

## DRAFT REPORT

Produced For City of Huntington Beach  
October 10, 2021



# ORANGE COUNTY OIL SPILL

## Water Quality Sampling Results



## Document Verification

Client	City of Huntington Beach
Document title	Orange County Oil Spill
Document sub-title	Water Quality Sampling Results
Status	Draft Report
Date	October 10, 2021
Project number	212289 / 03

Revision	Description	Issued by	Date	Checked
00	Draft Report			

Produced by:

Moffatt & Nichol  
555 Anton Blvd., Ste. 400  
Costa Mesa, CA 92626  
657.261.2166  
[www.moffattnichol.com](http://www.moffattnichol.com)



## Table of Contents

1. Introduction .....	1
2. Contaminant Exposure Pathways .....	2
2.1. Human Health .....	2
2.2. Ecological Health .....	3
3. Field Collection Program .....	4
3.1. Field Sampling Methods.....	4
3.2. Chemical Analyses.....	7
4. Results .....	8
4.1. Detected TPH.....	8
5. Conclusion .....	11

## APPENDIX

J72168-1 UDS Level 2 Report – Final Report

J72168-3 UDS Level 2 Report – Final Report



## List of Figures

Figure 1.	Leak Location.....	1
Figure 2.	Proposed locations of sampling sites along Huntington Beach on October 7, 2021.....	4
Figure 3.	Example site condition photograph (site 33).....	5
Figure 4.	Example field log (Sample Location 34).....	6

## List of Tables

Table 1.	Exposure Pathways for Beachgoers with Recommended Screening Levels.....	2
Table 2.	Proposed locations for Huntington Beach Oil Spill Response .....	7
Table 3.	Analytical Results with Comparison to Applicable Criteria.....	9



## Glossary

City	The City of Huntington Beach
COCP	Chemicals of Potential Concern
DOOR	Diesel Range Organics
DTSC	Department of Toxic Substances Control
ESL	Environmental Screening Level
HERO	Human and Ecological Risk Office
M&N	Moffatt & Nichol
MCL	Maximum Contaminant Level
MDL	Minimum Detection Limit
ORO	Oil Range Organics
PAH	Polycyclic Aromatic Hydrocarbons
QA/QC	Quality Assurance / Quality Control
TDML	Total Maximum Daily Load
TPH	Total Petroleum Hydrocarbon
USEPA	U.S. Environmental Protection Agency



## 1. Introduction

It is estimated that over 100,000 gallons of crude oil spilled off the coast of Orange County. The oil spill was first spotted late Friday October 1, 2021. The likely source is the oil pipe approximately 4.5 miles offshore, owned by Amplify Energy Corp. The pipeline was shut down at 6:00 am Saturday morning on October 2, 2021 (<https://www.cnn.com/2021/10/06/us/huntington-beach-california-oil-spill-timeline/index.html>).



**FIGURE 1. LEAK LOCATION**

(SOURCE: [HTTPS://WWW.CNN.COM/2021/10/06/US/HUNTINGTON-BEACH-CALIFORNIA-OIL-SPILL-TIMELINE/INDEX.HTML](https://www.cnn.com/2021/10/06/us/huntington-beach-california-oil-spill-timeline/index.html))

The City of Huntington Beach (City) closed the beaches on Sunday October 3, 2021 to ensure that beachgoers would not be exposed to health risks. On October 2<sup>nd</sup> the oil leak was sealed. Clean up efforts with skimmers and containment floating barriers known as booms on the water have continued. The City implemented removal clean-up procedures by professional clean-up crews on the beaches. Now that the extent of the oil spill is known and the slick is moving south and away from the Huntington Beach area, the City would like to consider reopening the beaches. The City requested that Moffatt & Nichol (M&N) collect environmental data to aid in the determination of any potential health risks that may be present.

## 2. Contaminant Exposure Pathways

### 2.1. Human Health

Beachgoers are expected to have potential exposure to chemicals in the environment through the pathways summarized in Table 2-1. Marine water quality was considered for each pathway and when applicable. Resource agencies have developed numeric standards to evaluate concentration of chemicals in the environment; applicable screening levels were compared to marine waters to estimate the potential for human health exposure.

**TABLE 1. EXPOSURE PATHWAYS FOR BEACHGOERS WITH RECOMMENDED SCREENING LEVELS**

Exposure Route	Consideration of Oil Spill Exposure
Inhalation	<ul style="list-style-type: none"> <li>Oil spill related compounds volatize easily, resulting in petroleum related odors, even though beachgoers are outdoors, in well ventilated areas.</li> <li>City health officials should provide direction to beachgoers to avoid unnecessary and prolonged exposure when odors are present. This summary does not include air sampling and, therefore, comparison to air concentrations was not evaluated.</li> <li>However, there are standards for nuisance odor for 3 compounds that are associated with oil spills. Water quality characterization includes a comparison to Odor Nuisance Levels<sup>1</sup> established by the Regional Water Quality Control Board for groundwater to provide a conservative comparison.</li> </ul>
Dermal absorption from contact on sand and from bathing, including immersion contact	<ul style="list-style-type: none"> <li>The oil spill has resulted in oil globules and stained sands in areas where the oil has reached the shore.</li> <li>City health officials should provide direction to beachgoers to avoid unnecessary exposure by handling oily sands.</li> <li>However, it is possible that a swimmer or beachgoer will be inadvertently exposed by accidentally touching oil on the sand or oil slicks on water surface resulting in dermal or direct exposure. Therefore, water quality characterization includes a comparison to Direct Exposure Human Health Risk Levels<sup>2</sup> established by the Regional Water Quality Control Board for groundwater to provide a conservative comparison.</li> </ul>
Ingestion during swimming	<ul style="list-style-type: none"> <li>The oil spill has resulted in oiled water surfaces that are often visible as slicks.</li> <li>City health officials should provide direction to beachgoers to avoid unnecessary exposure by swimming within observed slicks.</li> <li>However, it is possible that a swimmer or beachgoer will be inadvertently exposed by accidentally swallowing water while swimming. Water quality characterization includes a comparison to Oral Exposure Levels<sup>3</sup> provided by California Department of Toxic Substances Control (DTSC), Human and Ecological Risk Office (HERO) to provide a conservative comparison.</li> </ul>

<sup>1</sup> San Francisco Regional Water Quality Control Board (2019) for nuisance odor environmental screening levels (ESLs) for groundwater. Available at: [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/esl.html](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html)

<sup>2</sup> The highly conservative screen level of California maximum contaminant level (MCL) was applied. The MCL priority lists all available MCL values. If no MCL values are available, the lower of the cancer and noncancer tap water direct exposure levels is listed. MCL values are established for 13 polycyclic aromatic hydrocarbons (PAH) compounds.

<sup>3</sup> Guidance for Evaluating Human Health Risk at Sites Contaminated by Petroleum Hydrocarbons and Related Chemicals of Potential Concern (COPC) – Human Health Risk Assessment NOTE 12 was developed by DTSC. The guidance provides human health total petroleum hydrocarbon (TPH) human health toxicity criteria for carbon ranges of compounds.



## 2.2. Ecological Health

The following ecological screening levels were used to characterize the marine waters off Huntington Beach:

- California Toxics Rule Criteria to protect human health and aquatic life
- California Ocean Plan Water Quality Objectives (no oil standard available, metals only)
- U.S. Environmental Protection Agency (USEPA) Recommended Water Quality Criteria to Protect Human Health and Aquatic Life

The Santa Ana Basin Plan was reviewed to confirm no additional standards are applied to the Huntington Beach coastline through Clean Water Act Total Maximum Daily Loads (TMDLs).



## 3. Field Collection Program

### 3.1. Field Sampling Methods

Forty samples were collected along Huntington Beach at 0.25-mile increments (Figure 2); field replicates were collected at sample locations 5, 14, 25, and 35. At each sampling location, water samples were collected within the surf zone (knee to waist deep). Site observations were documented and photographed at each site (Figure 3). The presence of oil in the wrack line, in the sand (globules, discoloration, or sheen), and in the water were recorded in the field logs (Figure 4).

All water samples were stored on ice at the south end of Huntington Beach immediately after sampling and were transferred to Eurofins Laboratory.



FIGURE 2. PROPOSED LOCATIONS OF SAMPLING SITES ALONG HUNTINGTON BEACH ON OCTOBER 7, 2021



FIGURE 3. EXAMPLE SITE CONDITION PHOTOGRAPH (SITE 33)

Project No. -										
Location: HB	Field Log									
Date: 10/7/21	moffatt & nichol									
Site ID: 034	Sampler:	Webb	Thickman	McMahon	Corlett	Butler	Beck			
Time: 3:52	Recorder	Webb	Thickman	McMahon	Corlett	Butler	Beck			
Bottle ID: HB —	(W)	S	—	20211007	—	034				
QA/QC Sample:	Y	(N)	Type:	Duplicate (DUP)	Blank (BLK)	Control (CTL)				
Water Depth at Sample (ft):	Knee									
Weather:	Sunny	Partly Cloudy	Overcast	Fog	Rain	Air Temp (F): 68				
Wind:	Direction:	N	NE	E	SE	S	SW	W	NW	Notes:
	Speed:	Calm	Light	Medium	Heavy					
Currents:	Direction:	(N)	NE	E	SE	S	SW	W	NW	Notes:
	Speed:	Calm	<1ft/s	<1ft/s	1-2ft/s	1-2ft/s	3+ft/s			
Waves:	Direction:	N	NE	E	SE	S	SW	W	NW	Notes:
	Height:	Flat	<1ft	<1ft	1-2ft	2-3ft	3-5ft	Overhead		
Tide:	high	mid	low	flood	—	ebb	Wrackline:			(Y) N
Sheen:	Y	(N)	Notes:							
Surface Debris:	Y	(N)	Notes:							
Odor:	(None)	Slight	Mod	Strong	H <sub>2</sub> S	Petro	Septic			
Water Clarity:	Clear (see bottom)				Cloudy (>4")	Murky (<4")				
Water Color:	Colorless			Green	Yellow	Brown	Blue			
Photos:	(Y)	N	Geotagged:	(Y)	N	Notes:				
Comments:	gobs. obs									

FIGURE 4. EXAMPLE FIELD LOG (SAMPLE LOCATION 34)

**TABLE 2. PROPOSED LOCATIONS FOR HUNTINGTON BEACH OIL SPILL RESPONSE**

Site No.	Eastings (ft CA Zone 6)	Northings (ft CA Zone 6)	Site No.	Eastings (ft CA Zone 6)	Northings (ft CA Zone 6)
1	-13130900.15	3978938.60	21	-13138525.61	3984836.90
2	-13131345.31	3979209.87	22	-13138875.81	3985171.05
3	-13131753.70	3979468.47	23	-13139226.03	3985505.19
4	-13132162.10	3979727.07	24	-13139556.24	3985859.22
5	-13132570.52	3979985.66	25	-13139884.52	3986215.18
6	-13132980.57	3980241.64	26	-13140203.38	3986579.20
7	-13133391.00	3980497.03	27	-13140500.07	3986962.17
8	-13133780.48	3980780.73	28	-13140796.79	3987345.14
9	-13134143.97	3981099.80	29	-13141093.52	3987728.11
10	-13134528.40	3981393.27	30	-13141390.27	3988111.09
11	-13134912.85	3981686.73	31	-13141652.81	3988517.81
12	-13135297.32	3981980.18	32	-13141916.72	3988923.18
13	-13135726.29	3982201.24	33	-13142229.91	3989292.77
14	-13136150.84	3982426.16	34	-13142575.70	3989630.59
15	-13136451.76	3982805.57	35	-13142934.15	3989956.10
16	-13136783.86	3983156.79	36	-13143270.84	3990304.18
17	-13137128.76	3983496.35	37	-13143602.40	3990657.30
18	-13137477.47	3983831.98	38	-13143937.25	3991007.29
19	-13137826.20	3984167.62	39	-13144273.74	3991355.72
20	-13138175.42	3984502.76	40	-13144530.97	3991696.73

### 3.2. Chemical Analyses

Seawater from 40 sample locations were tested for PAHs (EPA method 8270 SIM), diesel range organics (DOR), and oil range organics (ORO) (EPA method 8015). The DOR and ORO typically refer to petroleum hydrocarbons with a range of 10-28 and 20-35 carbon atoms, respectively. Samples collected at Sites 1-3 were also analyzed for metals to evaluate potential ecological impacts.



## 4. Results

To provide early information to decision makers, this section summarizes available information as of October 10. A final report will incorporate all field observations sheets, site photographs, metals data, and laboratory quality assurance / quality control (QA/QC) Level IV summary.

Analytical results are summarized in Table 3. The screening criteria summarized in Table 1 were compared to the results. All minimum detection limit (MDL) values were below all applicable screening levels with the exception of the TPH human health toxicity criteria for carbon ranges of compounds. Laboratory QA/QC Level II is complete.

The following results are available from the laboratory test results:

- No PAHs were detected
- No oil was detected except at sample location 33

### 4.1. Detected TPH

As stated in the DTSC guidance, consideration of risks associated with TPH should include an assessment of the risk characterization for individual chemicals of potential concern. The mixture of chemicals varies significantly with each source and through time with degradation. The marine water samples were tested for DOR and ORO. The MDL for DOR and ORO samples (33 µg/L to 97 µg/L) were higher than human toxicity screening levels<sup>4</sup> proposed by DTSC, which have a daily oral exposure limit of 0.03 µg/L. However, this level is based on specific toxicology of naphthalene and methylnaphthalene measurements. While TPH was detected at sampling station 33 (HB-10072021-033), naphthalene and methylnaphthalene were non-detect with an MDL at 0.8 µg/L. If we conservatively assume the concentration is half the detection limit (0.04 µg/L), a beachgoer will need to consume 1 liter of seawater to meet daily toxicity criteria.

---

<sup>4</sup> Salt interferes with extraction methods and requires higher MDL than freshwater/drinking water samples.



TABLE 3. ANALYTICAL RESULTS WITH COMPARISON TO APPLICABLE CRITERIA

	US EPA Ambient Water Quality Criteria		Groundwater ESLs (SF RWQCB ESLs, 2019)		TPH Human Health Toxicity	HB-W-2021100 7-001	HB-W-2021100 7-002	HB-W-2021100 7-003	HB-W-2021100 7-004	HB-W-2021100 7-005	HB-W-2021100 7-005-DUP	HB-W-2021100 7-006	HB-W-2021100 7-007	HB-W-2021100 7-008	HB-W-2021100 7-009	HB-W-2021100 7-010	HB-W-2021100 7-011	HB-W-2021100 7-012	HB-W-2021100 7-013	HB-W-2021100 7-014-DUP	HB-W-2021100 7-014	HB-W-2021100 7-015	HB-W-2021100 7-016	HB-W-2021100 7-017	HB-W-2021100 7-018	HB-W-2021100 7-019	HB-W-2021100 7-020
	Chronic CCC	Acute CMC	Odor	Exposure		7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	
PAHs (µg/L)																											
1-Methylnaphthalene	-	-	-	-	-	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.073 U	0.073 U	0.072 U	0.073 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.073 U	0.073 U						
2-Methylnaphthalene	-	-	-	-	-	0.076 U	0.076 U	0.076 U	0.076 U	0.076 U	0.076 U	0.077 U	0.077 U	0.076 U	0.077 U	0.076 U	0.076 U	0.076 U	0.076 U	0.076 U	0.077 U	0.077 U					
Acenaphthene	40*	970	200	530	-	0.095 U	0.095 U	0.096 U	0.096 U	0.095 U	0.096 U	0.095 U	0.095 U	0.096 U	0.096 U	0.097 U	0.097 U	0.096 U	0.097 U	0.095 U	0.095 U	0.095 U	0.096 U	0.096 U	0.097 U	0.097 U	
Acenaphthylene	-	300	-	-	-	0.068 U	0.068 U	0.068 U	0.068 U	0.068 U	0.068 U	0.069 U	0.069 U	0.068 U	0.069 U	0.068 U	0.068 U	0.068 U	0.068 U	0.068 U	0.069 U	0.069 U					
Anthracene	-	300	-	1800	-	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.059 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U						
Benzo(a)anthracene	-	300	-	0.02	-	0.084 U	0.084 U	0.084 U	0.085 U	0.084 U	0.086 U	0.086 U	0.085 U	0.085 U	0.084 U	0.084 U	0.085 U										
Benzo(a)pyrene	-	300	-	0.2	-	0.061 U	0.061 U	0.061 U	0.062 U	0.061 U	0.061 U	0.061 U	0.062 U	0.062 U	0.063 U	0.062 U	0.062 U	0.062 U	0.061 U	0.061 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U		
Benzo(b)fluoranthene	-	300	-	0.25	-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U						
Benzo(g,h,i)perylene	-	300	-	-	-	0.099 U	0.099 U	0.099 U	0.10 U	0.099 U	0.099 U	0.10 U	0.099 U	0.10 U	0.099 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	
Benzo(k)fluoranthene	-	300	-	2.5	-	0.091 U	0.091 U	0.092 U	0.092 U	0.091 U	0.092 U	0.091 U	0.091 U	0.092 U	0.092 U	0.093 U	0.093 U	0.092 U	0.093 U	0.091 U	0.091 U	0.092 U	0.092 U	0.093 U	0.093 U		
Chrysene	-	300	-	25	-	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U	0.059 U	0.059 U	0.058 U	0.058 U	0.058 U	0.058 U	0.059 U	0.059 U							
Dibenz(a,h)anthracene	-	300	-	0.03	-	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.12 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U							
Fluoranthene	11*	800	-	800	-	0.066 U	0.066 U	0.067 U	0.067 U	0.066 U	0.067 U	0.066 U	0.067 U	0.066 U	0.067 U	0.067 U	0.068 U	0.068 U	0.067 U	0.067 U	0.066 U	0.067 U	0.067 U	0.067 U	0.067 U		
Fluorene	-	300	-	290	-	0.074 U	0.073 U	0.074 U	0.074 U	0.073 U	0.074 U	0.073 U	0.074 U	0.074 U	0.074 U	0.075 U	0.075 U	0.074 U	0.075 U	0.073 U	0.073 U	0.074 U	0.074 U	0.075 U	0.075 U		
Indeno(1,2,3-c,d)pyrene	-	300	-	0.25	-	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.11 U	0.11 U	0.11 U	0.10 U	0.10 U	0.10 U	0.10 U	0.11 U	0.11 U								
Naphthalene	1.4†	2400	210	0.17	-	0.081 U	0.081 U	0.081 U	0.082 U	0.081 U	0.081 U	0.081 U	0.082 U	0.081 U	0.082 U	0.083 U	0.083 U	0.082 U	0.082 U	0.081 U	0.081 U	0.082 U	0.082 U	0.082 U			
Phenanthrene	4.6‡	7.7‡	10000	-	-	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.073 U	0.073 U	0.072 U	0.073 U	0.072 U	0.072 U	0.072 U	0.073 U	0.073 U								
Pyrene	-	300	-	120	-	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.066 U	0.066 U	0.066 U	0.065 U	0.065 U	0.065 U	0.066 U	0.066 U								
Total PAHs (ND = 0)	-	300	-	-	-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U								
<b>Additional Analytes</b>																											
C8-C40 (ug/L)	-	-	-	-	0.03	33 U	97 U	32 U	33 U	33 U	32 U	33 U	32 U	33 U	32 U	34 U	32 U	33 U	32 U	34 U	34 U	32 U	35 U	33 U	34 U	33 U	34 U
Diesel Range Organics [C10-C28] (ug/L)	-	-	-	-	0.03	33 U	97 U	32 U	33 U	33 U	32 U	33 U	32 U														

	US EPA Ambient Water Quality Criteria		Groundwater ESLs (SF RWQCB ESLs, 2019)		TPH Human Health Toxicity	HB-W-2021100 7-021	HB-W-2021100 7-022	HB-W-2021100 7-023	HB-W-2021100 7-024	HB-W-2021100 7-025	HB-W-2021100 7-026	HB-W-2021100 7-027	HB-W-2021100 7-028	HB-W-2021100 7-029	HB-W-2021100 7-030	HB-W-2021100 7-031	HB-W-2021100 7-032	HB-W-2021100 7-033	HB-W-2021100 7-034	HB-W-2021100 7-035	HB-W-2021100 7-035-DUP	HB-W-2021100 7-036	HB-W-2021100 7-037	HB-W-2021100 7-038	HB-W-2021100 7-039	HB-W-2021100 7-040			
	Chronic CCC	Acute CMC	Odor	7-Oct-21		7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21	7-Oct-21																			
<b>PAHs (µg/L)</b>																													
1-Methylnaphthalene	-	-	-	-	-	0.071 U	0.072 U	0.071 U	0.072 U	0.071 U	0.071 U	0.071 U	0.072 U	0.071 U	0.072 U	0.071 U													
2-Methylnaphthalene	-	-	-	-	-	0.075 U	0.076 U	0.075 U	0.076 U	0.075 U	0.075 U	0.075 U	0.075 U	0.076 U	0.075 U	0.075 U													
Acenaphthene	40*	970	200	530	-	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U														
Acenaphthylene	-	300	-	-	-	0.067 U	0.068 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U														
Anthracene	-	300	-	1800	-	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U																
Benzo(a)anthracene	-	300	-	0.02	-	0.084 U	0.084 U	0.084 U	0.084 U	0.083 U	0.084 U	0.084 U	0.084 U																
Benzo(a)pyrene	-	300	-	0.2	-	0.061 U	0.062 U	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U	0.061 U														
Benzo(b)fluoranthene	-	300	-	0.25	-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.11 U	0.12 U	0.11 U															
Benzo(g,h,i)perylene	-	300	-	-	-	0.099 U	0.10 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.098 U	0.099 U	0.098 U	0.098 U					
Benzo(k)fluoranthene	-	300	-	2.5	-	0.091 U	0.092 U	0.091 U	0.091 U	0.091 U	0.092 U	0.091 U	0.091 U	0.091 U	0.091 U														
Chrysene	-	300	-	25	-	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U															
Dibenz(a,h)anthracene	-	300	-	0.03	-	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U															
Fluoranthene	11*	800	-	800	-	0.066 U	0.067 U	0.066 U	0.066 U	0.066 U	0.066 U	0.066 U	0.066 U	0.066 U	0.066 U														
Fluorene	-	300	-	290	-	0.073 U	0.074 U	0.073 U	0.073 U	0.073 U	0.074 U	0.073 U	0.073 U	0.073 U	0.073 U														
Indeno(1,2,3-c,d)pyrene	-	300	-	0.25	-	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U															
Naphthalene	1.4†	2400	210	0.17	-	0.081 U	0.082 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U														
Phenanthrene	4.6‡	7.7‡	10000	-	-	0.071 U	0.072 U	0.071 U	0.072 U	0.071 U	0.071 U	0.071 U	0.072 U	0.071 U	0.071 U														
Pyrene	-	300	-	120	-	0.064 U	0.065 U	0.065 U	0.065 U	0.064 U	0.064 U	0.064 U	0.064 U	0.064 U	0.064 U														
Total PAHs (ND = 0)	-	300	-	-	-	0.12 U	0.12 U	0.12 U	0.12 U	0.11 U	0.12 U	0.11 U	0.12 U																
<b>Additional Analytes</b>																													

## 5. Conclusion

Forty water quality samples were collected on October 7, 2021 along Huntington Beach over a shoreline length of 9.5 miles (from Santa Ana River to Anderson Street in Sunset Beach). All samples were analyzed for PAHs and TPH. All measured analytes were non-detect and below applicable standards with the exception of TPH at Station 33. The detected TPH sample at Station 33 did not co-occur with elevated levels of contaminants of concern (PAHs); therefore, the observed concentration is not anticipated to be at a level to be a concern for normal beachgoing activities.



