

WECK LABORATORIES, INC.

# Certificate of Analysis

FINAL REPORT

**Work Orders:** 6K14020

**Report Date:** 12/05/2016

**Project:** PFCs

**Received Date:** 11/14/2016

**Turnaround Time:** Normal

**Phones:** (303) 985-3636

**Fax:**

**P.O. #:**

**Attn:** Tom Napolilli

**Client:** Kenndey Jenks Conslutants - Lakewood CO  
143 Union Blvd., Ste. 600  
Lakewood, CO 80228

DoD-ELAP #L15-366 • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO 17025 #L15-365 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A

*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.*

Dear Tom Napolilli,

Enclosed are the results of analyses for samples received 11/14/16 with the Chain-of-Custody document. The samples were received in good condition, at 19.8 °C. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

**Reviewed by:**

Valerie Rejuso  
Project Manager





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Project Manager: Tom Napolilli

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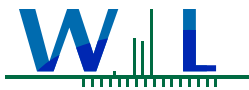
Reported:  
12/05/2016 13:24

## Sample Summary

Sample ID	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
Well #1	Client	6K14020-01	Water	11/08/16 14:00	
Well #2	Client	6K14020-02	Water	11/08/16 14:00	
Well #3	Client	6K14020-03	Water	11/08/16 14:00	

## Not Certified Analyses Summary

Analyte	CAS #	Not Accredited By
<b>EPA 537 in Water</b>		
Perfluorooctane sulfonate (PFOS) .....	1763-23-1	NELAP
Perfluorooctanoic acid (PFOA) .....	335-67-1	NELAP
Perfluorononanoic acid (PFNA) .....	375-95-1	NELAP
Perfluorohexanesulfonic acid (PFHxS) .....	355-46-4	NELAP
Perfluoroheptanoic acid (PFHpA) .....	375-85-9	NELAP
Perfluorobutanesulfonic acid (PFBS) .....	375-73-5	NELAP
13C2-PFHxA .....		NELAP
13C2-PFDA .....		NELAP



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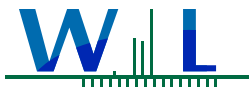
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## Sample Results

Sample: Well #1  
6K14020-01 (Water) Sampled: 11/08/16 14:00 by Client

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Perfluorinated Compounds (PFCs) by SPE/LCMSMS, EPA Method 537</b>						
<b>Method:</b> EPA 537	<b>Batch ID:</b> W6K1214	<b>Prepared:</b> 11/22/16 08:46	<b>Analyst:</b> kan			
Perfluorobutanesulfonic acid (PFBS)	ND	0.090	ug/l	1	11/23/16 12:03	
Perfluoroheptanoic acid (PFHpA)	ND	0.010	ug/l	1	11/23/16 12:03	
Perfluorohexanesulfonic acid (PFHxS)	ND	0.030	ug/l	1	11/23/16 12:03	
Perfluorononanoic acid (PFNA)	ND	0.020	ug/l	1	11/23/16 12:03	
Perfluorooctane sulfonate (PFOS)	ND	0.040	ug/l	1	11/23/16 12:03	
Perfluorooctanoic acid (PFOA)	ND	0.020	ug/l	1	11/23/16 12:03	
<i>Surrogate(s)</i>						
13C2-PFDA	72% Conc: 0.0580	70-130			11/23/16 12:03	
13C2-PFHxA	82% Conc: 0.0652	70-130			11/23/16 12:03	



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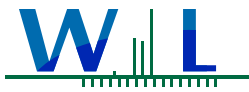
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## Sample Results

(Continued)

Sample: Well #2  
6K14020-02 (Water) Sampled: 11/08/16 14:00 by Client

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Perfluorinated Compounds (PFCs) by SPE/LCMSMS, EPA Method 537</b>						
<b>Method:</b> EPA 537	<b>Batch ID:</b> W6K1214	<b>Prepared:</b> 11/22/16 08:46	<b>Analyst:</b> kan			
Perfluorobutanesulfonic acid (PFBS)	ND	0.090	ug/l	1	11/23/16 12:20	
Perfluoroheptanoic acid (PFHpA)	ND	0.010	ug/l	1	11/23/16 12:20	
Perfluorohexanesulfonic acid (PFHxS)	ND	0.030	ug/l	1	11/23/16 12:20	
Perfluorononanoic acid (PFNA)	ND	0.020	ug/l	1	11/23/16 12:20	
Perfluorooctane sulfonate (PFOS)	ND	0.040	ug/l	1	11/23/16 12:20	
Perfluorooctanoic acid (PFOA)	ND	0.020	ug/l	1	11/23/16 12:20	
<i>Surrogate(s)</i>						
13C2-PFDA	82% Conc: 0.0328	70-130			11/23/16 12:20	
13C2-PFHxA	106% Conc: 0.0424	70-130			11/23/16 12:20	



