20 11:41

Matrix: Water

Date Received: 09/17/20 16:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			95155	09/17/20 18:17	URMH	ECL 1
	Instrument ID: IC15									
Total/NA	Analysis	300.0		1			95156	09/17/20 18:17	URMH	ECL 1
	Instrument ID: IC15									
Total/NA	Analysis	300.0		10			95445	09/18/20 11:13	P6WT	ECL 1
	Instrument ID: IC7									
Total/NA	Prep	3010A			50 mL	50 mL	97886	09/29/20 08:00	WL8G	ECL 1
Total/NA	Analysis	6010B		1			98711	09/30/20 20:30	OYW3	ECL 1
	Instrument ID: ICP8									
Total/NA	Analysis	SM 2320B		1	35 mL	35 mL	97663	09/25/20 20:44	UAPD	ECL 1
	Instrument ID: ManSciMantech									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

Client Sample ID: C-1-CW06

Lab Sample ID: 570-38680-3

Date Collected: 09/17/20 11:41

Matrix: Water

Date Received: 09/17/20 16:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	20 mL	20 mL	97861	09/28/20 21:44	UAPD	ECL 1

Client Sample ID: B-6-CW10

Lab Sample ID: 570-38680-4

Date Collected: 09/17/20 13:28

Matrix: Water

Date Received: 09/17/20 16:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			95155	09/17/20 19:18	URMH	ECL 1
	Instrument ID: IC15									
Total/NA	Analysis	300.0		1			95156	09/17/20 19:18	URMH	ECL 1
	Instrument ID: IC15									
Total/NA	Prep	3010A			50 mL	50 mL	97886	09/29/20 08:00	WL8G	ECL 1
Total/NA	Analysis	6010B		1			98711	09/30/20 20:32	OYW3	ECL 1
	Instrument ID: ICP8									
Total/NA	Analysis	SM 2320B		1	35 mL	35 mL	97663	09/25/20 20:50	UAPD	ECL 1
	Instrument ID: ManSciMantech									
Total/NA	Analysis	SM 2540C		1	20 mL	20 mL	97861	09/28/20 21:44	UAPD	ECL 1
	Instrument ID: NOEQUIP									

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 570-38680-1
Project/Site: Burbank Airport (WR2693-02A)

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2944	09-30-20

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	ECL 1
6010B	Metals (ICP)	SW846	ECL 1
SM 2320B	Alkalinity	SM	ECL 1
SM 2540C	Solids, Total Dissolved (TDS)	SM	ECL 1
3010A	Preparation, Total Metals	SW846	ECL 1

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Burbank Airport (WR2693-02A)

Job ID: 570-38680-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-38680-1	C-1-CW08	Water	09/17/20 08:29	09/17/20 16:13	
570-38680-2	C-1-CW03	Water	09/17/20 10:21	09/17/20 16:13	
570-38680-3	C-1-CW06	Water	09/17/20 11:41	09/17/20 16:13	
570-38680-4	B-6-CW10	Water	09/17/20 13:28	09/17/20 16:13	

570-38680

CHAIN OF CUSTODY RECORD

DATE: 9/17/20

PAGE: 1 OF 1

eurofins | Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

570-38680 Chain of Custody

LABORATORY CLIENT: Geosyntec Consultants	Burbank Aiport (WR2693-02A) / P.O. NO.: WR2693-02A
ADDRESS: 65 N. Raymond Ave, Suite 200	PROJECT CONTACT: Mital Desai / SAMPLER(S): (PRINT) J. Loper
CITY: Pasadena STATE: CA ZIP: 91103	
TEL: 626-449-0664 E-MAIL: mdesai@geosyntec.com	

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

☐ COELT EDF | GLOBAL ID: | LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TDS (SM) 2540C	Chloride, sulfate, nitrate-nitrogen (USEPA 300)	Carbonate and bicarbonate (SM2320B)	Calcium, magnesium, potassium, and sodium (6010B)	VOCs (8260B)	Title 22 Metals (6010B/7471A)	TPH (8015M)
	C-1-CW08	9/17/20	0829	GW	4	3	1		X	X	X	X			
	C-1-CW03		1021	GW	4	3	1		X	X	X	X			
	C-1-CW06		1141	GW	4	3	1		X	X	X	X			
	B-6-CW10		1328	GW	4	3	1		X	X	X	X			
	IDW-200917		1402	GW	3		3						X	X	X
				GW											
				GW											
				GW											
				GW											
				GW											