## APPENDIX

J72168-1 UDS Level 2 Report – Final Report

J72168-3 UDS Level 2 Report – Final Report





eurofins

Environment Testing  
America



## ANALYTICAL REPORT

Eurofins Calscience LLC  
7440 Lincoln Way  
Garden Grove, CA 92841  
Tel: (714)895-5494

Laboratory Job ID: 570-72168-1

Client Project/Site: Huntington Beach Oil Spill Sample

For:

Moffatt & Nichol  
4225 East Conant  
Long Beach, California 90808

Attn: Shelly Anghera

Authorized for release by:

10/8/2021 1:52:23 PM

Carla Hollowell, Project Manager I  
(714)895-5494  
[Carla.Hollowell@eurofinset.com](mailto:Carla.Hollowell@eurofinset.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?

Ask  
The  
Expert

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.

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

# Table of Contents

Cover Page .....	1
Table of Contents .....	2
Definitions/Glossary .....	3
Case Narrative .....	4
Client Sample Results .....	5
Surrogate Summary .....	13
QC Sample Results .....	15
QC Association Summary .....	18
Lab Chronicle .....	21
Certification Summary .....	30
Method Summary .....	31
Sample Summary .....	32
Chain of Custody .....	33
Receipt Checklists .....	38

# Definitions/Glossary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Qualifiers

### GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
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.
D	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: Moffatt & Nichol  
Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Job ID: 570-72168-1

Laboratory: Eurofins Calscience LLC

### Narrative

Job Narrative  
570-72168-1

### Comments

No additional comments.

### Receipt

The samples were received on 10/7/2021 6:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 5.0° C, 5.2° C, 5.3° C and 5.5° C.

### Receipt Exceptions

No additional comments.

### GC Semi VOA

Method 8015B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-184905 and analytical batch 570-184856 recovered outside control limits for the following analytes: TPH as Motor Oil (C17-C44)

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

### Organic Prep

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

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Client Sample ID: HB-W-20211007-001**

**Date Collected: 10/07/21 17:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		46	33	ug/L		10/07/21 19:11	10/07/21 23:15	1
C8-C40	ND		46	33	ug/L		10/07/21 19:11	10/07/21 23:15	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	109		53 - 151				10/07/21 19:11	10/07/21 23:15	1

**Client Sample ID: HB-W-20211007-002**

**Date Collected: 10/07/21 17:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		130	97	ug/L		10/07/21 19:11	10/07/21 23:36	1
C8-C40	ND		130	97	ug/L		10/07/21 19:11	10/07/21 23:36	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	104		53 - 151				10/07/21 19:11	10/07/21 23:36	1

**Client Sample ID: HB-W-20211007-003**

**Date Collected: 10/07/21 17:35**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		44	32	ug/L		10/07/21 19:11	10/07/21 23:58	1
C8-C40	ND		44	32	ug/L		10/07/21 19:11	10/07/21 23:58	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	102		53 - 151				10/07/21 19:11	10/07/21 23:58	1

**Client Sample ID: HB-W-20211007-004**

**Date Collected: 10/07/21 12:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		46	33	ug/L		10/07/21 19:11	10/08/21 00:19	1
C8-C40	ND		46	33	ug/L		10/07/21 19:11	10/08/21 00:19	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	99		53 - 151				10/07/21 19:11	10/08/21 00:19	1

**Client Sample ID: HB-W-20211007-005**

**Date Collected: 10/07/21 12:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-5**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		46	33	ug/L		10/07/21 19:11	10/08/21 00:40	1
C8-C40	ND		46	33	ug/L		10/07/21 19:11	10/08/21 00:40	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	108		53 - 151				10/07/21 19:11	10/08/21 00:40	1

**Client Sample ID: HB-W-20211007-006**

**Date Collected: 10/07/21 12:25**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-6**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	32	ug/L		10/07/21 19:11	10/08/21 01:02	1
C8-C40	ND		45	32	ug/L		10/07/21 19:11	10/08/21 01:02	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-1

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
n-Octacosane (Surr)	110		53 - 151	10/07/21 19:11	10/08/21 01:02	1
<b>Client Sample ID: HB-W-20211007-007</b>						
<b>Date Collected: 10/07/21 12:30</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		46	33	ug/L	D
C8-C40	ND		46	33	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	101		53 - 151	10/07/21 19:11	10/08/21 01:24	1
<b>Client Sample ID: HB-W-20211007-008</b>						
<b>Date Collected: 10/07/21 12:35</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		45	32	ug/L	D
C8-C40	ND		45	32	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	99		53 - 151	10/07/21 19:11	10/08/21 01:44	1
<b>Client Sample ID: HB-W-20211007-009</b>						
<b>Date Collected: 10/07/21 12:43</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		47	34	ug/L	D
C8-C40	ND		47	34	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	109		53 - 151	10/07/21 19:11	10/08/21 02:06	1
<b>Client Sample ID: HB-W-20211007-010</b>						
<b>Date Collected: 10/07/21 12:50</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		45	32	ug/L	D
C8-C40	ND		45	32	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	107		53 - 151	10/07/21 19:11	10/08/21 02:28	1
<b>Client Sample ID: HB-W-20211007-011</b>						
<b>Date Collected: 10/07/21 12:55</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		46	33	ug/L	D
C8-C40	ND		46	33	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	113		53 - 151	10/07/21 19:11	10/08/21 02:49	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Client Sample ID: HB-W-20211007-012**

**Date Collected: 10/07/21 13:10**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	32	ug/L		10/07/21 19:11	10/08/21 03:10	1
C8-C40	ND		45	32	ug/L		10/07/21 19:11	10/08/21 03:10	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	97		53 - 151						

**Lab Sample ID: 570-72168-12**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-013**

**Date Collected: 10/07/21 13:05**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		47	34	ug/L		10/07/21 19:11	10/08/21 03:32	1
C8-C40	ND		47	34	ug/L		10/07/21 19:11	10/08/21 03:32	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	106		53 - 151						

**Lab Sample ID: 570-72168-13**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-014**

**Date Collected: 10/07/21 13:15**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		47	34	ug/L		10/07/21 19:11	10/08/21 03:53	1
C8-C40	ND		47	34	ug/L		10/07/21 19:11	10/08/21 03:53	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	116		53 - 151						

**Lab Sample ID: 570-72168-14**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-015**

**Date Collected: 10/07/21 13:45**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	32	ug/L		10/07/21 19:11	10/08/21 04:58	1
C8-C40	ND		45	32	ug/L		10/07/21 19:11	10/08/21 04:58	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	108		53 - 151						

**Lab Sample ID: 570-72168-15**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-016**

**Date Collected: 10/07/21 13:50**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		48	35	ug/L		10/07/21 19:11	10/08/21 05:18	1
C8-C40	ND		48	35	ug/L		10/07/21 19:11	10/08/21 05:18	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	97		53 - 151						

**Lab Sample ID: 570-72168-16**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-017**

**Date Collected: 10/07/21 14:00**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		46	33	ug/L		10/07/21 19:11	10/08/21 05:40	1
C8-C40	ND		46	33	ug/L		10/07/21 19:11	10/08/21 05:40	1

**Lab Sample ID: 570-72168-17**

**Matrix: Water**

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
n-Octacosane (Surr)	99		53 - 151	10/07/21 19:11	10/08/21 05:40	1
<b>Client Sample ID: HB-W-20211007-018</b>						
<b>Date Collected: 10/07/21 14:05</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		47	34	ug/L	D
C8-C40	ND		47	34	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	116		53 - 151	10/07/21 19:11	10/08/21 06:01	1
<b>Lab Sample ID: 570-72168-18</b>						
<b>Matrix: Water</b>						
<b>Client Sample ID: HB-W-20211007-019</b>						
<b>Date Collected: 10/07/21 14:15</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		46	33	ug/L	D
C8-C40	ND		46	33	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	99		53 - 151	10/07/21 19:11	10/08/21 06:22	1
<b>Lab Sample ID: 570-72168-19</b>						
<b>Matrix: Water</b>						
<b>Client Sample ID: HB-W-20211007-020</b>						
<b>Date Collected: 10/07/21 14:30</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		47	34	ug/L	D
C8-C40	ND		47	34	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	107		53 - 151	10/07/21 19:11	10/08/21 06:43	1
<b>Lab Sample ID: 570-72168-20</b>						
<b>Matrix: Water</b>						
<b>Client Sample ID: HB-W-20211007-021</b>						
<b>Date Collected: 10/07/21 14:42</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		45	33	ug/L	D
C8-C40	ND		45	33	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	84		53 - 151	10/07/21 19:36	10/08/21 03:27	1
<b>Lab Sample ID: 570-72168-21</b>						
<b>Matrix: Water</b>						
<b>Client Sample ID: HB-W-20211007-022</b>						
<b>Date Collected: 10/07/21 14:50</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		44	32	ug/L	D
C8-C40	ND		44	32	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	83		53 - 151	10/07/21 19:36	10/08/21 03:47	1
<b>Lab Sample ID: 570-72168-22</b>						
<b>Matrix: Water</b>						

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Client Sample ID: HB-W-20211007-023**

**Date Collected: 10/07/21 14:55**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		46	33	ug/L		10/07/21 19:36	10/08/21 04:06	1
C8-C40	ND		46	33	ug/L		10/07/21 19:36	10/08/21 04:06	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	58		53 - 151				10/07/21 19:36	10/08/21 04:06	1

**Lab Sample ID: 570-72168-23**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-024**

**Date Collected: 10/07/21 14:55**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		44	32	ug/L		10/07/21 19:36	10/08/21 04:26	1
C8-C40	ND		44	32	ug/L		10/07/21 19:36	10/08/21 04:26	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	76		53 - 151				10/07/21 19:36	10/08/21 04:26	1

**Lab Sample ID: 570-72168-24**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-025**

**Date Collected: 10/07/21 15:05**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		46	33	ug/L		10/07/21 19:36	10/08/21 04:47	1
C8-C40	ND		46	33	ug/L		10/07/21 19:36	10/08/21 04:47	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	81		53 - 151				10/07/21 19:36	10/08/21 04:47	1

**Lab Sample ID: 570-72168-25**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-026**

**Date Collected: 10/07/21 15:10**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	32	ug/L		10/07/21 19:36	10/08/21 05:06	1
C8-C40	ND		45	32	ug/L		10/07/21 19:36	10/08/21 05:06	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	77		53 - 151				10/07/21 19:36	10/08/21 05:06	1

**Lab Sample ID: 570-72168-26**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-027**

**Date Collected: 10/07/21 15:20**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	33	ug/L		10/07/21 19:36	10/08/21 05:26	1
C8-C40	ND		45	33	ug/L		10/07/21 19:36	10/08/21 05:26	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	89		53 - 151				10/07/21 19:36	10/08/21 05:26	1

**Lab Sample ID: 570-72168-27**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-028**

**Date Collected: 10/07/21 15:20**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	32	ug/L		10/07/21 19:36	10/08/21 05:46	1
C8-C40	ND		45	32	ug/L		10/07/21 19:36	10/08/21 05:46	1

**Lab Sample ID: 570-72168-28**

**Matrix: Water**

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	74		53 - 151	10/07/21 19:36	10/08/21 05:46	1
<b>Client Sample ID: HB-W-20211007-029</b>						
<b>Date Collected: 10/07/21 15:30</b>						
<b>Date Received: 10/07/21 18:45</b>						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Diesel Range Organics [C10-C28]	ND		46	33	ug/L	10/07/21 19:36
C8-C40	ND		46	33	ug/L	10/07/21 19:36
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	72		53 - 151	10/07/21 19:36	10/08/21 06:06	1
<b>Client Sample ID: HB-W-20211007-030</b>						
<b>Date Collected: 10/07/21 15:32</b>						
<b>Date Received: 10/07/21 18:45</b>						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Diesel Range Organics [C10-C28]	ND		45	32	ug/L	10/07/21 19:36
C8-C40	ND		45	32	ug/L	10/07/21 19:36
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	74		53 - 151	10/07/21 19:36	10/08/21 06:25	1
<b>Client Sample ID: HB-W-20211007-031</b>						
<b>Date Collected: 10/07/21 15:40</b>						
<b>Date Received: 10/07/21 18:45</b>						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Diesel Range Organics [C10-C28]	ND		47	34	ug/L	10/07/21 19:36
C8-C40	ND		47	34	ug/L	10/07/21 19:36
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	76		53 - 151	10/07/21 19:36	10/08/21 06:45	1
<b>Client Sample ID: HB-W-20211007-032</b>						
<b>Date Collected: 10/07/21 15:42</b>						
<b>Date Received: 10/07/21 18:45</b>						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Diesel Range Organics [C10-C28]	ND		45	32	ug/L	10/07/21 19:36
C8-C40	ND		45	32	ug/L	10/07/21 19:36
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	67		53 - 151	10/07/21 19:36	10/08/21 07:05	1
<b>Client Sample ID: HB-W-20211007-033</b>						
<b>Date Collected: 10/07/21 15:50</b>						
<b>Date Received: 10/07/21 18:45</b>						
Analyte	Result	Qualifier	RL	MDL	Unit	D
Diesel Range Organics [C10-C28]	39	J	47	34	ug/L	10/07/21 19:36
C8-C40	53		47	34	ug/L	10/07/21 19:36
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	65		53 - 151	10/07/21 19:36	10/08/21 07:26	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Client Sample ID: HB-W-20211007-034**

**Date Collected: 10/07/21 15:52**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	32	ug/L		10/07/21 19:36	10/08/21 07:45	1
C8-C40	ND		45	32	ug/L		10/07/21 19:36	10/08/21 07:45	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	66		53 - 151				10/07/21 19:36	10/08/21 07:45	1

**Lab Sample ID: 570-72168-34**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-035**

**Date Collected: 10/07/21 16:05**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	33	ug/L		10/07/21 19:36	10/08/21 08:05	1
C8-C40	ND		45	33	ug/L		10/07/21 19:36	10/08/21 08:05	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	65		53 - 151				10/07/21 19:36	10/08/21 08:05	1

**Lab Sample ID: 570-72168-35**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-036**

**Date Collected: 10/07/21 16:02**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	32	ug/L		10/07/21 19:36	10/08/21 10:46	1
C8-C40	ND		45	32	ug/L		10/07/21 19:36	10/08/21 10:46	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	83		53 - 151				10/07/21 19:36	10/08/21 10:46	1

**Lab Sample ID: 570-72168-36**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-037**

**Date Collected: 10/07/21 16:15**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	33	ug/L		10/07/21 19:36	10/08/21 09:26	1
C8-C40	ND		45	33	ug/L		10/07/21 19:36	10/08/21 09:26	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	69		53 - 151				10/07/21 19:36	10/08/21 09:26	1

**Lab Sample ID: 570-72168-37**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-038**

**Date Collected: 10/07/21 16:15**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	32	ug/L		10/07/21 19:36	10/08/21 09:47	1
C8-C40	ND		45	32	ug/L		10/07/21 19:36	10/08/21 09:47	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	70		53 - 151				10/07/21 19:36	10/08/21 09:47	1

**Lab Sample ID: 570-72168-38**

**Matrix: Water**

**Client Sample ID: HB-W-20211007-039**

**Date Collected: 10/07/21 16:25**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		45	33	ug/L		10/07/21 19:36	10/08/21 10:07	1
C8-C40	ND		45	33	ug/L		10/07/21 19:36	10/08/21 10:07	1

**Lab Sample ID: 570-72168-39**

**Matrix: Water**

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
n-Octacosane (Surr)	71		53 - 151	10/07/21 19:36	10/08/21 10:07	1
<b>Client Sample ID: HB-W-20211007-040</b>						
<b>Date Collected: 10/07/21 16:30</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		45	32	ug/L	D
C8-C40	ND		45	32	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	66		53 - 151	10/07/21 19:36	10/08/21 10:27	1
<b>Lab Sample ID: 570-72168-40</b>						
<b>Matrix: Water</b>						
<b>Client Sample ID: HB-W-20211007-005-DUP</b>						
<b>Date Collected: 10/07/21 12:20</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		45	33	ug/L	D
C8-C40	ND		45	33	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	87		53 - 151	10/07/21 19:40	10/08/21 00:07	1
<b>Lab Sample ID: 570-72168-41</b>						
<b>Matrix: Water</b>						
<b>Client Sample ID: HB-W-20211007-014-DUP</b>						
<b>Date Collected: 10/07/21 13:15</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		47	34	ug/L	D
C8-C40	ND		47	34	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	85		53 - 151	10/07/21 19:40	10/08/21 00:26	1
<b>Lab Sample ID: 570-72168-42</b>						
<b>Matrix: Water</b>						
<b>Client Sample ID: HB-W-20211007-025-DUP</b>						
<b>Date Collected: 10/07/21 15:05</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		46	33	ug/L	D
C8-C40	ND		46	33	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	88		53 - 151	10/07/21 19:40	10/08/21 00:46	1
<b>Lab Sample ID: 570-72168-43</b>						
<b>Matrix: Water</b>						
<b>Client Sample ID: HB-W-20211007-035-DUP</b>						
<b>Date Collected: 10/07/21 16:05</b>						
<b>Date Received: 10/07/21 18:45</b>						
<b>Analyte</b>	<b>Result</b>	<b>Qualifier</b>	<b>RL</b>	<b>MDL</b>	<b>Unit</b>	<b>D</b>
Diesel Range Organics [C10-C28]	ND		46	33	ug/L	D
C8-C40	ND		46	33	ug/L	
C8-C40	ND		46	33	ug/L	
<b>Surrogate</b>						
n-Octacosane (Surr)	87		53 - 151	10/07/21 19:40	10/08/21 01:06	1
n-Octacosane (Surr)	87		53 - 151	10/07/21 19:40	10/08/21 01:06	1
<b>Lab Sample ID: 570-72168-44</b>						
<b>Matrix: Water</b>						

Eurofins Calscience LLC

# Surrogate Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		OTCSN1 (53-151)	OTCSN1 (53-151)	
570-72168-1	HB-W-20211007-001	109	109	
570-72168-2	HB-W-20211007-002	104	104	
570-72168-3	HB-W-20211007-003	102	102	
570-72168-4	HB-W-20211007-004	99	99	
570-72168-5	HB-W-20211007-005	108	108	
570-72168-6	HB-W-20211007-006	110	110	
570-72168-7	HB-W-20211007-007	101	101	
570-72168-8	HB-W-20211007-008	99	99	
570-72168-9	HB-W-20211007-009	109	109	
570-72168-10	HB-W-20211007-010	107	107	
570-72168-11	HB-W-20211007-011	113	113	
570-72168-12	HB-W-20211007-012	97	97	
570-72168-13	HB-W-20211007-013	106	106	
570-72168-14	HB-W-20211007-014	116	116	
570-72168-15	HB-W-20211007-015	108	108	
570-72168-16	HB-W-20211007-016	97	97	
570-72168-17	HB-W-20211007-017	99	99	
570-72168-18	HB-W-20211007-018	116	116	
570-72168-19	HB-W-20211007-019	99	99	
570-72168-20	HB-W-20211007-020	107	107	
570-72168-21	HB-W-20211007-021	84	84	
570-72168-22	HB-W-20211007-022	83	83	
570-72168-23	HB-W-20211007-023	58	58	
570-72168-24	HB-W-20211007-024	76	76	
570-72168-25	HB-W-20211007-025	81	81	
570-72168-26	HB-W-20211007-026	77	77	
570-72168-27	HB-W-20211007-027	89	89	
570-72168-28	HB-W-20211007-028	74	74	
570-72168-29	HB-W-20211007-029	72	72	
570-72168-30	HB-W-20211007-030	74	74	
570-72168-31	HB-W-20211007-031	76	76	
570-72168-32	HB-W-20211007-032	67	67	
570-72168-33	HB-W-20211007-033	65	65	
570-72168-34	HB-W-20211007-034	66	66	
570-72168-35	HB-W-20211007-035	65	65	
570-72168-36	HB-W-20211007-036	83	83	
570-72168-37	HB-W-20211007-037	69	69	
570-72168-38	HB-W-20211007-038	70	70	
570-72168-39	HB-W-20211007-039	71	71	
570-72168-40	HB-W-20211007-040	66	66	
570-72168-41	HB-W-20211007-005-DUP	87	87	
570-72168-42	HB-W-20211007-014-DUP	85	85	
570-72168-43	HB-W-20211007-025-DUP	88	88	
570-72168-44	HB-W-20211007-035-DUP	87	87	
LCS 570-184900/24-A	Lab Control Sample	95	95	
LCS 570-184900/2-A	Lab Control Sample	94	94	
LCS 570-184905/2-A	Lab Control Sample	83	83	
LCS 570-184905/4-A	Lab Control Sample	93	93	
LCS 570-184906/2-A	Lab Control Sample	79	79	

# Surrogate Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)**

**Matrix: Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		OTCSN1 (53-151)	OTCSN1 (53-151)	
LCS 570-184906/4-A	Lab Control Sample	80	80	
LCSD 570-184900/25-A	Lab Control Sample Dup	114	114	
LCSD 570-184900/3-A	Lab Control Sample Dup	115	115	
LCSD 570-184905/3-A	Lab Control Sample Dup	67	67	
LCSD 570-184905/5-A	Lab Control Sample Dup	77	77	
LCSD 570-184906/3-A	Lab Control Sample Dup	81	81	
LCSD 570-184906/5-A	Lab Control Sample Dup	90	90	
MB 570-184900/1-A	Method Blank	115	115	
MB 570-184905/1-A	Method Blank	72	72	
MB 570-184906/1-A	Method Blank	76	76	

## Surrogate Legend

OTCSN = n-Octacosane (Surr)



# QC Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-1

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: MB 570-184905/1-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50	36	ug/L		10/07/21 19:36	10/07/21 23:07	1
C8-C40	ND		50	36	ug/L		10/07/21 19:36	10/07/21 23:07	1
<hr/>									
<b>Surrogate</b>									
<i>n</i> -Octacosane (Surr)									

**Lab Sample ID: LCS 570-184905/2-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Diesel Range Organics [C10-C28]	4000	3416		ug/L		85	70 - 131
<hr/>							
<b>Surrogate</b>							
<i>n</i> -Octacosane (Surr)							

**Lab Sample ID: LCS 570-184905/4-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
TPH as Motor Oil (C17-C44)	4000	2934		ug/L		73	57 - 137
<hr/>							
<b>Surrogate</b>							
<i>n</i> -Octacosane (Surr)							

**Lab Sample ID: LCSD 570-184905/3-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
Diesel Range Organics [C10-C28]	4000	4139		ug/L		103	70 - 131	19
<hr/>								
<b>Surrogate</b>								
<i>n</i> -Octacosane (Surr)								

**Lab Sample ID: LCSD 570-184905/5-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
TPH as Motor Oil (C17-C44)	4000	3933	*1	ug/L		98	57 - 137	29
<hr/>								
<b>Surrogate</b>								
<i>n</i> -Octacosane (Surr)								

