



WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 0D06015

Report Date: 4/20/2020

Project: EPA 537

Received Date: 4/6/2020

Turnaround Time: Normal

Phones: (562) 220-2112

Fax: (562) 220-2144

Attn: Norm Mamea

P.O. #:

Client: City of Paramount
15300 Downey Ave.
Paramount, CA 90723

Billing Code:

Dear Norm Mamea,

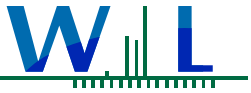
Enclosed are the results of analyses for samples received 4/06/20 with the Chain-of-Custody document. The samples were received in good condition, at 1.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: Well 14
0D06015-01 (Water)

Sampled: 04/06/20 10:25 by Allan Goldberg (wecklabs)

| Analyte | Result | MRL | Units | Dil | Analyzed | Qualifier |
|--------------------------|------------|--------------------------|------------|----------------------|----------|---------------------------------|
| Method: EPA 537.1 | | Batch ID: W0D0357 | | Instr: LCMS05 | | Prepared: 04/10/20 09:46 |
| | | | | | | Analyst: jan |
| 11CI-PF3OUdS | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| 9CI-PF3ONS | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| ADONA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| EtFOSAA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| HFPO-DA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| MeFOSAA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFBS | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFDA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFDoA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFHpA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFHxA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFHxS | 2.0 | 1.7 | ng/l | 1 | 04/14/20 | |
| PFNA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFOA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFOS | 9.4 | 1.7 | ng/l | 1 | 04/14/20 | |
| PFTeDA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFTrDA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFUnA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| <i>Surrogate(s)</i> | | | | | | |
| 13C2-PFDA | 104% | 70-130 | Conc: 36.4 | | 04/14/20 | |
| 13C2-PFHxA | 105% | 70-130 | Conc: 36.8 | | 04/14/20 | |



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Sample Results

(Continued)

Sample: Well 14
OD06015-01 (Water)

Sampled: 04/06/20 10:25 by Allan Goldberg (wecklabs)
(Continued)

| Analyte | Result | MRL | Units | Dil | Analyzed | Qualifier |
|--------------------------------------|--------------------------|----------------------|---------------------------------|---------------------|----------|-----------|
| Method: EPA 537.1 (Continued) | Batch ID: W0D0357 | Instr: LCMS05 | Prepared: 04/10/20 09:46 | Analyst: jan | | |
| <i>d5-EtFOSAA</i> | 103% | 70-130 | Conc: 36.0 | | 04/14/20 | |
| <i>HFPO-DA-13C3</i> | 104% | 70-130 | Conc: 36.3 | | 04/14/20 | |

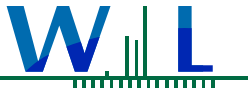
Sample: Well 14 FB
OD06015-02 (Water)

Sampled: 04/06/20 0:00 by Allan Goldberg (wecklabs)

| Analyte | Result | MRL | Units | Dil | Analyzed | Qualifier |
|--------------------------|--------------------------|----------------------|---------------------------------|---------------------|----------|-----------|
| Method: EPA 537.1 | Batch ID: W0D0357 | Instr: LCMS05 | Prepared: 04/10/20 09:46 | Analyst: jan | | |
| 11CI-PF3OUdS | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| 9CI-PF3ONS | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| ADONA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| EtFOSAA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| HFPO-DA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| MeFOSAA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFBS | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFDA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFDoA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFHpA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFHxA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFHxS | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFNA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFOA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFOS | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFTeDA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFTTrDA | ND | 1.7 | ng/l | 1 | 04/14/20 | |
| PFUnA | ND | 1.7 | ng/l | 1 | 04/14/20 | |

Surrogate(s)

| | | | | |
|---------------------|------|--------|------------|----------|
| <i>13C2-PFDA</i> | 103% | 70-130 | Conc: 35.9 | 04/14/20 |
| <i>13C2-PFHxA</i> | 109% | 70-130 | Conc: 37.9 | 04/14/20 |
| <i>d5-EtFOSAA</i> | 103% | 70-130 | Conc: 35.8 | 04/14/20 |
| <i>HFPO-DA-13C3</i> | 103% | 70-130 | Conc: 35.9 | 04/14/20 |



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Quality Control Results

Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
|---------|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|

Batch: W0D0357 - EPA 537/SPE

Blank (W0D0357-BLK1)

