

**From:** Brian Kent <bkent@sehinc.com>  
**Sent:** Tuesday, December 14, 2021 10:45 AM  
**To:** Sager, John E - DNR; Coller, Nathan - DNR  
**Cc:** John McCue  
**Subject:** RE: Hayward LF  
**Attachments:** HAYWA LF PFAS Investigation Phase II Summary Report.pdf

**CAUTION: This email originated from outside the organization.  
Do not click links or open attachments unless you recognize the sender and know the content is safe.**

John/Nathan-

Please find attached the Phase 2 PFAS Investigation Summary Report for the Hayward Landfill. Based on the information presented in the report, the City requests that the WDNR concur that the requirement to investigate PFAS be complete, and no further action recommended at this time. Upon this action, it is understood that the Hayward LF will be transferred to the WDNR WM program with subsequent approval of the NR726 closure request issued in February 2020. If you have any questions or issues, please contact me to discuss. Thank you.

Brian L. Kent, CHMM  
Principal, Project Manager  
Short Elliott Hendrickson Inc.  
715.456.4621 mobile | 608.498.4844 direct

Building a Better World for All of Us®

Follow SEH on Twitter | Facebook | LinkedIn | Instagram

---

**From:** Sager, John E - DNR <[John.Sager@wisconsin.gov](mailto:John.Sager@wisconsin.gov)>  
**Sent:** Friday, December 3, 2021 4:13 PM  
**To:** Brian Kent <[bkent@sehinc.com](mailto:bkent@sehinc.com)>; Coller, Nathan - DNR <[Nathan.Coller@wisconsin.gov](mailto:Nathan.Coller@wisconsin.gov)>  
**Subject:** RE: Hayward LF

Brian,

I believe you are correct. You do not need to submit an annual report. However please submit a Phase 2 report to the RR Program on your PFAS sampling efforts.

Thanks.

**We are committed to service excellence.**

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

John Sager

Hydrogeologist – Remediation and Redevelopment Program

Wisconsin Department of Natural Resources

1701 N. 4<sup>th</sup> St.

Superior, WI 54880

Phone: (715) 919-7239

[john.sager@wisconsin.gov](mailto:john.sager@wisconsin.gov)



[dnr.wi.gov](http://dnr.wi.gov)



---

**From:** Brian Kent <[bkent@sehinc.com](mailto:bkent@sehinc.com)>

**Sent:** Thursday, December 2, 2021 8:38 AM

**To:** Sager, John E - DNR <[John.Sager@wisconsin.gov](mailto:John.Sager@wisconsin.gov)>; Coller, Nathan - DNR <[Nathan.Coller@wisconsin.gov](mailto:Nathan.Coller@wisconsin.gov)>

**Subject:** Hayward LF

**CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.**

Good morning guys-

Just looking to confirm my understanding regarding Hayward LF. Since we have a tentative approved plan modification to reduce monitoring, remove annual summary report requirement, and transfer the site to WMM, I assume we do not have to prepare an annual report, and instead, and just continue to submit the data to GEMS moving forward.

Also, the Phase II PFAS investigation has been completed and we are wrapping up the summary report. Should have it issued soon, but the good news is we did not identify any exceedances of the 20 ng/L recommended combined limit in the deep piezometers or wells located offsite. Since we did re-sample a few of the wells from the Phase I investigation, the results for these locations were similar. Let me know if you have any questions.

Please advise. Thanks

Brian L. Kent, CHMM  
Principal, Project Manager  
Short Elliott Hendrickson Inc.  
715.456.4621 mobile | 608.498.4844 direct

Building a Better World for All of Us®

Follow SEH on Twitter | Facebook | LinkedIn | Instagram





Building a Better World  
for All of Us®

December 14, 2021

RE: Phase II PFAS Investigation Summary Report  
Hayward Landfill (License #01751)  
Hayward, Wisconsin  
SEH No. HAYWA 159031 14.00

Mr. John Sager, Hydrogeologist  
Wisconsin Department of Natural Resources  
1701 North 4<sup>th</sup> Street  
Superior, WI 54880

Dear Mr. Sager:

Short Elliott Hendrickson Inc. (SEH®) has completed an additional phase of investigation for the presence of polyfluoroalkyl substances (PFAS), and more specifically, potential concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) in groundwater at the closed Hayward Landfill (WDNR licence #01751). The original PFAS investigation was required by the Wisconsin Department of Natural Resources (WDNR) in an August 17, 2020 letter to the City of Hayward. Initial PFAS investigation was conducted in May 2021, and the results of this initial phase of investigation justified additional sampling and analysis performed in accordance with SEH's August 27, 2021 Work Plan. The following sections describe the results of the Phase II PFAS investigation.

## Background

The City of Hayward (City) operated the landfill for approximately 21 years and closed it in 1985. Municipal, commercial, and demolition waste were disposed in the waste containment area, which encompassed approximately 9.1 acres of the 20-acre site. Figure 1 (Title Sheet/Site Location). Due to the presence of volatile organic compounds (VOCs) identified in groundwater beneath and down gradient of the landfill, the City retained SEH to investigate the degree and extent of contamination, and ultimately design and install a remediation system to mitigate groundwater VOC impacts. The City operated an active LFG extraction system between 1998 and 2016 as a source abatement measure to limit the migration of VOCs from the landfill waste to the underlying groundwater. Induced atmospheric intrusion of oxygenated air into the landfill was implemented to accelerate decomposition of waste, reduce the anaerobic biochemical generation of vinyl chloride (VC), and reduce methane production. Based on the groundwater and landfill gas data collected between 1998 and 2019 the LFG system appears to have been effective.

The site contains 27 monitoring wells within and adjacent to the landfill site which included 15 shallow water table observation wells, six shallow to intermediate piezometers, and six deep piezometers. Groundwater flow across the monitoring area is south toward the Namekagon River and typically the horizontal hydraulic gradient is approximately 0.005 ft/ft. There are 17 landfill gas (LFG) monitoring probes installed in and around the perimeter of the waste footprint and 14 LFG extraction wells. In addition, up to 13 private wells were sampled at a minimum annually. The attached Figure 2 (Monitoring Well, Piezometer, and Private Well Locations) provides illustration of the monitoring well, piezometer and private well locations associated with the landfill site.

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 10 North Bridge Street, Chippewa Falls, WI 54729-2550

715.720.6200 | 800.472.5881 | 888.908.8166 fax | [sehinc.com](http://sehinc.com)

SEH is 100% employee-owned | Affirmative Action–Equal Opportunity Employer

Due to near zero VOC and methane concentrations in the LFG extraction system effluent the system, in 2016 the WDNR approved a closure plan modification enabling the LFG extraction system to be shut down. As a result, the LFG extraction wells were converted to passive vents. The 2016 plan modification also approved a reduction to the number of groundwater monitoring wells, private wells and gas probes monitored to assess possible rebounding groundwater contaminant trends.

In early 2020 it was discovered that the Hayward Landfill project had been transferred from the WDNR Remediation & Redevelopment (R&R) program to the WDNR Waste and Materials Management (WMM) program on March 5, 2018. Upon consultation with other WDNR R&R and WMM staff, Mr. Sager confirmed that the site had been transferred; however, it had not been “accepted” by the WMM program. Mr. Sager also indicated that the ongoing long-term care and reporting requirements of the WMM had not been established or discussed between the two programs. To facilitate the transfer and establishment of on-going long-term care requirements, the WDNR requested the City issue a case closure request and propose long-term care requirements. In effort to streamline the process, the WDNR indicated that the closure request and proposed long-term care requirements could be addressed within the 2019 Annual Progress Report. In May 2020 the WDNR WMM program issued to the City a DRAFT environmental monitoring plan for the Hayward LF, which allowed decreasing on-going monitoring frequency to annual collection at a smaller select set of monitoring wells and gas probes. The RR and WMM programs are also interested in the potential for PFAS contamination at the Hayward Landfill site.

In the August 17, 2020 letter to the City, the WDNR informed the City of their obligation to evaluate the Hayward Landfill for the presence of emerging contaminants specified in ch. NR 700 Wisconsin Administrative Code. The WDNR letter stated that an “evaluation of potential PFAS compounds and other applicable emerging contaminants that were historically or are presently produced, used, handled, or stored at the site.” The evaluation should include any available information on whether any products containing polyfluoroalkyl substances (PFAS) were used in any process services, the duration of PFAS-containing product use, the type of PFAS contained in the product, and any areas of the site where PFAS-containing products may have been used, stored, managed, or discarded.”

The City has acknowledged that due to the landfill history and likelihood that PFAS containing substances (which are contained on or within many household waste) were managed at the former landfill, the City proceeded with implementing the required sampling and analysis. An inventory of PFAS compounds that were handled or stored at the facility is not likely going to find “sources” of PFAS, however given the prevalence of PFAS within household waste, PFAS is likely present.

In an October 12, 2020 electronic mail, the WDNR agreed with the approach of sampling existing wells MW-1, MW-1S, MW-2, MW-3, MW-4, MW-5, MW-7, and MW-7SR for one round of PFAS analysis. Specifically, if either PFOA, PFOS, or the sum concentration of PFAO and PFOS exceeded 20 ng/L (approximately equivalent to parts per trillion), the WDNR would then determine if an additional round of PFAS sampling was warranted.

On May 20, 2021, one round of groundwater samples was collected from the wells referenced above for the analysis of PFAS compounds. The results of this first phase of investigation indicated one or more PFAS compound was detected in seven of the eight sampling points selected for the PFAS investigation. No PFAS were detected above the laboratory detection level in well MW-5 (both the sample and the sample duplicate), and only one PFAS compound was detected in well MW-3. Wells MW-5 and MW-3 are upgradient wells. The results of this initial phase of investigation justified performance of an additional round of PFAS sampling and analysis at the site, including additional sampling points as described in SEH's August 27, 2021 Phase II Investigation Work Plan.

### **Second Phase of PFAS Investigation**

Prior to performance of a second phase of sampling and analysis, it was agreed that sampling points MW-1, PZ-1S, PZ-1D, MW-7, PZ-7SR, PZ-7D, MW-8, PZ-8S, PZ-8D, MW-9, PZ-9S, PZ-9D, MW-10, PZ-10S, and PZ-10D would be included in Phase II of the PFAS investigation. On November 1, 2021, one round of groundwater samples was collected from the 15 sampling points referenced above for the analysis of PFAS compounds. The samples were collected using the protocols for PFAS sampling defined by the Michigan Department of Environmental Quality's (MDEQ) October 16, 2018 document "PFAS Sampling Guidance" (previously submitted to WDNR). Water level measurements were recorded at each sampling location to confirm depth to groundwater and direction of groundwater flow. The groundwater samples were then collected using sample-dedicated polyethylene disposable bailers, placed in laboratory-clean analytical bottles, and chilled to four degrees C. The analytical samples were submitted to Eurofins TestAmerica analytical laboratory in Sacramento, California via overnight courier for analysis. Sample collection, handling, and shipment was conducted using standard chain-of-custody documentation. The samples were analyzed for 36 PFAS compounds including PFOA and PFOS using EPA method 537.1.

Sampling precautions against outside contaminants being introduced to the samples included:

- Washing the water level indicator with an Alconox/ PFAS free water solution followed by a PFAs free water rinse after each measurement
- Utilizing PFAS-free bailers and bailer rope
- Utilizing clothing and equipment of acceptable materials as defined in the MDEQ PFAS Sampling Guidance
- Refraining from the use of sun black or insect repellent before and during sampling and sample processing
- Use of sample specific powder free nitrile gloves
- Purging of five well volumes of water from each sampled well prior to sampling
- Filling of sample bottles directly from the bailer
- Refrain from placement of sample bottles or caps on the ground during the sampling procedure
- Placing each discreet sample, as well as sample ice in closed zipper-locking plastic bags for shipment
- Collection of equipment blank and trip blank samples for quality control purposes

Upon completion of sampling, each sampling point was secured. The one-time use sampling equipment was disposed as solid waste.

## PFAS Investigation Results

The groundwater elevation data collected during the PFAS investigation indicates direction of groundwater flow is to the south at a horizontal hydraulic gradient of approximately 0.0045 ft/ft. This is consistent with historic groundwater flow patterns at the site.

One or more PFAS compound was detected in thirteen of the fifteen sampling points selected for the PFAS investigation. No PFAS were detected above the laboratory detection level in sampling points PZ-8D and PZ-9D, and two or less PFAS compounds were detected in sampling points PZ-1D, MW-8, and MW-10. No PFAS were detected in the field blank or the equipment blank. The analytical results are summarized on the attached table entitled "Summary of Analytical Results, Eurofins TestAmerica, Sacramento 320-81211-1." The complete analytical package received from Eurofins TestAmerica is also attached.

As presented on the attached table, four of twenty monitoring points exhibited concentrations of PFOA, PFOS, or PFOA + PFOS exceeding 20 ng/L. These monitoring points included MW-1 (37 ng/L PFOA and 85 ng/L PFOS), PZ-1S (32 ng/L PFOA and 5.5 ng/L PFOS), MW-7 (19 ng/L PFOA and 6.9 ng/L PFOS) and MW-7SR (27 ng/L PFOA and 4.1 ng/L PFOS). The remaining eleven monitoring points were below 20 ng/L for combined PFOA and PFOS concentrations.

## Discussion

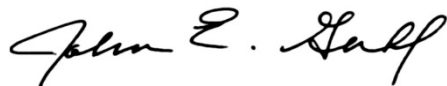
Based on the analytical results obtained during the second phase of PFAS sampling, it appears relatively low concentrations of PFAS remain present in the groundwater below the Hayward Landfill. However, it appears concentrations of PFOA and PFOS compounds exceeding 20 ng/L are only present in the water table wells and shallow piezometers at well nests MW-1 and MW-7. These points are either beneath (MW-1 nest) or down gradient of (MW-7 nest) the area of past waste disposal. Concentrations of PFAS detected in the MW-1 and MW-7 well nests are similar to those previously identified at these points (where previously sampled). Exceedances of 20 ng/L PFOA + PFOS were not identified in any of the deep piezometers included in this phase of investigation. It appears the Hayward Landfill is the likely source of PFAS impacts in some shallow and medium depth groundwater samples analyzed from below the site or immediately down gradient.

## Closure

We trust the information provided in this report provides the data related to PFAS groundwater impacts that was required in the August 17, 2020, and October 12, 2020 correspondence from WDNR, and the subsequent August 27, 2021 Phase II Investigation Work Plan. Please contact me at 715.271.7516 if you have ongoing questions or comments related to the PFAS groundwater investigation of the Hayward Landfill.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



John E. Guhl, PG  
Project Hydrogeologist

JEG/jeg/hbh/

Attachments:

Figure 1, Site Sheet/Site Location

Figure 2, Monitoring Well, Piezometer, and Private Well Locations

Table, Summary of Analytical Results, Eurofins Sacramento 320-81211-1

Eurofins Sacramento Analytical Package, 11/11/2021

x:\fj\h\haywa\159031\3-env-stdy-regs\pfas investigation\phase 2 investigation\summary report\haywa lf pfas investigation phase ii summary report\_final.docx



# HAYWARD LANDFILL

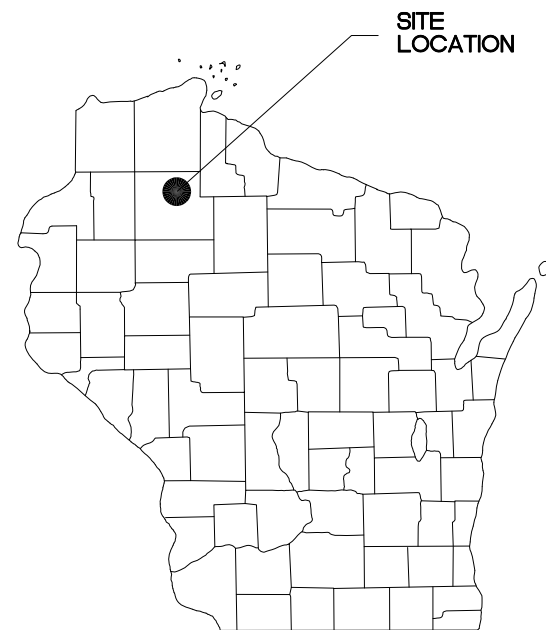
## SITE INVESTIGATION REPORT

### PHASE 2 PFAS ASSESSMENT

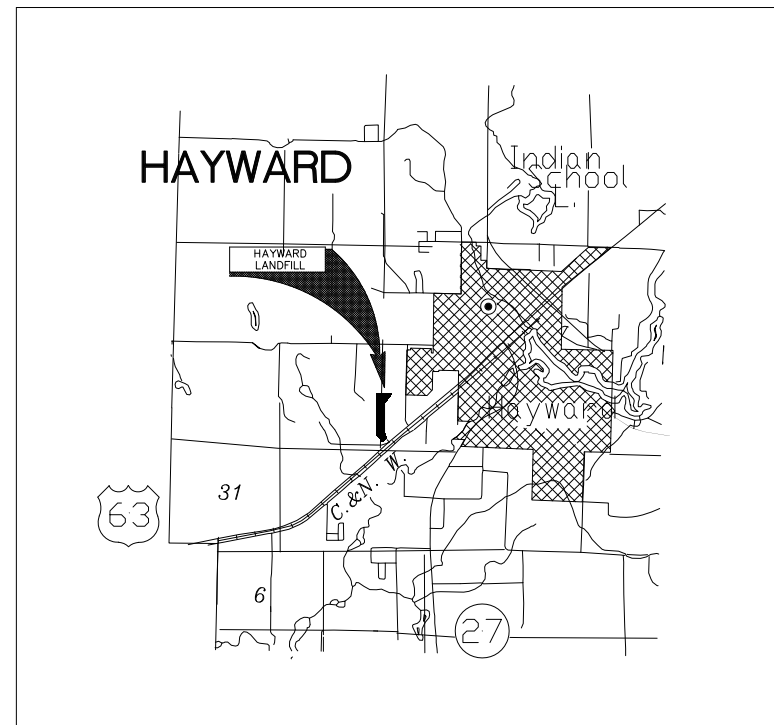
#### WDNR LICENSE NO. 01751

### INDEX

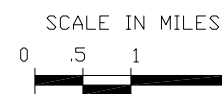
- 1/2 TITLE SHEET/ SITE LOCATION
- 2/2 MONITORING WELL, PIEZOMETER, AND PRIVATE WELL LOCATIONS



COUNTY LOCATION MAP



SITE LOCATION MAP



**PREPARED BY:**

SHORT ELLIOTT HENDRICKSON, INC.  
 ENVIRONMENTAL SERVICE AREA  
 421 FRENETTE DRIVE  
 CHIPPEWA FALLS, WISCONSIN

**PREPARED FOR:**

CITY OF HAYWARD  
 P.O. BOX 593  
 HAYWARD, WISCONSIN

DRAWING DIRECTORY: \\SEHLX\Projects\F\H\Hayward\159031\3-ENV-STDY-REGS\PFAS INVESTIGATION\PHASE 2 INVESTIGATION\FIGURE 1

1	12/21	ISSUED TO WDNR	RJH	12/21	RJH	12/21		JEG	12/21
NO.	DATE	ISSUE/REVISIONS	DRAWN BY	DESIGN	FIELD REVIEW	QC CHECK			



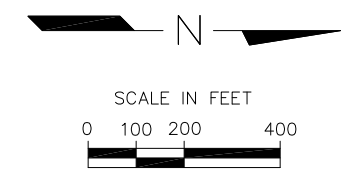
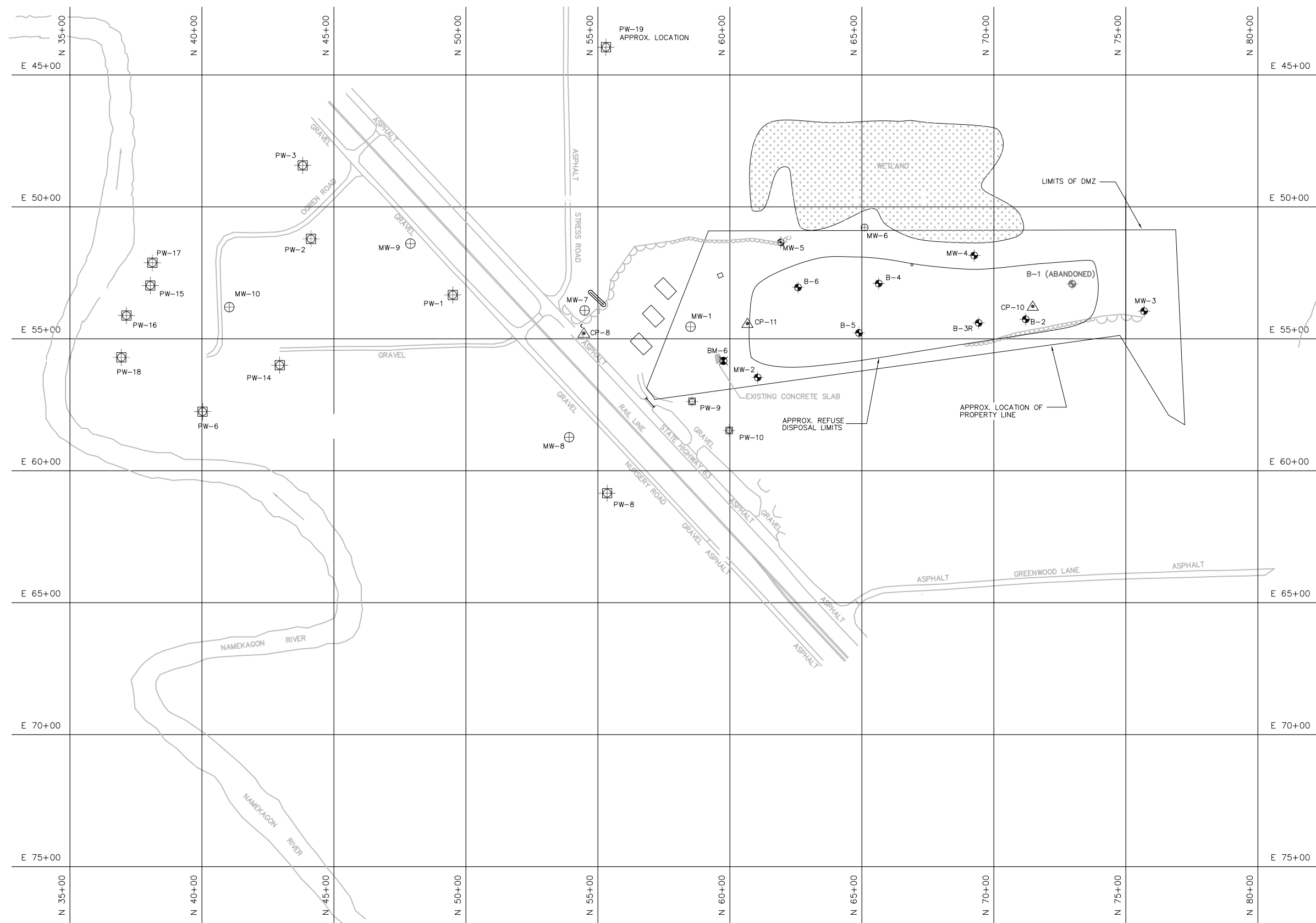
SITE INVESTIGATION REPORT  
 PHASE 2 PFAS ASSESSMENT  
 HAYWARD LANDFILL  
 HAYWARD, WISCONSIN