Eurofins Calscience LLC

# QC Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-1

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: MB 570-184906/1-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50	36	ug/L		10/07/21 19:40	10/07/21 22:07	1
C8-C40	ND		50	36	ug/L		10/07/21 19:40	10/07/21 22:07	1
<hr/>									
<b>Surrogate</b>									
<i>n</i> -Octacosane (Surr)									

**Lab Sample ID: LCS 570-184906/2-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Diesel Range Organics [C10-C28]	4000	3620		ug/L		90	70 - 131
<hr/>							
<b>Surrogate</b>							
<i>n</i> -Octacosane (Surr)							

**Lab Sample ID: LCS 570-184906/4-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
TPH as Motor Oil (C17-C44)	4000	3403		ug/L		85	57 - 137
<hr/>							
<b>Surrogate</b>							
<i>n</i> -Octacosane (Surr)							

**Lab Sample ID: LCSD 570-184906/3-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
Diesel Range Organics [C10-C28]	4000	3543		ug/L		89	70 - 131	2 / 20
<hr/>								
<b>Surrogate</b>								
<i>n</i> -Octacosane (Surr)								

**Lab Sample ID: LCSD 570-184906/5-A**

**Matrix: Water**

**Analysis Batch: 184856**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
TPH as Motor Oil (C17-C44)	4000	3522		ug/L		88	57 - 137	3 / 20
<hr/>								
<b>Surrogate</b>								
<i>n</i> -Octacosane (Surr)								

Eurofins Calscience LLC

# QC Association Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## GC Semi VOA

### Analysis Batch: 184674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-1	HB-W-20211007-001	Total/NA	Water	8015B	184900
570-72168-2	HB-W-20211007-002	Total/NA	Water	8015B	184900
570-72168-3	HB-W-20211007-003	Total/NA	Water	8015B	184900
570-72168-4	HB-W-20211007-004	Total/NA	Water	8015B	184900
570-72168-5	HB-W-20211007-005	Total/NA	Water	8015B	184900
570-72168-6	HB-W-20211007-006	Total/NA	Water	8015B	184900
570-72168-7	HB-W-20211007-007	Total/NA	Water	8015B	184900
570-72168-8	HB-W-20211007-008	Total/NA	Water	8015B	184900
570-72168-9	HB-W-20211007-009	Total/NA	Water	8015B	184900
570-72168-10	HB-W-20211007-010	Total/NA	Water	8015B	184900
570-72168-11	HB-W-20211007-011	Total/NA	Water	8015B	184900
570-72168-12	HB-W-20211007-012	Total/NA	Water	8015B	184900
570-72168-13	HB-W-20211007-013	Total/NA	Water	8015B	184900
570-72168-14	HB-W-20211007-014	Total/NA	Water	8015B	184900
570-72168-15	HB-W-20211007-015	Total/NA	Water	8015B	184900
570-72168-16	HB-W-20211007-016	Total/NA	Water	8015B	184900
570-72168-17	HB-W-20211007-017	Total/NA	Water	8015B	184900
570-72168-18	HB-W-20211007-018	Total/NA	Water	8015B	184900
570-72168-19	HB-W-20211007-019	Total/NA	Water	8015B	184900
570-72168-20	HB-W-20211007-020	Total/NA	Water	8015B	184900
MB 570-184900/1-A	Method Blank	Total/NA	Water	8015B	184900
LCS 570-184900/24-A	Lab Control Sample	Total/NA	Water	8015B	184900
LCS 570-184900/2-A	Lab Control Sample	Total/NA	Water	8015B	184900
LCSD 570-184900/25-A	Lab Control Sample Dup	Total/NA	Water	8015B	184900
LCSD 570-184900/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	184900

### Analysis Batch: 184856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-21	HB-W-20211007-021	Total/NA	Water	8015B	184905
570-72168-22	HB-W-20211007-022	Total/NA	Water	8015B	184905
570-72168-23	HB-W-20211007-023	Total/NA	Water	8015B	184905
570-72168-24	HB-W-20211007-024	Total/NA	Water	8015B	184905
570-72168-25	HB-W-20211007-025	Total/NA	Water	8015B	184905
570-72168-26	HB-W-20211007-026	Total/NA	Water	8015B	184905
570-72168-27	HB-W-20211007-027	Total/NA	Water	8015B	184905
570-72168-28	HB-W-20211007-028	Total/NA	Water	8015B	184905
570-72168-29	HB-W-20211007-029	Total/NA	Water	8015B	184905
570-72168-30	HB-W-20211007-030	Total/NA	Water	8015B	184905
570-72168-31	HB-W-20211007-031	Total/NA	Water	8015B	184905
570-72168-32	HB-W-20211007-032	Total/NA	Water	8015B	184905
570-72168-33	HB-W-20211007-033	Total/NA	Water	8015B	184905
570-72168-34	HB-W-20211007-034	Total/NA	Water	8015B	184905
570-72168-35	HB-W-20211007-035	Total/NA	Water	8015B	184905
570-72168-36	HB-W-20211007-036	Total/NA	Water	8015B	184905
570-72168-37	HB-W-20211007-037	Total/NA	Water	8015B	184905
570-72168-38	HB-W-20211007-038	Total/NA	Water	8015B	184905
570-72168-39	HB-W-20211007-039	Total/NA	Water	8015B	184905
570-72168-40	HB-W-20211007-040	Total/NA	Water	8015B	184905
570-72168-41	HB-W-20211007-005-DUP	Total/NA	Water	8015B	184906
570-72168-42	HB-W-20211007-014-DUP	Total/NA	Water	8015B	184906
570-72168-43	HB-W-20211007-025-DUP	Total/NA	Water	8015B	184906

Eurofins Calscience LLC

# QC Association Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## GC Semi VOA (Continued)

### Analysis Batch: 184856 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-44	HB-W-20211007-035-DUP	Total/NA	Water	8015B	184906
MB 570-184905/1-A	Method Blank	Total/NA	Water	8015B	184905
MB 570-184906/1-A	Method Blank	Total/NA	Water	8015B	184906
LCS 570-184905/2-A	Lab Control Sample	Total/NA	Water	8015B	184905
LCS 570-184905/4-A	Lab Control Sample	Total/NA	Water	8015B	184905
LCS 570-184906/2-A	Lab Control Sample	Total/NA	Water	8015B	184906
LCS 570-184906/4-A	Lab Control Sample	Total/NA	Water	8015B	184906
LCSD 570-184905/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	184905
LCSD 570-184905/5-A	Lab Control Sample Dup	Total/NA	Water	8015B	184905
LCSD 570-184906/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	184906
LCSD 570-184906/5-A	Lab Control Sample Dup	Total/NA	Water	8015B	184906

### Prep Batch: 184900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-1	HB-W-20211007-001	Total/NA	Water	3510C	11
570-72168-2	HB-W-20211007-002	Total/NA	Water	3510C	11
570-72168-3	HB-W-20211007-003	Total/NA	Water	3510C	12
570-72168-4	HB-W-20211007-004	Total/NA	Water	3510C	13
570-72168-5	HB-W-20211007-005	Total/NA	Water	3510C	13
570-72168-6	HB-W-20211007-006	Total/NA	Water	3510C	14
570-72168-7	HB-W-20211007-007	Total/NA	Water	3510C	14
570-72168-8	HB-W-20211007-008	Total/NA	Water	3510C	
570-72168-9	HB-W-20211007-009	Total/NA	Water	3510C	
570-72168-10	HB-W-20211007-010	Total/NA	Water	3510C	
570-72168-11	HB-W-20211007-011	Total/NA	Water	3510C	
570-72168-12	HB-W-20211007-012	Total/NA	Water	3510C	
570-72168-13	HB-W-20211007-013	Total/NA	Water	3510C	
570-72168-14	HB-W-20211007-014	Total/NA	Water	3510C	
570-72168-15	HB-W-20211007-015	Total/NA	Water	3510C	
570-72168-16	HB-W-20211007-016	Total/NA	Water	3510C	
570-72168-17	HB-W-20211007-017	Total/NA	Water	3510C	
570-72168-18	HB-W-20211007-018	Total/NA	Water	3510C	
570-72168-19	HB-W-20211007-019	Total/NA	Water	3510C	
570-72168-20	HB-W-20211007-020	Total/NA	Water	3510C	
MB 570-184900/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-184900/24-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 570-184900/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-184900/25-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 570-184900/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Prep Batch: 184905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-21	HB-W-20211007-021	Total/NA	Water	3510C	
570-72168-22	HB-W-20211007-022	Total/NA	Water	3510C	
570-72168-23	HB-W-20211007-023	Total/NA	Water	3510C	
570-72168-24	HB-W-20211007-024	Total/NA	Water	3510C	
570-72168-25	HB-W-20211007-025	Total/NA	Water	3510C	
570-72168-26	HB-W-20211007-026	Total/NA	Water	3510C	
570-72168-27	HB-W-20211007-027	Total/NA	Water	3510C	
570-72168-28	HB-W-20211007-028	Total/NA	Water	3510C	
570-72168-29	HB-W-20211007-029	Total/NA	Water	3510C	

Eurofins Calscience LLC

# QC Association Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

## GC Semi VOA (Continued)

### Prep Batch: 184905 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-30	HB-W-20211007-030	Total/NA	Water	3510C	1
570-72168-31	HB-W-20211007-031	Total/NA	Water	3510C	2
570-72168-32	HB-W-20211007-032	Total/NA	Water	3510C	3
570-72168-33	HB-W-20211007-033	Total/NA	Water	3510C	4
570-72168-34	HB-W-20211007-034	Total/NA	Water	3510C	5
570-72168-35	HB-W-20211007-035	Total/NA	Water	3510C	6
570-72168-36	HB-W-20211007-036	Total/NA	Water	3510C	7
570-72168-37	HB-W-20211007-037	Total/NA	Water	3510C	8
570-72168-38	HB-W-20211007-038	Total/NA	Water	3510C	9
570-72168-39	HB-W-20211007-039	Total/NA	Water	3510C	10
570-72168-40	HB-W-20211007-040	Total/NA	Water	3510C	11
MB 570-184905/1-A	Method Blank	Total/NA	Water	3510C	12
LCS 570-184905/2-A	Lab Control Sample	Total/NA	Water	3510C	13
LCS 570-184905/4-A	Lab Control Sample	Total/NA	Water	3510C	14
LCSD 570-184905/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 570-184905/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Prep Batch: 184906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-41	HB-W-20211007-005-DUP	Total/NA	Water	3510C	1
570-72168-42	HB-W-20211007-014-DUP	Total/NA	Water	3510C	2
570-72168-43	HB-W-20211007-025-DUP	Total/NA	Water	3510C	3
570-72168-44	HB-W-20211007-035-DUP	Total/NA	Water	3510C	4
MB 570-184906/1-A	Method Blank	Total/NA	Water	3510C	5
LCS 570-184906/2-A	Lab Control Sample	Total/NA	Water	3510C	6
LCS 570-184906/4-A	Lab Control Sample	Total/NA	Water	3510C	7
LCSD 570-184906/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	8
LCSD 570-184906/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	9

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-001**  
**Date Collected: 10/07/21 17:20**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			274.2 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/07/21 23:15	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-002**  
**Date Collected: 10/07/21 17:30**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			92.8 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/07/21 23:36	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-003**  
**Date Collected: 10/07/21 17:35**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			281.2 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/07/21 23:58	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-004**  
**Date Collected: 10/07/21 12:20**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			271.3 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 00:19	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-005**  
**Date Collected: 10/07/21 12:20**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			272.1 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 00:40	UJ3K	ECL 1

Instrument ID: GC48

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-006**

Date Collected: 10/07/21 12:25

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-6**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			278.6 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 01:02	UJ3K	ECL 1

**Client Sample ID: HB-W-20211007-007**

Date Collected: 10/07/21 12:30

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-7**

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	3510C			272.2 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 01:24	UJ3K	ECL 1

**Client Sample ID: HB-W-20211007-008**

Date Collected: 10/07/21 12:35

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-8**

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	3510C			278.7 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 01:44	UJ3K	ECL 1

**Client Sample ID: HB-W-20211007-009**

Date Collected: 10/07/21 12:43

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-9**

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	3510C			266.4 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 02:06	UJ3K	ECL 1

**Client Sample ID: HB-W-20211007-010**

Date Collected: 10/07/21 12:50

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-10**

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	3510C			279.1 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 02:28	UJ3K	ECL 1

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-011**  
**Date Collected: 10/07/21 12:55**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-11**  
**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	3510C			270.9 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 02:49	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-012**  
**Date Collected: 10/07/21 13:10**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-12**  
**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	3510C			278.4 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 03:10	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-013**  
**Date Collected: 10/07/21 13:05**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-13**  
**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	3510C			268.8 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 03:32	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-014**  
**Date Collected: 10/07/21 13:15**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-14**  
**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	3510C			263.8 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 03:53	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-015**  
**Date Collected: 10/07/21 13:45**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-15**  
**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	3510C			278 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 04:58	UJ3K	ECL 1

Instrument ID: GC48

# Lab Chronicle

Client: Moffatt & Nichol  
Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-016**

**Lab Sample ID: 570-72168-16**

Matrix: Water

Date Collected: 10/07/21 13:50

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			260.9 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 05:18	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-017**

**Lab Sample ID: 570-72168-17**

Matrix: Water

Date Collected: 10/07/21 14:00

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			270.1 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 05:40	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-018**

**Lab Sample ID: 570-72168-18**

Matrix: Water

Date Collected: 10/07/21 14:05

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			268.2 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 06:01	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-019**

**Lab Sample ID: 570-72168-19**

Matrix: Water

Date Collected: 10/07/21 14:15

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			272.7 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 06:22	UJ3K	ECL 1

Instrument ID: GC48

**Client Sample ID: HB-W-20211007-020**

**Lab Sample ID: 570-72168-20**

Matrix: Water

Date Collected: 10/07/21 14:30

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263.6 mL	2.5 mL	184900	10/07/21 19:11	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184674	10/08/21 06:43	UJ3K	ECL 1

Instrument ID: GC48

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-021**  
**Date Collected: 10/07/21 14:42**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-21**  
**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	3510C			275.8 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 03:27	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-022**  
**Date Collected: 10/07/21 14:50**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-22**  
**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	3510C			281.1 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 03:47	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-023**  
**Date Collected: 10/07/21 14:55**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-23**  
**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	3510C			271.3 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 04:06	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-024**  
**Date Collected: 10/07/21 14:55**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-24**  
**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	3510C			281.7 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 04:26	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-025**  
**Date Collected: 10/07/21 15:05**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-25**  
**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	3510C			274.4 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 04:47	N1A	ECL 1

Instrument ID: GC50

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-026**  
**Date Collected: 10/07/21 15:10**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-26**  
**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	3510C			278.2 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 05:06	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-027**  
**Date Collected: 10/07/21 15:20**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-27**  
**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	3510C			277 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 05:26	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-028**  
**Date Collected: 10/07/21 15:20**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-28**  
**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	3510C			280.5 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 05:46	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-029**  
**Date Collected: 10/07/21 15:30**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-29**  
**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	3510C			273.4 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 06:06	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-030**  
**Date Collected: 10/07/21 15:32**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-30**  
**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	3510C			278.7 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 06:25	N1A	ECL 1

Instrument ID: GC50

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-031**  
**Date Collected: 10/07/21 15:40**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-31**  
**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	3510C			264.6 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 06:45	N1A	ECL 1

**Client Sample ID: HB-W-20211007-032**  
**Date Collected: 10/07/21 15:42**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-32**  
**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	3510C			277.2 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 07:05	N1A	ECL 1

**Client Sample ID: HB-W-20211007-033**  
**Date Collected: 10/07/21 15:50**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-33**  
**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	3510C			265.6 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 07:26	N1A	ECL 1

**Client Sample ID: HB-W-20211007-034**  
**Date Collected: 10/07/21 15:52**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-34**  
**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	3510C			278.2 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 07:45	N1A	ECL 1

**Client Sample ID: HB-W-20211007-035**  
**Date Collected: 10/07/21 16:05**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-35**  
**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	3510C			276.4 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 08:05	N1A	ECL 1

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-036**

**Lab Sample ID: 570-72168-36**

Matrix: Water

Date Collected: 10/07/21 16:02

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			280.2 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 10:46	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-037**

**Lab Sample ID: 570-72168-37**

Matrix: Water

Date Collected: 10/07/21 16:15

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			275.9 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 09:26	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-038**

**Lab Sample ID: 570-72168-38**

Matrix: Water

Date Collected: 10/07/21 16:15

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			279.5 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 09:47	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-039**

**Lab Sample ID: 570-72168-39**

Matrix: Water

Date Collected: 10/07/21 16:25

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			276.9 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 10:07	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-040**

**Lab Sample ID: 570-72168-40**

Matrix: Water

Date Collected: 10/07/21 16:30

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			279.5 mL	2.5 mL	184905	10/07/21 19:36	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 10:27	N1A	ECL 1

Instrument ID: GC50

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

**Client Sample ID: HB-W-20211007-005-DUP**

**Lab Sample ID: 570-72168-41**

Matrix: Water

Date Collected: 10/07/21 12:20

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			276.2 mL	2.5 mL	184906	10/07/21 19:40	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 00:07	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-014-DUP**

**Lab Sample ID: 570-72168-42**

Matrix: Water

Date Collected: 10/07/21 13:15

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			263.6 mL	2.5 mL	184906	10/07/21 19:40	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 00:26	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-025-DUP**

**Lab Sample ID: 570-72168-43**

Matrix: Water

Date Collected: 10/07/21 15:05

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			273 mL	2.5 mL	184906	10/07/21 19:40	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 00:46	N1A	ECL 1

Instrument ID: GC50

**Client Sample ID: HB-W-20211007-035-DUP**

**Lab Sample ID: 570-72168-44**

Matrix: Water

Date Collected: 10/07/21 16:05

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			271.3 mL	2.5 mL	184906	10/07/21 19:40	UFLU	ECL 1
Total/NA	Analysis	8015B		1			184856	10/08/21 01:06	N1A	ECL 1

Instrument ID: GC50

## Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

## Accreditation/Certification Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

### Laboratory: Eurofins Calscience LLC

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

Authority	Program	Identification Number	Expiration Date
California	State	2944	09-30-22

1

2

3

4

5

6

7

8

9

10

11

12

13

14

## Method Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

Method	Method Description	Protocol	Laboratory
8015B	Diesel Range Organics (DRO) (GC)	SW846	ECL 1
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1

**Protocol References:**

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

**Laboratory References:**

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

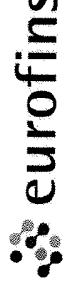
# Sample Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-72168-1	HB-W-20211007-001	Water	10/07/21 17:20	10/07/21 18:45
570-72168-2	HB-W-20211007-002	Water	10/07/21 17:30	10/07/21 18:45
570-72168-3	HB-W-20211007-003	Water	10/07/21 17:35	10/07/21 18:45
570-72168-4	HB-W-20211007-004	Water	10/07/21 12:20	10/07/21 18:45
570-72168-5	HB-W-20211007-005	Water	10/07/21 12:20	10/07/21 18:45
570-72168-6	HB-W-20211007-006	Water	10/07/21 12:25	10/07/21 18:45
570-72168-7	HB-W-20211007-007	Water	10/07/21 12:30	10/07/21 18:45
570-72168-8	HB-W-20211007-008	Water	10/07/21 12:35	10/07/21 18:45
570-72168-9	HB-W-20211007-009	Water	10/07/21 12:43	10/07/21 18:45
570-72168-10	HB-W-20211007-010	Water	10/07/21 12:50	10/07/21 18:45
570-72168-11	HB-W-20211007-011	Water	10/07/21 12:55	10/07/21 18:45
570-72168-12	HB-W-20211007-012	Water	10/07/21 13:10	10/07/21 18:45
570-72168-13	HB-W-20211007-013	Water	10/07/21 13:05	10/07/21 18:45
570-72168-14	HB-W-20211007-014	Water	10/07/21 13:15	10/07/21 18:45
570-72168-15	HB-W-20211007-015	Water	10/07/21 13:45	10/07/21 18:45
570-72168-16	HB-W-20211007-016	Water	10/07/21 13:50	10/07/21 18:45
570-72168-17	HB-W-20211007-017	Water	10/07/21 14:00	10/07/21 18:45
570-72168-18	HB-W-20211007-018	Water	10/07/21 14:05	10/07/21 18:45
570-72168-19	HB-W-20211007-019	Water	10/07/21 14:15	10/07/21 18:45
570-72168-20	HB-W-20211007-020	Water	10/07/21 14:30	10/07/21 18:45
570-72168-21	HB-W-20211007-021	Water	10/07/21 14:42	10/07/21 18:45
570-72168-22	HB-W-20211007-022	Water	10/07/21 14:50	10/07/21 18:45
570-72168-23	HB-W-20211007-023	Water	10/07/21 14:55	10/07/21 18:45
570-72168-24	HB-W-20211007-024	Water	10/07/21 14:55	10/07/21 18:45
570-72168-25	HB-W-20211007-025	Water	10/07/21 15:05	10/07/21 18:45
570-72168-26	HB-W-20211007-026	Water	10/07/21 15:10	10/07/21 18:45
570-72168-27	HB-W-20211007-027	Water	10/07/21 15:20	10/07/21 18:45
570-72168-28	HB-W-20211007-028	Water	10/07/21 15:20	10/07/21 18:45
570-72168-29	HB-W-20211007-029	Water	10/07/21 15:30	10/07/21 18:45
570-72168-30	HB-W-20211007-030	Water	10/07/21 15:32	10/07/21 18:45
570-72168-31	HB-W-20211007-031	Water	10/07/21 15:40	10/07/21 18:45
570-72168-32	HB-W-20211007-032	Water	10/07/21 15:42	10/07/21 18:45
570-72168-33	HB-W-20211007-033	Water	10/07/21 15:50	10/07/21 18:45
570-72168-34	HB-W-20211007-034	Water	10/07/21 15:52	10/07/21 18:45
570-72168-35	HB-W-20211007-035	Water	10/07/21 16:05	10/07/21 18:45
570-72168-36	HB-W-20211007-036	Water	10/07/21 16:02	10/07/21 18:45
570-72168-37	HB-W-20211007-037	Water	10/07/21 16:15	10/07/21 18:45
570-72168-38	HB-W-20211007-038	Water	10/07/21 16:15	10/07/21 18:45
570-72168-39	HB-W-20211007-039	Water	10/07/21 16:25	10/07/21 18:45
570-72168-40	HB-W-20211007-040	Water	10/07/21 16:30	10/07/21 18:45
570-72168-41	HB-W-20211007-005-DUP	Water	10/07/21 12:20	10/07/21 18:45
570-72168-42	HB-W-20211007-014-DUP	Water	10/07/21 13:15	10/07/21 18:45
570-72168-43	HB-W-20211007-025-DUP	Water	10/07/21 15:05	10/07/21 18:45
570-72168-44	HB-W-20211007-035-DUP	Water	10/07/21 16:05	10/07/21 18:45



Calscience

卷之三

**CHAIN OF CUSTODY RECORD**

7440 Lincoln Way Garden Grove CA 92841-1427 • (714) 895-5494  
For courier service / sample drop off information contact us26\_sales@eurofinsus.com or call us