Prepared: 04/10/20 Analyzed: 04/14/20

| | | | |
|--------------|----|-----|------|
| 11CI-PF3OUdS | ND | 2.0 | ng/l |
| 9CI-PF3ONS | ND | 2.0 | ng/l |
| ADONA | ND | 2.0 | ng/l |
| EtFOSAA | ND | 2.0 | ng/l |
| HFPO-DA | ND | 2.0 | ng/l |
| MeFOSAA | ND | 2.0 | ng/l |
| PFBS | ND | 2.0 | ng/l |
| PFDA | ND | 2.0 | ng/l |
| PFDoA | ND | 2.0 | ng/l |
| PFHpA | ND | 2.0 | ng/l |
| PFHxA | ND | 2.0 | ng/l |
| PFHxS | ND | 2.0 | ng/l |
| PFNA | ND | 2.0 | ng/l |
| PFOA | ND | 2.0 | ng/l |
| PFOS | ND | 2.0 | ng/l |
| PFTeDA | ND | 2.0 | ng/l |
| PFTrDA | ND | 2.0 | ng/l |
| PFUnA | ND | 2.0 | ng/l |

Surrogate(s)

| | | | | | | | |
|--------------|------|--|------|------|----|--------|------|
| 13C2-PFDA | 37.1 | | ng/l | 40.0 | 93 | 70-130 | |
| 13C2-PFHxA | 22.1 | | ng/l | 40.0 | 55 | 70-130 | S-11 |
| d5-EtFOSAA | 35.5 | | ng/l | 40.0 | 89 | 70-130 | |
| HFPO-DA-13C3 | 21.8 | | ng/l | 40.0 | 54 | 70-130 | S-11 |

LCS (W0D0357-BS1)

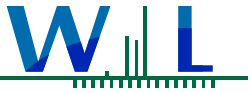
Prepared: 04/10/20 Analyzed: 04/14/20

| | | | | | | |
|--------------|------|-----|------|------|-----|--------|
| 11CI-PF3OUdS | 1.79 | 2.0 | ng/l | 2.00 | 89 | 50-150 |
| 9CI-PF3ONS | 2.13 | 2.0 | ng/l | 2.00 | 107 | 50-150 |
| ADONA | 2.06 | 2.0 | ng/l | 2.00 | 103 | 50-150 |
| EtFOSAA | 2.04 | 2.0 | ng/l | 2.00 | 102 | 50-150 |
| HFPO-DA | 2.09 | 2.0 | ng/l | 2.00 | 104 | 50-150 |
| MeFOSAA | 1.67 | 2.0 | ng/l | 2.00 | 83 | 50-150 |
| PFBS | 2.18 | 2.0 | ng/l | 2.00 | 109 | 50-150 |
| PFDA | 2.30 | 2.0 | ng/l | 2.00 | 115 | 50-150 |
| PFDoA | 2.15 | 2.0 | ng/l | 2.00 | 107 | 50-150 |
| PFHpA | 2.57 | 2.0 | ng/l | 2.00 | 128 | 50-150 |
| PFHxA | 2.35 | 2.0 | ng/l | 2.00 | 118 | 50-150 |
| PFHxS | 1.92 | 2.0 | ng/l | 2.00 | 96 | 50-150 |
| PFNA | 2.21 | 2.0 | ng/l | 2.00 | 110 | 50-150 |
| PFOA | 2.42 | 2.0 | ng/l | 2.00 | 121 | 50-150 |
| PFOS | 2.35 | 2.0 | ng/l | 2.00 | 118 | 50-150 |
| PFTeDA | 2.00 | 2.0 | ng/l | 2.00 | 100 | 50-150 |
| PFTrDA | 2.11 | 2.0 | ng/l | 2.00 | 105 | 50-150 |
| PFUnA | 1.91 | 2.0 | ng/l | 2.00 | 96 | 50-150 |

Surrogate(s)

0D06015

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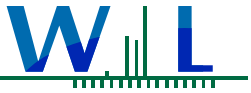
FINAL REPORT

Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS (Continued)