FIGURE 1  
 TITLE SHEET/ SITE LOCATION

PROJ. NO. HAYWA159031	1
DATE 12/02/21	2



DRAWING DIRECTORY: \\SEHLX\Projects\F\A\H\Haywa\19241\OMM Report 2019\Figures\FIGURE 3



**LEGEND:**

- MW-2 MONITORING WELL LOCATION AND NUMBER
- MW-1 MONITORING WELL - PIEZOMETER NEST LOCATION AND NUMBER
- PW-9 PRIVATE WELL LOCATION AND NUMBER
- B-6 TEMPORARY MONITORING WELL LOCATION AND NUMBER
- BM-6 BENCHMARK LOCATION AND NUMBER
- CP-11 SURVEY CONTROL POINT LOCATION AND NUMBER

**NOTES:**

1. APPROXIMATE LOCATION OF FACILITY PROPERTY LINE BASED ON MAY 29, 1984 SITE SURVEY BY ANDERSON-RITCHIE ENGINEERING + SURVEY CO.
2. APPROXIMATE REFUSE DISPOSAL LIMITS BASED ON MAY 29, 1984 SITE SURVEY BY ANDERSON-RITCHIE ENGINEERING + SURVEY CO., AND ON SITE OBSERVATIONS BY SEH.
3. PIEZOMETERS ARE LOCATED IN GENERAL LOCATION OF CORRESPONDING NUMBERED MONITORING WELLS.

SURVEY CONTROL POINTS/ BENCHMARKS			
NO.	STATION	DESCRIPTION	ELEV.
CP-8	54+47N, 54+79E	3/4" IRON PIPE	1192.86
CP-10	71+47N, 53+77E	3/4" IRON PIPE	1199.04
CP-11	60+66N, 54+42E	5/8" REBAR	1193.71
BM-6	59+75N, 55+84E	CONCRETE CORNER	1198.95

1	12/21	ISSUED TO WDNR	RJH	12/21	RJH	12/21		MFR	12/21
NO.	DATE	ISSUE/REVISIONS	DRAWN BY	DESIGN	FIELD REVIEW	QC CHECK			



**SITE INVESTIGATION REPORT  
PHASE 2 PFAS ASSESSMENT  
HAYWARD LANDFILL  
HAYWARD, WISCONSIN**

**FIGURE 2  
MONITORING WELL, PIEZOMETER,  
AND PRIVATE WELL LOCATIONS**

PROJ. NO. HAYWA159031  
DATE 12/02/21

2  
2



SUMMARY OF ANALYTICAL RESULTS  
Eurofins TestAmerica, Sacramento - 320-81211-1

Sample ID	Enforcement Standard	Preventive Action Limit	PZ-10D 822	PZ-10S 821	MW-10 820	PZ-9D 819	PZ-9S 818	MW-9 817	PZ-8D 816	PZ-8S 815	MW-8 814	PZ-7D 813	PZ-7SR 902	MW-7 811	PZ-1D 807	PZ-1S 806	MW-1 801	Field Blank	Equipment Blank	PZ-7D (Dup) 813
Lab Sample Number			320-81211-1	320-81211-2	320-81211-3	320-81211-4	320-81211-5	320-81211-6	320-81211-7	320-81211-8	320-81211-9	320-81211-10	320-81211-11	320-81211-12	320-81211-13	320-81211-14	320-81211-15	320-81211-16	320-81211-17	320-81211-18
Sampling Date			11/01/2021 09:45:00	11/01/2021 10:30:00	11/01/2021 11:00:00	11/01/2021 11:30:00	11/01/2021 11:50:00	11/01/2021 12:15:00	11/01/2021 12:30:00	11/01/2021 12:45:00	11/01/2021 13:00:00	11/01/2021 13:15:00	11/01/2021 13:40:00	11/01/2021 14:00:00	11/01/2021 14:20:00	11/01/2021 14:40:00	11/01/2021 15:00:00	11/01/2021 10:00:00	11/01/2021 14:45:00	11/01/2021 13:20:00
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Water	Water	Groundwater
Dilution Factor			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Units			ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
LCMS - 537 (modified)			Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Perfluorobutanoic acid (PFBA)	NE	NE	<2.0 U	<2.0 U	<2.1 U	<2.2 U	4.9 J	3.3 J	<2.0 U	<2.0 U	<2.3 U	5.6 J	6.8 J	5.9 J	<2.0 U	7.8 J	<2.0 U	<2.0 U	<2.1 U	7.1 J
Perfluoropentanoic acid (PFPeA)	NE	NE	<0.41 U	0.92 J	1.7 J	<0.45 U	4.9 J	1.5 J	<0.40 U	<0.41 U	<0.45 U	3.0 J	8.5 J	5.4 J	<0.41 U	9.9 J	<0.40 U	<0.40 U	<0.43 U	3.3 J
Perfluorohexanoic acid (PFHxA)	NE	NE	<0.48 U	0.77 J	1.8 J	<0.53 U	5.8 J	1.4 J	<0.47 U	<0.49 U	<0.53 U	3.3 J	9.7 J	6.3 J	<0.48 U	11 J	<0.47 U	<0.47 U	<0.51 U	2.5 J
Perfluoroheptanoic acid (PFHpA)	NE	NE	<0.21 U	0.53 J	1.2 J	<0.23 U	3.8 J	0.98 J	<0.20 U	<0.21 U	<0.23 U	1.6 J	6.9 J	4.5 J	<0.21 U	7.7 J	<0.20 U	<0.22 U	<0.22 U	1.5 J
Perfluorooctanoic acid (PFOA)	NE	NE	<0.70 U	3.1 J	5.8 J	<0.77 U	14 J	4.8 J	<0.69 U	<0.71 U	<0.78 U	5.6 J	27 J	19 J	<0.71 U	32 J	<0.69 U	<0.75 U	<0.75 U	4.2 J
Perfluorononanoic acid (PFNA)	NE	NE	<0.22 U	<0.23 U	<0.23 U	<0.25 U	<0.23 U	<0.23 U	<0.22 U	<0.23 U	<0.25 U	<0.25 U	<0.22 U	<0.23 U	<0.22 U	0.40 J	0.31 J	<0.22 U	<0.24 U	<0.22 U
Perfluorodecanoic acid (PFDA)	NE	NE	<0.26 U	<0.26 U	<0.27 U	<0.28 U	<0.27 U	<0.27 U	<0.25 U	<0.26 U	<0.28 U	<0.26 U	<0.26 U	<0.26 U	<0.26 U	<0.26 U	<0.26 U	<0.25 U	<0.27 U	<0.25 U
Perfluoroundecanoic acid (PFUdA)	NE	NE	<0.91 U	<0.93 U	<0.96 U	<1.0 U	<0.95 U	<0.95 U	<0.90 U	<0.92 U	<1.0 U	<1.0 U	<0.91 U	<0.93 U	<0.91 U	<0.93 U	<0.92 U	<0.90 U	<0.97 U	<0.90 U
Perfluorododecanoic acid (PFDDa)	NE	NE	<0.46 U	<0.46 U	<0.48 U	<0.50 U	<0.47 U	<0.47 U	<0.45 U	<0.46 U	<0.50 U	<0.50 U	<0.45 U	<0.47 U	<0.46 U	<0.47 U	<0.46 U	<0.45 U	<0.48 U	<0.45 U
Perfluorotridecanoic acid (PFTriDA)	NE	NE	<1.1 U	<1.1 U	<1.1 U	<1.2 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.2 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U
Perfluorotetradecanoic acid (PFTeA)	NE	NE	<0.60 U	<0.62 U	<0.64 U	<0.67 U	<0.63 U	<0.63 U	<0.60 U	<0.61 U	<0.67 U	<0.66 U	<0.60 U	<0.62 U	<0.61 U	<0.62 U	<0.61 U	<0.59 U	<0.64 U	<0.60 U
Perfluoro-n-hexadecanoic acid (PFHxDA)	NE	NE	<0.74 U	<0.75 U	<0.77 U	<0.81 U	<0.77 U	<0.77 U	<0.73 U	<0.75 U	<0.81 U	<0.81 U	<0.74 U	<0.76 U	<0.74 U	<0.76 U	<0.75 U	<0.72 U	<0.78 U	<0.73 U
Perfluoro-n-octadecanoic acid (PFODa)	NE	NE	<0.78 U	<0.79 U	<0.82 U	<0.86 U	<0.81 U	<0.81 U	<0.77 U	<0.79 U	<0.86 U	<0.85 U	<0.78 U	<0.80 U	<0.78 U	<0.80 U	<0.79 U	<0.77 U	<0.83 U	<0.77 U
Perfluorobutanesulfonic acid (PFBS)	NE	NE	<0.17 U	0.27 J	0.58 J	<0.18 U	0.76 J	0.35 J	<0.16 U	0.84 J	1.7 J	0.65 J	1.0 J	0.79 J	0.58 J	0.94 J	1.5 J	<0.16 U	<0.18 U	0.85 J
Perfluoropentanesulfonic acid (PFPS)	NE	NE	<0.25 U	<0.25 U	0.28 J	<0.27 U	0.65 J	<0.26 U	<0.25 U	<0.25 U	<0.27 U	0.40 J	0.92 J	0.69 J	<0.25 U	0.80 J	1.3 J	<0.24 U	<0.26 U	0.47 J
Perfluorohexanesulfonic acid (PFHS)	NE	NE	0.58 J	0.58 J	1.1 J	<0.52 U	2.1 J	0.70 J	<0.47 U	<0.48 U	<0.52 U	1.3 J	3.2 J	2.5 J	<0.47 U	3.6 J	3.8 J	<0.46 U	<0.50 U	1.2 J
Perfluoroheptanesulfonic acid (PFHpS)	NE	NE	<0.16 U	<0.16 U	<0.17 U	<0.17 U	0.18 J	<0.16 U	<0.16 U	<0.16 U	<0.17 U	<0.17 U	0.35 J	0.35 J	<0.16 U	0.34 J	1.3 J	<0.15 U	<0.17 U	<0.16 U
Perfluorooctanesulfonic acid (PFOS)	NE	NE	<0.45 U	<0.46 U	<0.47 U	<0.49 U	2.3 J	1.6 J	<0.44 U	<0.45 U	0.73 J	<0.49 U	4.1 J	6.9 J	1.0 J	5.5 J	85 J	<0.44 U	<0.47 U	1.1 J
Perfluorononanesulfonic acid (PFNS)	NE	NE	<0.31 U	<0.31 U	<0.32 U	<0.34 U	<0.32 U	<0.32 U	<0.30 U	<0.31 U	<0.34 U	<0.34 U	<0.31 U	<0.31 U	<0.31 U	<0.32 U	<0.31 U	<0.30 U	<0.32 U	<0.30 U
Perfluorodecane sulfonic acid (PFDS)	NE	NE	<0.27 U	<0.27 U	<0.28 U	<0.28 U	<0.28 U	<0.28 U	<0.26 U	<0.27 U	<0.29 U	<0.26 U	<0.26 U	<0.27 U	<0.27 U	<0.27 U	<0.27 U	<0.27 U	<0.28 U	<0.26 U
Perfluorododecane sulfonic acid (PFDoS)	NE	NE	<0.80 U	<0.82 U	<0.84 U	<0.88 U	<0.84 U	<0.84 U	<0.79 U	<0.82 U	<0.89 U	<0.88 U	<0.80 U	<0.82 U	<0.81 U	<0.83 U	<0.81 U	<0.79 U	<0.85 U	<0.80 U
Perfluorooctanesulfonamide (NEFOSA)	NE	NE	<0.81 U	<0.83 U	<0.85 U	<0.89 U	<0.85 U	<0.84 U	<0.80 U	<0.82 U	<0.90 U	<0.89 U	<0.81 U	<0.83 U	<0.82 U	<0.84 U	<0.82 U	<0.80 U	<0.86 U	<0.80 U
NEFOSA	NE	NE	<0.72 U	<0.73 U	<0.76 U	<0.79 U	<0.75 U	<0.76 U	<0.71 U	<0.73 U	<0.80 U	<0.72 U	<0.79 U	<0.74 U	<0.73 U	<0.74 U	<0.73 U	<0.71 U	<0.76 U	<0.71 U
NMeFOSA	NE	NE	<0.36 U	<0.36 U	<0.37 U	<0.39 U	<0.37 U	<0.37 U	<0.35 U	<0.36 U	<0.39 U	<0.39 U	<0.36 U	<0.37 U	<0.36 U	<0.37 U	<0.36 U	<0.35 U	<0.38 U	<0.35 U
NMeFOSAA	NE	NE	<0.99 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<0.98 U	<1.0 U	<1.0 U	<0.99 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<0.98 U	<1.0 U
NEFOSAA	NE	NE	<1.1 U	<1.1 U	<1.1 U	<1.2 U	<1.1 U	<1.1 U	<1.1 U	<1.2 U	<1.2 U	<1.1 U	<1.2 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U	<1.1 U
NMeFOSE	NE	NE	<1.2 U	<1.2 U	<1.2 U	<1.3 U	<1.2 U	<1.2 U	<1.1 U	<1.2 U	<1.3 U	<1.3 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.2 U	<1.1 U	<1.2 U	<1.1 U
NEFOSE	NE	NE	<0.70 U	<0.72 U	<0.74 U	<0.77 U	<0.74 U	<0.74 U	<0.69 U	<0.71 U	<0.77 U	<0.71 U	<0.78 U	<0.71 U	<0.72 U	<0.71 U	<0.71 U	<0.71 U	<0.75 U	<0.71 U
4:2 FTS	NE	NE	<0.20 U	<0.20 U	<0.21 U	<0.22 U	<0.21 U	<0.21 U	<0.20 U	<0.20 U	<0.22 U	<0.22 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.21 U	<0.20 U
6:2 FTS	NE	NE	<2.1 U	<2.1 U	<2.2 U	<2.3 U	<2.2 U	<2.2 U	<2.0 U	<2.1 U	<2.3 U	<2.3 U	<2.1 U	<2.1 U	<2.1 U	<2.1 U	<2.1 U	<2.0 U	<2.2 U	<2.1 U
8:2 FTS	NE	NE	<0.38 U	<0.39 U	<0.40 U	<0.42 U	<0.40 U	<0.40 U	<0.38 U	<0.39 U	<0.42 U	<0.42 U	<0.38 U	<0.39 U	<0.38 U	<0.39 U	<0.39 U	<0.37 U	<0.40 U	<0.38 U
10:2 FTS	NE	NE	<0.56 U	<0.56 U	<0.58 U	<0.61 U	<0.58 U	<0.58 U	<0.55 U	<0.56 U	<0.61 U	<0.55 U	<0.57 U	<0.56 U	<0.57 U	<0.56 U	<0.55 U	<0.59 U	<0.55 U	<0.55 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NE	NE	<0.33 U	<0.34 U	<0.35 U	<0.36 U	<0.34 U	<0.34 U	<0.33 U	<0.34 U	<0.37 U	<0.36 U	<0.33 U	<0.34 U	<0.33 U	<0.34 U	<0.34 U	<0.33 U	<0.35 U	<0.33 U
HFPO-DA (GenX)	NE	NE	<1.2 U	<1.3 U	<1.3 U	<1.4 U	<1.3 U	<1.3 U	<1.2 U	<1.3 U	<1.4 U	<1.3 U	<1.3 U	<1.3 U	<1.3 U	<1.3 U	<1.3 U	<1.3 U	<1.3 U	<1.2 U
BCL-PF3ONS	NE	NE	<0.20 U	<0.20 U	<0.21 U	<0.22 U	<0.21 U	<0.21 U	<0.20 U	<0.20 U	<0.22 U	<0.22 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.20 U	<0.21 U	<0.20 U
11Cl-PF3OUds	NE	NE	<0.27 U	<0.27 U	<0.28 U	<0.29 U	<0.28 U	<0.28 U	<0.27 U	<0.27 U	<0.29 U	<0.29 U	<0.26 U	<0.27 U	<0.27 U	<0.27 U	<0.27 U	<0.26 U	<0.28 U	<0.26 U

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.  
U : Indicates the analyte was analyzed for but not detected.



## ANALYTICAL REPORT

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

Laboratory Job ID: 320-81211-1  
Client Project/Site: Hayward LF PFAS#2

**For:**

Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Brian L. Kent



Authorized for release by:  
11/11/2021 7:14:35 AM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandra.fredrick@eurofinset.com](mailto:sandra.fredrick@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	4
Detection Summary . . . . .	5
Client Sample Results . . . . .	9
Isotope Dilution Summary . . . . .	45
QC Sample Results . . . . .	49
QC Association Summary . . . . .	54
Lab Chronicle . . . . .	55
Certification Summary . . . . .	58
Method Summary . . . . .	59
Sample Summary . . . . .	60
Chain of Custody . . . . .	61
Receipt Checklists . . . . .	63



# Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Qualifiers

### LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
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.
α	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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

---

## Job ID: 320-81211-1

---

### Laboratory: Eurofins TestAmerica, Sacramento

#### Narrative

---

#### Job Narrative 320-81211-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 11/3/2021 10:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8° C.

#### Receipt Exceptions

Discoloration. MW-10 820 (320-81211-3), MW-9 817 (320-81211-6), MW-8 814 (320-81211-9), PZ-7SR 902 (320-81211-11), MW-7 811 (320-81211-12) and PZ-1S 806 (320-81211-14)

Sample ID mismatch. Container labels wrote the sample ID with parantheses around the 3 digits. COC doesn't use parantheses. Logged and labeled according to COC. PZ-9D 819 (320-81211-4), PZ-9S 818 (320-81211-5), MW-9 817 (320-81211-6), PZ-8D 816 (320-81211-7), PZ-8S 815 (320-81211-8), PZ-1D 807 (320-81211-13), PZ-1S 806 (320-81211-14), MW-1 801 (320-81211-15) and PZ-7D (Dup) 813 (320-81211-18).

#### LCMS

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: PZ-8D 816 (320-81211-7) and PZ-1D 807 (320-81211-13). 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 following data were reported.

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 320-540156. Method: 3535\_PFC Matrix: Water

Method 3535: The following samples were observed to be light yellow prior to extraction with a thin layer of sediments at the bottom of the bottle: PZ-10D 822 (320-81211-1), PZ-10S 821 (320-81211-2), MW-10 820 (320-81211-3), PZ-9D 819 (320-81211-4), PZ-9S 818 (320-81211-5), MW-9 817 (320-81211-6), PZ-8D 816 (320-81211-7), PZ-8S 815 (320-81211-8), MW-8 814 (320-81211-9), PZ-7D 813 (320-81211-10), PZ-7SR 902 (320-81211-11), MW-7 811 (320-81211-12), PZ-1D 807 (320-81211-13), PZ-1S 806 (320-81211-14), MW-1 801 (320-81211-15) and PZ-7D (Dup) 813 (320-81211-18). Method: 3535\_PFC Matrix: Water preparation batch 320-540156

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

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Client Sample ID: PZ-10D 822

## Lab Sample ID: 320-81211-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.58	J	1.7	0.47	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: PZ-10S 821

## Lab Sample ID: 320-81211-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	0.92	J	1.7	0.41	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.77	J	1.7	0.49	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.53	J	1.7	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		1.7	0.72	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.27	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.58	J	1.7	0.48	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: MW-10 820

## Lab Sample ID: 320-81211-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	1.7		1.7	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.8		1.7	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.2	J	1.7	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.8		1.7	0.74	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.58	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.28	J	1.7	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	1.7	0.50	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: PZ-9D 819

## Lab Sample ID: 320-81211-4

No Detections.