LABORATORY CLIENT						PROJECT INFORMATION					
MOFFATT AND NICHOL			555 ANTON BLVD # 400			CLIENT PROJECT NAME / NUMBER			PO NO		
ADDRESS		CITY		STATE		ZIP		PROJECT CONTACT		SAMPLER(S) (PRINT)	
555 ANTON BLVD # 400		COSTA MESA		CA				SHELLY ANGHERA (sanghera@moffattnichol.com)		C. Webb M. Butles	
TURNDOWN TIME Rush samples may apply to any TAT not 'STANDARD'											
X SAME DAY <u>24 HRS</u>											
□ COELT EDF											
SW = Seawater											
SPECIAL INSTRUCTIONS											
RUSH TAT											
SO CAL OIL SPILL PROJECT											
C/O CARLA HOLLOWELL (@ EUROFINS)											
LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO OF CONT	REQUESTED ANALYSES					
		DATE	TIME			Please check box or fill in blank as needed					
		07-10-21	<u>5:20</u>			7470A - Mercury (CVAA)					
		07-10-21	<u>5:30</u>			6010B - Metals (ICP)					
		07-10-21	<u>5:35</u>			PAHs (EPA 8270 SIM)					
		07-10-21	<u>12:20pm</u>			DRO / ORO (EPA 8015)					
		07-10-21	<u>12:20</u>			Field Filtered					
		07-10-21	<u>12:25</u>			Preserved					
		07-10-21	<u>12:30</u>			Unpreserved					
		07-10-21	<u>12:35</u>								
07-10-21	<u>12:43</u>										
07-10-21	<u>12:50</u>										
Reinquished by <u>J. Webb</u>		Received by <u>C. Webb</u>						Date <u>10-7-2021</u>		Time <u>18:10</u>	
Reinquished by <u>E. CI</u>		Received by <u>E. CI</u>						Date <u>10-7-2021</u>		Time <u>18:57</u>	
Reinquished by <u>E. CI</u>		Received by <u>E. CI</u>						Date <u>10-7-2021</u>		Time <u>18:57</u>	
Reinquished by <u>E. CI</u>		Received by <u>E. CI</u>						Date <u>10-7-2021</u>		Time <u>18:57</u>	

LABORATORY CLIENT		CLIENT PROJECT NUMBER		PROJECT CONTACT		SAMPLE(S) (PRIN.)	
ADDRESS	MOFFATT AND NICHOL	Huntington Beach Oil Spill				C. Webber	M. Butler
CITY	COSTA MESA	STATE	CA	ZIP			
TEL	657-261-2699	E-MAIL	Sanghera@moffatnichol.com				
TURNAROUND TIME (Business days may apply to any TAT not STANDARD)							
<input checked="" type="checkbox"/> SAME DAY		<input type="checkbox"/> 48 HR		<input type="checkbox"/> 72 HR		<input type="checkbox"/> 5 DAYS	
<input type="checkbox"/> COELT EDF		SW = Seawater				<input type="checkbox"/> STANDARD	
SPECIAL INSTRUCTIONS							
RUSH TAT SO CAL OIL SPILL PROJECT C/O CARLA HOLLOWELL (@ EUROFINS)							
LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT	Field Filtered	
		DATE	TIME			Preserved	Chpreserved
11	HB-W-20211007-011	07-10-21	12:55	SW	2	X	X
12	HB-W-20211007-012	07-10-21	1:10	SW	2	X	X
13	HB-W-20211007-013	07-10-21	1:05	SW	2	X	X
14	HB-W-20211007-014	07-10-21	1:15	SW	2	X	X
15	HB-W-20211007-015	07-10-21	1:45	SW	2	X	X
16	HB-W-20211007-016	07-10-21	1:50	SW	2	X	X
17	HB-W-20211007-017	07-10-21	2:00	SW	2	X	X
18	HB-W-20211007-018	07-10-21	2:05	SW	2	X	X
19	HB-W-20211007-019	07-10-21	2:15	SW	2	X	X
20	HB-W-20211007-020	07-10-21	2:20	SW	2	X	X
Please check box or fill in blank as needed							
REQUESTED ANALYSES							
DRO / DRO (EPA 8015)							
PAHs (EPA 8270 SIM)							
Please check box or fill in blank as needed							
Received by (Signature/Affiliation)							
Relinquished by (Signature)		John T		Received by (Signature/Affiliation)		Received by (Signature/Affiliation)	
Relinquished by (Signature)		A. E. C.		Received by (Signature/Affiliation)		Received by (Signature/Affiliation)	
Relinquished by (Signature)		B. E. C.		Received by (Signature/Affiliation)		Received by (Signature/Affiliation)	
Date		Time		Date		Time	
10-7-2021		18:01		10-7-2021		18:57	
Date		Time		Date		Time	
10-7-2021		18:57		10-7-2021		18:01	

## CHAIN OF CUSTODY RECORD

		DATE 10-07-21	PAGE 3	OF 5
LABORATORY CLIENT MOFFATT AND NICHOL		CLIENT PROJECT NAME /NUMBER Huntington Beach Oil Spill		PO NO
ADDRESS 555 ANTON BLVD # 400	CITY COSTA MESA	STATE CA	ZIP	PROJECT CONTACT SHELLY ANGHERA (sanghera@moffattnichol.com)
TEL 657-261-2699	E-MAIL Sanghera@moffattnichol.com			SAMPLER(S) (PRINT) C. W. Hobbs M. Battles
<b>REQUESTED ANALYSES</b>				
Please check box or fill in blank as needed				
<input type="checkbox"/> SAME DAY <input checked="" type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> STANDARD				
<input type="checkbox"/> COELT EDF <input checked="" type="checkbox"/> SW = Seawater				
<b>SPECIAL INSTRUCTIONS</b> RUSH TAT SO CAL OIL SPILL PROJECT C/O CARLA HOLLOWELL (@ EUROFINS)				
LAB USE ONLY	SAMPLE ID	SAMPLING DATE	MATRIX TIME	NO OF CONT
21	HB-W-20211007-021	07-10-21	2:42 SW	2 X
22	HB-W-20211007-022	07-10-21	2:50 SW	2 X
23	HB-W-20211007-023	07-10-21	2:55 SW	2 X
24	HB-W-20211007-024	07-10-21	2:55 SW	2 X
25	HB-W-20211007-025	07-10-21	3:05 SW	2 X
26	HB-W-20211007-026	07-10-21	3:10 SW	2 X
27	HB-W-20211007-027	07-10-21	3:20 SW	2 X
28	HB-W-20211007-028	07-10-21	3:20 SW	2 X
29	HB-W-20211007-029	07-10-21	3:30 SW	2 X
30	HB-W-20211007-030	07-10-21	3:32 SW	2 X
Received by (Signature) <i>John T</i>				
Received by (Signature/Affiliation) <i>EE CI</i>				
Date 10-7-2021				
Time 18:01				
Relinquished by (Signature) <i>EE CI</i>				
Received by (Signature/Affiliation) <i>J. Johnson</i>				
Date 10-7-2021				
Time 18:57				
Relinquished by (Signature) <i>EE CI</i>				
Received by (Signature/Affiliation) <i>J. Johnson</i>				
Date 10-7-2021				
Time 18:57				

7440 Lincoln Way Garden Grove CA 92841-1427 • (714) 895-5494

For courier service / sample drop off information contact us26\_sales@eurofinsus.com or call us

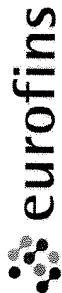
 1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30

6/02/14 Rev 5

**CHAIN OF CUSTODY RECORD**

7440 Lincoln Way Garden Grove CA 92841-1437 : (714) 895-5191

For courier service / sample drop off information contact us26 sales@eurofinsus.com or call us



Calscience

## CHAIN OF CUSTODY RECORD

		DATE 10/07/21	PAGE 5	OF 5
LABORATORY/CLIENT MOFFATT AND NICHOL	CLIENT/PROJECT NAME /NUMBER Huntington Beach Oil Spill	PO NO.		
ADDRESS 555 ANTON BLVD # 400	PROJECT CONTACT	SAMPLER(S) PRINT <i>C.W. Hobbs M. Butles</i>		
CITY COSTA MESA	STATE CA	ZIP		
TEL 657-261-2699	E MAIL Sanghera@moffattnichol.com			
<b>REQUESTED ANALYSES</b>				
Please check box or fill in blank as needed				
<input checked="" type="checkbox"/> <b>T47CA-Meccury (CVAA)</b> <input checked="" type="checkbox"/> <b>GC10B-Mdaks (ICP)</b> <input type="checkbox"/> <b>PAHs (EPA 8270 SIM)</b> <input type="checkbox"/> <b>DRO / DRO (EPA 8015)</b>				
<b>TURNAROUND TIME</b> (Rush time charges may apply to any TAT not STANDARD) <input checked="" type="checkbox"/> SAME DAY <input checked="" type="checkbox"/> 24 HRS <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> STANDARD				
<b>SPECIAL INSTRUCTIONS</b> <b>RUSH TAT</b> <b>SO CAL OIL SPILL PROJECT</b> <b>C/O CARLA HOLLOWELL (@ EUROFINS)</b> <b>"SP" samples 24 hr TAT</b> <b>every thing else same day TAT</b> <b>SW = Seawater</b>				
LAB USE ONLY	SAMPLE ID	SAMPLING	MATRIX	NO OF CONT
		DATE	TIME	
<b>41</b>	HB-W-20211007-005-DUP	07-10-21	12:20	SW 2 X
<b>42</b>	HB-W-20211007-014-DUP	07-10-21	11:15	SW 2 X
<b>43</b>	HB-W-20211007-025-DUP	07-10-21	3:05	SW 2 X
<b>44</b>	HB-W-20211007-035-DUP	07-10-21	4:05	SW 2 X
<b>45</b>	HB-W-20211007-1	07-10-21	5:20	SW 2 X
<b>46</b>	HB-W-20211007-2	07-10-21	5:30	SW 2 X
<b>47</b>	HB-W-20211007-3	07-10-21	5:35	SW 2 X
Field Filtered				
Preserved				
Chilled				
Received by (Signature/Affiliation) <i>Dale T</i>				
Received by (Signature/Affiliation) <i>Eric</i>				
Received by (Signature/Affiliation) <i>Shane</i>				
Relinquished by (Signature) <i>John T</i>				
Relinquished by (Signature) <i>Eric</i>				
Relinquished by (Signature) <i>Shane</i>				
Date 10-7-2021	Time 18:00			
Date 10-7-2021	Time 18:57			

66/02/14 Revision  
1 2 3 4 5 6 7 8 9 10 11 12 13 14

## Login Sample Receipt Checklist

Client: Moffatt & Nichol

Job Number: 570-72168-1

**Login Number:** 72168

**List Source:** Eurofins Calscience LLC

**List Number:** 1

**Creator:** Cruise, Noel

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



Environment Testing  
America



## ANALYTICAL REPORT

Eurofins Calscience LLC  
7440 Lincoln Way  
Garden Grove, CA 92841  
Tel: (714)895-5494

Laboratory Job ID: 570-72168-3

Client Project/Site: Huntington Beach Oil Spill Sample

For:

Moffatt & Nichol  
4225 East Conant  
Long Beach, California 90808

Attn: Shelly Anghera

Authorized for release by:

10/8/2021 8:34:43 PM

Carla Hollowell, Project Manager I  
(714)895-5494  
[Carla.Hollowell@eurofinset.com](mailto:Carla.Hollowell@eurofinset.com)

### LINKS

Review your project  
results through

**Total Access**

Have a Question?

Ask  
The  
Expert

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.

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

# Table of Contents

Cover Page .....	1
Table of Contents .....	2
Definitions/Glossary .....	3
Case Narrative .....	4
Client Sample Results .....	5
Surrogate Summary .....	30
QC Sample Results .....	32
QC Association Summary .....	38
Lab Chronicle .....	41
Certification Summary .....	50
Method Summary .....	51
Sample Summary .....	52
Chain of Custody .....	53
Receipt Checklists .....	58

# Definitions/Glossary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Glossary

### Abbreviation

These commonly used abbreviations may or may not be present in this report.

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

1

2

3

4

5

6

7

8

9

10

11

12

13

14

# Case Narrative

Client: Moffatt & Nichol  
Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Job ID: 570-72168-3

### Laboratory: Eurofins Calscience LLC

#### Narrative

#### Job Narrative 570-72168-3

#### Comments

No additional comments.

#### Receipt

The samples were received on 10/7/2021 6:45 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 5.0° C, 5.2° C, 5.3° C and 5.5° C.

#### Receipt Exceptions

No additional comments.

#### GC/MS Semi VOA

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

#### Organic Prep

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-184901. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-184917 and 570-184917. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch. Method 8270 Sim P.A.H

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-184919. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch. Method 8270 Sim P.A.H

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

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM)

**Client Sample ID: HB-W-20211007-001**

**Date Collected: 10/07/21 17:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 11:03	1	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L	10/07/21 19:21	10/08/21 11:03	1	2
Acenaphthene	ND		0.20	0.095	ug/L	10/07/21 19:21	10/08/21 11:03	1	3
Acenaphthylene	ND		0.20	0.068	ug/L	10/07/21 19:21	10/08/21 11:03	1	4
Anthracene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 11:03	1	5
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L	10/07/21 19:21	10/08/21 11:03	1	6
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L	10/07/21 19:21	10/08/21 11:03	1	7
Benzo[a]anthracene	ND		0.20	0.084	ug/L	10/07/21 19:21	10/08/21 11:03	1	8
Benzo[a]pyrene	ND		0.20	0.061	ug/L	10/07/21 19:21	10/08/21 11:03	1	9
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 11:03	1	10
Chrysene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 11:03	1	11
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 11:03	1	12
Fluoranthene	ND		0.20	0.066	ug/L	10/07/21 19:21	10/08/21 11:03	1	13
Fluorene	ND		0.20	0.074	ug/L	10/07/21 19:21	10/08/21 11:03	1	14
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 11:03	1	15
Naphthalene	ND		0.20	0.081	ug/L	10/07/21 19:21	10/08/21 11:03	1	16
Phenanthrene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 11:03	1	17
Pyrene	ND		0.20	0.065	ug/L	10/07/21 19:21	10/08/21 11:03	1	18
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	65			33 - 144			10/07/21 19:21	10/08/21 11:03	1
Nitrobenzene-d5 (Surr)	69			28 - 139			10/07/21 19:21	10/08/21 11:03	1
p-Terphenyl-d14 (Surr)	71			23 - 160			10/07/21 19:21	10/08/21 11:03	1

**Client Sample ID: HB-W-20211007-002**

**Date Collected: 10/07/21 17:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 11:25	1	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L	10/07/21 19:21	10/08/21 11:25	1	2
Acenaphthene	ND		0.20	0.095	ug/L	10/07/21 19:21	10/08/21 11:25	1	3
Acenaphthylene	ND		0.20	0.068	ug/L	10/07/21 19:21	10/08/21 11:25	1	4
Anthracene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 11:25	1	5
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L	10/07/21 19:21	10/08/21 11:25	1	6
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L	10/07/21 19:21	10/08/21 11:25	1	7
Benzo[a]anthracene	ND		0.20	0.084	ug/L	10/07/21 19:21	10/08/21 11:25	1	8
Benzo[a]pyrene	ND		0.20	0.061	ug/L	10/07/21 19:21	10/08/21 11:25	1	9
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 11:25	1	10
Chrysene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 11:25	1	11
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 11:25	1	12
Fluoranthene	ND		0.20	0.066	ug/L	10/07/21 19:21	10/08/21 11:25	1	13
Fluorene	ND		0.20	0.073	ug/L	10/07/21 19:21	10/08/21 11:25	1	14
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 11:25	1	15
Naphthalene	ND		0.20	0.081	ug/L	10/07/21 19:21	10/08/21 11:25	1	16
Phenanthrene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 11:25	1	17
Pyrene	ND		0.20	0.065	ug/L	10/07/21 19:21	10/08/21 11:25	1	18
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	59			33 - 144			10/07/21 19:21	10/08/21 11:25	1
Nitrobenzene-d5 (Surr)	61			28 - 139			10/07/21 19:21	10/08/21 11:25	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-002**

**Date Collected: 10/07/21 17:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-2**

**Matrix: Water**

**Surrogate**

*p-Terphenyl-d14 (Surr)*

**%Recovery**

68

**Qualifier**

**Limits**

23 - 160

**Prepared**

10/07/21 19:21

**Analyzed**

10/08/21 11:25

**Dil Fac**

1

**Client Sample ID: HB-W-20211007-003**

**Date Collected: 10/07/21 17:35**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-3**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

**Analyzed**

**Dil Fac**

1-Methylnaphthalene

ND

0.20

0.072

ug/L

10/07/21 19:21

10/08/21 11:46

1

2-Methylnaphthalene

ND

0.20

0.076

ug/L

10/07/21 19:21

10/08/21 11:46

1

Acenaphthene

ND

0.20

0.096

ug/L

10/07/21 19:21

10/08/21 11:46

1

Acenaphthylene

ND

0.20

0.068

ug/L

10/07/21 19:21

10/08/21 11:46

1

Anthracene

ND

0.20

0.058

ug/L

10/07/21 19:21

10/08/21 11:46

1

Benzo[g,h,i]perylene

ND

0.20

0.099

ug/L

10/07/21 19:21

10/08/21 11:46

1

Benzo[k]fluoranthene

ND

0.20

0.092

ug/L

10/07/21 19:21

10/08/21 11:46

1

Benzo[a]anthracene

ND

0.20

0.084

ug/L

10/07/21 19:21

10/08/21 11:46

1

Benzo[a]pyrene

ND

0.20

0.061

ug/L

10/07/21 19:21

10/08/21 11:46

1

Benzo[b]fluoranthene

ND

0.20

0.12

ug/L

10/07/21 19:21

10/08/21 11:46

1

Chrysene

ND

0.20

0.058

ug/L

10/07/21 19:21

10/08/21 11:46

1

Dibenz(a,h)anthracene

ND

0.20

0.11

ug/L

10/07/21 19:21

10/08/21 11:46

1

Fluoranthene

ND

0.20

0.067

ug/L

10/07/21 19:21

10/08/21 11:46

1

Fluorene

ND

0.20

0.074

ug/L

10/07/21 19:21

10/08/21 11:46

1

Indeno[1,2,3-cd]pyrene

ND

0.20

0.10

ug/L

10/07/21 19:21

10/08/21 11:46

1

Naphthalene

ND

0.20

0.081

ug/L

10/07/21 19:21

10/08/21 11:46

1

Phenanthrene

ND

0.20

0.072

ug/L

10/07/21 19:21

10/08/21 11:46

1

Pyrene

ND

0.20

0.065

ug/L

10/07/21 19:21

10/08/21 11:46

1

**Surrogate**

*2-Fluorobiphenyl (Surr)*

**%Recovery**

65

**Qualifier**

**Limits**

33 - 144

**Prepared**

**Analyzed**

**Dil Fac**

*Nitrobenzene-d5 (Surr)*

68

28 - 139

10/07/21 19:21

10/08/21 11:46

1

*p-Terphenyl-d14 (Surr)*

70

23 - 160

10/07/21 19:21

10/08/21 11:46

1

**Client Sample ID: HB-W-20211007-004**

**Date Collected: 10/07/21 12:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-4**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

**Analyzed**

**Dil Fac**

1-Methylnaphthalene

ND

0.20

0.072

ug/L

10/07/21 19:21

10/08/21 12:08

1

2-Methylnaphthalene

ND

0.20

0.076

ug/L

10/07/21 19:21

10/08/21 12:08

1

Acenaphthene

ND

0.20

0.096

ug/L

10/07/21 19:21

10/08/21 12:08

1

Acenaphthylene

ND

0.20

0.068

ug/L

10/07/21 19:21

10/08/21 12:08

1

Anthracene

ND

0.20

0.058

ug/L

10/07/21 19:21

10/08/21 12:08

1

Benzo[g,h,i]perylene

ND

0.20

0.10

ug/L

10/07/21 19:21

10/08/21 12:08

1

Benzo[k]fluoranthene

ND

0.20

0.092

ug/L

10/07/21 19:21

10/08/21 12:08

1

Benzo[a]anthracene

ND

0.20

0.084

ug/L

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-004**

**Date Collected: 10/07/21 12:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 12:08	1
Pyrene	ND		0.20	0.065	ug/L		10/07/21 19:21	10/08/21 12:08	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	58		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	62		28 - 139				10/07/21 19:21	10/08/21 12:08	1
p-Terphenyl-d14 (Surr)	66		23 - 160				10/07/21 19:21	10/08/21 12:08	1

**Client Sample ID: HB-W-20211007-005**

**Date Collected: 10/07/21 12:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-5**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 12:29	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/07/21 19:21	10/08/21 12:29	1
Acenaphthene	ND		0.20	0.095	ug/L		10/07/21 19:21	10/08/21 12:29	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 12:29	1
Anthracene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 12:29	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/07/21 19:21	10/08/21 12:29	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/07/21 19:21	10/08/21 12:29	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/07/21 19:21	10/08/21 12:29	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/07/21 19:21	10/08/21 12:29	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 12:29	1
Chrysene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 12:29	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 12:29	1
Fluoranthene	ND		0.20	0.066	ug/L		10/07/21 19:21	10/08/21 12:29	1
Fluorene	ND		0.20	0.073	ug/L		10/07/21 19:21	10/08/21 12:29	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 12:29	1
Naphthalene	ND		0.20	0.081	ug/L		10/07/21 19:21	10/08/21 12:29	1
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 12:29	1
Pyrene	ND		0.20	0.065	ug/L		10/07/21 19:21	10/08/21 12:29	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	65		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	69		28 - 139				10/07/21 19:21	10/08/21 12:29	1
p-Terphenyl-d14 (Surr)	70		23 - 160				10/07/21 19:21	10/08/21 12:29	1

**Client Sample ID: HB-W-20211007-006**

**Date Collected: 10/07/21 12:25**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-6**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 12:51	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/07/21 19:21	10/08/21 12:51	1
Acenaphthene	ND		0.20	0.095	ug/L		10/07/21 19:21	10/08/21 12:51	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 12:51	1
Anthracene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 12:51	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/07/21 19:21	10/08/21 12:51	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/07/21 19:21	10/08/21 12:51	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/07/21 19:21	10/08/21 12:51	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/07/21 19:21	10/08/21 12:51	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 12:51	1

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-006**

**Date Collected: 10/07/21 12:25**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-6**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 12:51	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 12:51	1
Fluoranthene	ND		0.20	0.066	ug/L		10/07/21 19:21	10/08/21 12:51	1
Fluorene	ND		0.20	0.073	ug/L		10/07/21 19:21	10/08/21 12:51	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 12:51	1
Naphthalene	ND		0.20	0.081	ug/L		10/07/21 19:21	10/08/21 12:51	1
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 12:51	1
Pyrene	ND		0.20	0.065	ug/L		10/07/21 19:21	10/08/21 12:51	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)		64		33 - 144			10/07/21 19:21	10/08/21 12:51	1
Nitrobenzene-d5 (Surr)		65		28 - 139			10/07/21 19:21	10/08/21 12:51	1
p-Terphenyl-d14 (Surr)		70		23 - 160			10/07/21 19:21	10/08/21 12:51	1