Relinquished by: (Signature) Julia Loper	Received by: (Signature/Affiliation) GEL	Date: 9/17/20	Time: 16:13
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 570-38680-1

Login Number: 38680
List Number: 1
Creator: Ramos, Maribel

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Headspace larger than 1/4".
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Geosyntec consultants

APPENDIX G

Data Validation

Memorandum

Date:	22 October 2020
To:	Mital Desai
From:	Matthew Richardson
CC:	Julia Caprio
Subject:	Eurofins TestAmerica Laboratory Job IDs 320-64470-1, 320-64510-1, 320-64722-1 and 320-64765-1, Stage 2A Data Validation

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Eleven solid samples, one field duplicate solid sample, five water samples, one field duplicate water sample, five equipment blanks and five field blanks were collected between 9-10 September 2020 and 16-17 September 2020 and submitted to Eurofins Lancaster Laboratories Env, LLC, Lancaster, Pennsylvania as part of the Hollywood Burbank Airport project. Eurofins Lancaster Laboratories Env, LLC analyzed the samples for the following analysis:

- Per- and Polyfluroalkyl Substances (PFAS) by United States Environmental Protection Agency (USEPA) Modified Method 537/537 IDA

The data were validated at a US EPA Stage 2A data validation level, based on the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, January 2017 (EPA 540-R-2017-002); and USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Organic Methods Data Review, April 2016 (USEPA-542-B-2016-001), as well as by the pertinent methods referenced by the data package and professional and technical judgment.

1.0 320-64470-1

The following samples were validated at a Stage 2A level:

Laboratory ID	Client Sample
320-64470-1	EB-200208
320-64470-2	FB-200208
320-64470-3	SB-5A-60
320-64470-4	SB-5A-70
320-64470-5	EB-200209
320-64470-6	FB-200209
320-64470-7	SB-5A-80

Laboratory ID	Client Sample
320-64470-8	SB-5A-80-DUP
320-64470-9	SB-5A-90
320-64470-10	SB-5A-100
320-64470-11	SB-5A-110
320-64470-12	SB-5A-120
320-64470-13	SB-5A-130

The holding times for the PFAS analysis of a water and solid sample are 14 days from collection to extraction and 28 days from extraction to analysis. The holding times were met for the sample analyses.

The PFeA and PFHxA contamination reported in the equipment blank, EB-200208, did not result in qualification of the associated sample data.

The PFeA, PFHxA, PFHpA and PFOA contamination reported in the field blank, FB-200208, did not result in qualification of the associated sample data.

The laboratory data were reviewed and validated by Geosyntec's in-house data validation specialists. The in-house data validation team qualified some of the laboratory reported data based on technical and professional judgement due to one or more of the following conditions associated with the reported results:

- J – the result was considered as an estimated value due to the following:
    - MS/MSD recovery(ies) or relative percent difference (RPD) was outside laboratory specified criteria; or
- UJ – the results were not detected above the RL, however, the RL is considered an estimated value due to:
    - MS/MSD recovery(ies) or relative percent difference (RPD) was outside laboratory specified criteria
    - Isotope dilution analyte, 13C8 FOSA, was outside acceptance limits with low recovery in EB-200208. Therefore, the non-detect FOSA result was UJ qualified as estimated less than the RL.

Overall, the data are acceptable for use in supporting data quality objectives. Data should be used within the limitations of the applied qualifications. Elevated non-detect results were not reported.

Sample	Analyte	Laboratory Result (ng/L)	Laboratory Flag	Validation Result (ng/L)	Validation Qualifier	Reason Code
EB-200208	Perfluorooctanesulfonamide (FOSA)	1.6	U	1.6	UJ	11
SB-5A-70	4:2 FTS	2.1	F2 F1	2.1	UJ	4
SB-5A-70	6:2 FTS	2.1	F2 F1	2.1	UJ	4
SB-5A-70	8:2 FTS	3.1	F2 F1	3.1	UJ	4
SB-5A-70	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.1	U F2	2.1	UJ	4
SB-5A-70	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.1	U F2	2.1	UJ	4
SB-5A-70	Perfluorobutanesulfonic acid (PFBS)	2.1	U F2 F1	2.1	UJ	4