## Client Sample ID: PZ-9S 818

## Lab Sample ID: 320-81211-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.9		4.3	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.9		1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.8		1.7	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.8		1.7	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	14		1.7	0.73	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.76	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.65	J	1.7	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.1		1.7	0.49	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.18	J	1.7	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		1.7	0.47	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: MW-9 817

## Lab Sample ID: 320-81211-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.3	J	4.3	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.5	J	1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.4	J	1.7	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.98	J	1.7	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	4.8		1.7	0.73	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.35	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.70	J	1.7	0.49	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Client Sample ID: MW-9 817 (Continued)

Lab Sample ID: 320-81211-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	1.6	J	1.7	0.47	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: PZ-8D 816

Lab Sample ID: 320-81211-7

No Detections.

## Client Sample ID: PZ-8S 815

Lab Sample ID: 320-81211-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.84	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: MW-8 814

Lab Sample ID: 320-81211-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	1.7	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.73	J	1.8	0.49	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: PZ-7D 813

Lab Sample ID: 320-81211-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.6		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.0		1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.3		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6	J	1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.6		1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.65	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.40	J	1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.8	0.52	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: PZ-7SR 902

Lab Sample ID: 320-81211-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	6.8		4.1	2.0	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	8.5		1.7	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	9.7		1.7	0.48	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.9		1.7	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	27		1.7	0.70	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.92	J	1.7	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		1.7	0.47	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.35	J	1.7	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.1		1.7	0.45	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: MW-7 811

Lab Sample ID: 320-81211-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.9		4.2	2.0	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	5.4		1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.3		1.7	0.49	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	4.5		1.7	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	19		1.7	0.72	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.79	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Client Sample ID: MW-7 811 (Continued)

Lab Sample ID: 320-81211-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanesulfonic acid (PFPeS)	0.69	J	1.7	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		1.7	0.48	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.35	J	1.7	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.9		1.7	0.46	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: PZ-1D 807

Lab Sample ID: 320-81211-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.58	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.0	J	1.7	0.45	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: PZ-1S 806

Lab Sample ID: 320-81211-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.8		4.3	2.0	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	9.9		1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	11		1.7	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	7.7		1.7	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	32		1.7	0.73	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.40	J	1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.94	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.80	J	1.7	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.6		1.7	0.49	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.34	J	1.7	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.5		1.7	0.46	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: MW-1 801

Lab Sample ID: 320-81211-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	0.79	J	1.7	0.41	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.3	J	1.7	0.49	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.7		1.7	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	37		1.7	0.71	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.31	J	1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.5	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.3	J	1.7	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.8		1.7	0.48	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	1.3	J	1.7	0.16	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	85		1.7	0.45	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: Field Blank

Lab Sample ID: 320-81211-16

No Detections.

## Client Sample ID: Equipment Blank

Lab Sample ID: 320-81211-17

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-7D (Dup) 813**

**Lab Sample ID: 320-81211-18**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.1		4.1	2.0	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.3		1.6	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.5		1.6	0.48	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.5	J	1.6	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	4.2		1.6	0.70	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.85	J	1.6	0.16	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.47	J	1.6	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	1.6	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.6	0.44	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-10D 822**

**Lab Sample ID: 320-81211-1**

**Date Collected: 11/01/21 09:45**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.1	2.0	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluoropentanoic acid (PFPeA)	<0.41		1.7	0.41	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorohexanoic acid (PFHxA)	<0.48		1.7	0.48	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluoroheptanoic acid (PFHpA)	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorooctanoic acid (PFOA)	<0.70		1.7	0.70	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorononanoic acid (PFNA)	<0.22		1.7	0.22	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluoroundecanoic acid (PFUnA)	<0.91		1.7	0.91	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorododecanoic acid (PFDoA)	<0.46		1.7	0.46	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorotridecanoic acid (PFTTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorotetradecanoic acid (PFTeA)	<0.60		1.7	0.60	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.74		1.7	0.74	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.78		1.7	0.78	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorobutanesulfonic acid (PFBS)	<0.17		1.7	0.17	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluoropentanesulfonic acid (PFPeS)	<0.25		1.7	0.25	ng/L		11/04/21 19:19	11/06/21 18:22	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>0.58 J</b>		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.7	0.16	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorooctanesulfonic acid (PFOS)	<0.45		1.7	0.45	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorononanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorododecanesulfonic acid (PFDoS)	<0.80		1.7	0.80	ng/L		11/04/21 19:19	11/06/21 18:22	1
Perfluorooctanesulfonamide (FOSA)	<0.81		1.7	0.81	ng/L		11/04/21 19:19	11/06/21 18:22	1
NEtFOSA	<0.72		1.7	0.72	ng/L		11/04/21 19:19	11/06/21 18:22	1
NMeFOSA	<0.36		1.7	0.36	ng/L		11/04/21 19:19	11/06/21 18:22	1
NMeFOSAA	<0.99		4.1	0.99	ng/L		11/04/21 19:19	11/06/21 18:22	1
NEtFOSAA	<1.1		4.1	1.1	ng/L		11/04/21 19:19	11/06/21 18:22	1
NMeFOSE	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/06/21 18:22	1
NEtFOSE	<0.70		1.7	0.70	ng/L		11/04/21 19:19	11/06/21 18:22	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 18:22	1
6:2 FTS	<2.1		4.1	2.1	ng/L		11/04/21 19:19	11/06/21 18:22	1
8:2 FTS	<0.38		1.7	0.38	ng/L		11/04/21 19:19	11/06/21 18:22	1
10:2 FTS	<0.56		1.7	0.56	ng/L		11/04/21 19:19	11/06/21 18:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.33		1.7	0.33	ng/L		11/04/21 19:19	11/06/21 18:22	1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/06/21 18:22	1
9CI-PF3ONS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 18:22	1
11CI-PF3OUdS	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 18:22	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFBA	101		25 - 150				11/04/21 19:19	11/06/21 18:22	1
13C5 PFPeA	107		25 - 150				11/04/21 19:19	11/06/21 18:22	1
13C2 PFHxA	99		25 - 150				11/04/21 19:19	11/06/21 18:22	1
13C4 PFHpA	110		25 - 150				11/04/21 19:19	11/06/21 18:22	1
13C4 PFOA	111		25 - 150				11/04/21 19:19	11/06/21 18:22	1
13C5 PFNA	103		25 - 150				11/04/21 19:19	11/06/21 18:22	1
13C2 PFDA	95		25 - 150				11/04/21 19:19	11/06/21 18:22	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-10D 822**

**Lab Sample ID: 320-81211-1**

Date Collected: 11/01/21 09:45

Matrix: Groundwater

Date Received: 11/03/21 10:35

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFluA	96		25 - 150	11/04/21 19:19	11/06/21 18:22	1
13C2 PFlDoA	88		25 - 150	11/04/21 19:19	11/06/21 18:22	1
13C2 PFlTeDA	97		25 - 150	11/04/21 19:19	11/06/21 18:22	1
13C2 PFlHxDA	98		25 - 150	11/04/21 19:19	11/06/21 18:22	1
13C3 PFlBS	113		25 - 150	11/04/21 19:19	11/06/21 18:22	1
18O2 PFlHxS	103		25 - 150	11/04/21 19:19	11/06/21 18:22	1
13C4 PFlOS	108		25 - 150	11/04/21 19:19	11/06/21 18:22	1
13C8 FOSA	94		10 - 150	11/04/21 19:19	11/06/21 18:22	1
d3-NMeFOSAA	101		25 - 150	11/04/21 19:19	11/06/21 18:22	1
d5-NEtFOSAA	94		25 - 150	11/04/21 19:19	11/06/21 18:22	1
d-N-MeFOSA-M	90		10 - 150	11/04/21 19:19	11/06/21 18:22	1
d-N-EtFOSA-M	87		10 - 150	11/04/21 19:19	11/06/21 18:22	1
d7-N-MeFOSE-M	94		10 - 150	11/04/21 19:19	11/06/21 18:22	1
d9-N-EtFOSE-M	95		10 - 150	11/04/21 19:19	11/06/21 18:22	1
M2-4:2 FTS	123		25 - 150	11/04/21 19:19	11/06/21 18:22	1
M2-6:2 FTS	105		25 - 150	11/04/21 19:19	11/06/21 18:22	1
M2-8:2 FTS	105		25 - 150	11/04/21 19:19	11/06/21 18:22	1
13C3 HFPO-DA	104		25 - 150	11/04/21 19:19	11/06/21 18:22	1
13C2 10:2 FTS	96		25 - 150	11/04/21 19:19	11/06/21 18:22	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-10S 821**

**Lab Sample ID: 320-81211-2**

**Date Collected: 11/01/21 10:30**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.2	2.0	ng/L		11/04/21 19:19	11/06/21 18:32	1
<b>Perfluoropentanoic acid (PFPeA)</b>	<b>0.92</b>	<b>J</b>	1.7	0.41	ng/L		11/04/21 19:19	11/06/21 18:32	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>0.77</b>	<b>J</b>	1.7	0.49	ng/L		11/04/21 19:19	11/06/21 18:32	1
<b>Perfluoroheptanoic acid (PFHpA)</b>	<b>0.53</b>	<b>J</b>	1.7	0.21	ng/L		11/04/21 19:19	11/06/21 18:32	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>3.1</b>		1.7	0.72	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluoroundecanoic acid (PFUnA)	<0.93		1.7	0.93	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorododecanoic acid (PFDoA)	<0.46		1.7	0.46	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorotetradecanoic acid (PFTeA)	<0.62		1.7	0.62	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.75		1.7	0.75	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.79		1.7	0.79	ng/L		11/04/21 19:19	11/06/21 18:32	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.27</b>	<b>J</b>	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.25		1.7	0.25	ng/L		11/04/21 19:19	11/06/21 18:32	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>0.58</b>	<b>J</b>	1.7	0.48	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.7	0.16	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorooctanesulfonic acid (PFOS)	<0.46		1.7	0.46	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorononanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorododecanesulfonic acid (PFDoS)	<0.82		1.7	0.82	ng/L		11/04/21 19:19	11/06/21 18:32	1
Perfluorooctanesulfonamide (FOSA)	<0.83		1.7	0.83	ng/L		11/04/21 19:19	11/06/21 18:32	1
NEtFOSA	<0.73		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 18:32	1
NMeFOSA	<0.36		1.7	0.36	ng/L		11/04/21 19:19	11/06/21 18:32	1
NMeFOSAA	<1.0		4.2	1.0	ng/L		11/04/21 19:19	11/06/21 18:32	1
NEtFOSAA	<1.1		4.2	1.1	ng/L		11/04/21 19:19	11/06/21 18:32	1
NMeFOSE	<1.2		3.4	1.2	ng/L		11/04/21 19:19	11/06/21 18:32	1
NEtFOSE	<0.72		1.7	0.72	ng/L		11/04/21 19:19	11/06/21 18:32	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 18:32	1
6:2 FTS	<2.1		4.2	2.1	ng/L		11/04/21 19:19	11/06/21 18:32	1
8:2 FTS	<0.39		1.7	0.39	ng/L		11/04/21 19:19	11/06/21 18:32	1
10:2 FTS	<0.56		1.7	0.56	ng/L		11/04/21 19:19	11/06/21 18:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/04/21 19:19	11/06/21 18:32	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/04/21 19:19	11/06/21 18:32	1
9Cl-PF3ONS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 18:32	1
11Cl-PF3OUdS	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 18:32	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	102		25 - 150				11/04/21 19:19	11/06/21 18:32	1
13C5 PFPeA	109		25 - 150				11/04/21 19:19	11/06/21 18:32	1
13C2 PFHxA	106		25 - 150				11/04/21 19:19	11/06/21 18:32	1
13C4 PFHpA	113		25 - 150				11/04/21 19:19	11/06/21 18:32	1
13C4 PFOA	114		25 - 150				11/04/21 19:19	11/06/21 18:32	1
13C5 PFNA	113		25 - 150				11/04/21 19:19	11/06/21 18:32	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-10S 821**

**Lab Sample ID: 320-81211-2**

**Date Collected: 11/01/21 10:30**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDA	100		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C2 PFUnA	100		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C2 PFDoA	95		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C2 PFTeDA	96		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C2 PFHxDA	102		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C3 PFBS	116		25 - 150	11/04/21 19:19	11/06/21 18:32	1
18O2 PFHxS	105		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C4 PFOS	111		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C8 FOSA	95		10 - 150	11/04/21 19:19	11/06/21 18:32	1
d3-NMeFOSAA	102		25 - 150	11/04/21 19:19	11/06/21 18:32	1
d5-NEtFOSAA	96		25 - 150	11/04/21 19:19	11/06/21 18:32	1
d-N-MeFOSA-M	93		10 - 150	11/04/21 19:19	11/06/21 18:32	1
d-N-EtFOSA-M	91		10 - 150	11/04/21 19:19	11/06/21 18:32	1
d7-N-MeFOSE-M	103		10 - 150	11/04/21 19:19	11/06/21 18:32	1
d9-N-EtFOSE-M	101		10 - 150	11/04/21 19:19	11/06/21 18:32	1
M2-4:2 FTS	117		25 - 150	11/04/21 19:19	11/06/21 18:32	1
M2-6:2 FTS	102		25 - 150	11/04/21 19:19	11/06/21 18:32	1
M2-8:2 FTS	103		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C3 HFPO-DA	107		25 - 150	11/04/21 19:19	11/06/21 18:32	1
13C2 10:2 FTS	102		25 - 150	11/04/21 19:19	11/06/21 18:32	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-10 820**

**Lab Sample ID: 320-81211-3**

**Date Collected: 11/01/21 11:00**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.1		4.3	2.1	ng/L		11/04/21 19:19	11/06/21 18:42	1
<b>Perfluoropentanoic acid (PFPeA)</b>	<b>1.7</b>		1.7	0.43	ng/L		11/04/21 19:19	11/06/21 18:42	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>1.8</b>		1.7	0.50	ng/L		11/04/21 19:19	11/06/21 18:42	1
<b>Perfluoroheptanoic acid (PFHpA)</b>	<b>1.2 J</b>		1.7	0.22	ng/L		11/04/21 19:19	11/06/21 18:42	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>5.8</b>		1.7	0.74	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorodecanoic acid (PFDA)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluoroundecanoic acid (PFUnA)	<0.96		1.7	0.96	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorododecanoic acid (PFDoA)	<0.48		1.7	0.48	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorotetradecanoic acid (PFTeA)	<0.64		1.7	0.64	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.77		1.7	0.77	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.82		1.7	0.82	ng/L		11/04/21 19:19	11/06/21 18:42	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.58 J</b>		1.7	0.17	ng/L		11/04/21 19:19	11/06/21 18:42	1
<b>Perfluoropentanesulfonic acid (PFPeS)</b>	<b>0.28 J</b>		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 18:42	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>1.1 J</b>		1.7	0.50	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.7	0.17	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorooctanesulfonic acid (PFOS)	<0.47		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.7	0.32	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.7	0.28	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorododecanesulfonic acid (PFDoS)	<0.84		1.7	0.84	ng/L		11/04/21 19:19	11/06/21 18:42	1
Perfluorooctanesulfonamide (FOSA)	<0.85		1.7	0.85	ng/L		11/04/21 19:19	11/06/21 18:42	1
NEtFOSA	<0.76		1.7	0.76	ng/L		11/04/21 19:19	11/06/21 18:42	1
NMeFOSA	<0.37		1.7	0.37	ng/L		11/04/21 19:19	11/06/21 18:42	1
NMeFOSAA	<1.0		4.3	1.0	ng/L		11/04/21 19:19	11/06/21 18:42	1
NEtFOSAA	<1.1		4.3	1.1	ng/L		11/04/21 19:19	11/06/21 18:42	1
NMeFOSE	<1.2		3.5	1.2	ng/L		11/04/21 19:19	11/06/21 18:42	1
NEtFOSE	<0.74		1.7	0.74	ng/L		11/04/21 19:19	11/06/21 18:42	1
4:2 FTS	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 18:42	1
6:2 FTS	<2.2		4.3	2.2	ng/L		11/04/21 19:19	11/06/21 18:42	1
8:2 FTS	<0.40		1.7	0.40	ng/L		11/04/21 19:19	11/06/21 18:42	1
10:2 FTS	<0.58		1.7	0.58	ng/L		11/04/21 19:19	11/06/21 18:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.35		1.7	0.35	ng/L		11/04/21 19:19	11/06/21 18:42	1
HFPO-DA (GenX)	<1.3		3.5	1.3	ng/L		11/04/21 19:19	11/06/21 18:42	1
9Cl-PF3ONS	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 18:42	1
11Cl-PF3OUdS	<0.28		1.7	0.28	ng/L		11/04/21 19:19	11/06/21 18:42	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	104		25 - 150				11/04/21 19:19	11/06/21 18:42	1
13C5 PFPeA	113		25 - 150				11/04/21 19:19	11/06/21 18:42	1
13C2 PFHxA	111		25 - 150				11/04/21 19:19	11/06/21 18:42	1
13C4 PFHpA	112		25 - 150				11/04/21 19:19	11/06/21 18:42	1
13C4 PFOA	115		25 - 150				11/04/21 19:19	11/06/21 18:42	1
13C5 PFNA	113		25 - 150				11/04/21 19:19	11/06/21 18:42	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-10 820**

**Lab Sample ID: 320-81211-3**

**Date Collected: 11/01/21 11:00**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDA	103		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C2 PFUnA	78		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C2 PFDoA	66		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C2 PFTeDA	62		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C2 PFHxDA	75		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C3 PFBS	117		25 - 150	11/04/21 19:19	11/06/21 18:42	1
18O2 PFHxS	109		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C4 PFOS	110		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C8 FOSA	81		10 - 150	11/04/21 19:19	11/06/21 18:42	1
d3-NMeFOSAA	85		25 - 150	11/04/21 19:19	11/06/21 18:42	1
d5-NEtFOSAA	78		25 - 150	11/04/21 19:19	11/06/21 18:42	1
d-N-MeFOSA-M	64		10 - 150	11/04/21 19:19	11/06/21 18:42	1
d-N-EtFOSA-M	60		10 - 150	11/04/21 19:19	11/06/21 18:42	1
d7-N-MeFOSE-M	66		10 - 150	11/04/21 19:19	11/06/21 18:42	1
d9-N-EtFOSE-M	66		10 - 150	11/04/21 19:19	11/06/21 18:42	1
M2-4:2 FTS	121		25 - 150	11/04/21 19:19	11/06/21 18:42	1
M2-6:2 FTS	103		25 - 150	11/04/21 19:19	11/06/21 18:42	1
M2-8:2 FTS	94		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C3 HFPO-DA	112		25 - 150	11/04/21 19:19	11/06/21 18:42	1
13C2 10:2 FTS	65		25 - 150	11/04/21 19:19	11/06/21 18:42	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-9D 819**

**Lab Sample ID: 320-81211-4**

**Date Collected: 11/01/21 11:30**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.6	2.2	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluoropentanoic acid (PFPeA)	<0.45		1.8	0.45	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorohexanoic acid (PFHxA)	<0.53		1.8	0.53	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.8	0.23	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorooctanoic acid (PFOA)	<0.77		1.8	0.77	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorononanoic acid (PFNA)	<0.25		1.8	0.25	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorotridecanoic acid (PFTTrDA)	<1.2		1.8	1.2	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorotetradecanoic acid (PFTeA)	<0.67		1.8	0.67	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.81		1.8	0.81	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.86		1.8	0.86	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorohexanesulfonic acid (PFHxS)	<0.52		1.8	0.52	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		11/04/21 19:19	11/06/21 18:52	1
Perfluorooctanesulfonamide (FOSA)	<0.89		1.8	0.89	ng/L		11/04/21 19:19	11/06/21 18:52	1
NEtFOSA	<0.79		1.8	0.79	ng/L		11/04/21 19:19	11/06/21 18:52	1
NMeFOSA	<0.39		1.8	0.39	ng/L		11/04/21 19:19	11/06/21 18:52	1
NMeFOSAA	<1.1		4.6	1.1	ng/L		11/04/21 19:19	11/06/21 18:52	1
NEtFOSAA	<1.2		4.6	1.2	ng/L		11/04/21 19:19	11/06/21 18:52	1
NMeFOSE	<1.3		3.6	1.3	ng/L		11/04/21 19:19	11/06/21 18:52	1
NEtFOSE	<0.77		1.8	0.77	ng/L		11/04/21 19:19	11/06/21 18:52	1
4:2 FTS	<0.22		1.8	0.22	ng/L		11/04/21 19:19	11/06/21 18:52	1
6:2 FTS	<2.3		4.6	2.3	ng/L		11/04/21 19:19	11/06/21 18:52	1
8:2 FTS	<0.42		1.8	0.42	ng/L		11/04/21 19:19	11/06/21 18:52	1
10:2 FTS	<0.61		1.8	0.61	ng/L		11/04/21 19:19	11/06/21 18:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		11/04/21 19:19	11/06/21 18:52	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		11/04/21 19:19	11/06/21 18:52	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		11/04/21 19:19	11/06/21 18:52	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		11/04/21 19:19	11/06/21 18:52	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	107		25 - 150				11/04/21 19:19	11/06/21 18:52	1
13C5 PFPeA	111		25 - 150				11/04/21 19:19	11/06/21 18:52	1
13C2 PFHxA	108		25 - 150				11/04/21 19:19	11/06/21 18:52	1
13C4 PFHpA	115		25 - 150				11/04/21 19:19	11/06/21 18:52	1
13C4 PFOA	114		25 - 150				11/04/21 19:19	11/06/21 18:52	1
13C5 PFNA	105		25 - 150				11/04/21 19:19	11/06/21 18:52	1
13C2 PFDA	102		25 - 150				11/04/21 19:19	11/06/21 18:52	1
13C2 PFUnA	103		25 - 150				11/04/21 19:19	11/06/21 18:52	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-9D 819**