**Client Sample ID: HB-W-20211007-007**

**Date Collected: 10/07/21 12:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-7**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 13:13	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/07/21 19:21	10/08/21 13:13	1
Acenaphthene	ND		0.20	0.095	ug/L		10/07/21 19:21	10/08/21 13:13	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 13:13	1
Anthracene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 13:13	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/07/21 19:21	10/08/21 13:13	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/07/21 19:21	10/08/21 13:13	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/07/21 19:21	10/08/21 13:13	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/07/21 19:21	10/08/21 13:13	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 13:13	1
Chrysene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 13:13	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 13:13	1
Fluoranthene	ND		0.20	0.066	ug/L		10/07/21 19:21	10/08/21 13:13	1
Fluorene	ND		0.20	0.073	ug/L		10/07/21 19:21	10/08/21 13:13	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 13:13	1
Naphthalene	ND		0.20	0.081	ug/L		10/07/21 19:21	10/08/21 13:13	1
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 13:13	1
Pyrene	ND		0.20	0.065	ug/L		10/07/21 19:21	10/08/21 13:13	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)		63		33 - 144			10/07/21 19:21	10/08/21 13:13	1
Nitrobenzene-d5 (Surr)		65		28 - 139			10/07/21 19:21	10/08/21 13:13	1
p-Terphenyl-d14 (Surr)		70		23 - 160			10/07/21 19:21	10/08/21 13:13	1

**Client Sample ID: HB-W-20211007-008**

**Date Collected: 10/07/21 12:35**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-8**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 13:34	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/07/21 19:21	10/08/21 13:34	1
Acenaphthene	ND		0.20	0.096	ug/L		10/07/21 19:21	10/08/21 13:34	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 13:34	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-008**

**Date Collected: 10/07/21 12:35**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-8**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 13:34	1
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 13:34	1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/07/21 19:21	10/08/21 13:34	1
Benzo[a]anthracene	ND		0.20	0.085	ug/L		10/07/21 19:21	10/08/21 13:34	1
Benzo[a]pyrene	ND		0.20	0.062	ug/L		10/07/21 19:21	10/08/21 13:34	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 13:34	1
Chrysene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 13:34	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 13:34	1
Fluoranthene	ND		0.20	0.067	ug/L		10/07/21 19:21	10/08/21 13:34	1
Fluorene	ND		0.20	0.074	ug/L		10/07/21 19:21	10/08/21 13:34	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 13:34	1
Naphthalene	ND		0.20	0.082	ug/L		10/07/21 19:21	10/08/21 13:34	1
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 13:34	1
Pyrene	ND		0.20	0.065	ug/L		10/07/21 19:21	10/08/21 13:34	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	60		33 - 144				10/07/21 19:21	10/08/21 13:34	1
Nitrobenzene-d5 (Surr)	62		28 - 139				10/07/21 19:21	10/08/21 13:34	1
p-Terphenyl-d14 (Surr)	66		23 - 160				10/07/21 19:21	10/08/21 13:34	1

**Client Sample ID: HB-W-20211007-009**

**Date Collected: 10/07/21 12:43**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-9**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 13:56	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/07/21 19:21	10/08/21 13:56	1
Acenaphthene	ND		0.20	0.096	ug/L		10/07/21 19:21	10/08/21 13:56	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 13:56	1
Anthracene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 13:56	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/07/21 19:21	10/08/21 13:56	1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/07/21 19:21	10/08/21 13:56	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/07/21 19:21	10/08/21 13:56	1
Benzo[a]pyrene	ND		0.20	0.062	ug/L		10/07/21 19:21	10/08/21 13:56	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 13:56	1
Chrysene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 13:56	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 13:56	1
Fluoranthene	ND		0.20	0.067	ug/L		10/07/21 19:21	10/08/21 13:56	1
Fluorene	ND		0.20	0.074	ug/L		10/07/21 19:21	10/08/21 13:56	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 13:56	1
Naphthalene	ND		0.20	0.081	ug/L		10/07/21 19:21	10/08/21 13:56	1
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 13:56	1
Pyrene	ND		0.20	0.065	ug/L		10/07/21 19:21	10/08/21 13:56	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	63		33 - 144				10/07/21 19:21	10/08/21 13:56	1
Nitrobenzene-d5 (Surr)	65		28 - 139				10/07/21 19:21	10/08/21 13:56	1
p-Terphenyl-d14 (Surr)	70		23 - 160				10/07/21 19:21	10/08/21 13:56	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM)

**Client Sample ID: HB-W-20211007-010**

**Date Collected: 10/07/21 12:50**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-10**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 14:17	1	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L	10/07/21 19:21	10/08/21 14:17	1	2
Acenaphthene	ND		0.20	0.096	ug/L	10/07/21 19:21	10/08/21 14:17	1	3
Acenaphthylene	ND		0.20	0.068	ug/L	10/07/21 19:21	10/08/21 14:17	1	4
Anthracene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 14:17	1	5
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 14:17	1	6
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L	10/07/21 19:21	10/08/21 14:17	1	7
Benzo[a]anthracene	ND		0.20	0.084	ug/L	10/07/21 19:21	10/08/21 14:17	1	8
Benzo[a]pyrene	ND		0.20	0.062	ug/L	10/07/21 19:21	10/08/21 14:17	1	9
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 14:17	1	10
Chrysene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 14:17	1	11
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 14:17	1	12
Fluoranthene	ND		0.20	0.067	ug/L	10/07/21 19:21	10/08/21 14:17	1	13
Fluorene	ND		0.20	0.074	ug/L	10/07/21 19:21	10/08/21 14:17	1	14
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 14:17	1	1
Naphthalene	ND		0.20	0.082	ug/L	10/07/21 19:21	10/08/21 14:17	1	2
Phenanthrene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 14:17	1	3
Pyrene	ND		0.20	0.065	ug/L	10/07/21 19:21	10/08/21 14:17	1	4
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	59			33 - 144			10/07/21 19:21	10/08/21 14:17	1
Nitrobenzene-d5 (Surr)	58			28 - 139			10/07/21 19:21	10/08/21 14:17	1
p-Terphenyl-d14 (Surr)	67			23 - 160			10/07/21 19:21	10/08/21 14:17	1

**Client Sample ID: HB-W-20211007-011**

**Date Collected: 10/07/21 12:55**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-11**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.073	ug/L	10/07/21 19:21	10/08/21 14:39	1	1
2-Methylnaphthalene	ND		0.20	0.077	ug/L	10/07/21 19:21	10/08/21 14:39	1	2
Acenaphthene	ND		0.20	0.097	ug/L	10/07/21 19:21	10/08/21 14:39	1	3
Acenaphthylene	ND		0.20	0.069	ug/L	10/07/21 19:21	10/08/21 14:39	1	4
Anthracene	ND		0.20	0.059	ug/L	10/07/21 19:21	10/08/21 14:39	1	5
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 14:39	1	6
Benzo[k]fluoranthene	ND		0.20	0.093	ug/L	10/07/21 19:21	10/08/21 14:39	1	7
Benzo[a]anthracene	ND		0.20	0.086	ug/L	10/07/21 19:21	10/08/21 14:39	1	8
Benzo[a]pyrene	ND		0.20	0.063	ug/L	10/07/21 19:21	10/08/21 14:39	1	9
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 14:39	1	10
Chrysene	ND		0.20	0.059	ug/L	10/07/21 19:21	10/08/21 14:39	1	11
Dibenz(a,h)anthracene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 14:39	1	12
Fluoranthene	ND		0.20	0.068	ug/L	10/07/21 19:21	10/08/21 14:39	1	13
Fluorene	ND		0.20	0.075	ug/L	10/07/21 19:21	10/08/21 14:39	1	14
Indeno[1,2,3-cd]pyrene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 14:39	1	1
Naphthalene	ND		0.20	0.083	ug/L	10/07/21 19:21	10/08/21 14:39	1	2
Phenanthrene	ND		0.20	0.073	ug/L	10/07/21 19:21	10/08/21 14:39	1	3
Pyrene	ND		0.20	0.066	ug/L	10/07/21 19:21	10/08/21 14:39	1	4
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	59			33 - 144			10/07/21 19:21	10/08/21 14:39	1
Nitrobenzene-d5 (Surr)	60			28 - 139			10/07/21 19:21	10/08/21 14:39	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-011**

**Date Collected: 10/07/21 12:55**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-11**

**Matrix: Water**

**Surrogate**

*p-Terphenyl-d14 (Surr)*

**%Recovery**

69

**Qualifier**

**Limits**

23 - 160

**Prepared**

10/07/21 19:21

**Analyzed**

10/08/21 14:39

**Dil Fac**

1

**Client Sample ID: HB-W-20211007-012**

**Date Collected: 10/07/21 13:10**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-12**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

10/07/21 19:21

**Analyzed**

10/08/21 15:00

**Dil Fac**

1

1-Methylnaphthalene

ND

0.20

0.073

ug/L

2-Methylnaphthalene

ND

0.20

0.077

ug/L

Acenaphthene

ND

0.20

0.097

ug/L

Acenaphthylene

ND

0.20

0.069

ug/L

Anthracene

ND

0.20

0.059

ug/L

Benzo[g,h,i]perylene

ND

0.20

0.10

ug/L

Benzo[k]fluoranthene

ND

0.20

0.093

ug/L

Benzo[a]anthracene

ND

0.20

0.086

ug/L

Benzo[a]pyrene

ND

0.20

0.062

ug/L

Benzo[b]fluoranthene

ND

0.20

0.12

ug/L

Chrysene

ND

0.20

0.059

ug/L

Dibenz(a,h)anthracene

ND

0.20

0.11

ug/L

Fluoranthene

ND

0.20

0.068

ug/L

Fluorene

ND

0.20

0.075

ug/L

Indeno[1,2,3-cd]pyrene

ND

0.20

0.11

ug/L

Naphthalene

ND

0.20

0.083

ug/L

Phenanthrene

ND

0.20

0.073

ug/L

Pyrene

ND

0.20

0.066

ug/L

**Surrogate**

*2-Fluorobiphenyl (Surr)*

**%Recovery**

52

**Limits**

33 - 144

**Prepared**

10/07/21 19:21

**Analyzed**

10/08/21 15:00

**Dil Fac**

1

*Nitrobenzene-d5 (Surr)*

**%Recovery**

54

**Limits**

28 - 139

**Prepared**

10/07/21 19:21

**Analyzed**

10/08/21 15:00

**Dil Fac**

*p-Terphenyl-d14 (Surr)*

**%Recovery**

69

**Limits**

23 - 160

**Prepared**

10/07/21 19:21

**Analyzed**

10/08/21 15:00

**Dil Fac**

1

**Client Sample ID: HB-W-20211007-013**

**Date Collected: 10/07/21 13:05**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-13**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

10/07/21 19:21

**Analyzed**

10/08/21 15:22

**Dil Fac**

1

1-Methylnaphthalene

ND

0.20

0.072

ug/L

2-Methylnaphthalene

ND

0.20

0.076

ug/L

Acenaphthene

ND

0.20

0.096

ug/L

Acenaphthylene

ND

0.20

0.068

ug/L

Anthracene

ND

0.20

0.059

ug/L

Benzo[g,h,i]perylene

ND

0.20

0.10

ug/L

Benzo[k]fluoranthene

ND

0.20

0.092

ug/L

Benzo[a]anthracene

ND

0.20

0.085

ug/L

Benzo[a]pyrene

ND

0.20

0.062

ug/L

Benzo[b]fluoranthene

ND

0.20

0.12

ug/L

Chrysene

ND

0.20

0.059

ug/L

Dibenz(a,h)anthracene

ND

0.20

0.11

ug/L

Fluoranthene

ND

0.20

0.067

ug/L

Fluorene

ND

0.20

0.074

ug/L

Indeno[1,2,3-cd]pyrene

ND

0.20

0.11

ug/L

Naphthalene

ND

0.20

0.082

ug/L

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-013**

**Date Collected: 10/07/21 13:05**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 15:22	1
Pyrene	ND		0.20	0.066	ug/L		10/07/21 19:21	10/08/21 15:22	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	59		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	59		28 - 139				10/07/21 19:21	10/08/21 15:22	1
p-Terphenyl-d14 (Surr)	71		23 - 160				10/07/21 19:21	10/08/21 15:22	1

**Client Sample ID: HB-W-20211007-014**

**Date Collected: 10/07/21 13:15**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.073	ug/L		10/07/21 19:21	10/08/21 15:43	1
2-Methylnaphthalene	ND		0.20	0.077	ug/L		10/07/21 19:21	10/08/21 15:43	1
Acenaphthene	ND		0.20	0.097	ug/L		10/07/21 19:21	10/08/21 15:43	1
Acenaphthylene	ND		0.20	0.069	ug/L		10/07/21 19:21	10/08/21 15:43	1
Anthracene	ND		0.20	0.059	ug/L		10/07/21 19:21	10/08/21 15:43	1
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 15:43	1
Benzo[k]fluoranthene	ND		0.20	0.093	ug/L		10/07/21 19:21	10/08/21 15:43	1
Benzo[a]anthracene	ND		0.20	0.085	ug/L		10/07/21 19:21	10/08/21 15:43	1
Benzo[a]pyrene	ND		0.20	0.062	ug/L		10/07/21 19:21	10/08/21 15:43	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 15:43	1
Chrysene	ND		0.20	0.059	ug/L		10/07/21 19:21	10/08/21 15:43	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 15:43	1
Fluoranthene	ND		0.20	0.067	ug/L		10/07/21 19:21	10/08/21 15:43	1
Fluorene	ND		0.20	0.075	ug/L		10/07/21 19:21	10/08/21 15:43	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 15:43	1
Naphthalene	ND		0.20	0.082	ug/L		10/07/21 19:21	10/08/21 15:43	1
Phenanthrene	ND		0.20	0.073	ug/L		10/07/21 19:21	10/08/21 15:43	1
Pyrene	ND		0.20	0.066	ug/L		10/07/21 19:21	10/08/21 15:43	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	61		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	63		28 - 139				10/07/21 19:21	10/08/21 15:43	1
p-Terphenyl-d14 (Surr)	69		23 - 160				10/07/21 19:21	10/08/21 15:43	1

**Client Sample ID: HB-W-20211007-015**

**Date Collected: 10/07/21 13:45**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 16:05	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/07/21 19:21	10/08/21 16:05	1
Acenaphthene	ND		0.20	0.095	ug/L		10/07/21 19:21	10/08/21 16:05	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 16:05	1
Anthracene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 16:05	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/07/21 19:21	10/08/21 16:05	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/07/21 19:21	10/08/21 16:05	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/07/21 19:21	10/08/21 16:05	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/07/21 19:21	10/08/21 16:05	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 16:05	1

**Lab Sample ID: 570-72168-15**

**Matrix: Water**

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-015**

**Date Collected: 10/07/21 13:45**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-15**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 16:05	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 16:05	1
Fluoranthene	ND		0.20	0.066	ug/L		10/07/21 19:21	10/08/21 16:05	1
Fluorene	ND		0.20	0.073	ug/L		10/07/21 19:21	10/08/21 16:05	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 16:05	1
Naphthalene	ND		0.20	0.081	ug/L		10/07/21 19:21	10/08/21 16:05	1
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 16:05	1
Pyrene	ND		0.20	0.065	ug/L		10/07/21 19:21	10/08/21 16:05	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	64		33 - 144				10/07/21 19:21	10/08/21 16:05	1
Nitrobenzene-d5 (Surr)	65		28 - 139				10/07/21 19:21	10/08/21 16:05	1
p-Terphenyl-d14 (Surr)	74		23 - 160				10/07/21 19:21	10/08/21 16:05	1

**Client Sample ID: HB-W-20211007-016**

**Date Collected: 10/07/21 13:50**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-16**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 16:26	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/07/21 19:21	10/08/21 16:26	1
Acenaphthene	ND		0.20	0.095	ug/L		10/07/21 19:21	10/08/21 16:26	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 16:26	1
Anthracene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 16:26	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/07/21 19:21	10/08/21 16:26	1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/07/21 19:21	10/08/21 16:26	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/07/21 19:21	10/08/21 16:26	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/07/21 19:21	10/08/21 16:26	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 16:26	1
Chrysene	ND		0.20	0.058	ug/L		10/07/21 19:21	10/08/21 16:26	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 16:26	1
Fluoranthene	ND		0.20	0.067	ug/L		10/07/21 19:21	10/08/21 16:26	1
Fluorene	ND		0.20	0.074	ug/L		10/07/21 19:21	10/08/21 16:26	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 16:26	1
Naphthalene	ND		0.20	0.081	ug/L		10/07/21 19:21	10/08/21 16:26	1
Phenanthrene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 16:26	1
Pyrene	ND		0.20	0.065	ug/L		10/07/21 19:21	10/08/21 16:26	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	59		33 - 144				10/07/21 19:21	10/08/21 16:26	1
Nitrobenzene-d5 (Surr)	59		28 - 139				10/07/21 19:21	10/08/21 16:26	1
p-Terphenyl-d14 (Surr)	71		23 - 160				10/07/21 19:21	10/08/21 16:26	1

**Client Sample ID: HB-W-20211007-017**

**Date Collected: 10/07/21 14:00**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-17**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/07/21 19:21	10/08/21 16:48	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/07/21 19:21	10/08/21 16:48	1
Acenaphthene	ND		0.20	0.096	ug/L		10/07/21 19:21	10/08/21 16:48	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 16:48	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-017**

**Date Collected: 10/07/21 14:00**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-17**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 16:48	1	1
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 16:48	1	2
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L	10/07/21 19:21	10/08/21 16:48	1	3
Benzo[a]anthracene	ND		0.20	0.085	ug/L	10/07/21 19:21	10/08/21 16:48	1	4
Benzo[a]pyrene	ND		0.20	0.062	ug/L	10/07/21 19:21	10/08/21 16:48	1	5
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 16:48	1	6
Chrysene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 16:48	1	7
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 16:48	1	8
Fluoranthene	ND		0.20	0.067	ug/L	10/07/21 19:21	10/08/21 16:48	1	9
Fluorene	ND		0.20	0.074	ug/L	10/07/21 19:21	10/08/21 16:48	1	10
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 16:48	1	11
Naphthalene	ND		0.20	0.082	ug/L	10/07/21 19:21	10/08/21 16:48	1	12
Phenanthrene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 16:48	1	13
Pyrene	ND		0.20	0.065	ug/L	10/07/21 19:21	10/08/21 16:48	1	14
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	54		33 - 144				10/07/21 19:21	10/08/21 16:48	1
Nitrobenzene-d5 (Surr)	54		28 - 139				10/07/21 19:21	10/08/21 16:48	1
p-Terphenyl-d14 (Surr)	66		23 - 160				10/07/21 19:21	10/08/21 16:48	1

**Client Sample ID: HB-W-20211007-018**

**Date Collected: 10/07/21 14:05**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-18**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 17:10	1	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L	10/07/21 19:21	10/08/21 17:10	1	2
Acenaphthene	ND		0.20	0.096	ug/L	10/07/21 19:21	10/08/21 17:10	1	3
Acenaphthylene	ND		0.20	0.068	ug/L	10/07/21 19:21	10/08/21 17:10	1	4
Anthracene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 17:10	1	5
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 17:10	1	6
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L	10/07/21 19:21	10/08/21 17:10	1	7
Benzo[a]anthracene	ND		0.20	0.085	ug/L	10/07/21 19:21	10/08/21 17:10	1	8
Benzo[a]pyrene	ND		0.20	0.062	ug/L	10/07/21 19:21	10/08/21 17:10	1	9
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 17:10	1	10
Chrysene	ND		0.20	0.058	ug/L	10/07/21 19:21	10/08/21 17:10	1	11
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 17:10	1	12
Fluoranthene	ND		0.20	0.067	ug/L	10/07/21 19:21	10/08/21 17:10	1	13
Fluorene	ND		0.20	0.074	ug/L	10/07/21 19:21	10/08/21 17:10	1	14
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 17:10	1	1
Naphthalene	ND		0.20	0.082	ug/L	10/07/21 19:21	10/08/21 17:10	1	2
Phenanthrene	ND		0.20	0.072	ug/L	10/07/21 19:21	10/08/21 17:10	1	3
Pyrene	ND		0.20	0.065	ug/L	10/07/21 19:21	10/08/21 17:10	1	4
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	66		33 - 144				10/07/21 19:21	10/08/21 17:10	1
Nitrobenzene-d5 (Surr)	66		28 - 139				10/07/21 19:21	10/08/21 17:10	1
p-Terphenyl-d14 (Surr)	72		23 - 160				10/07/21 19:21	10/08/21 17:10	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM)

**Client Sample ID: HB-W-20211007-019**

**Date Collected: 10/07/21 14:15**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-19**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.073	ug/L	10/07/21 19:21	10/08/21 17:31	1	1
2-Methylnaphthalene	ND		0.20	0.077	ug/L	10/07/21 19:21	10/08/21 17:31	1	2
Acenaphthene	ND		0.20	0.097	ug/L	10/07/21 19:21	10/08/21 17:31	1	3
Acenaphthylene	ND		0.20	0.069	ug/L	10/07/21 19:21	10/08/21 17:31	1	4
Anthracene	ND		0.20	0.059	ug/L	10/07/21 19:21	10/08/21 17:31	1	5
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 17:31	1	6
Benzo[k]fluoranthene	ND		0.20	0.093	ug/L	10/07/21 19:21	10/08/21 17:31	1	7
Benzo[a]anthracene	ND		0.20	0.085	ug/L	10/07/21 19:21	10/08/21 17:31	1	8
Benzo[a]pyrene	ND		0.20	0.062	ug/L	10/07/21 19:21	10/08/21 17:31	1	9
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 17:31	1	10
Chrysene	ND		0.20	0.059	ug/L	10/07/21 19:21	10/08/21 17:31	1	11
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 17:31	1	12
Fluoranthene	ND		0.20	0.067	ug/L	10/07/21 19:21	10/08/21 17:31	1	13
Fluorene	ND		0.20	0.075	ug/L	10/07/21 19:21	10/08/21 17:31	1	14
Indeno[1,2,3-cd]pyrene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 17:31	1	15
Naphthalene	ND		0.20	0.082	ug/L	10/07/21 19:21	10/08/21 17:31	1	16
Phenanthrene	ND		0.20	0.073	ug/L	10/07/21 19:21	10/08/21 17:31	1	17
Pyrene	ND		0.20	0.066	ug/L	10/07/21 19:21	10/08/21 17:31	1	18
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	54			33 - 144			10/07/21 19:21	10/08/21 17:31	1
Nitrobenzene-d5 (Surr)	56			28 - 139			10/07/21 19:21	10/08/21 17:31	1
p-Terphenyl-d14 (Surr)	63			23 - 160			10/07/21 19:21	10/08/21 17:31	1