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|--------|-----|-------|-------------|---------------|------|-------------|-----|-----------|-----------|
| Batch: W0D0357 - EPA 537/SPE (Continued) | | | | | | | | | | |
| LCS (W0D0357-BS1) | | | | | | | | | | |
| Prepared: 04/10/20 Analyzed: 04/14/20 | | | | | | | | | | |
| <i>Surrogate(s)</i> | | | | | | | | | | |
| 13C2-PFDA | 42.4 | | ng/l | 40.0 | | 106 | 70-130 | | | |
| 13C2-PFHxA | 42.5 | | ng/l | 40.0 | | 106 | 70-130 | | | |
| d5-EtFOSAA | 41.3 | | ng/l | 40.0 | | 103 | 70-130 | | | |
| HFPO-DA-13C3 | 41.5 | | ng/l | 40.0 | | 104 | 70-130 | | | |
| LCS Dup (W0D0357-BSD1) | | | | | | | | | | |
| Prepared: 04/10/20 Analyzed: 04/14/20 | | | | | | | | | | |
| 11Cl-PF3OUdS | 1.69 | 2.0 | ng/l | 2.00 | | 84 | 50-150 | 6 | 30 | |
| 9Cl-PF3ONS | 1.61 | 2.0 | ng/l | 2.00 | | 81 | 50-150 | 28 | 30 | |
| ADONA | 1.52 | 2.0 | ng/l | 2.00 | | 76 | 50-150 | 30 | 30 | |
| EtFOSAA | 2.02 | 2.0 | ng/l | 2.00 | | 101 | 50-150 | 1 | 30 | |
| HFPO-DA | 1.52 | 2.0 | ng/l | 2.00 | | 76 | 50-150 | 31 | 30 | Q-12 |
| MeFOSAA | 1.78 | 2.0 | ng/l | 2.00 | | 89 | 50-150 | 6 | 30 | |
| PFBS | 1.65 | 2.0 | ng/l | 2.00 | | 82 | 50-150 | 28 | 30 | |
| PFDA | 1.79 | 2.0 | ng/l | 2.00 | | 89 | 50-150 | 25 | 30 | |
| PFDoA | 1.55 | 2.0 | ng/l | 2.00 | | 77 | 50-150 | 33 | 30 | Q-12 |
| PFHpA | 1.96 | 2.0 | ng/l | 2.00 | | 98 | 50-150 | 27 | 30 | |
| PFHxA | 1.72 | 2.0 | ng/l | 2.00 | | 86 | 50-150 | 31 | 30 | Q-12 |
| PFHxS | 1.58 | 2.0 | ng/l | 2.00 | | 79 | 50-150 | 19 | 30 | |
| PFNA | 1.81 | 2.0 | ng/l | 2.00 | | 90 | 50-150 | 20 | 30 | |
| PFOA | 1.92 | 2.0 | ng/l | 2.00 | | 96 | 50-150 | 23 | 30 | |
| PFOS | 1.76 | 2.0 | ng/l | 2.00 | | 88 | 50-150 | 29 | 30 | |
| PFTeDA | 1.75 | 2.0 | ng/l | 2.00 | | 87 | 50-150 | 13 | 30 | |
| PFTTrDA | 1.88 | 2.0 | ng/l | 2.00 | | 94 | 50-150 | 11 | 30 | |
| PFUnA | 1.71 | 2.0 | ng/l | 2.00 | | 86 | 50-150 | 11 | 30 | |
| <i>Surrogate(s)</i> | | | | | | | | | | |
| 13C2-PFDA | 34.8 | | ng/l | 40.0 | | 87 | 70-130 | | | |
| 13C2-PFHxA | 30.5 | | ng/l | 40.0 | | 76 | 70-130 | | | |
| d5-EtFOSAA | 33.2 | | ng/l | 40.0 | | 83 | 70-130 | | | |
| HFPO-DA-13C3 | 28.9 | | ng/l | 40.0 | | 72 | 70-130 | | | |



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Notes and Definitions

| Item | Definition |
|--------|--|
| Q-12 | The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data. |
| S-11 | Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate. |
| % Rec | Percent Recovery |
| Dil | Dilution |
| dry | Sample results reported on a dry weight basis |
| MDA | Minimum Detectable Activity |
| MDL | Method Detection Limit |
| MRL | The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ) |
| ND | NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL. |
| NR | Not Reportable |
| RPD | Relative Percent Difference |
| Source | Sample that was matrix spiked or duplicated. |
| TIC | Tentatively Identified Compound (TIC) using mass spectrometry. The reported concentration is relative concentration based on the nearest internal standard. If the library search produces no matches at, or above 85%, the compound is reported as unknown. |

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California State Water Resources Control Board (SWRCB)

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



Analyses Accreditation Summary

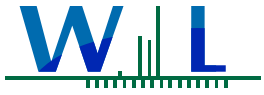
| Analyte | CAS # | Not By NELAP | ANAB ISO 17025 |
|---------------------------|-------------|--------------|----------------|
| EPA 537.1 in Water | | | |
| HFPO-DA | 13252-13-6 | ✓ | |
| EtFOSAA | 2991-50-6 | ✓ | |
| MeFOSAA | 2355-31-9 | ✓ | |
| PFDA | 335-76-2 | ✓ | |
| PFDoA | 307-55-1 | ✓ | |
| PFHxA | 307-24-4 | ✓ | |
| PFTeDA | 376-06-7 | ✓ | |
| PFTrDA | 72629-94-8 | ✓ | |
| PFUnA | 2058-94-8 | ✓ | |
| 11CI-PF3OUdS | 763051-92-9 | ✓ | |
| 9CI-PF3ONS | 756426-58-1 | ✓ | |
| ADONA | 958445-44-8 | ✓ | |

Reviewed by:

Valerie I. Rejuso
Project Manager



ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • HW-DOH # • ISO17025 ANAB #L2457.01 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006



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This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.