**Lab Sample ID: 320-81211-4**

**Date Collected: 11/01/21 11:30**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDoA	94		25 - 150	11/04/21 19:19	11/06/21 18:52	1
13C2 PFTeDA	94		25 - 150	11/04/21 19:19	11/06/21 18:52	1
13C2 PFHxDA	94		25 - 150	11/04/21 19:19	11/06/21 18:52	1
13C3 PFBS	116		25 - 150	11/04/21 19:19	11/06/21 18:52	1
18O2 PFHxS	105		25 - 150	11/04/21 19:19	11/06/21 18:52	1
13C4 PFOS	114		25 - 150	11/04/21 19:19	11/06/21 18:52	1
13C8 FOSA	98		10 - 150	11/04/21 19:19	11/06/21 18:52	1
d3-NMeFOSAA	99		25 - 150	11/04/21 19:19	11/06/21 18:52	1
d5-NEtFOSAA	100		25 - 150	11/04/21 19:19	11/06/21 18:52	1
d-N-MeFOSA-M	96		10 - 150	11/04/21 19:19	11/06/21 18:52	1
d-N-EtFOSA-M	89		10 - 150	11/04/21 19:19	11/06/21 18:52	1
d7-N-MeFOSE-M	98		10 - 150	11/04/21 19:19	11/06/21 18:52	1
d9-N-EtFOSE-M	100		10 - 150	11/04/21 19:19	11/06/21 18:52	1
M2-4:2 FTS	119		25 - 150	11/04/21 19:19	11/06/21 18:52	1
M2-6:2 FTS	108		25 - 150	11/04/21 19:19	11/06/21 18:52	1
M2-8:2 FTS	109		25 - 150	11/04/21 19:19	11/06/21 18:52	1
13C3 HFPO-DA	106		25 - 150	11/04/21 19:19	11/06/21 18:52	1
13C2 10:2 FTS	110		25 - 150	11/04/21 19:19	11/06/21 18:52	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-9S 818**

**Lab Sample ID: 320-81211-5**

Date Collected: 11/01/21 11:50

Matrix: Groundwater

Date Received: 11/03/21 10:35

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.9		4.3	2.1	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluoropentanoic acid (PFPeA)	4.9		1.7	0.42	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorohexanoic acid (PFHxA)	5.8		1.7	0.50	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluoroheptanoic acid (PFHpA)	3.8		1.7	0.22	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorooctanoic acid (PFOA)	14		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorodecanoic acid (PFDA)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluoroundecanoic acid (PFUnA)	<0.95		1.7	0.95	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorododecanoic acid (PFDoA)	<0.47		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorotetradecanoic acid (PFTeA)	<0.63		1.7	0.63	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.77		1.7	0.77	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.81		1.7	0.81	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorobutanesulfonic acid (PFBS)	0.76	J	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluoropentanesulfonic acid (PFPeS)	0.65	J	1.7	0.26	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorohexanesulfonic acid (PFHxS)	2.1		1.7	0.49	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.18	J	1.7	0.16	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorooctanesulfonic acid (PFOS)	2.3		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.7	0.32	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.7	0.28	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorododecanesulfonic acid (PFDoS)	<0.84		1.7	0.84	ng/L		11/04/21 19:19	11/06/21 19:02	1
Perfluorooctanesulfonamide (FOSA)	<0.85		1.7	0.85	ng/L		11/04/21 19:19	11/06/21 19:02	1
NEtFOSA	<0.75		1.7	0.75	ng/L		11/04/21 19:19	11/06/21 19:02	1
NMeFOSA	<0.37		1.7	0.37	ng/L		11/04/21 19:19	11/06/21 19:02	1
NMeFOSAA	<1.0		4.3	1.0	ng/L		11/04/21 19:19	11/06/21 19:02	1
NEtFOSAA	<1.1		4.3	1.1	ng/L		11/04/21 19:19	11/06/21 19:02	1
NMeFOSE	<1.2		3.4	1.2	ng/L		11/04/21 19:19	11/06/21 19:02	1
NEtFOSE	<0.73		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 19:02	1
4:2 FTS	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 19:02	1
6:2 FTS	<2.2		4.3	2.2	ng/L		11/04/21 19:19	11/06/21 19:02	1
8:2 FTS	<0.40		1.7	0.40	ng/L		11/04/21 19:19	11/06/21 19:02	1
10:2 FTS	<0.58		1.7	0.58	ng/L		11/04/21 19:19	11/06/21 19:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/04/21 19:19	11/06/21 19:02	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/04/21 19:19	11/06/21 19:02	1
9Cl-PF3ONS	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 19:02	1
11Cl-PF3OUdS	<0.28		1.7	0.28	ng/L		11/04/21 19:19	11/06/21 19:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	80		25 - 150				11/04/21 19:19	11/06/21 19:02	1
13C5 PFPeA	109		25 - 150				11/04/21 19:19	11/06/21 19:02	1
13C2 PFHxA	106		25 - 150				11/04/21 19:19	11/06/21 19:02	1
13C4 PFHpA	114		25 - 150				11/04/21 19:19	11/06/21 19:02	1
13C4 PFOA	113		25 - 150				11/04/21 19:19	11/06/21 19:02	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-9S 818**

**Lab Sample ID: 320-81211-5**

**Date Collected: 11/01/21 11:50**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	108		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C2 PFDA	100		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C2 PFUnA	98		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C2 PFDoA	97		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C2 PFTeDA	97		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C2 PFHxDA	101		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C3 PFBS	111		25 - 150	11/04/21 19:19	11/06/21 19:02	1
18O2 PFHxS	107		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C4 PFOS	114		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C8 FOSA	96		10 - 150	11/04/21 19:19	11/06/21 19:02	1
d3-NMeFOSAA	97		25 - 150	11/04/21 19:19	11/06/21 19:02	1
d5-NEtFOSAA	94		25 - 150	11/04/21 19:19	11/06/21 19:02	1
d-N-MeFOSA-M	95		10 - 150	11/04/21 19:19	11/06/21 19:02	1
d-N-EtFOSA-M	92		10 - 150	11/04/21 19:19	11/06/21 19:02	1
d7-N-MeFOSE-M	98		10 - 150	11/04/21 19:19	11/06/21 19:02	1
d9-N-EtFOSE-M	95		10 - 150	11/04/21 19:19	11/06/21 19:02	1
M2-4:2 FTS	122		25 - 150	11/04/21 19:19	11/06/21 19:02	1
M2-6:2 FTS	111		25 - 150	11/04/21 19:19	11/06/21 19:02	1
M2-8:2 FTS	111		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C3 HFPO-DA	99		25 - 150	11/04/21 19:19	11/06/21 19:02	1
13C2 10:2 FTS	106		25 - 150	11/04/21 19:19	11/06/21 19:02	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-9 817**

**Lab Sample ID: 320-81211-6**

**Date Collected: 11/01/21 12:15**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.3	J	4.3	2.1	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluoropentanoic acid (PFPeA)	1.5	J	1.7	0.42	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorohexanoic acid (PFHxA)	1.4	J	1.7	0.50	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluoroheptanoic acid (PFHpA)	0.98	J	1.7	0.22	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorooctanoic acid (PFOA)	4.8		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorodecanoic acid (PFDA)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluoroundecanoic acid (PFUnA)	<0.95		1.7	0.95	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorododecanoic acid (PFDoA)	<0.47		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorotetradecanoic acid (PFTeA)	<0.63		1.7	0.63	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.77		1.7	0.77	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.81		1.7	0.81	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorobutanesulfonic acid (PFBS)	0.35	J	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluoropentanesulfonic acid (PFPeS)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorohexanesulfonic acid (PFHxS)	0.70	J	1.7	0.49	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.7	0.16	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorooctanesulfonic acid (PFOS)	1.6	J	1.7	0.47	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.7	0.32	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.7	0.28	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorododecanesulfonic acid (PFDoS)	<0.84		1.7	0.84	ng/L		11/04/21 19:19	11/06/21 19:12	1
Perfluorooctanesulfonamide (FOSA)	<0.84		1.7	0.84	ng/L		11/04/21 19:19	11/06/21 19:12	1
NEtFOSA	<0.75		1.7	0.75	ng/L		11/04/21 19:19	11/06/21 19:12	1
NMeFOSA	<0.37		1.7	0.37	ng/L		11/04/21 19:19	11/06/21 19:12	1
NMeFOSAA	<1.0		4.3	1.0	ng/L		11/04/21 19:19	11/06/21 19:12	1
NEtFOSAA	<1.1		4.3	1.1	ng/L		11/04/21 19:19	11/06/21 19:12	1
NMeFOSE	<1.2		3.4	1.2	ng/L		11/04/21 19:19	11/06/21 19:12	1
NEtFOSE	<0.73		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 19:12	1
4:2 FTS	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 19:12	1
6:2 FTS	<2.2		4.3	2.2	ng/L		11/04/21 19:19	11/06/21 19:12	1
8:2 FTS	<0.40		1.7	0.40	ng/L		11/04/21 19:19	11/06/21 19:12	1
10:2 FTS	<0.58		1.7	0.58	ng/L		11/04/21 19:19	11/06/21 19:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/04/21 19:19	11/06/21 19:12	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/04/21 19:19	11/06/21 19:12	1
9Cl-PF3ONS	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 19:12	1
11Cl-PF3OUdS	<0.28		1.7	0.28	ng/L		11/04/21 19:19	11/06/21 19:12	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	104		25 - 150				11/04/21 19:19	11/06/21 19:12	1
13C5 PFPeA	117		25 - 150				11/04/21 19:19	11/06/21 19:12	1
13C2 PFHxA	109		25 - 150				11/04/21 19:19	11/06/21 19:12	1
13C4 PFHpA	119		25 - 150				11/04/21 19:19	11/06/21 19:12	1
13C4 PFOA	112		25 - 150				11/04/21 19:19	11/06/21 19:12	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-9 817**

**Lab Sample ID: 320-81211-6**

**Date Collected: 11/01/21 12:15**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	113		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C2 PFDA	110		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C2 PFUnA	105		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C2 PFDoA	101		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C2 PFTeDA	95		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C2 PFHxDA	98		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C3 PFBS	122		25 - 150	11/04/21 19:19	11/06/21 19:12	1
18O2 PFHxS	110		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C4 PFOS	118		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C8 FOSA	97		10 - 150	11/04/21 19:19	11/06/21 19:12	1
d3-NMeFOSAA	104		25 - 150	11/04/21 19:19	11/06/21 19:12	1
d5-NEtFOSAA	105		25 - 150	11/04/21 19:19	11/06/21 19:12	1
d-N-MeFOSA-M	94		10 - 150	11/04/21 19:19	11/06/21 19:12	1
d-N-EtFOSA-M	88		10 - 150	11/04/21 19:19	11/06/21 19:12	1
d7-N-MeFOSE-M	98		10 - 150	11/04/21 19:19	11/06/21 19:12	1
d9-N-EtFOSE-M	98		10 - 150	11/04/21 19:19	11/06/21 19:12	1
M2-4:2 FTS	117		25 - 150	11/04/21 19:19	11/06/21 19:12	1
M2-6:2 FTS	106		25 - 150	11/04/21 19:19	11/06/21 19:12	1
M2-8:2 FTS	125		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C3 HFPO-DA	107		25 - 150	11/04/21 19:19	11/06/21 19:12	1
13C2 10:2 FTS	116		25 - 150	11/04/21 19:19	11/06/21 19:12	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-8D 816**

**Lab Sample ID: 320-81211-7**

**Date Collected: 11/01/21 12:30**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.1	2.0	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluoropentanoic acid (PFPeA)	<0.40		1.6	0.40	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorohexanoic acid (PFHxA)	<0.47		1.6	0.47	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluoroheptanoic acid (PFHpA)	<0.20		1.6	0.20	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorooctanoic acid (PFOA)	<0.69		1.6	0.69	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorononanoic acid (PFNA)	<0.22		1.6	0.22	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorodecanoic acid (PFDA)	<0.25		1.6	0.25	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluoroundecanoic acid (PFUnA)	<0.90		1.6	0.90	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorododecanoic acid (PFDoA)	<0.45		1.6	0.45	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorotridecanoic acid (PFTTrDA)	<1.1		1.6	1.1	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorotetradecanoic acid (PFTeA)	<0.60		1.6	0.60	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.73		1.6	0.73	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.77		1.6	0.77	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorobutanesulfonic acid (PFBS)	<0.16		1.6	0.16	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluoropentanesulfonic acid (PFPeS)	<0.25		1.6	0.25	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorohexanesulfonic acid (PFHxS)	<0.47		1.6	0.47	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.6	0.16	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorooctanesulfonic acid (PFOS)	<0.44		1.6	0.44	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorononanesulfonic acid (PFNS)	<0.30		1.6	0.30	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorodecanesulfonic acid (PFDS)	<0.26		1.6	0.26	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorododecanesulfonic acid (PFDoS)	<0.79		1.6	0.79	ng/L		11/04/21 19:19	11/06/21 19:22	1
Perfluorooctanesulfonamide (FOSA)	<0.80		1.6	0.80	ng/L		11/04/21 19:19	11/06/21 19:22	1
NEtFOSA	<0.71		1.6	0.71	ng/L		11/04/21 19:19	11/06/21 19:22	1
NMeFOSA	<0.35		1.6	0.35	ng/L		11/04/21 19:19	11/06/21 19:22	1
NMeFOSAA	<0.98		4.1	0.98	ng/L		11/04/21 19:19	11/06/21 19:22	1
NEtFOSAA	<1.1		4.1	1.1	ng/L		11/04/21 19:19	11/06/21 19:22	1
NMeFOSE	<1.1		3.3	1.1	ng/L		11/04/21 19:19	11/06/21 19:22	1
NEtFOSE	<0.69		1.6	0.69	ng/L		11/04/21 19:19	11/06/21 19:22	1
4:2 FTS	<0.20		1.6	0.20	ng/L		11/04/21 19:19	11/06/21 19:22	1
6:2 FTS	<2.0		4.1	2.0	ng/L		11/04/21 19:19	11/06/21 19:22	1
8:2 FTS	<0.38		1.6	0.38	ng/L		11/04/21 19:19	11/06/21 19:22	1
10:2 FTS	<0.55		1.6	0.55	ng/L		11/04/21 19:19	11/06/21 19:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.33		1.6	0.33	ng/L		11/04/21 19:19	11/06/21 19:22	1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/06/21 19:22	1
9Cl-PF3ONS	<0.20		1.6	0.20	ng/L		11/04/21 19:19	11/06/21 19:22	1
11Cl-PF3OUdS	<0.26		1.6	0.26	ng/L		11/04/21 19:19	11/06/21 19:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	104		25 - 150				11/04/21 19:19	11/06/21 19:22	1
13C5 PFPeA	105		25 - 150				11/04/21 19:19	11/06/21 19:22	1
13C2 PFHxA	99		25 - 150				11/04/21 19:19	11/06/21 19:22	1
13C4 PFHpA	107		25 - 150				11/04/21 19:19	11/06/21 19:22	1
13C4 PFOA	105		25 - 150				11/04/21 19:19	11/06/21 19:22	1
13C5 PFNA	100		25 - 150				11/04/21 19:19	11/06/21 19:22	1
13C2 PFDA	103		25 - 150				11/04/21 19:19	11/06/21 19:22	1
13C2 PFUnA	100		25 - 150				11/04/21 19:19	11/06/21 19:22	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-8D 816**

**Lab Sample ID: 320-81211-7**

**Date Collected: 11/01/21 12:30**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDoA	98		25 - 150	11/04/21 19:19	11/06/21 19:22	1
13C2 PFTeDA	95		25 - 150	11/04/21 19:19	11/06/21 19:22	1
13C2 PFHxDA	103		25 - 150	11/04/21 19:19	11/06/21 19:22	1
13C3 PFBS	110		25 - 150	11/04/21 19:19	11/06/21 19:22	1
18O2 PFHxS	98		25 - 150	11/04/21 19:19	11/06/21 19:22	1
13C4 PFOS	104		25 - 150	11/04/21 19:19	11/06/21 19:22	1
13C8 FOSA	91		10 - 150	11/04/21 19:19	11/06/21 19:22	1
d3-NMeFOSAA	106		25 - 150	11/04/21 19:19	11/06/21 19:22	1
d5-NEtFOSAA	101		25 - 150	11/04/21 19:19	11/06/21 19:22	1
d-N-MeFOSA-M	89		10 - 150	11/04/21 19:19	11/06/21 19:22	1
d-N-EtFOSA-M	83		10 - 150	11/04/21 19:19	11/06/21 19:22	1
d7-N-MeFOSE-M	98		10 - 150	11/04/21 19:19	11/06/21 19:22	1
d9-N-EtFOSE-M	96		10 - 150	11/04/21 19:19	11/06/21 19:22	1
M2-4:2 FTS	107		25 - 150	11/04/21 19:19	11/06/21 19:22	1
M2-6:2 FTS	105		25 - 150	11/04/21 19:19	11/06/21 19:22	1
M2-8:2 FTS	144		25 - 150	11/04/21 19:19	11/06/21 19:22	1
13C3 HFPO-DA	103		25 - 150	11/04/21 19:19	11/06/21 19:22	1
13C2 10:2 FTS	154	*5+	25 - 150	11/04/21 19:19	11/06/21 19:22	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-8S 815**

**Lab Sample ID: 320-81211-8**

**Date Collected: 11/01/21 12:45**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.2	2.0	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluoropentanoic acid (PFPeA)	<0.41		1.7	0.41	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorohexanoic acid (PFHxA)	<0.49		1.7	0.49	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluoroheptanoic acid (PFHpA)	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorooctanoic acid (PFOA)	<0.71		1.7	0.71	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluoroundecanoic acid (PFUnA)	<0.92		1.7	0.92	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorododecanoic acid (PFDoA)	<0.46		1.7	0.46	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorotridecanoic acid (PFTTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorotetradecanoic acid (PFTeA)	<0.61		1.7	0.61	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.75		1.7	0.75	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.79		1.7	0.79	ng/L		11/04/21 19:19	11/06/21 19:32	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.84</b>	<b>J</b>	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.25		1.7	0.25	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorohexanesulfonic acid (PFHxS)	<0.48		1.7	0.48	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.7	0.16	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorooctanesulfonic acid (PFOS)	<0.45		1.7	0.45	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorononanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorododecanesulfonic acid (PFDoS)	<0.82		1.7	0.82	ng/L		11/04/21 19:19	11/06/21 19:32	1
Perfluorooctanesulfonamide (FOSA)	<0.82		1.7	0.82	ng/L		11/04/21 19:19	11/06/21 19:32	1
NEtFOSA	<0.73		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 19:32	1
NMeFOSA	<0.36		1.7	0.36	ng/L		11/04/21 19:19	11/06/21 19:32	1
NMeFOSAA	<1.0		4.2	1.0	ng/L		11/04/21 19:19	11/06/21 19:32	1
NEtFOSAA	<1.1		4.2	1.1	ng/L		11/04/21 19:19	11/06/21 19:32	1
NMeFOSE	<1.2		3.4	1.2	ng/L		11/04/21 19:19	11/06/21 19:32	1
NEtFOSE	<0.71		1.7	0.71	ng/L		11/04/21 19:19	11/06/21 19:32	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 19:32	1
6:2 FTS	<2.1		4.2	2.1	ng/L		11/04/21 19:19	11/06/21 19:32	1
8:2 FTS	<0.39		1.7	0.39	ng/L		11/04/21 19:19	11/06/21 19:32	1
10:2 FTS	<0.56		1.7	0.56	ng/L		11/04/21 19:19	11/06/21 19:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/04/21 19:19	11/06/21 19:32	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/04/21 19:19	11/06/21 19:32	1
9Cl-PF3ONS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 19:32	1
11Cl-PF3OUdS	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 19:32	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFBA	103		25 - 150				11/04/21 19:19	11/06/21 19:32	1
13C5 PFPeA	104		25 - 150				11/04/21 19:19	11/06/21 19:32	1
13C2 PFHxA	103		25 - 150				11/04/21 19:19	11/06/21 19:32	1
13C4 PFHpA	112		25 - 150				11/04/21 19:19	11/06/21 19:32	1
13C4 PFOA	108		25 - 150				11/04/21 19:19	11/06/21 19:32	1
13C5 PFNA	107		25 - 150				11/04/21 19:19	11/06/21 19:32	1
13C2 PFDA	102		25 - 150				11/04/21 19:19	11/06/21 19:32	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-8S 815**