**Client Sample ID: HB-W-20211007-020**

**Date Collected: 10/07/21 14:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-20**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.073	ug/L	10/07/21 19:21	10/08/21 17:27	1	1
2-Methylnaphthalene	ND		0.20	0.077	ug/L	10/07/21 19:21	10/08/21 17:27	1	2
Acenaphthene	ND		0.20	0.097	ug/L	10/07/21 19:21	10/08/21 17:27	1	3
Acenaphthylene	ND		0.20	0.069	ug/L	10/07/21 19:21	10/08/21 17:27	1	4
Anthracene	ND		0.20	0.059	ug/L	10/07/21 19:21	10/08/21 17:27	1	5
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L	10/07/21 19:21	10/08/21 17:27	1	6
Benzo[k]fluoranthene	ND		0.20	0.093	ug/L	10/07/21 19:21	10/08/21 17:27	1	7
Benzo[a]anthracene	ND		0.20	0.085	ug/L	10/07/21 19:21	10/08/21 17:27	1	8
Benzo[a]pyrene	ND		0.20	0.062	ug/L	10/07/21 19:21	10/08/21 17:27	1	9
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L	10/07/21 19:21	10/08/21 17:27	1	10
Chrysene	ND		0.20	0.059	ug/L	10/07/21 19:21	10/08/21 17:27	1	11
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 17:27	1	12
Fluoranthene	ND		0.20	0.067	ug/L	10/07/21 19:21	10/08/21 17:27	1	13
Fluorene	ND		0.20	0.075	ug/L	10/07/21 19:21	10/08/21 17:27	1	14
Indeno[1,2,3-cd]pyrene	ND		0.20	0.11	ug/L	10/07/21 19:21	10/08/21 17:27	1	15
Naphthalene	ND		0.20	0.082	ug/L	10/07/21 19:21	10/08/21 17:27	1	16
Phenanthrene	ND		0.20	0.073	ug/L	10/07/21 19:21	10/08/21 17:27	1	17
Pyrene	ND		0.20	0.066	ug/L	10/07/21 19:21	10/08/21 17:27	1	18
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	74			33 - 144			10/07/21 19:21	10/08/21 17:27	1
Nitrobenzene-d5 (Surr)	81			28 - 139			10/07/21 19:21	10/08/21 17:27	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-020**

**Date Collected: 10/07/21 14:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-20**

**Matrix: Water**

**Surrogate**

*p-Terphenyl-d14 (Surr)*

**%Recovery**

84

**Qualifier**

**Limits**

23 - 160

**Prepared**

10/07/21 19:21

**Analyzed**

10/08/21 17:27

**Dil Fac**

1

**Client Sample ID: HB-W-20211007-021**

**Date Collected: 10/07/21 14:42**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-21**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

10/08/21 05:29

**Analyzed**

10/08/21 12:42

**Dil Fac**

1

1-Methylnaphthalene

ND

0.20

0.071

ug/L

2-Methylnaphthalene

ND

0.20

0.075

ug/L

Acenaphthene

ND

0.20

0.095

ug/L

Acenaphthylene

ND

0.20

0.067

ug/L

Anthracene

ND

0.20

0.058

ug/L

Benzo[g,h,i]perylene

ND

0.20

0.099

ug/L

Benzo[k]fluoranthene

ND

0.20

0.091

ug/L

Benzo[a]anthracene

ND

0.20

0.084

ug/L

Benzo[a]pyrene

ND

0.20

0.061

ug/L

Benzo[b]fluoranthene

ND

0.20

0.12

ug/L

Chrysene

ND

0.20

0.058

ug/L

Dibenz(a,h)anthracene

ND

0.20

0.11

ug/L

Fluoranthene

ND

0.20

0.066

ug/L

Fluorene

ND

0.20

0.073

ug/L

Indeno[1,2,3-cd]pyrene

ND

0.20

0.10

ug/L

Naphthalene

ND

0.20

0.081

ug/L

Phenanthrene

ND

0.20

0.071

ug/L

Pyrene

ND

0.20

0.064

ug/L

**Surrogate**

*2-Fluorobiphenyl (Surr)*

**%Recovery**

53

**Limits**

33 - 144

**Prepared**

10/08/21 05:29

**Analyzed**

10/08/21 12:42

**Dil Fac**

1

*Nitrobenzene-d5 (Surr)*

56

28 - 139

10/08/21 05:29

10/08/21 12:42

1

*p-Terphenyl-d14 (Surr)*

56

23 - 160

10/08/21 05:29

10/08/21 12:42

1

**Client Sample ID: HB-W-20211007-022**

**Date Collected: 10/07/21 14:50**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-22**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

10/08/21 05:29

**Analyzed**

10/08/21 13:02

**Dil Fac**

1

1-Methylnaphthalene

ND

0.20

0.072

ug/L

2-Methylnaphthalene

ND

0.20

0.076

ug/L

Acenaphthene

ND

0.20

0.095

ug/L

Acenaphthylene

ND

0.20

0.068

ug/L

Anthracene

ND

0.20

0.058

ug/L

Benzo[g,h,i]perylene

ND

0.20

0.099

ug/L

Benzo[k]fluoranthene

ND

0.20

0.091

ug/L

Benzo[a]anthracene

ND

0.20

0.084

ug/L

Benzo[a]pyrene

ND

0.20

0.061

ug/L

Benzo[b]fluoranthene

ND

0.20

0.12

ug/L

Chrysene

ND

0.20

0.058

ug/L

Dibenz(a,h)anthracene

ND

0.20

0.11

ug/L

Fluoranthene

ND

0.20

0.066

ug/L

Fluorene

ND

0.20

0.073

ug/L

Indeno[1,2,3-cd]pyrene

ND

0.20

0.10

ug/L

Naphthalene

ND

0.20

0.081

ug/L

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-022**

**Date Collected: 10/07/21 14:50**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.20	0.072	ug/L		10/08/21 05:29	10/08/21 13:02	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 13:02	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	37		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	42		28 - 139				10/08/21 05:29	10/08/21 13:02	1
p-Terphenyl-d14 (Surr)	38		23 - 160				10/08/21 05:29	10/08/21 13:02	1

**Client Sample ID: HB-W-20211007-023**

**Date Collected: 10/07/21 14:55**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 13:21	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 13:21	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 13:21	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 13:21	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 13:21	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 13:21	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 13:21	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 13:21	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 13:21	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 13:21	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 13:21	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 13:21	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 13:21	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 13:21	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 13:21	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 13:21	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 13:21	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 13:21	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	53		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	62		28 - 139				10/08/21 05:29	10/08/21 13:21	1
p-Terphenyl-d14 (Surr)	58		23 - 160				10/08/21 05:29	10/08/21 13:21	1

**Client Sample ID: HB-W-20211007-024**

**Date Collected: 10/07/21 14:55**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/08/21 05:29	10/08/21 13:41	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/08/21 05:29	10/08/21 13:41	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 13:41	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/08/21 05:29	10/08/21 13:41	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 13:41	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 13:41	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 13:41	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 13:41	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 13:41	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 13:41	1

**Lab Sample ID: 570-72168-24**

**Matrix: Water**

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-024**

**Date Collected: 10/07/21 14:55**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-24**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 13:41	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 13:41	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 13:41	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 13:41	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 13:41	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 13:41	1
Phenanthrene	ND		0.20	0.072	ug/L		10/08/21 05:29	10/08/21 13:41	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 13:41	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	53		33 - 144				10/08/21 05:29	10/08/21 13:41	1
Nitrobenzene-d5 (Surr)	62		28 - 139				10/08/21 05:29	10/08/21 13:41	1
p-Terphenyl-d14 (Surr)	57		23 - 160				10/08/21 05:29	10/08/21 13:41	1

**Client Sample ID: HB-W-20211007-025**

**Date Collected: 10/07/21 15:05**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-25**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 14:00	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 14:00	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 14:00	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 14:00	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:00	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 14:00	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 14:00	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 14:00	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 14:00	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 14:00	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:00	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 14:00	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 14:00	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 14:00	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 14:00	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 14:00	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 14:00	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 14:00	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	50		33 - 144				10/08/21 05:29	10/08/21 14:00	1
Nitrobenzene-d5 (Surr)	56		28 - 139				10/08/21 05:29	10/08/21 14:00	1
p-Terphenyl-d14 (Surr)	54		23 - 160				10/08/21 05:29	10/08/21 14:00	1

**Client Sample ID: HB-W-20211007-026**

**Date Collected: 10/07/21 15:10**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-26**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 14:20	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 14:20	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 14:20	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 14:20	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-026**

**Date Collected: 10/07/21 15:10**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-26**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:20	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 14:20	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 14:20	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 14:20	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 14:20	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 14:20	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:20	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 14:20	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 14:20	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 14:20	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 14:20	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 14:20	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 14:20	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 14:20	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	55			33 - 144			10/08/21 05:29	10/08/21 14:20	1
Nitrobenzene-d5 (Surr)	61			28 - 139			10/08/21 05:29	10/08/21 14:20	1
p-Terphenyl-d14 (Surr)	59			23 - 160			10/08/21 05:29	10/08/21 14:20	1

**Client Sample ID: HB-W-20211007-027**

**Date Collected: 10/07/21 15:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-27**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/08/21 05:29	10/08/21 14:39	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/08/21 05:29	10/08/21 14:39	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 14:39	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/08/21 05:29	10/08/21 14:39	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:39	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 14:39	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 14:39	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 14:39	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 14:39	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 14:39	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:39	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 14:39	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 14:39	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 14:39	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 14:39	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 14:39	1
Phenanthrene	ND		0.20	0.072	ug/L		10/08/21 05:29	10/08/21 14:39	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 14:39	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	54			33 - 144			10/08/21 05:29	10/08/21 14:39	1
Nitrobenzene-d5 (Surr)	59			28 - 139			10/08/21 05:29	10/08/21 14:39	1
p-Terphenyl-d14 (Surr)	59			23 - 160			10/08/21 05:29	10/08/21 14:39	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM)

**Client Sample ID: HB-W-20211007-028**

**Date Collected: 10/07/21 15:20**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-28**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 14:59	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 14:59	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 14:59	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 14:59	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:59	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 14:59	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 14:59	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 14:59	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 14:59	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 14:59	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:59	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 14:59	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 14:59	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 14:59	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 14:59	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 14:59	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 14:59	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 14:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	55			33 - 144			10/08/21 05:29	10/08/21 14:59	1
Nitrobenzene-d5 (Surr)	61			28 - 139			10/08/21 05:29	10/08/21 14:59	1
p-Terphenyl-d14 (Surr)	60			23 - 160			10/08/21 05:29	10/08/21 14:59	1

**Client Sample ID: HB-W-20211007-029**

**Date Collected: 10/07/21 15:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-29**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 15:18	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 15:18	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 15:18	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 15:18	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 15:18	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 15:18	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 15:18	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 15:18	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 15:18	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 15:18	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 15:18	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 15:18	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 15:18	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 15:18	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 15:18	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 15:18	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 15:18	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 15:18	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	55			33 - 144			10/08/21 05:29	10/08/21 15:18	1
Nitrobenzene-d5 (Surr)	63			28 - 139			10/08/21 05:29	10/08/21 15:18	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-029**

**Date Collected: 10/07/21 15:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-29**

**Matrix: Water**

**Surrogate**

*p-Terphenyl-d14 (Surr)*

**%Recovery**

62

**Qualifier**

**Limits**

23 - 160

**Prepared**

10/08/21 05:29

**Analyzed**

10/08/21 15:18

**Dil Fac**

1

**Client Sample ID: HB-W-20211007-030**

**Date Collected: 10/07/21 15:32**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-30**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

10/08/21 05:29

**Analyzed**

10/08/21 15:38

**Dil Fac**

1

1-Methylnaphthalene

ND

0.20

0.071

ug/L

2-Methylnaphthalene

ND

0.20

0.075

ug/L

Acenaphthene

ND

0.20

0.095

ug/L

Acenaphthylene

ND

0.20

0.067

ug/L

Anthracene

ND

0.20

0.058

ug/L

Benzo[g,h,i]perylene

ND

0.20

0.099

ug/L

Benzo[k]fluoranthene

ND

0.20

0.091

ug/L

Benzo[a]anthracene

ND

0.20

0.084

ug/L

Benzo[a]pyrene

ND

0.20

0.061

ug/L

Benzo[b]fluoranthene

ND

0.20

0.12

ug/L

Chrysene

ND

0.20

0.058

ug/L

Dibenz(a,h)anthracene

ND

0.20

0.11

ug/L

Fluoranthene

ND

0.20

0.066

ug/L

Fluorene

ND

0.20

0.073

ug/L

Indeno[1,2,3-cd]pyrene

ND

0.20

0.10

ug/L

Naphthalene

ND

0.20

0.081

ug/L

Phenanthrene

ND

0.20

0.071

ug/L

Pyrene

ND

0.20

0.065

ug/L

**Surrogate**

*2-Fluorobiphenyl (Surr)*

**%Recovery**

54

**Limits**

33 - 144

**Prepared**

10/08/21 05:29

**Analyzed**

10/08/21 15:38

**Dil Fac**

1

*Nitrobenzene-d5 (Surr)*

60

28 - 139

10/08/21 05:29

10/08/21 15:38

1

*p-Terphenyl-d14 (Surr)*

57

23 - 160

10/08/21 05:29

10/08/21 15:38

1

**Client Sample ID: HB-W-20211007-031**

**Date Collected: 10/07/21 15:40**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-31**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

10/08/21 05:29

**Analyzed**

10/08/21 15:57

**Dil Fac**

1

1-Methylnaphthalene

ND

0.20

0.071

ug/L

2-Methylnaphthalene

ND

0.20

0.075

ug/L

Acenaphthene

ND

0.20

0.095

ug/L

Acenaphthylene

ND

0.20

0.067

ug/L

Anthracene

ND

0.20

0.058

ug/L

Benzo[g,h,i]perylene

ND

0.20

0.099

ug/L

Benzo[k]fluoranthene

ND

0.20

0.091

ug/L

Benzo[a]anthracene

ND

0.20

0.084

ug/L

Benzo[a]pyrene

ND

0.20

0.061

ug/L

Benzo[b]fluoranthene

ND

0.20

0.12

ug/L

Chrysene

ND

0.20

0.058

ug/L

Dibenz(a,h)anthracene

ND

0.20

0.11

ug/L

Fluoranthene

ND

0.20

0.066

ug/L

Fluorene

ND

0.20

0.073

ug/L

Indeno[1,2,3-cd]pyrene

ND

0.20

0.10

ug/L

Naphthalene

ND

0.20

0.081

ug/L

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-031**

**Date Collected: 10/07/21 15:40**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 15:57	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 15:57	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	48		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	48		28 - 139				10/08/21 05:29	10/08/21 15:57	1
p-Terphenyl-d14 (Surr)	55		23 - 160				10/08/21 05:29	10/08/21 15:57	1

**Client Sample ID: HB-W-20211007-032**

**Date Collected: 10/07/21 15:42**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:28	10/08/21 16:17	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:28	10/08/21 16:17	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:28	10/08/21 16:17	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:28	10/08/21 16:17	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:28	10/08/21 16:17	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:28	10/08/21 16:17	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:28	10/08/21 16:17	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:28	10/08/21 16:17	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:28	10/08/21 16:17	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:28	10/08/21 16:17	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:28	10/08/21 16:17	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:28	10/08/21 16:17	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:28	10/08/21 16:17	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:28	10/08/21 16:17	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:28	10/08/21 16:17	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:28	10/08/21 16:17	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:28	10/08/21 16:17	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:28	10/08/21 16:17	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	53		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	54		28 - 139				10/08/21 05:28	10/08/21 16:17	1
p-Terphenyl-d14 (Surr)	61		23 - 160				10/08/21 05:28	10/08/21 16:17	1

**Client Sample ID: HB-W-20211007-033**

**Date Collected: 10/07/21 15:50**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 16:36	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 16:36	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 16:36	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 16:36	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 16:36	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 16:36	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 16:36	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 16:36	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 16:36	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 16:36	1

**Lab Sample ID: 570-72168-33**

**Matrix: Water**

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-033**

**Date Collected: 10/07/21 15:50**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-33**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 16:36	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 16:36	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 16:36	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 16:36	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 16:36	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 16:36	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 16:36	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 16:36	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	54		33 - 144				10/08/21 05:29	10/08/21 16:36	1
Nitrobenzene-d5 (Surr)	54		28 - 139				10/08/21 05:29	10/08/21 16:36	1
p-Terphenyl-d14 (Surr)	58		23 - 160				10/08/21 05:29	10/08/21 16:36	1

**Client Sample ID: HB-W-20211007-034**

**Date Collected: 10/07/21 15:52**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-34**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 16:55	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 16:55	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 16:55	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 16:55	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 16:55	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 16:55	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 16:55	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 16:55	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 16:55	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 16:55	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 16:55	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 16:55	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 16:55	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 16:55	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 16:55	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 16:55	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 16:55	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 16:55	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	47		33 - 144				10/08/21 05:29	10/08/21 16:55	1
Nitrobenzene-d5 (Surr)	50		28 - 139				10/08/21 05:29	10/08/21 16:55	1
p-Terphenyl-d14 (Surr)	57		23 - 160				10/08/21 05:29	10/08/21 16:55	1

**Client Sample ID: HB-W-20211007-035**

**Date Collected: 10/07/21 16:05**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-35**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 14:54	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 14:54	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 14:54	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 14:54	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-035**

**Date Collected: 10/07/21 16:05**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-35**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:54	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 14:54	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 14:54	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 14:54	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 14:54	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 14:54	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 14:54	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 14:54	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 14:54	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 14:54	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 14:54	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 14:54	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 14:54	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 14:54	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	61			33 - 144			10/08/21 05:29	10/08/21 14:54	1
Nitrobenzene-d5 (Surr)	66			28 - 139			10/08/21 05:29	10/08/21 14:54	1
p-Terphenyl-d14 (Surr)	70			23 - 160			10/08/21 05:29	10/08/21 14:54	1

**Client Sample ID: HB-W-20211007-036**

**Date Collected: 10/07/21 16:02**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-36**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 15:17	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 15:17	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 15:17	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 15:17	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 15:17	1
Benzo[g,h,i]perylene	ND		0.20	0.098	ug/L		10/08/21 05:29	10/08/21 15:17	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 15:17	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 15:17	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 15:17	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 15:17	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 15:17	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 15:17	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 15:17	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 15:17	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 15:17	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 15:17	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 15:17	1
Pyrene	ND		0.20	0.064	ug/L		10/08/21 05:29	10/08/21 15:17	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	62			33 - 144			10/08/21 05:29	10/08/21 15:17	1
Nitrobenzene-d5 (Surr)	67			28 - 139			10/08/21 05:29	10/08/21 15:17	1
p-Terphenyl-d14 (Surr)	70			23 - 160			10/08/21 05:29	10/08/21 15:17	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM)

**Client Sample ID: HB-W-20211007-037**

**Date Collected: 10/07/21 16:15**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-37**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 15:40	1
2-Methylnaphthalene	ND		0.20	0.075	ug/L		10/08/21 05:29	10/08/21 15:40	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 05:29	10/08/21 15:40	1
Acenaphthylene	ND		0.20	0.067	ug/L		10/08/21 05:29	10/08/21 15:40	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 15:40	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 05:29	10/08/21 15:40	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 05:29	10/08/21 15:40	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 05:29	10/08/21 15:40	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 05:29	10/08/21 15:40	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 05:29	10/08/21 15:40	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 05:29	10/08/21 15:40	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 05:29	10/08/21 15:40	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 05:29	10/08/21 15:40	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 05:29	10/08/21 15:40	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 05:29	10/08/21 15:40	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 05:29	10/08/21 15:40	1
Phenanthrene	ND		0.20	0.071	ug/L		10/08/21 05:29	10/08/21 15:40	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 05:29	10/08/21 15:40	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	58			33 - 144			10/08/21 05:29	10/08/21 15:40	1
Nitrobenzene-d5 (Surr)	60			28 - 139			10/08/21 05:29	10/08/21 15:40	1
p-Terphenyl-d14 (Surr)	68			23 - 160			10/08/21 05:29	10/08/21 15:40	1

**Client Sample ID: HB-W-20211007-038**

**Date Collected: 10/07/21 16:15**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-38**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.19	0.071	ug/L		10/08/21 05:29	10/08/21 16:19	1
2-Methylnaphthalene	ND		0.19	0.075	ug/L		10/08/21 05:29	10/08/21 16:19	1
Acenaphthene	ND		0.19	0.095	ug/L		10/08/21 05:29	10/08/21 16:19	1
Acenaphthylene	ND		0.19	0.067	ug/L		10/08/21 05:29	10/08/21 16:19	1
Anthracene	ND		0.19	0.058	ug/L		10/08/21 05:29	10/08/21 16:19	1
Benzo[g,h,i]perylene	ND		0.19	0.098	ug/L		10/08/21 05:29	10/08/21 16:19	1
Benzo[k]fluoranthene	ND		0.19	0.091	ug/L		10/08/21 05:29	10/08/21 16:19	1
Benzo[a]anthracene	ND		0.19	0.083	ug/L		10/08/21 05:29	10/08/21 16:19	1
Benzo[a]pyrene	ND		0.19	0.061	ug/L		10/08/21 05:29	10/08/21 16:19	1
Benzo[b]fluoranthene	ND		0.19	0.11	ug/L		10/08/21 05:29	10/08/21 16:19	1
Chrysene	ND		0.19	0.058	ug/L		10/08/21 05:29	10/08/21 16:19	1
Dibenz(a,h)anthracene	ND		0.19	0.11	ug/L		10/08/21 05:29	10/08/21 16:19	1
Fluoranthene	ND		0.19	0.066	ug/L		10/08/21 05:29	10/08/21 16:19	1
Fluorene	ND		0.19	0.073	ug/L		10/08/21 05:29	10/08/21 16:19	1
Indeno[1,2,3-cd]pyrene	ND		0.19	0.10	ug/L		10/08/21 05:29	10/08/21 16:19	1
Naphthalene	ND		0.19	0.081	ug/L		10/08/21 05:29	10/08/21 16:19	1
Phenanthrene	ND		0.19	0.071	ug/L		10/08/21 05:29	10/08/21 16:19	1
Pyrene	ND		0.19	0.064	ug/L		10/08/21 05:29	10/08/21 16:19	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	62			33 - 144			10/08/21 05:29	10/08/21 16:19	1
Nitrobenzene-d5 (Surr)	68			28 - 139			10/08/21 05:29	10/08/21 16:19	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-038**

**Date Collected: 10/07/21 16:15**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-38**

**Matrix: Water**

**Surrogate**

**%Recovery**

**Qualifier**

**Limits**

*p-Terphenyl-d14 (Surr)*

73

23 - 160

**Prepared**

**Analyzed**

**Dil Fac**

10/08/21 05:29

10/08/21 16:19

1

**Client Sample ID: HB-W-20211007-039**

**Date Collected: 10/07/21 16:25**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-39**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