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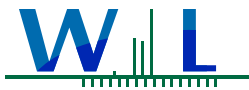
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## Sample Results

(Continued)

Sample: Well #3  
6K14020-03 (Water) Sampled: 11/08/16 14:00 by Client

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>Perfluorinated Compounds (PFCs) by SPE/LCMSMS, EPA Method 537</b>						
<b>Method:</b> EPA 537	<b>Batch ID:</b> W6K1214	<b>Prepared:</b> 11/22/16 08:46	<b>Analyst:</b> kan			
Perfluorobutanesulfonic acid (PFBS)	ND	0.090	ug/l	1	11/23/16 12:38	
Perfluoroheptanoic acid (PFHpA)	ND	0.010	ug/l	1	11/23/16 12:38	
Perfluorohexanesulfonic acid (PFHxS)	ND	0.030	ug/l	1	11/23/16 12:38	
Perfluorononanoic acid (PFNA)	ND	0.020	ug/l	1	11/23/16 12:38	
Perfluorooctane sulfonate (PFOS)	ND	0.040	ug/l	1	11/23/16 12:38	
Perfluorooctanoic acid (PFOA)	ND	0.020	ug/l	1	11/23/16 12:38	
<i>Surrogate(s)</i>						
13C2-PFDA	76% Conc: 0.0305	70-130			11/23/16 12:38	
13C2-PFHxA	94% Conc: 0.0377	70-130			11/23/16 12:38	



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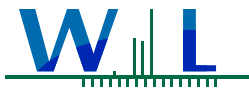
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## Quality Control Results

Perfluorinated Compounds (PFCs) by SPE/LCMSMS, EPA Method 537

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W6K1214 - EPA 537</b>										
<b>Blank (W6K1214-BLK1)</b>										
				<b>Prepared: 11/22/16 Analyzed: 11/23/16</b>						
Perfluorobutanesulfonic acid (PFBS)	ND	0.090	ug/l							
Perfluoroheptanoic acid (PFHpA)	ND	0.010	ug/l							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.030	ug/l							
Perfluorononanoic acid (PFNA)	ND	0.020	ug/l							
Perfluorooctane sulfonate (PFOS)	ND	0.040	ug/l							
Perfluorooctanoic acid (PFOA)	ND	0.020	ug/l							
<i>Surrogate(s)</i>										
13C2-PFDA		0.0309	ug/l	0.0400		77	70-130			
13C2-PFHxA		0.0344	ug/l	0.0400		86	70-130			
<b>LCS (W6K1214-BS1)</b>										
				<b>Prepared: 11/22/16 Analyzed: 11/23/16</b>						
Perfluorobutanesulfonic acid (PFBS)	0.0716	0.090	ug/l	0.0896		80	50-150			
Perfluoroheptanoic acid (PFHpA)	0.0110	0.010	ug/l	0.0100		110	50-150			
Perfluorohexanesulfonic acid (PFHxS)	0.0164	0.030	ug/l	0.0329		50	50-150			
Perfluorononanoic acid (PFNA)	0.0141	0.020	ug/l	0.0200		70	50-150			
Perfluorooctane sulfonate (PFOS)	0.0231	0.040	ug/l	0.0400		58	50-150			
Perfluorooctanoic acid (PFOA)	0.0131	0.020	ug/l	0.0200		66	50-150			
<i>Surrogate(s)</i>										
13C2-PFDA		0.0327	ug/l	0.0400		82	70-130			
13C2-PFHxA		0.0408	ug/l	0.0400		102	70-130			
<b>LCS Dup (W6K1214-BSD1)</b>										
				<b>Prepared: 11/22/16 Analyzed: 11/23/16</b>						
Perfluorobutanesulfonic acid (PFBS)	0.0884	0.090	ug/l	0.0896		99	50-150	21	50	
Perfluoroheptanoic acid (PFHpA)	0.0128	0.010	ug/l	0.0100		128	50-150	15	50	
Perfluorohexanesulfonic acid (PFHxS)	0.0198	0.030	ug/l	0.0329		60	50-150	19	50	
Perfluorononanoic acid (PFNA)	0.0169	0.020	ug/l	0.0200		84	50-150	18	50	
Perfluorooctane sulfonate (PFOS)	0.0278	0.040	ug/l	0.0400		70	50-150	19	50	
Perfluorooctanoic acid (PFOA)	0.0155	0.020	ug/l	0.0200		77	50-150	17	50	
<i>Surrogate(s)</i>										
13C2-PFDA		0.0349	ug/l	0.0400		87	70-130			
13C2-PFHxA		0.0448	ug/l	0.0400		112	70-130			



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## Notes and Definitions

Item	Definition
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.
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
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) and Detection Limit for Reporting (DLR)
MDA	Minimum Detectable Activity
NR	Not Reportable
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 MIS 002.