**Lab Sample ID: 320-81211-8**

**Date Collected: 11/01/21 12:45**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFluA	100		25 - 150	11/04/21 19:19	11/06/21 19:32	1
13C2 PFlDoA	92		25 - 150	11/04/21 19:19	11/06/21 19:32	1
13C2 PFlTeDA	92		25 - 150	11/04/21 19:19	11/06/21 19:32	1
13C2 PFlHxDA	91		25 - 150	11/04/21 19:19	11/06/21 19:32	1
13C3 PFlBS	116		25 - 150	11/04/21 19:19	11/06/21 19:32	1
18O2 PFlHxS	101		25 - 150	11/04/21 19:19	11/06/21 19:32	1
13C4 PFlOS	109		25 - 150	11/04/21 19:19	11/06/21 19:32	1
13C8 FOSA	92		10 - 150	11/04/21 19:19	11/06/21 19:32	1
d3-NMeFOSAA	94		25 - 150	11/04/21 19:19	11/06/21 19:32	1
d5-NEtFOSAA	93		25 - 150	11/04/21 19:19	11/06/21 19:32	1
d-N-MeFOSA-M	90		10 - 150	11/04/21 19:19	11/06/21 19:32	1
d-N-EtFOSA-M	86		10 - 150	11/04/21 19:19	11/06/21 19:32	1
d7-N-MeFOSE-M	91		10 - 150	11/04/21 19:19	11/06/21 19:32	1
d9-N-EtFOSE-M	94		10 - 150	11/04/21 19:19	11/06/21 19:32	1
M2-4:2 FTS	121		25 - 150	11/04/21 19:19	11/06/21 19:32	1
M2-6:2 FTS	100		25 - 150	11/04/21 19:19	11/06/21 19:32	1
M2-8:2 FTS	102		25 - 150	11/04/21 19:19	11/06/21 19:32	1
13C3 HFPO-DA	103		25 - 150	11/04/21 19:19	11/06/21 19:32	1
13C2 10:2 FTS	98		25 - 150	11/04/21 19:19	11/06/21 19:32	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-8 814**

**Lab Sample ID: 320-81211-9**

**Date Collected: 11/01/21 13:00**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.6	2.2	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluoropentanoic acid (PFPeA)	<0.45		1.8	0.45	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorohexanoic acid (PFHxA)	<0.53		1.8	0.53	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.8	0.23	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorooctanoic acid (PFOA)	<0.78		1.8	0.78	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorononanoic acid (PFNA)	<0.25		1.8	0.25	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorotridecanoic acid (PFTTrDA)	<1.2		1.8	1.2	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorotetradecanoic acid (PFTeA)	<0.67		1.8	0.67	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.81		1.8	0.81	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.86		1.8	0.86	ng/L		11/04/21 19:19	11/06/21 19:42	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>1.7 J</b>		1.8	0.18	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.52		1.8	0.52	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		11/04/21 19:19	11/06/21 19:42	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>0.73 J</b>		1.8	0.49	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorododecanesulfonic acid (PFDoS)	<0.89		1.8	0.89	ng/L		11/04/21 19:19	11/06/21 19:42	1
Perfluorooctanesulfonamide (FOSA)	<0.90		1.8	0.90	ng/L		11/04/21 19:19	11/06/21 19:42	1
NEtFOSA	<0.80		1.8	0.80	ng/L		11/04/21 19:19	11/06/21 19:42	1
NMeFOSA	<0.39		1.8	0.39	ng/L		11/04/21 19:19	11/06/21 19:42	1
NMeFOSAA	<1.1		4.6	1.1	ng/L		11/04/21 19:19	11/06/21 19:42	1
NEtFOSAA	<1.2		4.6	1.2	ng/L		11/04/21 19:19	11/06/21 19:42	1
NMeFOSE	<1.3		3.7	1.3	ng/L		11/04/21 19:19	11/06/21 19:42	1
NEtFOSE	<0.78		1.8	0.78	ng/L		11/04/21 19:19	11/06/21 19:42	1
4:2 FTS	<0.22		1.8	0.22	ng/L		11/04/21 19:19	11/06/21 19:42	1
6:2 FTS	<2.3		4.6	2.3	ng/L		11/04/21 19:19	11/06/21 19:42	1
8:2 FTS	<0.42		1.8	0.42	ng/L		11/04/21 19:19	11/06/21 19:42	1
10:2 FTS	<0.61		1.8	0.61	ng/L		11/04/21 19:19	11/06/21 19:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		1.8	0.37	ng/L		11/04/21 19:19	11/06/21 19:42	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		11/04/21 19:19	11/06/21 19:42	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		11/04/21 19:19	11/06/21 19:42	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		11/04/21 19:19	11/06/21 19:42	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFBA	102		25 - 150				11/04/21 19:19	11/06/21 19:42	1
13C5 PFPeA	104		25 - 150				11/04/21 19:19	11/06/21 19:42	1
13C2 PFHxA	103		25 - 150				11/04/21 19:19	11/06/21 19:42	1
13C4 PFHpA	111		25 - 150				11/04/21 19:19	11/06/21 19:42	1
13C4 PFOA	108		25 - 150				11/04/21 19:19	11/06/21 19:42	1
13C5 PFNA	104		25 - 150				11/04/21 19:19	11/06/21 19:42	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-8 814**

**Lab Sample ID: 320-81211-9**

**Date Collected: 11/01/21 13:00**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDA	96		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C2 PFUnA	89		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C2 PFDoA	90		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C2 PFTeDA	90		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C2 PFHxDA	92		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C3 PFBS	114		25 - 150	11/04/21 19:19	11/06/21 19:42	1
18O2 PFHxS	104		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C4 PFOS	105		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C8 FOSA	93		10 - 150	11/04/21 19:19	11/06/21 19:42	1
d3-NMeFOSAA	93		25 - 150	11/04/21 19:19	11/06/21 19:42	1
d5-NEtFOSAA	86		25 - 150	11/04/21 19:19	11/06/21 19:42	1
d-N-MeFOSA-M	89		10 - 150	11/04/21 19:19	11/06/21 19:42	1
d-N-EtFOSA-M	87		10 - 150	11/04/21 19:19	11/06/21 19:42	1
d7-N-MeFOSE-M	93		10 - 150	11/04/21 19:19	11/06/21 19:42	1
d9-N-EtFOSE-M	94		10 - 150	11/04/21 19:19	11/06/21 19:42	1
M2-4:2 FTS	106		25 - 150	11/04/21 19:19	11/06/21 19:42	1
M2-6:2 FTS	103		25 - 150	11/04/21 19:19	11/06/21 19:42	1
M2-8:2 FTS	97		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C3 HFPO-DA	103		25 - 150	11/04/21 19:19	11/06/21 19:42	1
13C2 10:2 FTS	89		25 - 150	11/04/21 19:19	11/06/21 19:42	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-7D 813**

**Lab Sample ID: 320-81211-10**

**Date Collected: 11/01/21 13:15**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.6		4.5	2.2	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluoropentanoic acid (PFPeA)	3.0		1.8	0.45	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorohexanoic acid (PFHxA)	3.3		1.8	0.53	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluoroheptanoic acid (PFHpA)	1.6	J	1.8	0.23	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorooctanoic acid (PFOA)	5.6		1.8	0.77	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorononanoic acid (PFNA)	<0.25		1.8	0.25	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.81		1.8	0.81	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.85		1.8	0.85	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorobutanesulfonic acid (PFBS)	0.65	J	1.8	0.18	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluoropentanesulfonic acid (PFPeS)	0.40	J	1.8	0.27	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.8	0.52	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		11/04/21 19:19	11/09/21 04:52	1
Perfluorooctanesulfonamide (FOSA)	<0.89		1.8	0.89	ng/L		11/04/21 19:19	11/09/21 04:52	1
NEtFOSA	<0.79		1.8	0.79	ng/L		11/04/21 19:19	11/09/21 04:52	1
NMeFOSA	<0.39		1.8	0.39	ng/L		11/04/21 19:19	11/09/21 04:52	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		11/04/21 19:19	11/09/21 04:52	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		11/04/21 19:19	11/09/21 04:52	1
NMeFOSE	<1.3		3.6	1.3	ng/L		11/04/21 19:19	11/09/21 04:52	1
NEtFOSE	<0.77		1.8	0.77	ng/L		11/04/21 19:19	11/09/21 04:52	1
4:2 FTS	<0.22		1.8	0.22	ng/L		11/04/21 19:19	11/09/21 04:52	1
6:2 FTS	<2.3		4.5	2.3	ng/L		11/04/21 19:19	11/09/21 04:52	1
8:2 FTS	<0.42		1.8	0.42	ng/L		11/04/21 19:19	11/09/21 04:52	1
10:2 FTS	<0.61		1.8	0.61	ng/L		11/04/21 19:19	11/09/21 04:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		11/04/21 19:19	11/09/21 04:52	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		11/04/21 19:19	11/09/21 04:52	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		11/04/21 19:19	11/09/21 04:52	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		11/04/21 19:19	11/09/21 04:52	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	98		25 - 150				11/04/21 19:19	11/09/21 04:52	1
13C5 PFPeA	111		25 - 150				11/04/21 19:19	11/09/21 04:52	1
13C2 PFHxA	105		25 - 150				11/04/21 19:19	11/09/21 04:52	1
13C4 PFHpA	107		25 - 150				11/04/21 19:19	11/09/21 04:52	1
13C4 PFOA	105		25 - 150				11/04/21 19:19	11/09/21 04:52	1
13C5 PFNA	107		25 - 150				11/04/21 19:19	11/09/21 04:52	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-7D 813**

**Lab Sample ID: 320-81211-10**

**Date Collected: 11/01/21 13:15**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDA	103		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C2 PFUnA	102		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C2 PFDoA	98		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C2 PFTeDA	92		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C2 PFHxDA	105		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C3 PFBS	117		25 - 150	11/04/21 19:19	11/09/21 04:52	1
18O2 PFHxS	104		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C4 PFOS	108		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C8 FOSA	94		10 - 150	11/04/21 19:19	11/09/21 04:52	1
d3-NMeFOSAA	97		25 - 150	11/04/21 19:19	11/09/21 04:52	1
d5-NEtFOSAA	106		25 - 150	11/04/21 19:19	11/09/21 04:52	1
d-N-MeFOSA-M	95		10 - 150	11/04/21 19:19	11/09/21 04:52	1
d-N-EtFOSA-M	88		10 - 150	11/04/21 19:19	11/09/21 04:52	1
d7-N-MeFOSE-M	98		10 - 150	11/04/21 19:19	11/09/21 04:52	1
d9-N-EtFOSE-M	97		10 - 150	11/04/21 19:19	11/09/21 04:52	1
M2-4:2 FTS	120		25 - 150	11/04/21 19:19	11/09/21 04:52	1
M2-6:2 FTS	108		25 - 150	11/04/21 19:19	11/09/21 04:52	1
M2-8:2 FTS	147		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C3 HFPO-DA	102		25 - 150	11/04/21 19:19	11/09/21 04:52	1
13C2 10:2 FTS	143		25 - 150	11/04/21 19:19	11/09/21 04:52	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-7SR 902**

**Lab Sample ID: 320-81211-11**

**Date Collected: 11/01/21 13:40**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.8		4.1	2.0	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluoropentanoic acid (PFPeA)	8.5		1.7	0.40	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorohexanoic acid (PFHxA)	9.7		1.7	0.48	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluoroheptanoic acid (PFHpA)	6.9		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorooctanoic acid (PFOA)	27		1.7	0.70	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorononanoic acid (PFNA)	<0.22		1.7	0.22	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluoroundecanoic acid (PFUnA)	<0.91		1.7	0.91	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorododecanoic acid (PFDoA)	<0.45		1.7	0.45	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorotetradecanoic acid (PFTeA)	<0.60		1.7	0.60	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.74		1.7	0.74	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.78		1.7	0.78	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluoropentanesulfonic acid (PFPeS)	0.92	J	1.7	0.25	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorohexanesulfonic acid (PFHxS)	3.2		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.35	J	1.7	0.16	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorooctanesulfonic acid (PFOS)	4.1		1.7	0.45	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorononanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorodecanesulfonic acid (PFDS)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorododecanesulfonic acid (PFDoS)	<0.80		1.7	0.80	ng/L		11/04/21 19:19	11/06/21 20:23	1
Perfluorooctanesulfonamide (FOSA)	<0.81		1.7	0.81	ng/L		11/04/21 19:19	11/06/21 20:23	1
NEtFOSA	<0.72		1.7	0.72	ng/L		11/04/21 19:19	11/06/21 20:23	1
NMeFOSA	<0.36		1.7	0.36	ng/L		11/04/21 19:19	11/06/21 20:23	1
NMeFOSAA	<0.99		4.1	0.99	ng/L		11/04/21 19:19	11/06/21 20:23	1
NEtFOSAA	<1.1		4.1	1.1	ng/L		11/04/21 19:19	11/06/21 20:23	1
NMeFOSE	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/06/21 20:23	1
NEtFOSE	<0.70		1.7	0.70	ng/L		11/04/21 19:19	11/06/21 20:23	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 20:23	1
6:2 FTS	<2.1		4.1	2.1	ng/L		11/04/21 19:19	11/06/21 20:23	1
8:2 FTS	<0.38		1.7	0.38	ng/L		11/04/21 19:19	11/06/21 20:23	1
10:2 FTS	<0.55		1.7	0.55	ng/L		11/04/21 19:19	11/06/21 20:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.33		1.7	0.33	ng/L		11/04/21 19:19	11/06/21 20:23	1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/06/21 20:23	1
9Cl-PF3ONS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 20:23	1
11Cl-PF3OUdS	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 20:23	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	86		25 - 150				11/04/21 19:19	11/06/21 20:23	1
13C5 PFPeA	101		25 - 150				11/04/21 19:19	11/06/21 20:23	1
13C2 PFHxA	101		25 - 150				11/04/21 19:19	11/06/21 20:23	1
13C4 PFHpA	107		25 - 150				11/04/21 19:19	11/06/21 20:23	1
13C4 PFOA	106		25 - 150				11/04/21 19:19	11/06/21 20:23	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-7SR 902**

**Lab Sample ID: 320-81211-11**

**Date Collected: 11/01/21 13:40**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	104		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C2 PFDA	98		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C2 PFUnA	93		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C2 PFDoA	98		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C2 PFTeDA	87		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C2 PFHxDA	99		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C3 PFBS	101		25 - 150	11/04/21 19:19	11/06/21 20:23	1
18O2 PFHxS	100		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C4 PFOS	105		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C8 FOSA	87		10 - 150	11/04/21 19:19	11/06/21 20:23	1
d3-NMeFOSAA	103		25 - 150	11/04/21 19:19	11/06/21 20:23	1
d5-NEtFOSAA	98		25 - 150	11/04/21 19:19	11/06/21 20:23	1
d-N-MeFOSA-M	84		10 - 150	11/04/21 19:19	11/06/21 20:23	1
d-N-EtFOSA-M	81		10 - 150	11/04/21 19:19	11/06/21 20:23	1
d7-N-MeFOSE-M	92		10 - 150	11/04/21 19:19	11/06/21 20:23	1
d9-N-EtFOSE-M	89		10 - 150	11/04/21 19:19	11/06/21 20:23	1
M2-4:2 FTS	131		25 - 150	11/04/21 19:19	11/06/21 20:23	1
M2-6:2 FTS	119		25 - 150	11/04/21 19:19	11/06/21 20:23	1
M2-8:2 FTS	133		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C3 HFPO-DA	102		25 - 150	11/04/21 19:19	11/06/21 20:23	1
13C2 10:2 FTS	142		25 - 150	11/04/21 19:19	11/06/21 20:23	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-7 811**

**Lab Sample ID: 320-81211-12**

**Date Collected: 11/01/21 14:00**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.9		4.2	2.0	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluoropentanoic acid (PFPeA)	5.4		1.7	0.42	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorohexanoic acid (PFHxA)	6.3		1.7	0.49	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluoroheptanoic acid (PFHpA)	4.5		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorooctanoic acid (PFOA)	19		1.7	0.72	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluoroundecanoic acid (PFUnA)	<0.93		1.7	0.93	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorododecanoic acid (PFDoA)	<0.47		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorotetradecanoic acid (PFTeA)	<0.62		1.7	0.62	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.76		1.7	0.76	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.80		1.7	0.80	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorobutanesulfonic acid (PFBS)	0.79	J	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluoropentanesulfonic acid (PFPeS)	0.69	J	1.7	0.25	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		1.7	0.48	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.35	J	1.7	0.16	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorooctanesulfonic acid (PFOS)	6.9		1.7	0.46	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorononanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorododecanesulfonic acid (PFDoS)	<0.82		1.7	0.82	ng/L		11/04/21 19:19	11/06/21 20:33	1
Perfluorooctanesulfonamide (FOSA)	<0.83		1.7	0.83	ng/L		11/04/21 19:19	11/06/21 20:33	1
NEtFOSA	<0.74		1.7	0.74	ng/L		11/04/21 19:19	11/06/21 20:33	1
NMeFOSA	<0.37		1.7	0.37	ng/L		11/04/21 19:19	11/06/21 20:33	1
NMeFOSAA	<1.0		4.2	1.0	ng/L		11/04/21 19:19	11/06/21 20:33	1
NEtFOSAA	<1.1		4.2	1.1	ng/L		11/04/21 19:19	11/06/21 20:33	1
NMeFOSE	<1.2		3.4	1.2	ng/L		11/04/21 19:19	11/06/21 20:33	1
NEtFOSE	<0.72		1.7	0.72	ng/L		11/04/21 19:19	11/06/21 20:33	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 20:33	1
6:2 FTS	<2.1		4.2	2.1	ng/L		11/04/21 19:19	11/06/21 20:33	1
8:2 FTS	<0.39		1.7	0.39	ng/L		11/04/21 19:19	11/06/21 20:33	1
10:2 FTS	<0.57		1.7	0.57	ng/L		11/04/21 19:19	11/06/21 20:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/04/21 19:19	11/06/21 20:33	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/04/21 19:19	11/06/21 20:33	1
9Cl-PF3ONS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 20:33	1
11Cl-PF3OUdS	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 20:33	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	73		25 - 150				11/04/21 19:19	11/06/21 20:33	1
13C5 PFPeA	98		25 - 150				11/04/21 19:19	11/06/21 20:33	1
13C2 PFHxA	106		25 - 150				11/04/21 19:19	11/06/21 20:33	1
13C4 PFHpA	116		25 - 150				11/04/21 19:19	11/06/21 20:33	1
13C4 PFOA	113		25 - 150				11/04/21 19:19	11/06/21 20:33	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-7 811**

**Lab Sample ID: 320-81211-12**

**Date Collected: 11/01/21 14:00**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	108		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C2 PFDA	104		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C2 PFUnA	94		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C2 PFDoA	93		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C2 PFTeDA	86		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C2 PFHxDA	91		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C3 PFBS	110		25 - 150	11/04/21 19:19	11/06/21 20:33	1
18O2 PFHxS	99		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C4 PFOS	107		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C8 FOSA	87		10 - 150	11/04/21 19:19	11/06/21 20:33	1
d3-NMeFOSAA	87		25 - 150	11/04/21 19:19	11/06/21 20:33	1
d5-NEtFOSAA	86		25 - 150	11/04/21 19:19	11/06/21 20:33	1
d-N-MeFOSA-M	87		10 - 150	11/04/21 19:19	11/06/21 20:33	1
d-N-EtFOSA-M	84		10 - 150	11/04/21 19:19	11/06/21 20:33	1
d7-N-MeFOSE-M	90		10 - 150	11/04/21 19:19	11/06/21 20:33	1
d9-N-EtFOSE-M	94		10 - 150	11/04/21 19:19	11/06/21 20:33	1
M2-4:2 FTS	130		25 - 150	11/04/21 19:19	11/06/21 20:33	1
M2-6:2 FTS	105		25 - 150	11/04/21 19:19	11/06/21 20:33	1
M2-8:2 FTS	100		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C3 HFPO-DA	100		25 - 150	11/04/21 19:19	11/06/21 20:33	1
13C2 10:2 FTS	95		25 - 150	11/04/21 19:19	11/06/21 20:33	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-1D 807**

**Lab Sample ID: 320-81211-13**

**Date Collected: 11/01/21 14:20**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.2	2.0	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluoropentanoic acid (PFPeA)	<0.41		1.7	0.41	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorohexanoic acid (PFHxA)	<0.48		1.7	0.48	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluoroheptanoic acid (PFHpA)	<0.21		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorooctanoic acid (PFOA)	<0.71		1.7	0.71	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorononanoic acid (PFNA)	<0.22		1.7	0.22	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluoroundecanoic acid (PFUnA)	<0.91		1.7	0.91	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorododecanoic acid (PFDoA)	<0.46		1.7	0.46	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorotridecanoic acid (PFTTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorotetradecanoic acid (PFTeA)	<0.61		1.7	0.61	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.74		1.7	0.74	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.78		1.7	0.78	ng/L		11/04/21 19:19	11/06/21 20:43	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.58</b>	<b>J</b>	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluoropentanesulfonic acid (PFPeS)	<0.25		1.7	0.25	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorohexanesulfonic acid (PFHxS)	<0.47		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.7	0.16	ng/L		11/04/21 19:19	11/06/21 20:43	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>1.0</b>	<b>J</b>	1.7	0.45	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluoronanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorododecanesulfonic acid (PFDoS)	<0.81		1.7	0.81	ng/L		11/04/21 19:19	11/06/21 20:43	1
Perfluorooctanesulfonamide (FOSA)	<0.82		1.7	0.82	ng/L		11/04/21 19:19	11/06/21 20:43	1
NEtFOSA	<0.72		1.7	0.72	ng/L		11/04/21 19:19	11/06/21 20:43	1
NMeFOSA	<0.36		1.7	0.36	ng/L		11/04/21 19:19	11/06/21 20:43	1
NMeFOSAA	<1.0		4.2	1.0	ng/L		11/04/21 19:19	11/06/21 20:43	1
NEtFOSAA	<1.1		4.2	1.1	ng/L		11/04/21 19:19	11/06/21 20:43	1
NMeFOSE	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/06/21 20:43	1
NEtFOSE	<0.71		1.7	0.71	ng/L		11/04/21 19:19	11/06/21 20:43	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 20:43	1
6:2 FTS	<2.1		4.2	2.1	ng/L		11/04/21 19:19	11/06/21 20:43	1
8:2 FTS	<0.38		1.7	0.38	ng/L		11/04/21 19:19	11/06/21 20:43	1
10:2 FTS	<0.56		1.7	0.56	ng/L		11/04/21 19:19	11/06/21 20:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.33		1.7	0.33	ng/L		11/04/21 19:19	11/06/21 20:43	1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/06/21 20:43	1
9Cl-PF3ONS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 20:43	1
11Cl-PF3OUdS	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 20:43	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFBA	105		25 - 150				11/04/21 19:19	11/06/21 20:43	1
13C5 PFPeA	109		25 - 150				11/04/21 19:19	11/06/21 20:43	1
13C2 PFHxA	105		25 - 150				11/04/21 19:19	11/06/21 20:43	1
13C4 PFHpA	116		25 - 150				11/04/21 19:19	11/06/21 20:43	1
13C4 PFOA	107		25 - 150				11/04/21 19:19	11/06/21 20:43	1
13C5 PFNA	106		25 - 150				11/04/21 19:19	11/06/21 20:43	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-1D 807**