**Analyzed**

**Dil Fac**

1-Methylnaphthalene

ND

0.20

0.072

ug/L

10/08/21 05:29

10/08/21 16:42

1

2-Methylnaphthalene

ND

0.20

0.076

ug/L

10/08/21 05:29

10/08/21 16:42

1

Acenaphthene

ND

0.20

0.095

ug/L

10/08/21 05:29

10/08/21 16:42

1

Acenaphthylene

ND

0.20

0.068

ug/L

10/08/21 05:29

10/08/21 16:42

1

Anthracene

ND

0.20

0.058

ug/L

10/08/21 05:29

10/08/21 16:42

1

Benzo[g,h,i]perylene

ND

0.20

0.099

ug/L

10/08/21 05:29

10/08/21 16:42

1

Benzo[k]fluoranthene

ND

0.20

0.092

ug/L

10/08/21 05:29

10/08/21 16:42

1

Benzo[a]anthracene

ND

0.20

0.084

ug/L

10/08/21 05:29

10/08/21 16:42

1

Benzo[a]pyrene

ND

0.20

0.061

ug/L

10/08/21 05:29

10/08/21 16:42

1

Benzo[b]fluoranthene

ND

0.20

0.12

ug/L

10/08/21 05:29

10/08/21 16:42

1

Chrysene

ND

0.20

0.058

ug/L

10/08/21 05:29

10/08/21 16:42

1

Dibenz(a,h)anthracene

ND

0.20

0.11

ug/L

10/08/21 05:29

10/08/21 16:42

1

Fluoranthene

ND

0.20

0.067

ug/L

10/08/21 05:29

10/08/21 16:42

1

Fluorene

ND

0.20

0.074

ug/L

10/08/21 05:29

10/08/21 16:42

1

Indeno[1,2,3-cd]pyrene

ND

0.20

0.10

ug/L

10/08/21 05:29

10/08/21 16:42

1

Naphthalene

ND

0.20

0.081

ug/L

10/08/21 05:29

10/08/21 16:42

1

Phenanthrene

ND

0.20

0.072

ug/L

10/08/21 05:29

10/08/21 16:42

1

Pyrene

ND

0.20

0.065

ug/L

10/08/21 05:29

10/08/21 16:42

1

**Surrogate**

**%Recovery**

**Qualifier**

**Limits**

*2-Fluorobiphenyl (Surr)*

59

33 - 144

*Nitrobenzene-d5 (Surr)*

62

28 - 139

*p-Terphenyl-d14 (Surr)*

72

23 - 160

**Prepared**

**Analyzed**

**Dil Fac**

10/08/21 05:29

10/08/21 16:42

1

10/08/21 05:29

10/08/21 16:42

1

10/08/21 05:29

10/08/21 16:42

1

**Client Sample ID: HB-W-20211007-040**

**Date Collected: 10/07/21 16:30**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-40**

**Matrix: Water**

**Analyte**

**Result**

**Qualifier**

**RL**

**MDL**

**Unit**

**D**

**Prepared**

**Analyzed**

**Dil Fac**

1-Methylnaphthalene

ND

0.19

0.071

ug/L

10/08/21 05:29

10/08/21 17:05

1

2-Methylnaphthalene

ND

0.19

0.075

ug/L

10/08/21 05:29

10/08/21 17:05

1

Acenaphthene

ND

0.19

0.095

ug/L

10/08/21 05:29

10/08/21 17:05

1

Acenaphthylene

ND

0.19

0.067

ug/L

10/08/21 05:29

10/08/21 17:05

1

Anthracene

ND

0.19

0.058

ug/L

10/08/21 05:29

10/08/21 17:05

1

Benzo[g,h,i]perylene

ND

0.19

0.098

ug/L

10/08/21 05:29

10/08/21 17:05

1

Benzo[k]fluoranthene

ND

0.19

0.091

ug/L

10/08/21 05:29

10/08/21 17:05

1

Benzo[a]anthracene

ND</

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-040**

**Date Collected: 10/07/21 16:30**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.19	0.071	ug/L		10/08/21 05:29	10/08/21 17:05	1
Pyrene	ND		0.19	0.064	ug/L		10/08/21 05:29	10/08/21 17:05	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	64		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	67		28 - 139				10/08/21 05:29	10/08/21 17:05	1
p-Terphenyl-d14 (Surr)	78		23 - 160				10/08/21 05:29	10/08/21 17:05	1

**Client Sample ID: HB-W-20211007-005-DUP**

**Date Collected: 10/07/21 12:20**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/08/21 06:59	10/08/21 13:24	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/08/21 06:59	10/08/21 13:24	1
Acenaphthene	ND		0.20	0.096	ug/L		10/08/21 06:59	10/08/21 13:24	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/08/21 06:59	10/08/21 13:24	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 06:59	10/08/21 13:24	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 06:59	10/08/21 13:24	1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/08/21 06:59	10/08/21 13:24	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 06:59	10/08/21 13:24	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 06:59	10/08/21 13:24	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 06:59	10/08/21 13:24	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 06:59	10/08/21 13:24	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 06:59	10/08/21 13:24	1
Fluoranthene	ND		0.20	0.067	ug/L		10/08/21 06:59	10/08/21 13:24	1
Fluorene	ND		0.20	0.074	ug/L		10/08/21 06:59	10/08/21 13:24	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 06:59	10/08/21 13:24	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 06:59	10/08/21 13:24	1
Phenanthrene	ND		0.20	0.072	ug/L		10/08/21 06:59	10/08/21 13:24	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 06:59	10/08/21 13:24	1
<b>Surrogate</b>									
2-Fluorobiphenyl (Surr)	67		33 - 144				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	75		28 - 139				10/08/21 06:59	10/08/21 13:24	1
p-Terphenyl-d14 (Surr)	72		23 - 160				10/08/21 06:59	10/08/21 13:24	1

**Client Sample ID: HB-W-20211007-014-DUP**

**Date Collected: 10/07/21 13:15**

**Date Received: 10/07/21 18:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/08/21 06:59	10/08/21 13:46	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/08/21 06:59	10/08/21 13:46	1
Acenaphthene	ND		0.20	0.095	ug/L		10/08/21 06:59	10/08/21 13:46	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/08/21 06:59	10/08/21 13:46	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 06:59	10/08/21 13:46	1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 06:59	10/08/21 13:46	1
Benzo[k]fluoranthene	ND		0.20	0.091	ug/L		10/08/21 06:59	10/08/21 13:46	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 06:59	10/08/21 13:46	1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 06:59	10/08/21 13:46	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 06:59	10/08/21 13:46	1

**Lab Sample ID: 570-72168-42**

**Matrix: Water**

# Client Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-014-DUP**

**Date Collected: 10/07/21 13:15**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-42**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.20	0.058	ug/L		10/08/21 06:59	10/08/21 13:46	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 06:59	10/08/21 13:46	1
Fluoranthene	ND		0.20	0.066	ug/L		10/08/21 06:59	10/08/21 13:46	1
Fluorene	ND		0.20	0.073	ug/L		10/08/21 06:59	10/08/21 13:46	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 06:59	10/08/21 13:46	1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 06:59	10/08/21 13:46	1
Phenanthrene	ND		0.20	0.072	ug/L		10/08/21 06:59	10/08/21 13:46	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 06:59	10/08/21 13:46	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	68			33 - 144			10/08/21 06:59	10/08/21 13:46	1
Nitrobenzene-d5 (Surr)	75			28 - 139			10/08/21 06:59	10/08/21 13:46	1
p-Terphenyl-d14 (Surr)	73			23 - 160			10/08/21 06:59	10/08/21 13:46	1

**Client Sample ID: HB-W-20211007-025-DUP**

**Date Collected: 10/07/21 15:05**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-43**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/08/21 06:59	10/08/21 14:09	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/08/21 06:59	10/08/21 14:09	1
Acenaphthene	ND		0.20	0.096	ug/L		10/08/21 06:59	10/08/21 14:09	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/08/21 06:59	10/08/21 14:09	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 06:59	10/08/21 14:09	1
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L		10/08/21 06:59	10/08/21 14:09	1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/08/21 06:59	10/08/21 14:09	1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 06:59	10/08/21 14:09	1
Benzo[a]pyrene	ND		0.20	0.062	ug/L		10/08/21 06:59	10/08/21 14:09	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 06:59	10/08/21 14:09	1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 06:59	10/08/21 14:09	1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 06:59	10/08/21 14:09	1
Fluoranthene	ND		0.20	0.067	ug/L		10/08/21 06:59	10/08/21 14:09	1
Fluorene	ND		0.20	0.074	ug/L		10/08/21 06:59	10/08/21 14:09	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 06:59	10/08/21 14:09	1
Naphthalene	ND		0.20	0.082	ug/L		10/08/21 06:59	10/08/21 14:09	1
Phenanthrene	ND		0.20	0.072	ug/L		10/08/21 06:59	10/08/21 14:09	1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 06:59	10/08/21 14:09	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	70			33 - 144			10/08/21 06:59	10/08/21 14:09	1
Nitrobenzene-d5 (Surr)	76			28 - 139			10/08/21 06:59	10/08/21 14:09	1
p-Terphenyl-d14 (Surr)	70			23 - 160			10/08/21 06:59	10/08/21 14:09	1

**Client Sample ID: HB-W-20211007-035-DUP**

**Date Collected: 10/07/21 16:05**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-44**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.072	ug/L		10/08/21 06:59	10/08/21 14:32	1
2-Methylnaphthalene	ND		0.20	0.076	ug/L		10/08/21 06:59	10/08/21 14:32	1
Acenaphthene	ND		0.20	0.096	ug/L		10/08/21 06:59	10/08/21 14:32	1
Acenaphthylene	ND		0.20	0.068	ug/L		10/08/21 06:59	10/08/21 14:32	1

Eurofins Calscience LLC

# Client Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-3

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Client Sample ID: HB-W-20211007-035-DUP**

**Date Collected: 10/07/21 16:05**

**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-44**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	1
Anthracene	ND		0.20	0.058	ug/L		10/08/21 06:59	10/08/21 14:32		1
Benzo[g,h,i]perylene	ND		0.20	0.099	ug/L		10/08/21 06:59	10/08/21 14:32		1
Benzo[k]fluoranthene	ND		0.20	0.092	ug/L		10/08/21 06:59	10/08/21 14:32		1
Benzo[a]anthracene	ND		0.20	0.084	ug/L		10/08/21 06:59	10/08/21 14:32		1
Benzo[a]pyrene	ND		0.20	0.061	ug/L		10/08/21 06:59	10/08/21 14:32		1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 06:59	10/08/21 14:32		1
Chrysene	ND		0.20	0.058	ug/L		10/08/21 06:59	10/08/21 14:32		1
Dibenz(a,h)anthracene	ND		0.20	0.11	ug/L		10/08/21 06:59	10/08/21 14:32		1
Fluoranthene	ND		0.20	0.067	ug/L		10/08/21 06:59	10/08/21 14:32		1
Fluorene	ND		0.20	0.074	ug/L		10/08/21 06:59	10/08/21 14:32		1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.10	ug/L		10/08/21 06:59	10/08/21 14:32		1
Naphthalene	ND		0.20	0.081	ug/L		10/08/21 06:59	10/08/21 14:32		1
Phenanthrene	ND		0.20	0.072	ug/L		10/08/21 06:59	10/08/21 14:32		1
Pyrene	ND		0.20	0.065	ug/L		10/08/21 06:59	10/08/21 14:32		1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	1
2-Fluorobiphenyl (Surr)	73		33 - 144				10/08/21 06:59	10/08/21 14:32		1
Nitrobenzene-d5 (Surr)	80		28 - 139				10/08/21 06:59	10/08/21 14:32		1
p-Terphenyl-d14 (Surr)	72		23 - 160				10/08/21 06:59	10/08/21 14:32		1

# Surrogate Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (33-144)	NBZ (28-139)	TPHd14 (23-160)
570-72168-1	HB-W-20211007-001	65	69	71
570-72168-2	HB-W-20211007-002	59	61	68
570-72168-3	HB-W-20211007-003	65	68	70
570-72168-4	HB-W-20211007-004	58	62	66
570-72168-5	HB-W-20211007-005	65	69	70
570-72168-6	HB-W-20211007-006	64	65	70
570-72168-7	HB-W-20211007-007	63	65	70
570-72168-8	HB-W-20211007-008	60	62	66
570-72168-9	HB-W-20211007-009	63	65	70
570-72168-10	HB-W-20211007-010	59	58	67
570-72168-11	HB-W-20211007-011	59	60	69
570-72168-12	HB-W-20211007-012	52	54	69
570-72168-13	HB-W-20211007-013	59	59	71
570-72168-14	HB-W-20211007-014	61	63	69
570-72168-15	HB-W-20211007-015	64	65	74
570-72168-16	HB-W-20211007-016	59	59	71
570-72168-17	HB-W-20211007-017	54	54	66
570-72168-18	HB-W-20211007-018	66	66	72
570-72168-19	HB-W-20211007-019	54	56	63
570-72168-20	HB-W-20211007-020	74	81	84
570-72168-21	HB-W-20211007-021	53	56	56
570-72168-22	HB-W-20211007-022	37	42	38
570-72168-23	HB-W-20211007-023	53	62	58
570-72168-24	HB-W-20211007-024	53	62	57
570-72168-25	HB-W-20211007-025	50	56	54
570-72168-26	HB-W-20211007-026	55	61	59
570-72168-27	HB-W-20211007-027	54	59	59
570-72168-28	HB-W-20211007-028	55	61	60
570-72168-29	HB-W-20211007-029	55	63	62
570-72168-30	HB-W-20211007-030	54	60	57
570-72168-31	HB-W-20211007-031	48	48	55
570-72168-32	HB-W-20211007-032	53	54	61
570-72168-33	HB-W-20211007-033	54	54	58
570-72168-34	HB-W-20211007-034	47	50	57
570-72168-35	HB-W-20211007-035	61	66	70
570-72168-36	HB-W-20211007-036	62	67	70
570-72168-37	HB-W-20211007-037	58	60	68
570-72168-38	HB-W-20211007-038	62	68	73
570-72168-39	HB-W-20211007-039	59	62	72
570-72168-40	HB-W-20211007-040	64	67	78
570-72168-41	HB-W-20211007-005-DUP	67	75	72
570-72168-42	HB-W-20211007-014-DUP	68	75	73
570-72168-43	HB-W-20211007-025-DUP	70	76	70
570-72168-44	HB-W-20211007-035-DUP	73	80	72
LCS 570-184901/2-A	Lab Control Sample	66	66	64
LCS 570-184917/2-A	Lab Control Sample	61	65	63
LCS 570-184919/2-A	Lab Control Sample	63	73	78
LCSD 570-184901/3-A	Lab Control Sample Dup	63	66	63
LCSD 570-184917/3-A	Lab Control Sample Dup	64	68	65

# Surrogate Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)**

**Matrix: Water**

**Prep Type: Total/NA**

## Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	FBP (33-144)	NBZ (28-139)	TPHd14 (23-160)									
LCSD 570-184919/3-A	Lab Control Sample Dup	65	76	73									
MB 570-184901/1-A	Method Blank	62	62	63									
MB 570-184917/1-A	Method Blank	60	62	64									
MB 570-184919/1-A	Method Blank	65	76	76									

### Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

# QC Sample Results

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## Method: 8270C SIM - PAHs (GC/MS SIM)

**Lab Sample ID: MB 570-184901/1-A**

**Matrix: Water**

**Analysis Batch: 184986**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 184901**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.073	ug/L		10/07/21 19:21	10/08/21 09:59	1
2-Methylnaphthalene	ND		0.20	0.077	ug/L		10/07/21 19:21	10/08/21 09:59	1
Acenaphthene	ND		0.20	0.097	ug/L		10/07/21 19:21	10/08/21 09:59	1
Acenaphthylene	ND		0.20	0.069	ug/L		10/07/21 19:21	10/08/21 09:59	1
Anthracene	ND		0.20	0.059	ug/L		10/07/21 19:21	10/08/21 09:59	1
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L		10/07/21 19:21	10/08/21 09:59	1
Benzo[k]fluoranthene	ND		0.20	0.093	ug/L		10/07/21 19:21	10/08/21 09:59	1
Benzo[a]anthracene	ND		0.20	0.086	ug/L		10/07/21 19:21	10/08/21 09:59	1
Benzo[a]pyrene	ND		0.20	0.063	ug/L		10/07/21 19:21	10/08/21 09:59	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 09:59	1
Chrysene	ND		0.20	0.059	ug/L		10/07/21 19:21	10/08/21 09:59	1
Dibenz(a,h)anthracene	ND		0.20	0.12	ug/L		10/07/21 19:21	10/08/21 09:59	1
Fluoranthene	ND		0.20	0.068	ug/L		10/07/21 19:21	10/08/21 09:59	1
Fluorene	ND		0.20	0.075	ug/L		10/07/21 19:21	10/08/21 09:59	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.11	ug/L		10/07/21 19:21	10/08/21 09:59	1
Naphthalene	ND		0.20	0.083	ug/L		10/07/21 19:21	10/08/21 09:59	1
Phenanthrene	ND		0.20	0.073	ug/L		10/07/21 19:21	10/08/21 09:59	1
Pyrene	ND		0.20	0.066	ug/L		10/07/21 19:21	10/08/21 09:59	1

**MB MB**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	62		33 - 144	10/07/21 19:21	10/08/21 09:59	1
Nitrobenzene-d5 (Surr)	62		28 - 139	10/07/21 19:21	10/08/21 09:59	1
p-Terphenyl-d14 (Surr)	63		23 - 160	10/07/21 19:21	10/08/21 09:59	1

**Lab Sample ID: LCS 570-184901/2-A**

**Matrix: Water**

**Analysis Batch: 184986**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 184901**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limts
1-Methylnaphthalene	2.00	1.284		ug/L	64	20 - 140	
2-Methylnaphthalene	2.00	1.201		ug/L	60	21 - 140	
Acenaphthene	2.00	1.267		ug/L	63	55 - 121	
Acenaphthylene	2.00	1.537		ug/L	77	33 - 145	
Anthracene	2.00	1.309		ug/L	65	27 - 133	
Benzo[g,h,i]perylene	2.00	1.118		ug/L	56	25 - 157	
Benzo[k]fluoranthene	2.00	1.256		ug/L	63	24 - 159	
Benzo[a]anthracene	2.00	1.193		ug/L	60	33 - 143	
Benzo[a]pyrene	2.00	1.157		ug/L	58	17 - 163	
Benzo[b]fluoranthene	2.00	1.102		ug/L	55	24 - 159	
Chrysene	2.00	1.246		ug/L	62	17 - 168	
Dibenz(a,h)anthracene	2.00	0.9222		ug/L	46	25 - 175	
Fluoranthene	2.00	1.218		ug/L	61	26 - 137	
Fluorene	2.00	1.301		ug/L	65	59 - 121	
Indeno[1,2,3-cd]pyrene	2.00	0.8607		ug/L	43	25 - 175	
Naphthalene	2.00	1.245		ug/L	62	21 - 133	
Phenanthrene	2.00	1.295		ug/L	65	54 - 120	
Pyrene	2.00	1.268		ug/L	63	45 - 129	

Eurofins Calscience LLC

# QC Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-3

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 570-184901/2-A**

**Matrix: Water**

**Analysis Batch: 184986**

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	66				33 - 144
Nitrobenzene-d5 (Surr)	66				28 - 139
p-Terphenyl-d14 (Surr)	64				23 - 160

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 184901**

**Lab Sample ID: LCSD 570-184901/3-A**

**Matrix: Water**

**Analysis Batch: 184986**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
1-Methylnaphthalene	2.00	1.270		ug/L		64	20 - 140	1	25
2-Methylnaphthalene	2.00	1.200		ug/L		60	21 - 140	0	25
Acenaphthene	2.00	1.290		ug/L		65	55 - 121	2	25
Acenaphthylene	2.00	1.467		ug/L		73	33 - 145	5	25
Anthracene	2.00	1.322		ug/L		66	27 - 133	1	25
Benzo[g,h,i]perylene	2.00	1.134		ug/L		57	25 - 157	1	25
Benzo[k]fluoranthene	2.00	1.242		ug/L		62	24 - 159	1	25
Benzo[a]anthracene	2.00	1.191		ug/L		60	33 - 143	0	25
Benzo[a]pyrene	2.00	1.139		ug/L		57	17 - 163	2	25
Benzo[b]fluoranthene	2.00	1.091		ug/L		55	24 - 159	1	25
Chrysene	2.00	1.248		ug/L		62	17 - 168	0	25
Dibenz(a,h)anthracene	2.00	0.9160		ug/L		46	25 - 175	1	25
Fluoranthene	2.00	1.244		ug/L		62	26 - 137	2	25
Fluorene	2.00	1.305		ug/L		65	59 - 121	0	25
Indeno[1,2,3-cd]pyrene	2.00	0.8638		ug/L		43	25 - 175	0	25
Naphthalene	2.00	1.219		ug/L		61	21 - 133	2	25
Phenanthrene	2.00	1.315		ug/L		66	54 - 120	2	25
Pyrene	2.00	1.292		ug/L		65	45 - 129	2	25

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	63				33 - 144
Nitrobenzene-d5 (Surr)	66				28 - 139
p-Terphenyl-d14 (Surr)	63				23 - 160

**Lab Sample ID: MB 570-184917/1-A**

**Matrix: Water**

**Analysis Batch: 185015**

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND				0.20	0.073	ug/L		10/08/21 05:29	10/08/21 11:44	1
2-Methylnaphthalene	ND				0.20	0.077	ug/L		10/08/21 05:29	10/08/21 11:44	1
Acenaphthene	ND				0.20	0.097	ug/L		10/08/21 05:29	10/08/21 11:44	1
Acenaphthylene	ND				0.20	0.069	ug/L		10/08/21 05:29	10/08/21 11:44	1
Anthracene	ND				0.20	0.059	ug/L		10/08/21 05:29	10/08/21 11:44	1
Benzo[g,h,i]perylene	ND				0.20	0.10	ug/L		10/08/21 05:29	10/08/21 11:44	1
Benzo[k]fluoranthene	ND				0.20	0.093	ug/L		10/08/21 05:29	10/08/21 11:44	1
Benzo[a]anthracene	ND				0.20	0.086	ug/L		10/08/21 05:29	10/08/21 11:44	1
Benzo[a]pyrene	ND				0.20	0.063	ug/L		10/08/21 05:29	10/08/21 11:44	1
Benzo[b]fluoranthene	ND				0.20	0.12	ug/L		10/08/21 05:29	10/08/21 11:44	1

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 184917**

Eurofins Calscience LLC

# QC Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-3

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Lab Sample ID: MB 570-184917/1-A**

**Matrix: Water**

**Analysis Batch: 185015**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 184917**

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							Prepared	Analyzed	Dil Fac
Chrysene	ND				0.20	0.059	ug/L		10/08/21 05:29	10/08/21 11:44	1
Dibenz(a,h)anthracene	ND				0.20	0.12	ug/L		10/08/21 05:29	10/08/21 11:44	1
Fluoranthene	ND				0.20	0.068	ug/L		10/08/21 05:29	10/08/21 11:44	1
Fluorene	ND				0.20	0.075	ug/L		10/08/21 05:29	10/08/21 11:44	1
Indeno[1,2,3-cd]pyrene	ND				0.20	0.11	ug/L		10/08/21 05:29	10/08/21 11:44	1
Naphthalene	ND				0.20	0.083	ug/L		10/08/21 05:29	10/08/21 11:44	1
Phenanthrene	ND				0.20	0.073	ug/L		10/08/21 05:29	10/08/21 11:44	1
Pyrene	ND				0.20	0.066	ug/L		10/08/21 05:29	10/08/21 11:44	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
2-Fluorobiphenyl (Surr)	60		33 - 144			10/08/21 05:29	10/08/21 11:44	1
Nitrobenzene-d5 (Surr)	62		28 - 139			10/08/21 05:29	10/08/21 11:44	1
p-Terphenyl-d14 (Surr)	64		23 - 160			10/08/21 05:29	10/08/21 11:44	1