Sample	Analyte	Laboratory Result (ng/L)	Laboratory Flag	Validation Result (ng/L)	Validation Qualifier	Reason Code
SB-5A-70	Perfluorobutanoic acid (PFBA)	2.1	U F2 F1	2.1	UJ	4
SB-5A-70	Perfluorodecanesulfonic acid (PFDS)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluorodecanoic acid (PFDA)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluorododecanoic acid (PFDoA)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluoroheptanesulfonic Acid (PFHpS)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluoroheptanoic acid (PFHpA)	1.5	F2 F1	1.5	J	4
SB-5A-70	Perfluorohexanesulfonic acid (PFHxS)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluorohexanoic acid (PFHxA)	6.3	F2 F1	6.3	J	4
SB-5A-70	Perfluorononanoic acid (PFNA)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluorooctanesulfonamide (FOSA)	0.62	U F2	0.62	UJ	4
SB-5A-70	Perfluorooctanesulfonic acid (PFOS)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluorooctanoic acid (PFOA)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluoropentanesulfonic acid (PFPeS)	3.1	U F2 F1	3.1	UJ	4
SB-5A-70	Perfluoropentanoic acid (PFPeA)	6.1	F2 F1	6.1	J	4
SB-5A-70	Perfluorotetradecanoic acid (PFTeA)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluorotridecanoic acid (PFTriA)	0.62	U F2 F1	0.62	UJ	4
SB-5A-70	Perfluoroundecanoic acid (PFUnA)	0.62	U F2 F1	0.62	UJ	4

ng/L-nanograms per liter
U-analyte was not detected at the value indicated
F1-laboratory flag indicating MS and/or MSD recovery exceeds control limits
F2-laboratory flag indicating MS/MSD RPD exceeds control limits

2.0 320-64510-1

The following samples were validated at a Stage 2A level:

Laboratory ID	Client Sample
320-64510-1	EB-200910
320-64510-2	FB-200910
320-64510-3	SB-5A-140

Laboratory ID	Client Sample
320-64510-4	SB-5A-150
320-64510-5	SB-5A-160

The holding times for the PFAS analysis of a water and solid sample are 14 days from collection to extraction and 28 days from extraction to analysis. The holding times were met for the sample analyses.

The laboratory data were reviewed and validated by Geosyntec's in-house data validation specialists. The in-house data validation team did not apply qualifications to the reported laboratory data.

Overall, the data are acceptable for use in supporting data quality objectives. Elevated non-detect results were not reported.

3.0 320-64722-1

The following samples were validated at a Stage 2A level

Laboratory ID	Client Sample
320-64722-1	A-1-CW09
320-64722-2	A-1-CW09-DUP
320-64722-3	EB-200916

Laboratory ID	Client Sample
320-64722-4	FB-200916
320-64722-5	A-1-CW03R

The relinquished time for the sample transfer was not documented on the COC.

The laboratory narrative indicated that the label for the sample container for EB-200916 did not match the COC, and one of the two sample containers did not have a sample collection time recorded.

The holding times for the PFAS analysis of a water sample are 14 days from collection to extraction and 28 days from extraction to analysis. The holding times were met for the sample analyses.

The 6:2 FTS contamination reported in the method blank did not result in qualified data.

The laboratory data were reviewed and validated by Geosyntec's in-house data validation specialists. The in-house data validation team did not apply qualifications to the reported laboratory data.

Overall, the data are acceptable for use in supporting data quality objectives. Elevated non-detect results were not reported.

4.0 320-64765-1

The following samples were validated at a Stage 2A level:

Laboratory ID	Client Sample
320-64765-1	FB-200917
320-64765-2	EB-200917
320-64765-3	C-1-CW08

Laboratory ID	Client Sample
320-64765-4	C-1-CW03
320-64765-5	C-1-CW06
320-64765-6	B-6-CW10

The relinquished time for the sample transfer was not documented on the COC.

The holding times for the PFAS analysis of a water sample are 14 days from collection to extraction and 28 days from extraction to analysis. The holding times were met for the sample analyses.

The laboratory data were reviewed and validated by Geosyntec's in-house data validation specialists. The in-house data validation team did not apply qualifications to the reported laboratory data.

Overall, the data are acceptable for use in supporting data quality objectives. Elevated non-detect results were reported due to the analyzed dilution of sample B-6-CW10.

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

BURBANK-GLENDALE-PASADENA AIRPORT AUTHORITY
LEGAL, GOVERNMENT AND ENVIRONMENTAL AFFAIRS COMMITTEE
JANUARY 19, 2021

COMMITTEE PENDING ITEMS

Future

1. Annual Noise Fine CPI Adjustment