**Lab Sample ID: 320-81211-13**

**Date Collected: 11/01/21 14:20**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDA	105		25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C2 PFUnA	101		25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C2 PFDoA	100		25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C2 PFTeDA	89		25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C2 PFHxDA	99		25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C3 PFBS	113		25 - 150	11/04/21 19:19	11/06/21 20:43	1
18O2 PFHxS	103		25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C4 PFOS	108		25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C8 FOSA	92		10 - 150	11/04/21 19:19	11/06/21 20:43	1
d3-NMeFOSAA	117		25 - 150	11/04/21 19:19	11/06/21 20:43	1
d5-NEtFOSAA	115		25 - 150	11/04/21 19:19	11/06/21 20:43	1
d-N-MeFOSA-M	89		10 - 150	11/04/21 19:19	11/06/21 20:43	1
d-N-EtFOSA-M	83		10 - 150	11/04/21 19:19	11/06/21 20:43	1
d7-N-MeFOSE-M	95		10 - 150	11/04/21 19:19	11/06/21 20:43	1
d9-N-EtFOSE-M	100		10 - 150	11/04/21 19:19	11/06/21 20:43	1
M2-4:2 FTS	118		25 - 150	11/04/21 19:19	11/06/21 20:43	1
M2-6:2 FTS	112		25 - 150	11/04/21 19:19	11/06/21 20:43	1
M2-8:2 FTS	157	*5+	25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C3 HFPO-DA	103		25 - 150	11/04/21 19:19	11/06/21 20:43	1
13C2 10:2 FTS	166	*5+	25 - 150	11/04/21 19:19	11/06/21 20:43	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-1S 806**

**Lab Sample ID: 320-81211-14**

Date Collected: 11/01/21 14:40

Matrix: Groundwater

Date Received: 11/03/21 10:35

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.8		4.3	2.0	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluoropentanoic acid (PFPeA)	9.9		1.7	0.42	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorohexanoic acid (PFHxA)	11		1.7	0.50	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluoroheptanoic acid (PFHpA)	7.7		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorooctanoic acid (PFOA)	32		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorononanoic acid (PFNA)	0.40	J	1.7	0.23	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluoroundecanoic acid (PFUnA)	<0.94		1.7	0.94	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorododecanoic acid (PFDoA)	<0.47		1.7	0.47	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorotetradecanoic acid (PFTeA)	<0.62		1.7	0.62	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.76		1.7	0.76	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.80		1.7	0.80	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorobutanesulfonic acid (PFBS)	0.94	J	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluoropentanesulfonic acid (PFPeS)	0.80	J	1.7	0.26	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorohexanesulfonic acid (PFHxS)	3.6		1.7	0.49	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.34	J	1.7	0.16	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorooctanesulfonic acid (PFOS)	5.5		1.7	0.46	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.7	0.32	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorododecanesulfonic acid (PFDoS)	<0.83		1.7	0.83	ng/L		11/04/21 19:19	11/06/21 20:53	1
Perfluorooctanesulfonamide (FOSA)	<0.84		1.7	0.84	ng/L		11/04/21 19:19	11/06/21 20:53	1
NEtFOSA	<0.74		1.7	0.74	ng/L		11/04/21 19:19	11/06/21 20:53	1
NMeFOSA	<0.37		1.7	0.37	ng/L		11/04/21 19:19	11/06/21 20:53	1
NMeFOSAA	<1.0		4.3	1.0	ng/L		11/04/21 19:19	11/06/21 20:53	1
NEtFOSAA	<1.1		4.3	1.1	ng/L		11/04/21 19:19	11/06/21 20:53	1
NMeFOSE	<1.2		3.4	1.2	ng/L		11/04/21 19:19	11/06/21 20:53	1
NEtFOSE	<0.73		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 20:53	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 20:53	1
6:2 FTS	<2.1		4.3	2.1	ng/L		11/04/21 19:19	11/06/21 20:53	1
8:2 FTS	<0.39		1.7	0.39	ng/L		11/04/21 19:19	11/06/21 20:53	1
10:2 FTS	<0.57		1.7	0.57	ng/L		11/04/21 19:19	11/06/21 20:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/04/21 19:19	11/06/21 20:53	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/04/21 19:19	11/06/21 20:53	1
9Cl-PF3ONS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 20:53	1
11Cl-PF3OUdS	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 20:53	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	83		25 - 150				11/04/21 19:19	11/06/21 20:53	1
13C5 PFPeA	105		25 - 150				11/04/21 19:19	11/06/21 20:53	1
13C2 PFHxA	104		25 - 150				11/04/21 19:19	11/06/21 20:53	1
13C4 PFHpA	113		25 - 150				11/04/21 19:19	11/06/21 20:53	1
13C4 PFOA	112		25 - 150				11/04/21 19:19	11/06/21 20:53	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-1S 806**

**Lab Sample ID: 320-81211-14**

**Date Collected: 11/01/21 14:40**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C5 PFNA	102		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C2 PFDA	102		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C2 PFUnA	92		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C2 PFDoA	93		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C2 PFTeDA	87		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C2 PFHxDA	89		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C3 PFBS	114		25 - 150	11/04/21 19:19	11/06/21 20:53	1
18O2 PFHxS	104		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C4 PFOS	113		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C8 FOSA	90		10 - 150	11/04/21 19:19	11/06/21 20:53	1
d3-NMeFOSAA	105		25 - 150	11/04/21 19:19	11/06/21 20:53	1
d5-NEtFOSAA	100		25 - 150	11/04/21 19:19	11/06/21 20:53	1
d-N-MeFOSA-M	87		10 - 150	11/04/21 19:19	11/06/21 20:53	1
d-N-EtFOSA-M	83		10 - 150	11/04/21 19:19	11/06/21 20:53	1
d7-N-MeFOSE-M	84		10 - 150	11/04/21 19:19	11/06/21 20:53	1
d9-N-EtFOSE-M	88		10 - 150	11/04/21 19:19	11/06/21 20:53	1
M2-4:2 FTS	130		25 - 150	11/04/21 19:19	11/06/21 20:53	1
M2-6:2 FTS	115		25 - 150	11/04/21 19:19	11/06/21 20:53	1
M2-8:2 FTS	118		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C3 HFPO-DA	102		25 - 150	11/04/21 19:19	11/06/21 20:53	1
13C2 10:2 FTS	125		25 - 150	11/04/21 19:19	11/06/21 20:53	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-1 801**

**Lab Sample ID: 320-81211-15**

**Date Collected: 11/01/21 15:00**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.2	2.0	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluoropentanoic acid (PFPeA)</b>	<b>0.79</b>	<b>J</b>	1.7	0.41	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>1.3</b>	<b>J</b>	1.7	0.49	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluoroheptanoic acid (PFHpA)</b>	<b>2.7</b>		1.7	0.21	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>37</b>		1.7	0.71	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluorononanoic acid (PFNA)</b>	<b>0.31</b>	<b>J</b>	1.7	0.23	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluoroundecanoic acid (PFUnA)	<0.92		1.7	0.92	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluorododecanoic acid (PFDoA)	<0.46		1.7	0.46	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.7	1.1	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluorotetradecanoic acid (PFTeA)	<0.61		1.7	0.61	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.75		1.7	0.75	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.79		1.7	0.79	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>1.5</b>	<b>J</b>	1.7	0.17	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluoropentanesulfonic acid (PFPeS)</b>	<b>1.3</b>	<b>J</b>	1.7	0.25	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>3.8</b>		1.7	0.48	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluoroheptanesulfonic Acid (PFHpS)</b>	<b>1.3</b>	<b>J</b>	1.7	0.16	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>85</b>		1.7	0.45	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluorononanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluorododecanesulfonic acid (PFDoS)	<0.81		1.7	0.81	ng/L		11/04/21 19:19	11/06/21 21:03	1
Perfluorooctanesulfonamide (FOSA)	<0.82		1.7	0.82	ng/L		11/04/21 19:19	11/06/21 21:03	1
NEtFOSA	<0.73		1.7	0.73	ng/L		11/04/21 19:19	11/06/21 21:03	1
NMeFOSA	<0.36		1.7	0.36	ng/L		11/04/21 19:19	11/06/21 21:03	1
NMeFOSAA	<1.0		4.2	1.0	ng/L		11/04/21 19:19	11/06/21 21:03	1
NEtFOSAA	<1.1		4.2	1.1	ng/L		11/04/21 19:19	11/06/21 21:03	1
NMeFOSE	<1.2		3.4	1.2	ng/L		11/04/21 19:19	11/06/21 21:03	1
NEtFOSE	<0.71		1.7	0.71	ng/L		11/04/21 19:19	11/06/21 21:03	1
4:2 FTS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 21:03	1
6:2 FTS	<2.1		4.2	2.1	ng/L		11/04/21 19:19	11/06/21 21:03	1
8:2 FTS	<0.39		1.7	0.39	ng/L		11/04/21 19:19	11/06/21 21:03	1
10:2 FTS	<0.56		1.7	0.56	ng/L		11/04/21 19:19	11/06/21 21:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.34		1.7	0.34	ng/L		11/04/21 19:19	11/06/21 21:03	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		11/04/21 19:19	11/06/21 21:03	1
9Cl-PF3ONS	<0.20		1.7	0.20	ng/L		11/04/21 19:19	11/06/21 21:03	1
11Cl-PF3OUdS	<0.27		1.7	0.27	ng/L		11/04/21 19:19	11/06/21 21:03	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	95		25 - 150				11/04/21 19:19	11/06/21 21:03	1
13C5 PFPeA	109		25 - 150				11/04/21 19:19	11/06/21 21:03	1
13C2 PFHxA	105		25 - 150				11/04/21 19:19	11/06/21 21:03	1
13C4 PFHpA	108		25 - 150				11/04/21 19:19	11/06/21 21:03	1
13C4 PFOA	111		25 - 150				11/04/21 19:19	11/06/21 21:03	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: MW-1 801**

**Lab Sample ID: 320-81211-15**

**Date Collected: 11/01/21 15:00**

**Matrix: Groundwater**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	108		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C2 PFDA	101		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C2 PFUnA	94		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C2 PFDoA	93		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C2 PFTeDA	94		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C2 PFHxDA	96		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C3 PFBS	116		25 - 150	11/04/21 19:19	11/06/21 21:03	1
18O2 PFHxS	110		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C4 PFOS	116		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C8 FOSA	90		10 - 150	11/04/21 19:19	11/06/21 21:03	1
d3-NMeFOSAA	98		25 - 150	11/04/21 19:19	11/06/21 21:03	1
d5-NEtFOSAA	89		25 - 150	11/04/21 19:19	11/06/21 21:03	1
d-N-MeFOSA-M	91		10 - 150	11/04/21 19:19	11/06/21 21:03	1
d-N-EtFOSA-M	86		10 - 150	11/04/21 19:19	11/06/21 21:03	1
d7-N-MeFOSE-M	93		10 - 150	11/04/21 19:19	11/06/21 21:03	1
d9-N-EtFOSE-M	92		10 - 150	11/04/21 19:19	11/06/21 21:03	1
M2-4:2 FTS	106		25 - 150	11/04/21 19:19	11/06/21 21:03	1
M2-6:2 FTS	97		25 - 150	11/04/21 19:19	11/06/21 21:03	1
M2-8:2 FTS	95		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C3 HFPO-DA	102		25 - 150	11/04/21 19:19	11/06/21 21:03	1
13C2 10:2 FTS	94		25 - 150	11/04/21 19:19	11/06/21 21:03	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 320-81211-16**

**Date Collected: 11/01/21 10:00**

**Matrix: Water**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.1	2.0	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluoropentanoic acid (PFPeA)	<0.40		1.6	0.40	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorohexanoic acid (PFHxA)	<0.47		1.6	0.47	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluoroheptanoic acid (PFHpA)	<0.20		1.6	0.20	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorooctanoic acid (PFOA)	<0.69		1.6	0.69	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorononanoic acid (PFNA)	<0.22		1.6	0.22	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorodecanoic acid (PFDA)	<0.25		1.6	0.25	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluoroundecanoic acid (PFUnA)	<0.90		1.6	0.90	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorododecanoic acid (PFDoA)	<0.45		1.6	0.45	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.6	1.1	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorotetradecanoic acid (PFTeA)	<0.59		1.6	0.59	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.72		1.6	0.72	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.77		1.6	0.77	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorobutanesulfonic acid (PFBS)	<0.16		1.6	0.16	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluoropentanesulfonic acid (PFPeS)	<0.24		1.6	0.24	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorohexanesulfonic acid (PFHxS)	<0.46		1.6	0.46	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.15		1.6	0.15	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorooctanesulfonic acid (PFOS)	<0.44		1.6	0.44	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorononanesulfonic acid (PFNS)	<0.30		1.6	0.30	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorodecanesulfonic acid (PFDS)	<0.26		1.6	0.26	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorododecanesulfonic acid (PFDoS)	<0.79		1.6	0.79	ng/L		11/04/21 19:19	11/05/21 16:06	1
Perfluorooctanesulfonamide (FOSA)	<0.80		1.6	0.80	ng/L		11/04/21 19:19	11/05/21 16:06	1
NEtFOSA	<0.71		1.6	0.71	ng/L		11/04/21 19:19	11/05/21 16:06	1
NMeFOSA	<0.35		1.6	0.35	ng/L		11/04/21 19:19	11/05/21 16:06	1
NMeFOSAA	<0.98		4.1	0.98	ng/L		11/04/21 19:19	11/05/21 16:06	1
NEtFOSAA	<1.1		4.1	1.1	ng/L		11/04/21 19:19	11/05/21 16:06	1
NMeFOSE	<1.1		3.3	1.1	ng/L		11/04/21 19:19	11/05/21 16:06	1
NEtFOSE	<0.69		1.6	0.69	ng/L		11/04/21 19:19	11/05/21 16:06	1
4:2 FTS	<0.20		1.6	0.20	ng/L		11/04/21 19:19	11/05/21 16:06	1
6:2 FTS	<2.0		4.1	2.0	ng/L		11/04/21 19:19	11/05/21 16:06	1
8:2 FTS	<0.37		1.6	0.37	ng/L		11/04/21 19:19	11/05/21 16:06	1
10:2 FTS	<0.55		1.6	0.55	ng/L		11/04/21 19:19	11/05/21 16:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.33		1.6	0.33	ng/L		11/04/21 19:19	11/05/21 16:06	1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/05/21 16:06	1
9Cl-PF3ONS	<0.20		1.6	0.20	ng/L		11/04/21 19:19	11/05/21 16:06	1
11Cl-PF3OUdS	<0.26		1.6	0.26	ng/L		11/04/21 19:19	11/05/21 16:06	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	101		25 - 150				11/04/21 19:19	11/05/21 16:06	1
13C5 PFPeA	103		25 - 150				11/04/21 19:19	11/05/21 16:06	1
13C2 PFHxA	100		25 - 150				11/04/21 19:19	11/05/21 16:06	1
13C4 PFHpA	111		25 - 150				11/04/21 19:19	11/05/21 16:06	1
13C4 PFOA	102		25 - 150				11/04/21 19:19	11/05/21 16:06	1
13C5 PFNA	107		25 - 150				11/04/21 19:19	11/05/21 16:06	1
13C2 PFDA	99		25 - 150				11/04/21 19:19	11/05/21 16:06	1
13C2 PFUnA	99		25 - 150				11/04/21 19:19	11/05/21 16:06	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 320-81211-16**

**Date Collected: 11/01/21 10:00**

**Matrix: Water**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDoA	92		25 - 150	11/04/21 19:19	11/05/21 16:06	1
13C2 PFTeDA	91		25 - 150	11/04/21 19:19	11/05/21 16:06	1
13C2 PFHxDA	89		25 - 150	11/04/21 19:19	11/05/21 16:06	1
13C3 PFBS	106		25 - 150	11/04/21 19:19	11/05/21 16:06	1
18O2 PFHxS	98		25 - 150	11/04/21 19:19	11/05/21 16:06	1
13C4 PFOS	105		25 - 150	11/04/21 19:19	11/05/21 16:06	1
13C8 FOSA	89		10 - 150	11/04/21 19:19	11/05/21 16:06	1
d3-NMeFOSAA	93		25 - 150	11/04/21 19:19	11/05/21 16:06	1
d5-NEtFOSAA	91		25 - 150	11/04/21 19:19	11/05/21 16:06	1
d-N-MeFOSA-M	93		10 - 150	11/04/21 19:19	11/05/21 16:06	1
d-N-EtFOSA-M	85		10 - 150	11/04/21 19:19	11/05/21 16:06	1
d7-N-MeFOSE-M	98		10 - 150	11/04/21 19:19	11/05/21 16:06	1
d9-N-EtFOSE-M	96		10 - 150	11/04/21 19:19	11/05/21 16:06	1
M2-4:2 FTS	108		25 - 150	11/04/21 19:19	11/05/21 16:06	1
M2-6:2 FTS	95		25 - 150	11/04/21 19:19	11/05/21 16:06	1
M2-8:2 FTS	97		25 - 150	11/04/21 19:19	11/05/21 16:06	1
13C3 HFPO-DA	109		25 - 150	11/04/21 19:19	11/05/21 16:06	1
13C2 10:2 FTS	83		25 - 150	11/04/21 19:19	11/05/21 16:06	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: Equipment Blank**

**Lab Sample ID: 320-81211-17**

**Date Collected: 11/01/21 14:45**

**Matrix: Water**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.1		4.4	2.1	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluoropentanoic acid (PFPeA)	<0.43		1.8	0.43	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorohexanoic acid (PFHxA)	<0.51		1.8	0.51	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluoroheptanoic acid (PFHpA)	<0.22		1.8	0.22	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorooctanoic acid (PFOA)	<0.75		1.8	0.75	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorodecanoic acid (PFDA)	<0.27		1.8	0.27	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluoroundecanoic acid (PFUnA)	<0.97		1.8	0.97	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorododecanoic acid (PFDoA)	<0.48		1.8	0.48	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorotridecanoic acid (PFTTrDA)	<1.1		1.8	1.1	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorotetradecanoic acid (PFTeA)	<0.64		1.8	0.64	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.78		1.8	0.78	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.83		1.8	0.83	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluoropentanesulfonic acid (PFPeS)	<0.26		1.8	0.26	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorohexanesulfonic acid (PFHxS)	<0.50		1.8	0.50	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorooctanesulfonic acid (PFOS)	<0.47		1.8	0.47	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.8	0.32	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.8	0.28	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorododecanesulfonic acid (PFDoS)	<0.85		1.8	0.85	ng/L		11/04/21 19:19	11/05/21 16:16	1
Perfluorooctanesulfonamide (FOSA)	<0.86		1.8	0.86	ng/L		11/04/21 19:19	11/05/21 16:16	1
NEtFOSA	<0.76		1.8	0.76	ng/L		11/04/21 19:19	11/05/21 16:16	1
NMeFOSA	<0.38		1.8	0.38	ng/L		11/04/21 19:19	11/05/21 16:16	1
NMeFOSAA	<1.1		4.4	1.1	ng/L		11/04/21 19:19	11/05/21 16:16	1
NEtFOSAA	<1.1		4.4	1.1	ng/L		11/04/21 19:19	11/05/21 16:16	1
NMeFOSE	<1.2		3.5	1.2	ng/L		11/04/21 19:19	11/05/21 16:16	1
NEtFOSE	<0.75		1.8	0.75	ng/L		11/04/21 19:19	11/05/21 16:16	1
4:2 FTS	<0.21		1.8	0.21	ng/L		11/04/21 19:19	11/05/21 16:16	1
6:2 FTS	<2.2		4.4	2.2	ng/L		11/04/21 19:19	11/05/21 16:16	1
8:2 FTS	<0.40		1.8	0.40	ng/L		11/04/21 19:19	11/05/21 16:16	1
10:2 FTS	<0.59		1.8	0.59	ng/L		11/04/21 19:19	11/05/21 16:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.35		1.8	0.35	ng/L		11/04/21 19:19	11/05/21 16:16	1
HFPO-DA (GenX)	<1.3		3.5	1.3	ng/L		11/04/21 19:19	11/05/21 16:16	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		11/04/21 19:19	11/05/21 16:16	1
11Cl-PF3OUdS	<0.28		1.8	0.28	ng/L		11/04/21 19:19	11/05/21 16:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	104		25 - 150				11/04/21 19:19	11/05/21 16:16	1
13C5 PFPeA	109		25 - 150				11/04/21 19:19	11/05/21 16:16	1
13C2 PFHxA	106		25 - 150				11/04/21 19:19	11/05/21 16:16	1
13C4 PFHpA	111		25 - 150				11/04/21 19:19	11/05/21 16:16	1
13C4 PFOA	114		25 - 150				11/04/21 19:19	11/05/21 16:16	1
13C5 PFNA	110		25 - 150				11/04/21 19:19	11/05/21 16:16	1
13C2 PFDA	100		25 - 150				11/04/21 19:19	11/05/21 16:16	1
13C2 PFUnA	98		25 - 150				11/04/21 19:19	11/05/21 16:16	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: Equipment Blank**

**Lab Sample ID: 320-81211-17**

**Date Collected: 11/01/21 14:45**

**Matrix: Water**

**Date Received: 11/03/21 10:35**

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDoA	94		25 - 150	11/04/21 19:19	11/05/21 16:16	1
13C2 PFTeDA	91		25 - 150	11/04/21 19:19	11/05/21 16:16	1
13C2 PFHxDA	82		25 - 150	11/04/21 19:19	11/05/21 16:16	1
13C3 PFBS	111		25 - 150	11/04/21 19:19	11/05/21 16:16	1
18O2 PFHxS	101		25 - 150	11/04/21 19:19	11/05/21 16:16	1
13C4 PFOS	104		25 - 150	11/04/21 19:19	11/05/21 16:16	1
13C8 FOSA	89		10 - 150	11/04/21 19:19	11/05/21 16:16	1
d3-NMeFOSAA	92		25 - 150	11/04/21 19:19	11/05/21 16:16	1
d5-NEtFOSAA	87		25 - 150	11/04/21 19:19	11/05/21 16:16	1
d-N-MeFOSA-M	91		10 - 150	11/04/21 19:19	11/05/21 16:16	1
d-N-EtFOSA-M	85		10 - 150	11/04/21 19:19	11/05/21 16:16	1
d7-N-MeFOSE-M	98		10 - 150	11/04/21 19:19	11/05/21 16:16	1
d9-N-EtFOSE-M	96		10 - 150	11/04/21 19:19	11/05/21 16:16	1
M2-4:2 FTS	121		25 - 150	11/04/21 19:19	11/05/21 16:16	1
M2-6:2 FTS	95		25 - 150	11/04/21 19:19	11/05/21 16:16	1
M2-8:2 FTS	100		25 - 150	11/04/21 19:19	11/05/21 16:16	1
13C3 HFPO-DA	112		25 - 150	11/04/21 19:19	11/05/21 16:16	1
13C2 10:2 FTS	84		25 - 150	11/04/21 19:19	11/05/21 16:16	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-7D (Dup) 813**

**Lab Sample ID: 320-81211-18**

Date Collected: 11/01/21 13:20

Matrix: Groundwater

Date Received: 11/03/21 10:35

**Method: 537 (modified) - Fluorinated Alkyl Substances**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	7.1		4.1	2.0	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluoropentanoic acid (PFPeA)	3.3		1.6	0.40	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorohexanoic acid (PFHxA)	2.5		1.6	0.48	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluoroheptanoic acid (PFHpA)	1.5	J	1.6	0.21	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorooctanoic acid (PFOA)	4.2		1.6	0.70	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorononanoic acid (PFNA)	<0.22		1.6	0.22	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorodecanoic acid (PFDA)	<0.25		1.6	0.25	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluoroundecanoic acid (PFUnA)	<0.90		1.6	0.90	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorododecanoic acid (PFDoA)	<0.45		1.6	0.45	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.6	1.1	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorotetradecanoic acid (PFTeA)	<0.60		1.6	0.60	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.73		1.6	0.73	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluoro-n-octadecanoic acid (PFOA)	<0.77		1.6	0.77	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorobutanesulfonic acid (PFBS)	0.85	J	1.6	0.16	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluoropentanesulfonic acid (PFPeS)	0.47	J	1.6	0.25	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	1.6	0.47	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.6	0.16	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.6	0.44	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorononanesulfonic acid (PFNS)	<0.30		1.6	0.30	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorodecanesulfonic acid (PFDS)	<0.26		1.6	0.26	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorododecanesulfonic acid (PFDoS)	<0.80		1.6	0.80	ng/L		11/04/21 19:19	11/06/21 21:14	1
Perfluorooctanesulfonamide (FOSA)	<0.80		1.6	0.80	ng/L		11/04/21 19:19	11/06/21 21:14	1
NEtFOSA	<0.71		1.6	0.71	ng/L		11/04/21 19:19	11/06/21 21:14	1
NMeFOSA	<0.35		1.6	0.35	ng/L		11/04/21 19:19	11/06/21 21:14	1
NMeFOSAA	<0.99		4.1	0.99	ng/L		11/04/21 19:19	11/06/21 21:14	1
NEtFOSAA	<1.1		4.1	1.1	ng/L		11/04/21 19:19	11/06/21 21:14	1
NMeFOSE	<1.1		3.3	1.1	ng/L		11/04/21 19:19	11/06/21 21:14	1
NEtFOSE	<0.70		1.6	0.70	ng/L		11/04/21 19:19	11/06/21 21:14	1
4:2 FTS	<0.20		1.6	0.20	ng/L		11/04/21 19:19	11/06/21 21:14	1
6:2 FTS	<2.1		4.1	2.1	ng/L		11/04/21 19:19	11/06/21 21:14	1
8:2 FTS	<0.38		1.6	0.38	ng/L		11/04/21 19:19	11/06/21 21:14	1
10:2 FTS	<0.55		1.6	0.55	ng/L		11/04/21 19:19	11/06/21 21:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.33		1.6	0.33	ng/L		11/04/21 19:19	11/06/21 21:14	1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L		11/04/21 19:19	11/06/21 21:14	1
9Cl-PF3ONS	<0.20		1.6	0.20	ng/L		11/04/21 19:19	11/06/21 21:14	1
11Cl-PF3OUdS	<0.26		1.6	0.26	ng/L		11/04/21 19:19	11/06/21 21:14	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C4 PFBA	94		25 - 150				11/04/21 19:19	11/06/21 21:14	1
13C5 PFPeA	105		25 - 150				11/04/21 19:19	11/06/21 21:14	1
13C2 PFHxA	101		25 - 150				11/04/21 19:19	11/06/21 21:14	1
13C4 PFHpA	109		25 - 150				11/04/21 19:19	11/06/21 21:14	1
13C4 PFOA	109		25 - 150				11/04/21 19:19	11/06/21 21:14	1

Eurofins TestAmerica, Sacramento

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-7D (Dup) 813**

**Lab Sample ID: 320-81211-18**

Date Collected: 11/01/21 13:20

Matrix: Groundwater

Date Received: 11/03/21 10:35

**Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	105		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C2 PFDA	107		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C2 PFUnA	98		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C2 PFDoA	97		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C2 PFTeDA	90		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C2 PFHxDA	101		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C3 PFBS	107		25 - 150	11/04/21 19:19	11/06/21 21:14	1
18O2 PFHxS	101		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C4 PFOS	107		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C8 FOSA	90		10 - 150	11/04/21 19:19	11/06/21 21:14	1
d3-NMeFOSAA	91		25 - 150	11/04/21 19:19	11/06/21 21:14	1
d5-NEtFOSAA	100		25 - 150	11/04/21 19:19	11/06/21 21:14	1
d-N-MeFOSA-M	88		10 - 150	11/04/21 19:19	11/06/21 21:14	1
d-N-EtFOSA-M	83		10 - 150	11/04/21 19:19	11/06/21 21:14	1
d7-N-MeFOSE-M	93		10 - 150	11/04/21 19:19	11/06/21 21:14	1
d9-N-EtFOSE-M	95		10 - 150	11/04/21 19:19	11/06/21 21:14	1
M2-4:2 FTS	114		25 - 150	11/04/21 19:19	11/06/21 21:14	1
M2-6:2 FTS	107		25 - 150	11/04/21 19:19	11/06/21 21:14	1
M2-8:2 FTS	137		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C3 HFPO-DA	102		25 - 150	11/04/21 19:19	11/06/21 21:14	1
13C2 10:2 FTS	124		25 - 150	11/04/21 19:19	11/06/21 21:14	1

# Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Method: 537 (modified) - Fluorinated Alkyl Substances**

**Matrix: Groundwater**

**Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-81211-1	PZ-10D 822	101	107	99	110	111	103	95	96
320-81211-2	PZ-10S 821	102	109	106	113	114	113	100	100
320-81211-3	MW-10 820	104	113	111	112	115	113	103	78
320-81211-4	PZ-9D 819	107	111	108	115	114	105	102	103
320-81211-5	PZ-9S 818	80	109	106	114	113	108	100	98
320-81211-6	MW-9 817	104	117	109	119	112	113	110	105
320-81211-7	PZ-8D 816	104	105	99	107	105	100	103	100
320-81211-8	PZ-8S 815	103	104	103	112	108	107	102	100
320-81211-9	MW-8 814	102	104	103	111	108	104	96	89
320-81211-10	PZ-7D 813	98	111	105	107	105	107	103	102
320-81211-11	PZ-7SR 902	86	101	101	107	106	104	98	93
320-81211-12	MW-7 811	73	98	106	116	113	108	104	94
320-81211-13	PZ-1D 807	105	109	105	116	107	106	105	101
320-81211-14	PZ-1S 806	83	105	104	113	112	102	102	92
320-81211-15	MW-1 801	95	109	105	108	111	108	101	94
320-81211-18	PZ-7D (Dup) 813	94	105	101	109	109	105	107	98

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)
320-81211-1	PZ-10D 822	88	97	98	113	103	108	94	101
320-81211-2	PZ-10S 821	95	96	102	116	105	111	95	102
320-81211-3	MW-10 820	66	62	75	117	109	110	81	85
320-81211-4	PZ-9D 819	94	94	94	116	105	114	98	99
320-81211-5	PZ-9S 818	97	97	101	111	107	114	96	97
320-81211-6	MW-9 817	101	95	98	122	110	118	97	104
320-81211-7	PZ-8D 816	98	95	103	110	98	104	91	106
320-81211-8	PZ-8S 815	92	92	91	116	101	109	92	94
320-81211-9	MW-8 814	90	90	92	114	104	105	93	93
320-81211-10	PZ-7D 813	98	92	105	117	104	108	94	97
320-81211-11	PZ-7SR 902	98	87	99	101	100	105	87	103
320-81211-12	MW-7 811	93	86	91	110	99	107	87	87
320-81211-13	PZ-1D 807	100	89	99	113	103	108	92	117
320-81211-14	PZ-1S 806	93	87	89	114	104	113	90	105
320-81211-15	MW-1 801	93	94	96	116	110	116	90	98
320-81211-18	PZ-7D (Dup) 813	97	90	101	107	101	107	90	91

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
320-81211-1	PZ-10D 822	94	90	87	94	95	123	105	105
320-81211-2	PZ-10S 821	96	93	91	103	101	117	102	103
320-81211-3	MW-10 820	78	64	60	66	66	121	103	94
320-81211-4	PZ-9D 819	100	96	89	98	100	119	108	109
320-81211-5	PZ-9S 818	94	95	92	98	95	122	111	111
320-81211-6	MW-9 817	105	94	88	98	98	117	106	125
320-81211-7	PZ-8D 816	101	89	83	98	96	107	105	144
320-81211-8	PZ-8S 815	93	90	86	91	94	121	100	102
320-81211-9	MW-8 814	86	89	87	93	94	106	103	97
320-81211-10	PZ-7D 813	106	95	88	98	97	120	108	147
320-81211-11	PZ-7SR 902	98	84	81	92	89	131	119	133

Eurofins TestAmerica, Sacramento

# Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Groundwater

Prep Type: Total/NA

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
320-81211-12	MW-7 811	86	87	84	90	94	130	105	100
320-81211-13	PZ-1D 807	115	89	83	95	100	118	112	157 *5+
320-81211-14	PZ-1S 806	100	87	83	84	88	130	115	118
320-81211-15	MW-1 801	89	91	86	93	92	106	97	95
320-81211-18	PZ-7D (Dup) 813	100	88	83	93	95	114	107	137

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (25-150)	M102FTS (25-150)
320-81211-1	PZ-10D 822	104	96
320-81211-2	PZ-10S 821	107	102
320-81211-3	MW-10 820	112	65
320-81211-4	PZ-9D 819	106	110
320-81211-5	PZ-9S 818	99	106
320-81211-6	MW-9 817	107	116
320-81211-7	PZ-8D 816	103	154 *5+
320-81211-8	PZ-8S 815	103	98
320-81211-9	MW-8 814	103	89
320-81211-10	PZ-7D 813	102	143
320-81211-11	PZ-7SR 902	102	142
320-81211-12	MW-7 811	100	95
320-81211-13	PZ-1D 807	103	166 *5+
320-81211-14	PZ-1S 806	102	125
320-81211-15	MW-1 801	102	94
320-81211-18	PZ-7D (Dup) 813	102	124

### 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
- PFHxDA = 13C2 PFHxDA
- C3PFBS = 13C3 PFBS
- PFHxS = 18O2 PFHxS
- PFOS = 13C4 PFOS
- PFOSA = 13C8 FOSA
- d3NMFOS = d3-NMeFOSAA
- d5NEFOS = d5-NEtFOSAA
- dMeFOSA = d-N-MeFOSA-M
- dEtFOSA = d-N-EtFOSA-M
- NMFM = d7-N-MeFOSE-M
- NEFM = d9-N-EtFOSE-M
- M242FTS = M2-4:2 FTS
- M262FTS = M2-6:2 FTS
- M282FTS = M2-8:2 FTS

# Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2  
 HFPODA = 13C3 HFPO-DA  
 M102FTS = 13C2 10:2 FTS

Job ID: 320-81211-1

## Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-81211-16	Field Blank	101	103	100	111	102	107	99	99
320-81211-17	Equipment Blank	104	109	106	111	114	110	100	98
LCS 320-540156/2-A	Lab Control Sample	102	105	106	111	110	110	96	90
LCSD 320-540156/3-A	Lab Control Sample Dup	99	103	101	100	107	104	96	96
MB 320-540156/1-A	Method Blank	102	111	104	113	114	106	100	94

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)
320-81211-16	Field Blank	92	91	89	106	98	105	89	93
320-81211-17	Equipment Blank	94	91	82	111	101	104	89	92
LCS 320-540156/2-A	Lab Control Sample	97	91	90	108	105	109	89	89
LCSD 320-540156/3-A	Lab Control Sample Dup	94	92	91	104	99	104	84	97
MB 320-540156/1-A	Method Blank	94	89	87	117	106	110	92	93

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
320-81211-16	Field Blank	91	93	85	98	96	108	95	97
320-81211-17	Equipment Blank	87	91	85	98	96	121	95	100
LCS 320-540156/2-A	Lab Control Sample	88	92	91	97	98	112	99	94
LCSD 320-540156/3-A	Lab Control Sample Dup	86	87	86	95	94	109	89	96
MB 320-540156/1-A	Method Blank	91	93	85	97	97	111	102	97

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (25-150)	M102FTS (25-150)
320-81211-16	Field Blank	109	83
320-81211-17	Equipment Blank	112	84
LCS 320-540156/2-A	Lab Control Sample	108	88
LCSD 320-540156/3-A	Lab Control Sample Dup	106	86
MB 320-540156/1-A	Method Blank	112	85

#### 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
- PFDaA = 13C2 PFDaA
- PFTDA = 13C2 PFTeDA
- PFHxDA = 13C2 PFHxDA
- C3PFBS = 13C3 PFBS
- PFHxS = 18O2 PFHxS
- PFOS = 13C4 PFOS
- PFOSA = 13C8 FOSA
- d3NMFOS = d3-NMeFOSAA

# Isotope Dilution Summary

Client: Short Elliott Hendrickson, Inc. dba SEH

Job ID: 320-81211-1

Project/Site: Hayward LF PFAS#2

d5NEFOS = d5-NEtFOSAA  
dMeFOSA = d-N-MeFOSA-M  
dEtFOSA = d-N-EtFOSA-M  
NMFM = d7-N-MeFOSE-M  
NEFM = d9-N-EtFOSE-M  
M242FTS = M2-4:2 FTS  
M262FTS = M2-6:2 FTS  
M282FTS = M2-8:2 FTS  
HFPODA = 13C3 HFPO-DA  
M102FTS = 13C2 10:2 FTS

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Method: 537 (modified) - Fluorinated Alkyl Substances

**Lab Sample ID: MB 320-540156/1-A**  
**Matrix: Water**  
**Analysis Batch: 540508**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 540156**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.89		2.0	0.89	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.94		2.0	0.94	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		11/04/21 19:19	11/05/21 15:35	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		11/04/21 19:19	11/05/21 15:35	1
NEtFOSA	<0.87		2.0	0.87	ng/L		11/04/21 19:19	11/05/21 15:35	1
NMeFOSA	<0.43		2.0	0.43	ng/L		11/04/21 19:19	11/05/21 15:35	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		11/04/21 19:19	11/05/21 15:35	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		11/04/21 19:19	11/05/21 15:35	1
NMeFOSE	<1.4		4.0	1.4	ng/L		11/04/21 19:19	11/05/21 15:35	1
NEtFOSE	<0.85		2.0	0.85	ng/L		11/04/21 19:19	11/05/21 15:35	1
4:2 FTS	<0.24		2.0	0.24	ng/L		11/04/21 19:19	11/05/21 15:35	1
6:2 FTS	<2.5		5.0	2.5	ng/L		11/04/21 19:19	11/05/21 15:35	1
8:2 FTS	<0.46		2.0	0.46	ng/L		11/04/21 19:19	11/05/21 15:35	1
10:2 FTS	<0.67		2.0	0.67	ng/L		11/04/21 19:19	11/05/21 15:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		11/04/21 19:19	11/05/21 15:35	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		11/04/21 19:19	11/05/21 15:35	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		11/04/21 19:19	11/05/21 15:35	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		11/04/21 19:19	11/05/21 15:35	1
Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
13C4 PFBA	102		25 - 150	11/04/21 19:19	11/05/21 15:35	1			
13C5 PFPeA	111		25 - 150	11/04/21 19:19	11/05/21 15:35	1			
13C2 PFHxA	104		25 - 150	11/04/21 19:19	11/05/21 15:35	1			
13C4 PFHpA	113		25 - 150	11/04/21 19:19	11/05/21 15:35	1			
13C4 PFOA	114		25 - 150	11/04/21 19:19	11/05/21 15:35	1			
13C5 PFNA	106		25 - 150	11/04/21 19:19	11/05/21 15:35	1			

Eurofins TestAmerica, Sacramento

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: MB 320-540156/1-A**  
**Matrix: Water**  
**Analysis Batch: 540508**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 540156**

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFDA	100		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C2 PFUnA	94		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C2 PFDoA	94		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C2 PFTeDA	89		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C2 PFHxDA	87		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C3 PFBS	117		25 - 150	11/04/21 19:19	11/05/21 15:35	1
18O2 PFHxS	106		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C4 PFOS	110		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C8 FOSA	92		10 - 150	11/04/21 19:19	11/05/21 15:35	1
d3-NMeFOSAA	93		25 - 150	11/04/21 19:19	11/05/21 15:35	1
d5-NEtFOSAA	91		25 - 150	11/04/21 19:19	11/05/21 15:35	1
d-N-MeFOSA-M	93		10 - 150	11/04/21 19:19	11/05/21 15:35	1
d-N-EtFOSA-M	85		10 - 150	11/04/21 19:19	11/05/21 15:35	1
d7-N-MeFOSE-M	97		10 - 150	11/04/21 19:19	11/05/21 15:35	1
d9-N-EtFOSE-M	97		10 - 150	11/04/21 19:19	11/05/21 15:35	1
M2-4:2 FTS	111		25 - 150	11/04/21 19:19	11/05/21 15:35	1
M2-6:2 FTS	102		25 - 150	11/04/21 19:19	11/05/21 15:35	1
M2-8:2 FTS	97		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C3 HFPO-DA	112		25 - 150	11/04/21 19:19	11/05/21 15:35	1
13C2 10:2 FTS	85		25 - 150	11/04/21 19:19	11/05/21 15:35	1

**Lab Sample ID: LCS 320-540156/2-A**  
**Matrix: Water**  
**Analysis Batch: 540508**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 540156**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	40.0	39.2		ng/L		98	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	38.0		ng/L		95	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	38.0		ng/L		95	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	39.1		ng/L		98	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	39.0		ng/L		98	60 - 135
Perfluorononanoic acid (PFNA)	40.0	38.7		ng/L		97	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	39.9		ng/L		100	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	43.2		ng/L		108	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	41.7		ng/L		104	60 - 135
Perfluorotridecanoic acid (PFTTrDA)	40.0	39.7		ng/L		99	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	39.2		ng/L		98	60 - 135
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	41.8		ng/L		104	60 - 135
Perfluoro-n-octadecanoic acid (PFODA)	40.0	35.8		ng/L		89	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.4	31.7		ng/L		90	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.5	34.3		ng/L		91	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.1		ng/L		94	60 - 135

Eurofins TestAmerica, Sacramento



# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCS 320-540156/2-A**  
**Matrix: Water**  
**Analysis Batch: 540508**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 540156**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	35.7		ng/L		94	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.1	34.4		ng/L		93	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.4	33.4		ng/L		87	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	33.7		ng/L		87	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.7	35.6		ng/L		92	60 - 135
Perfluorooctanesulfonamide (FOSA)	40.0	41.0		ng/L		102	60 - 135
NEtFOSA	40.0	40.5		ng/L		101	60 - 135
NMeFOSA	40.0	41.4		ng/L		103	60 - 135
NMeFOSAA	40.0	37.8		ng/L		94	60 - 135
NEtFOSAA	40.0	38.0		ng/L		95	60 - 135
NMeFOSE	40.0	40.3		ng/L		101	60 - 135
NEtFOSE	40.0	38.2		ng/L		95	60 - 135
4:2 FTS	37.4	33.1		ng/L		89	60 - 135
6:2 FTS	37.9	38.4		ng/L		101	60 - 135
8:2 FTS	38.3	36.8		ng/L		96	60 - 135
10:2 FTS	38.6	34.9		ng/L		91	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.7	37.2		ng/L		99	60 - 135
HFPO-DA (GenX)	40.0	42.8		ng/L		107	60 - 135
9CI-PF3ONS	37.3	35.0		ng/L		94	60 - 135
11CI-PF3OUdS	37.7	33.2		ng/L		88	60 - 135

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	102		25 - 150
13C5 PFPeA	105		25 - 150
13C2 PFHxA	106		25 - 150
13C4 PFHpA	111		25 - 150
13C4 PFOA	110		25 - 150
13C5 PFNA	110		25 - 150
13C2 PFDA	96		25 - 150
13C2 PFUnA	90		25 - 150
13C2 PFDoA	97		25 - 150
13C2 PFTeDA	91		25 - 150
13C2 PFHxDA	90		25 - 150
13C3 PFBS	108		25 - 150
18O2 PFHxS	105		25 - 150
13C4 PFOS	109		25 - 150
13C8 FOSA	89		10 - 150
d3-NMeFOSAA	89		25 - 150
d5-NEtFOSAA	88		25 - 150
d-N-MeFOSA-M	92		10 - 150
d-N-EtFOSA-M	91		10 - 150
d7-N-MeFOSE-M	97		10 - 150
d9-N-EtFOSE-M	98		10 - 150

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCS 320-540156/2-A**  
**Matrix: Water**  
**Analysis Batch: 540508**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 540156**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
M2-4:2 FTS	112		25 - 150
M2-6:2 FTS	99		25 - 150
M2-8:2 FTS	94		25 - 150
13C3 HFPO-DA	108		25 - 150
13C2 10:2 FTS	88		25 - 150

**Lab Sample ID: LCSD 320-540156/3-A**  
**Matrix: Water**  
**Analysis Batch: 540508**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 540156**

<b>Analyte</b>	<b>Spike Added</b>	<b>LCSD Result</b>	<b>LCSD Qualifier</b>	<b>Unit</b>	<b>D</b>	<b>%Rec</b>	<b>%Rec. Limits</b>	<b>RPD</b>	<b>RPD Limit</b>
Perfluorobutanoic acid (PFBA)	40.0	39.2		ng/L		98	60 - 135	0	30
Perfluoropentanoic acid (PFPeA)	40.0	39.0		ng/L		97	60 - 135	3	30
Perfluorohexanoic acid (PFHxA)	40.0	38.6		ng/L		97	60 - 135	2	30
Perfluoroheptanoic acid (PFHpA)	40.0	41.7		ng/L		104	60 - 135	6	30
Perfluorooctanoic acid (PFOA)	40.0	38.4		ng/L		96	60 - 135	2	30
Perfluorononanoic acid (PFNA)	40.0	40.3		ng/L		101	60 - 135	4	30
Perfluorodecanoic acid (PFDA)	40.0	40.0		ng/L		100	60 - 135	0	30
Perfluoroundecanoic acid (PFUnA)	40.0	39.0		ng/L		98	60 - 135	10	30
Perfluorododecanoic acid (PFDoA)	40.0	41.2		ng/L		103	60 - 135	1	30
Perfluorotridecanoic acid (PFTrDA)	40.0	40.6		ng/L		102	60 - 135	2	30
Perfluorotetradecanoic acid (PFTeA)	40.0	38.5		ng/L		96	60 - 135	2	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	40.4		ng/L		101	60 - 135	3	30
Perfluoro-n-octadecanoic acid (PFODA)	40.0	32.8		ng/L		82	60 - 135	9	30
Perfluorobutanesulfonic acid (PFBS)	35.4	31.6		ng/L		89	60 - 135	0	30
Perfluoropentanesulfonic acid (PFPeS)	37.5	34.1		ng/L		91	60 - 135	1	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.9		ng/L		96	60 - 135	3	30
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	34.7		ng/L		91	60 - 135	3	30
Perfluorooctanesulfonic acid (PFOS)	37.1	34.0		ng/L		92	60 - 135	1	30
Perfluorononanesulfonic acid (PFNS)	38.4	33.7		ng/L		88	60 - 135	1	30
Perfluorodecanesulfonic acid (PFDS)	38.6	33.1		ng/L		86	60 - 135	2	30
Perfluorododecanesulfonic acid (PFDoS)	38.7	35.5		ng/L		92	60 - 135	0	30
Perfluorooctanesulfonamide (FOSA)	40.0	41.0		ng/L		102	60 - 135	0	30
NEtFOSA	40.0	39.6		ng/L		99	60 - 135	2	30
NMeFOSA	40.0	41.4		ng/L		103	60 - 135	0	30
NMeFOSAA	40.0	34.7		ng/L		87	60 - 135	8	30
NEtFOSAA	40.0	39.1		ng/L		98	60 - 135	3	30
NMeFOSE	40.0	39.3		ng/L		98	60 - 135	3	30

Eurofins TestAmerica, Sacramento

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCSD 320-540156/3-A**  
**Matrix: Water**  
**Analysis Batch: 540508**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 540156**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NETFOSE	40.0	37.1		ng/L		93	60 - 135	3	30
4:2 FTS	37.4	35.1		ng/L		94	60 - 135	6	30
6:2 FTS	37.9	39.9		ng/L		105	60 - 135	4	30
8:2 FTS	38.3	36.0		ng/L		94	60 - 135	2	30
10:2 FTS	38.6	35.9		ng/L		93	60 - 135	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.7	36.2		ng/L		96	60 - 135	3	30
HFPO-DA (GenX)	40.0	41.2		ng/L		103	60 - 135	4	30
9CI-PF3ONS	37.3	35.8		ng/L		96	60 - 135	2	30
11CI-PF3OUdS	37.7	32.3		ng/L		86	60 - 135	3	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	99		25 - 150
13C5 PFPeA	103		25 - 150
13C2 PFHxA	101		25 - 150
13C4 PFHpA	100		25 - 150
13C4 PFOA	107		25 - 150
13C5 PFNA	104		25 - 150
13C2 PFDA	96		25 - 150
13C2 PFUnA	96		25 - 150
13C2 PFDoA	94		25 - 150
13C2 PFTeDA	92		25 - 150
13C2 PFHxDA	91		25 - 150
13C3 PFBS	104		25 - 150
18O2 PFHxS	99		25 - 150
13C4 PFOS	104		25 - 150
13C8 FOSA	84		10 - 150
d3-NMeFOSAA	97		25 - 150
d5-NEtFOSAA	86		25 - 150
d-N-MeFOSA-M	87		10 - 150
d-N-EtFOSA-M	86		10 - 150
d7-N-MeFOSE-M	95		10 - 150
d9-N-EtFOSE-M	94		10 - 150
M2-4:2 FTS	109		25 - 150
M2-6:2 FTS	89		25 - 150
M2-8:2 FTS	96		25 - 150
13C3 HFPO-DA	106		25 - 150
13C2 10:2 FTS	86		25 - 150

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## LCMS

### Prep Batch: 540156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-81211-1	PZ-10D 822	Total/NA	Groundwater	3535	
320-81211-2	PZ-10S 821	Total/NA	Groundwater	3535	
320-81211-3	MW-10 820	Total/NA	Groundwater	3535	
320-81211-4	PZ-9D 819	Total/NA	Groundwater	3535	
320-81211-5	PZ-9S 818	Total/NA	Groundwater	3535	
320-81211-6	MW-9 817	Total/NA	Groundwater	3535	
320-81211-7	PZ-8D 816	Total/NA	Groundwater	3535	
320-81211-8	PZ-8S 815	Total/NA	Groundwater	3535	
320-81211-9	MW-8 814	Total/NA	Groundwater	3535	
320-81211-10	PZ-7D 813	Total/NA	Groundwater	3535	
320-81211-11	PZ-7SR 902	Total/NA	Groundwater	3535	
320-81211-12	MW-7 811	Total/NA	Groundwater	3535	
320-81211-13	PZ-1D 807	Total/NA	Groundwater	3535	
320-81211-14	PZ-1S 806	Total/NA	Groundwater	3535	
320-81211-15	MW-1 801	Total/NA	Groundwater	3535	
320-81211-16	Field Blank	Total/NA	Water	3535	
320-81211-17	Equipment Blank	Total/NA	Water	3535	
320-81211-18	PZ-7D (Dup) 813	Total/NA	Groundwater	3535	
MB 320-540156/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-540156/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-540156/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

### Analysis Batch: 540508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-81211-16	Field Blank	Total/NA	Water	537 (modified)	540156
320-81211-17	Equipment Blank	Total/NA	Water	537 (modified)	540156
MB 320-540156/1-A	Method Blank	Total/NA	Water	537 (modified)	540156
LCS 320-540156/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	540156
LCSD 320-540156/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	540156

### Analysis Batch: 540713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-81211-1	PZ-10D 822	Total/NA	Groundwater	537 (modified)	540156
320-81211-2	PZ-10S 821	Total/NA	Groundwater	537 (modified)	540156
320-81211-3	MW-10 820	Total/NA	Groundwater	537 (modified)	540156
320-81211-4	PZ-9D 819	Total/NA	Groundwater	537 (modified)	540156
320-81211-5	PZ-9S 818	Total/NA	Groundwater	537 (modified)	540156
320-81211-6	MW-9 817	Total/NA	Groundwater	537 (modified)	540156
320-81211-7	PZ-8D 816	Total/NA	Groundwater	537 (modified)	540156
320-81211-8	PZ-8S 815	Total/NA	Groundwater	537 (modified)	540156
320-81211-9	MW-8 814	Total/NA	Groundwater	537 (modified)	540156
320-81211-11	PZ-7SR 902	Total/NA	Groundwater	537 (modified)	540156
320-81211-12	MW-7 811	Total/NA	Groundwater	537 (modified)	540156
320-81211-13	PZ-1D 807	Total/NA	Groundwater	537 (modified)	540156
320-81211-14	PZ-1S 806	Total/NA	Groundwater	537 (modified)	540156
320-81211-15	MW-1 801	Total/NA	Groundwater	537 (modified)	540156
320-81211-18	PZ-7D (Dup) 813	Total/NA	Groundwater	537 (modified)	540156

### Analysis Batch: 541136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-81211-10	PZ-7D 813	Total/NA	Groundwater	537 (modified)	540156

Eurofins TestAmerica, Sacramento

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

**Client Sample ID: PZ-10D 822**

**Lab Sample ID: 320-81211-1**

Date Collected: 11/01/21 09:45

Matrix: Groundwater

Date Received: 11/03/21 10:35

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	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 18:22	RS1	TAL SAC

**Client Sample ID: PZ-10S 821**

**Lab Sample ID: 320-81211-2**

Date Collected: 11/01/21 10:30

Matrix: Groundwater

Date Received: 11/03/21 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			296.5 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 18:32	RS1	TAL SAC

**Client Sample ID: MW-10 820**

**Lab Sample ID: 320-81211-3**

Date Collected: 11/01/21 11:00

Matrix: Groundwater

Date Received: 11/03/21 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			287.4 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 18:42	RS1	TAL SAC

**Client Sample ID: PZ-9D 819**

**Lab Sample ID: 320-81211-4**

Date Collected: 11/01/21 11:30

Matrix: Groundwater

Date Received: 11/03/21 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			274.4 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 18:52	RS1	TAL SAC

**Client Sample ID: PZ-9S 818**

**Lab Sample ID: 320-81211-5**

Date Collected: 11/01/21 11:50

Matrix: Groundwater

Date Received: 11/03/21 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			289.9 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 19:02	RS1	TAL SAC

**Client Sample ID: MW-9 817**

**Lab Sample ID: 320-81211-6**

Date Collected: 11/01/21 12:15

Matrix: Groundwater

Date Received: 11/03/21 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			290 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 19:12	RS1	TAL SAC

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Client Sample ID: PZ-8D 816

Date Collected: 11/01/21 12:30

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-7

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			306.1 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 19:22	RS1	TAL SAC

## Client Sample ID: PZ-8S 815

Date Collected: 11/01/21 12:45

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-8

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			297.4 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 19:32	RS1	TAL SAC

## Client Sample ID: MW-8 814

Date Collected: 11/01/21 13:00

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-9

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			273.1 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 19:42	RS1	TAL SAC

## Client Sample ID: PZ-7D 813

Date Collected: 11/01/21 13:15

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-10

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			275.2 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			541136	11/09/21 04:52	LT	TAL SAC

## Client Sample ID: PZ-7SR 902

Date Collected: 11/01/21 13:40

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-11

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			302.6 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 20:23	RS1	TAL SAC

## Client Sample ID: MW-7 811

Date Collected: 11/01/21 14:00

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-12

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			294.3 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 20:33	RS1	TAL SAC

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Client Sample ID: PZ-1D 807

Date Collected: 11/01/21 14:20

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-13

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			300.6 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 20:43	RS1	TAL SAC

## Client Sample ID: PZ-1S 806

Date Collected: 11/01/21 14:40

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-14

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			292.9 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 20:53	RS1	TAL SAC

## Client Sample ID: MW-1 801

Date Collected: 11/01/21 15:00

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-15

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			298 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 21:03	RS1	TAL SAC

## Client Sample ID: Field Blank

Date Collected: 11/01/21 10:00

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-16

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			307 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540508	11/05/21 16:06	RS1	TAL SAC

## Client Sample ID: Equipment Blank

Date Collected: 11/01/21 14:45

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-17

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			284.8 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540508	11/05/21 16:16	RS1	TAL SAC

## Client Sample ID: PZ-7D (Dup) 813

Date Collected: 11/01/21 13:20

Date Received: 11/03/21 10:35

## Lab Sample ID: 320-81211-18

Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			304.4 mL	10.0 mL	540156	11/04/21 19:19	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			540713	11/06/21 21:14	RS1	TAL SAC

### Laboratory References:

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

Eurofins TestAmerica, Sacramento

# Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

## Laboratory: Eurofins TestAmerica, Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-22

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



# Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Hayward LF PFAS#2

Job ID: 320-81211-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-81211-1	PZ-10D 822	Groundwater	11/01/21 09:45	11/03/21 10:35
320-81211-2	PZ-10S 821	Groundwater	11/01/21 10:30	11/03/21 10:35
320-81211-3	MW-10 820	Groundwater	11/01/21 11:00	11/03/21 10:35
320-81211-4	PZ-9D 819	Groundwater	11/01/21 11:30	11/03/21 10:35
320-81211-5	PZ-9S 818	Groundwater	11/01/21 11:50	11/03/21 10:35
320-81211-6	MW-9 817	Groundwater	11/01/21 12:15	11/03/21 10:35
320-81211-7	PZ-8D 816	Groundwater	11/01/21 12:30	11/03/21 10:35
320-81211-8	PZ-8S 815	Groundwater	11/01/21 12:45	11/03/21 10:35
320-81211-9	MW-8 814	Groundwater	11/01/21 13:00	11/03/21 10:35
320-81211-10	PZ-7D 813	Groundwater	11/01/21 13:15	11/03/21 10:35
320-81211-11	PZ-7SR 902	Groundwater	11/01/21 13:40	11/03/21 10:35
320-81211-12	MW-7 811	Groundwater	11/01/21 14:00	11/03/21 10:35
320-81211-13	PZ-1D 807	Groundwater	11/01/21 14:20	11/03/21 10:35
320-81211-14	PZ-1S 806	Groundwater	11/01/21 14:40	11/03/21 10:35
320-81211-15	MW-1 801	Groundwater	11/01/21 15:00	11/03/21 10:35
320-81211-16	Field Blank	Water	11/01/21 10:00	11/03/21 10:35
320-81211-17	Equipment Blank	Water	11/01/21 14:45	11/03/21 10:35
320-81211-18	PZ-7D (Dup) 813	Groundwater	11/01/21 13:20	11/03/21 10:35



# Chain of Custody Record

548035



Environment Testing  
TestAmerica

TAL-8210

Address: \_\_\_\_\_

Regulatory Program:  DW  NPDES  RCRA  Other:

Company Name: <b>SEH</b>		Client Contact		Project Manager: <b>Brian Kent</b>		Site Contact:		Date:		COC No:				
Address: <b>10N Bridge St.</b>		Tel/Email: <b>b.kent@sefin.com</b>		Analysis Turnaround Time		Lab Contact:		Carrier:		COCs				
City/State/Zip: <b>Chappaqua Falls VT 54724</b>		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		TAT if different from Below		Perform MS / MSD (Y / N)		Sampler:		For Lab Use Only:				
Phone: <b>757-220-6380</b>		<input type="checkbox"/> 2 weeks		<input type="checkbox"/> 1 week		Filtered Sample (Y / N)		Walk-in Client:		Lab Sampling:				
Fax: _____		<input type="checkbox"/> 2 days		<input type="checkbox"/> 1 day		320-81211 Chain of Custody		Job / SDG No.:		Sample Specific Notes:				
Project Name: <b>Hayward landfill PEAS#2</b>		Site: _____		P O # _____		Sample Identification		Job / SDG No.:		Sample Specific Notes:				
Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.
PZ-10D	9:22	G	GW	1	11/11/21	9:45	G	GW	1					
PZ-10S	8:21					10:30								
MW-10	8:20					11:00								
PZ-9D	8:14					11:30								
PZ-9S	8:18					11:50								
MW-9	8:17					12:15								
PZ-8D	8:16					12:30								
PZ-8S	8:15					12:45								
MW-8	8:14					1:00								
PZ-7D	9:3					1:15								
PZ-7SR	9:2					1:40								
MW-7	8:11					3:00								

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

### Possible Hazard Identification:

Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

### Special Instructions/QC Requirements & Comments:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Custody Seals Intact:  Yes  No

Relinquished by: *Mike Miller*

Relinquished by:

Relinquished by:

Custody Seal No.:

Company: **SEH**

Company:

Company:

Received by: *SEH*

Date/Time: **11/2/21**

Company:

Company:

Received by: *SEH*

Date/Time: **11-3-21 10:35**

Company:

Company:

Received in Laboratory by:

Date/Time:

Company:

Company:

• Sample 16 mismatch. Containers put parentheses around numbers. NC to 11-3-21 *discoloration, NC 11-3-21*



Address:

Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact		Project Manager: <i>Brian Kant</i>		Site Contact:		Date:	
Company Name: <i>SEH</i>		Tel/Email: <i>bkante@schinc.com</i>		Perform MS / MSD (Y / N)		COC No. _____ of _____ COCs	
Address: <i>10 N Bridge St.</i>		Analysis Turnaround Time		Filtered Sample (Y / N)		Sampler:	
City/State/Zip: <i>Chippewa Falls WI 54729</i>		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		TAT if different from Below		For Lab Use Only:	
Phone: <i>715 220 6200</i>		<input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Type (C=Comp, G=Grab)		Walk-in Client:	
Fax:		Sample Date		Sample Time		Lab Sampling:	
Project Name: <i>Huyward LP PFAS #2</i>		Sample Identification		Matrix		Job / SDG No.:	
Site:		Sample Date		Sample Time		Sample Specific Notes:	
P O #		Sample Date		Sample Time			
<i>PZ-1D 807</i>	<i>11/17</i>	<i>2:20</i>	<i>G</i>	<i>6W</i>	<i>1</i>		
<i>PZ-1S 806</i>		<i>2:40</i>		<i>↓</i>			
<i>MW-1 801</i>		<i>3:00</i>		<i>↓</i>			
<i>Field Blank</i>		<i>10:00</i>		<i>other</i>			
<i>Equipment Blank</i>		<i>2:45</i>		<i>↓</i>			
<i>PZ-70 (Dup) 813</i>		<i>1:20</i>		<i>GW</i>	<i>1</i>		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other

Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Special Instructions/QC Requirements & Comments:

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)

Cooler Temp. (°C): Obs'd: *2.8* Corr'd: *2.8* Therm ID No.: *61*

Received by: *SKH* Date/Time: *11/21/21* Company: *SEH*

Relinquished by: *Mela Rohler* Date/Time: *11-3-21* Company: *6033*

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_



## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 320-81211-1

**Login Number: 81211**

**List Source: Eurofins TestAmerica, Sacramento**

**List Number: 1**

**Creator: Cahill, Nicholas P**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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?	False	
There are no discrepancies between the containers received and the COC.	False	IDs on containers do not match the COC. Logged in per COC.
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	