**Lab Sample ID: LCS 570-184917/2-A**

**Matrix: Water**

**Analysis Batch: 185015**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 184917**

Analyte	Spike Added	LCS	LCS	Result	Qualifier	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier						Prepared	
1-Methylnaphthalene	2.00			1.296		ug/L		65	20 - 140	
2-Methylnaphthalene	2.00			1.464		ug/L		73	21 - 140	
Acenaphthene	2.00			1.229		ug/L		61	55 - 121	
Acenaphthylene	2.00			1.413		ug/L		71	33 - 145	
Anthracene	2.00			1.303		ug/L		65	27 - 133	
Benzo[g,h,i]perylene	2.00			1.241		ug/L		62	25 - 157	
Benzo[k]fluoranthene	2.00			1.326		ug/L		66	24 - 159	
Benzo[a]anthracene	2.00			1.268		ug/L		63	33 - 143	
Benzo[a]pyrene	2.00			1.221		ug/L		61	17 - 163	
Benzo[b]fluoranthene	2.00			1.167		ug/L		58	24 - 159	
Chrysene	2.00			1.275		ug/L		64	17 - 168	
Dibenz(a,h)anthracene	2.00			1.114		ug/L		56	25 - 175	
Fluoranthene	2.00			1.276		ug/L		64	26 - 137	
Fluorene	2.00			1.306		ug/L		65	59 - 121	
Indeno[1,2,3-cd]pyrene	2.00			1.130		ug/L		57	25 - 175	
Naphthalene	2.00			1.209		ug/L		60	21 - 133	
Phenanthrene	2.00			1.261		ug/L		63	54 - 120	
Pyrene	2.00			1.333		ug/L		67	45 - 129	

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
2-Fluorobiphenyl (Surr)	61		33 - 144					
Nitrobenzene-d5 (Surr)	65		28 - 139					
p-Terphenyl-d14 (Surr)	63		23 - 160					

# QC Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-3

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Lab Sample ID: LCSD 570-184917/3-A**

**Matrix: Water**

**Analysis Batch: 185015**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 184917**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	2.00	1.376		ug/L		69	20 - 140	6	25
2-Methylnaphthalene	2.00	1.555		ug/L		78	21 - 140	6	25
Acenaphthene	2.00	1.299		ug/L		65	55 - 121	6	25
Acenaphthylene	2.00	1.480		ug/L		74	33 - 145	5	25
Anthracene	2.00	1.330		ug/L		66	27 - 133	2	25
Benzo[g,h,i]perylene	2.00	1.243		ug/L		62	25 - 157	0	25
Benzo[k]fluoranthene	2.00	1.464		ug/L		73	24 - 159	10	25
Benzo[a]anthracene	2.00	1.262		ug/L		63	33 - 143	1	25
Benzo[a]pyrene	2.00	1.238		ug/L		62	17 - 163	1	25
Benzo[b]fluoranthene	2.00	1.065		ug/L		53	24 - 159	9	25
Chrysene	2.00	1.301		ug/L		65	17 - 168	2	25
Dibenz(a,h)anthracene	2.00	1.112		ug/L		56	25 - 175	0	25
Fluoranthene	2.00	1.317		ug/L		66	26 - 137	3	25
Fluorene	2.00	1.370		ug/L		68	59 - 121	5	25
Indeno[1,2,3-cd]pyrene	2.00	1.129		ug/L		56	25 - 175	0	25
Naphthalene	2.00	1.297		ug/L		65	21 - 133	7	25
Phenanthrene	2.00	1.304		ug/L		65	54 - 120	3	25
Pyrene	2.00	1.351		ug/L		68	45 - 129	1	25

	LCSD		
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	64		33 - 144
Nitrobenzene-d5 (Surr)	68		28 - 139
p-Terphenyl-d14 (Surr)	65		23 - 160

**Lab Sample ID: MB 570-184919/1-A**

**Matrix: Water**

**Analysis Batch: 185044**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 184919**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.20	0.073	ug/L		10/08/21 06:59	10/08/21 12:15	1
2-Methylnaphthalene	ND		0.20	0.077	ug/L		10/08/21 06:59	10/08/21 12:15	1
Acenaphthene	ND		0.20	0.097	ug/L		10/08/21 06:59	10/08/21 12:15	1
Acenaphthylene	ND		0.20	0.069	ug/L		10/08/21 06:59	10/08/21 12:15	1
Anthracene	ND		0.20	0.059	ug/L		10/08/21 06:59	10/08/21 12:15	1
Benzo[g,h,i]perylene	ND		0.20	0.10	ug/L		10/08/21 06:59	10/08/21 12:15	1
Benzo[k]fluoranthene	ND		0.20	0.093	ug/L		10/08/21 06:59	10/08/21 12:15	1
Benzo[a]anthracene	ND		0.20	0.086	ug/L		10/08/21 06:59	10/08/21 12:15	1
Benzo[a]pyrene	ND		0.20	0.063	ug/L		10/08/21 06:59	10/08/21 12:15	1
Benzo[b]fluoranthene	ND		0.20	0.12	ug/L		10/08/21 06:59	10/08/21 12:15	1
Chrysene	ND		0.20	0.059	ug/L		10/08/21 06:59	10/08/21 12:15	1
Dibenz(a,h)anthracene	ND		0.20	0.12	ug/L		10/08/21 06:59	10/08/21 12:15	1
Fluoranthene	ND		0.20	0.068	ug/L		10/08/21 06:59	10/08/21 12:15	1
Fluorene	ND		0.20	0.075	ug/L		10/08/21 06:59	10/08/21 12:15	1
Indeno[1,2,3-cd]pyrene	ND		0.20	0.11	ug/L		10/08/21 06:59	10/08/21 12:15	1
Naphthalene	ND		0.20	0.083	ug/L		10/08/21 06:59	10/08/21 12:15	1
Phenanthrene	ND		0.20	0.073	ug/L		10/08/21 06:59	10/08/21 12:15	1
Pyrene	ND		0.20	0.066	ug/L		10/08/21 06:59	10/08/21 12:15	1

Eurofins Calscience LLC

# QC Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-3

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Lab Sample ID: MB 570-184919/1-A**

**Matrix: Water**

**Analysis Batch: 185044**

Surrogate	MB	MB	%Recovery	Qualifier	Limits
	%Recovery	Qualifier			
2-Fluorobiphenyl (Surr)	65		33 - 144		
Nitrobenzene-d5 (Surr)	76		28 - 139		
p-Terphenyl-d14 (Surr)	76		23 - 160		

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 184919**

**Lab Sample ID: LCS 570-184919/2-A**

**Matrix: Water**

**Analysis Batch: 185044**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
1-Methylnaphthalene	2.00	1.460		ug/L	73	20 - 140		
2-Methylnaphthalene	2.00	1.657		ug/L	83	21 - 140		
Acenaphthene	2.00	1.292		ug/L	65	55 - 121		
Acenaphthylene	2.00	1.481		ug/L	74	33 - 145		
Anthracene	2.00	1.438		ug/L	72	27 - 133		
Benzo[g,h,i]perylene	2.00	1.342		ug/L	67	25 - 157		
Benzo[k]fluoranthene	2.00	1.415		ug/L	71	24 - 159		
Benzo[a]anthracene	2.00	1.370		ug/L	69	33 - 143		
Benzo[a]pyrene	2.00	1.508		ug/L	75	17 - 163		
Benzo[b]fluoranthene	2.00	1.372		ug/L	69	24 - 159		
Chrysene	2.00	1.406		ug/L	70	17 - 168		
Dibenz(a,h)anthracene	2.00	1.264		ug/L	63	25 - 175		
Fluoranthene	2.00	1.433		ug/L	72	26 - 137		
Fluorene	2.00	1.340		ug/L	67	59 - 121		
Indeno[1,2,3-cd]pyrene	2.00	1.259		ug/L	63	25 - 175		
Naphthalene	2.00	1.316		ug/L	66	21 - 133		
Phenanthrene	2.00	1.383		ug/L	69	54 - 120		
Pyrene	2.00	1.493		ug/L	75	45 - 129		

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
	Result	Qualifier			
2-Fluorobiphenyl (Surr)	63		33 - 144		
Nitrobenzene-d5 (Surr)	73		28 - 139		
p-Terphenyl-d14 (Surr)	78		23 - 160		

**Lab Sample ID: LCSD 570-184919/3-A**

**Matrix: Water**

**Analysis Batch: 185044**

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
		Result	Qualifier							
1-Methylnaphthalene	2.00	1.540		ug/L	77	20 - 140	5	25		
2-Methylnaphthalene	2.00	1.744		ug/L	87	21 - 140	5	25		
Acenaphthene	2.00	1.337		ug/L	67	55 - 121	3	25		
Acenaphthylene	2.00	1.544		ug/L	77	33 - 145	4	25		
Anthracene	2.00	1.509		ug/L	75	27 - 133	5	25		
Benzo[g,h,i]perylene	2.00	1.366		ug/L	68	25 - 157	2	25		
Benzo[k]fluoranthene	2.00	1.507		ug/L	75	24 - 159	6	25		
Benzo[a]anthracene	2.00	1.448		ug/L	72	33 - 143	6	25		
Benzo[a]pyrene	2.00	1.536		ug/L	77	17 - 163	2	25		
Benzo[b]fluoranthene	2.00	1.383		ug/L	69	24 - 159	1	25		

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 184919**

# QC Sample Results

Client: Moffatt & Nichol

Job ID: 570-72168-3

Project/Site: Huntington Beach Oil Spill Sample

## Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

**Lab Sample ID: LCSD 570-184919/3-A**

**Matrix: Water**

**Analysis Batch: 185044**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 184919**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Chrysene	2.00	1.423		ug/L	71	17 - 168		1	25
Dibenz(a,h)anthracene	2.00	1.297		ug/L	65	25 - 175		3	25
Fluoranthene	2.00	1.434		ug/L	72	26 - 137		0	25
Fluorene	2.00	1.372		ug/L	69	59 - 121		2	25
Indeno[1,2,3-cd]pyrene	2.00	1.264		ug/L	63	25 - 175		0	25
Naphthalene	2.00	1.399		ug/L	70	21 - 133		6	25
Phenanthrene	2.00	1.338		ug/L	67	54 - 120		3	25
Pyrene	2.00	1.442		ug/L	72	45 - 129		3	25

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	65		33 - 144
Nitrobenzene-d5 (Surr)	76		28 - 139
p-Terphenyl-d14 (Surr)	73		23 - 160

# QC Association Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## GC/MS Semi VOA

### Prep Batch: 184901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-1	HB-W-20211007-001	Total/NA	Water	3510C	1
570-72168-2	HB-W-20211007-002	Total/NA	Water	3510C	2
570-72168-3	HB-W-20211007-003	Total/NA	Water	3510C	3
570-72168-4	HB-W-20211007-004	Total/NA	Water	3510C	4
570-72168-5	HB-W-20211007-005	Total/NA	Water	3510C	5
570-72168-6	HB-W-20211007-006	Total/NA	Water	3510C	6
570-72168-7	HB-W-20211007-007	Total/NA	Water	3510C	7
570-72168-8	HB-W-20211007-008	Total/NA	Water	3510C	8
570-72168-9	HB-W-20211007-009	Total/NA	Water	3510C	9
570-72168-10	HB-W-20211007-010	Total/NA	Water	3510C	10
570-72168-11	HB-W-20211007-011	Total/NA	Water	3510C	11
570-72168-12	HB-W-20211007-012	Total/NA	Water	3510C	12
570-72168-13	HB-W-20211007-013	Total/NA	Water	3510C	13
570-72168-14	HB-W-20211007-014	Total/NA	Water	3510C	14
570-72168-15	HB-W-20211007-015	Total/NA	Water	3510C	
570-72168-16	HB-W-20211007-016	Total/NA	Water	3510C	
570-72168-17	HB-W-20211007-017	Total/NA	Water	3510C	
570-72168-18	HB-W-20211007-018	Total/NA	Water	3510C	
570-72168-19	HB-W-20211007-019	Total/NA	Water	3510C	
570-72168-20	HB-W-20211007-020	Total/NA	Water	3510C	
MB 570-184901/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-184901/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-184901/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Prep Batch: 184917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-21	HB-W-20211007-021	Total/NA	Water	3510C	1
570-72168-22	HB-W-20211007-022	Total/NA	Water	3510C	2
570-72168-23	HB-W-20211007-023	Total/NA	Water	3510C	3
570-72168-24	HB-W-20211007-024	Total/NA	Water	3510C	4
570-72168-25	HB-W-20211007-025	Total/NA	Water	3510C	5
570-72168-26	HB-W-20211007-026	Total/NA	Water	3510C	6
570-72168-27	HB-W-20211007-027	Total/NA	Water	3510C	7
570-72168-28	HB-W-20211007-028	Total/NA	Water	3510C	8
570-72168-29	HB-W-20211007-029	Total/NA	Water	3510C	9
570-72168-30	HB-W-20211007-030	Total/NA	Water	3510C	10
570-72168-31	HB-W-20211007-031	Total/NA	Water	3510C	11
570-72168-32	HB-W-20211007-032	Total/NA	Water	3510C	12
570-72168-33	HB-W-20211007-033	Total/NA	Water	3510C	13
570-72168-34	HB-W-20211007-034	Total/NA	Water	3510C	14
570-72168-35	HB-W-20211007-035	Total/NA	Water	3510C	
570-72168-36	HB-W-20211007-036	Total/NA	Water	3510C	
570-72168-37	HB-W-20211007-037	Total/NA	Water	3510C	
570-72168-38	HB-W-20211007-038	Total/NA	Water	3510C	
570-72168-39	HB-W-20211007-039	Total/NA	Water	3510C	
570-72168-40	HB-W-20211007-040	Total/NA	Water	3510C	
MB 570-184917/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-184917/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-184917/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

# QC Association Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## GC/MS Semi VOA

### Prep Batch: 184919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-41	HB-W-20211007-005-DUP	Total/NA	Water	3510C	
570-72168-42	HB-W-20211007-014-DUP	Total/NA	Water	3510C	
570-72168-43	HB-W-20211007-025-DUP	Total/NA	Water	3510C	
570-72168-44	HB-W-20211007-035-DUP	Total/NA	Water	3510C	
MB 570-184919/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-184919/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-184919/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 184986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-1	HB-W-20211007-001	Total/NA	Water	8270C SIM	184901
570-72168-2	HB-W-20211007-002	Total/NA	Water	8270C SIM	184901
570-72168-3	HB-W-20211007-003	Total/NA	Water	8270C SIM	184901
570-72168-4	HB-W-20211007-004	Total/NA	Water	8270C SIM	184901
570-72168-5	HB-W-20211007-005	Total/NA	Water	8270C SIM	184901
570-72168-6	HB-W-20211007-006	Total/NA	Water	8270C SIM	184901
570-72168-7	HB-W-20211007-007	Total/NA	Water	8270C SIM	184901
570-72168-8	HB-W-20211007-008	Total/NA	Water	8270C SIM	184901
570-72168-9	HB-W-20211007-009	Total/NA	Water	8270C SIM	184901
570-72168-10	HB-W-20211007-010	Total/NA	Water	8270C SIM	184901
570-72168-11	HB-W-20211007-011	Total/NA	Water	8270C SIM	184901
570-72168-12	HB-W-20211007-012	Total/NA	Water	8270C SIM	184901
570-72168-13	HB-W-20211007-013	Total/NA	Water	8270C SIM	184901
570-72168-14	HB-W-20211007-014	Total/NA	Water	8270C SIM	184901
570-72168-15	HB-W-20211007-015	Total/NA	Water	8270C SIM	184901
570-72168-16	HB-W-20211007-016	Total/NA	Water	8270C SIM	184901
570-72168-17	HB-W-20211007-017	Total/NA	Water	8270C SIM	184901
570-72168-18	HB-W-20211007-018	Total/NA	Water	8270C SIM	184901
570-72168-19	HB-W-20211007-019	Total/NA	Water	8270C SIM	184901
MB 570-184901/1-A	Method Blank	Total/NA	Water	8270C SIM	184901
LCS 570-184901/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	184901
LCSD 570-184901/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	184901

### Analysis Batch: 185015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-21	HB-W-20211007-021	Total/NA	Water	8270C SIM	184917
570-72168-22	HB-W-20211007-022	Total/NA	Water	8270C SIM	184917
570-72168-23	HB-W-20211007-023	Total/NA	Water	8270C SIM	184917
570-72168-24	HB-W-20211007-024	Total/NA	Water	8270C SIM	184917
570-72168-25	HB-W-20211007-025	Total/NA	Water	8270C SIM	184917
570-72168-26	HB-W-20211007-026	Total/NA	Water	8270C SIM	184917
570-72168-27	HB-W-20211007-027	Total/NA	Water	8270C SIM	184917
570-72168-28	HB-W-20211007-028	Total/NA	Water	8270C SIM	184917
570-72168-29	HB-W-20211007-029	Total/NA	Water	8270C SIM	184917
570-72168-30	HB-W-20211007-030	Total/NA	Water	8270C SIM	184917
570-72168-31	HB-W-20211007-031	Total/NA	Water	8270C SIM	184917
570-72168-32	HB-W-20211007-032	Total/NA	Water	8270C SIM	184917
570-72168-33	HB-W-20211007-033	Total/NA	Water	8270C SIM	184917
570-72168-34	HB-W-20211007-034	Total/NA	Water	8270C SIM	184917
MB 570-184917/1-A	Method Blank	Total/NA	Water	8270C SIM	184917
LCS 570-184917/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	184917

Eurofins Calscience LLC

# QC Association Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

## GC/MS Semi VOA (Continued)

### Analysis Batch: 185015 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 570-184917/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	184917

### Analysis Batch: 185044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-72168-20	HB-W-20211007-020	Total/NA	Water	8270C SIM	184901
570-72168-35	HB-W-20211007-035	Total/NA	Water	8270C SIM	184917
570-72168-36	HB-W-20211007-036	Total/NA	Water	8270C SIM	184917
570-72168-37	HB-W-20211007-037	Total/NA	Water	8270C SIM	184917
570-72168-38	HB-W-20211007-038	Total/NA	Water	8270C SIM	184917
570-72168-39	HB-W-20211007-039	Total/NA	Water	8270C SIM	184917
570-72168-40	HB-W-20211007-040	Total/NA	Water	8270C SIM	184917
570-72168-41	HB-W-20211007-005-DUP	Total/NA	Water	8270C SIM	184919
570-72168-42	HB-W-20211007-014-DUP	Total/NA	Water	8270C SIM	184919
570-72168-43	HB-W-20211007-025-DUP	Total/NA	Water	8270C SIM	184919
570-72168-44	HB-W-20211007-035-DUP	Total/NA	Water	8270C SIM	184919
MB 570-184919/1-A	Method Blank	Total/NA	Water	8270C SIM	184919
LCS 570-184919/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	184919
LCSD 570-184919/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	184919

# Lab Chronicle

Client: Moffatt & Nichol  
Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-001**

Date Collected: 10/07/21 17:20

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-1**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1019 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 11:03	ULLI	ECL 1

**Client Sample ID: HB-W-20211007-002**

Date Collected: 10/07/21 17:30

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-2**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1019.1 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 11:25	ULLI	ECL 1

**Client Sample ID: HB-W-20211007-003**

Date Collected: 10/07/21 17:35

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-3**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1016.6 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 11:46	ULLI	ECL 1

**Client Sample ID: HB-W-20211007-004**

Date Collected: 10/07/21 12:20

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-4**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1014.3 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 12:08	ULLI	ECL 1

**Client Sample ID: HB-W-20211007-005**

Date Collected: 10/07/21 12:20

Date Received: 10/07/21 18:45

**Lab Sample ID: 570-72168-5**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1019.9 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 12:29	ULLI	ECL 1

# Lab Chronicle

Client: Moffatt & Nichol  
Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-006**  
**Date Collected: 10/07/21 12:25**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1019.7 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 12:51	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-007**  
**Date Collected: 10/07/21 12:30**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-7**  
**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	3510C			1019.2 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 13:13	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-008**  
**Date Collected: 10/07/21 12:35**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-8**  
**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	3510C			1014.1 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 13:34	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-009**  
**Date Collected: 10/07/21 12:43**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-9**  
**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	3510C			1015.3 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 13:56	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-010**  
**Date Collected: 10/07/21 12:50**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-10**  
**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	3510C			1014.5 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 14:17	ULLI	ECL 1

Instrument ID: GCMSEEE

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-011**  
**Date Collected: 10/07/21 12:55**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-11**  
**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	3510C			999.9 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 14:39	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-012**  
**Date Collected: 10/07/21 13:05**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-12**  
**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	3510C			1002.3 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 15:00	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-013**  
**Date Collected: 10/07/21 13:05**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-13**  
**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	3510C			1008.9 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 15:22	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-014**  
**Date Collected: 10/07/21 13:15**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-14**  
**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	3510C			1003.8 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 15:43	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-015**  
**Date Collected: 10/07/21 13:45**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-15**  
**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	3510C			1019.1 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 16:05	ULLI	ECL 1

Instrument ID: GCMSEEE

# Lab Chronicle

Client: Moffatt & Nichol  
Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-016**

**Lab Sample ID: 570-72168-16**

Matrix: Water

Date Collected: 10/07/21 13:50

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1018 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 16:26	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-017**

**Lab Sample ID: 570-72168-17**

Matrix: Water

Date Collected: 10/07/21 14:00

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1010.5 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 16:48	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-018**

**Lab Sample ID: 570-72168-18**

Matrix: Water

Date Collected: 10/07/21 14:05

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1012.6 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 17:10	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-019**

**Lab Sample ID: 570-72168-19**

Matrix: Water

Date Collected: 10/07/21 14:15

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1004.3 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			184986	10/08/21 17:31	ULLI	ECL 1

Instrument ID: GCMSEEE

**Client Sample ID: HB-W-20211007-020**

**Lab Sample ID: 570-72168-20**

Matrix: Water

Date Collected: 10/07/21 14:30

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1004.2 mL	2 mL	184901	10/07/21 19:21	UM1W	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 17:27	AJ2Q	ECL 1

Instrument ID: GCMSMM

# Lab Chronicle

Client: Moffatt & Nichol  
Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-021**

**Lab Sample ID: 570-72168-21**

Matrix: Water

Date Collected: 10/07/21 14:42

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1025.3 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 12:42	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-022**

**Lab Sample ID: 570-72168-22**

Matrix: Water

Date Collected: 10/07/21 14:50

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1019.8 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 13:02	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-023**

**Lab Sample ID: 570-72168-23**

Matrix: Water

Date Collected: 10/07/21 14:55

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1022 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 13:21	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-024**

**Lab Sample ID: 570-72168-24**

Matrix: Water

Date Collected: 10/07/21 14:55

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1020 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 13:41	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-025**

**Lab Sample ID: 570-72168-25**

Matrix: Water

Date Collected: 10/07/21 15:05

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1022.1 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 14:00	AJ2Q	ECL 1

Instrument ID: GCMSAAA

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-026**

**Lab Sample ID: 570-72168-26**

Matrix: Water

Date Collected: 10/07/21 15:10

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1021.6 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 14:20	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-027**

**Lab Sample ID: 570-72168-27**

Matrix: Water

Date Collected: 10/07/21 15:20

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1019.1 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 14:39	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-028**

**Lab Sample ID: 570-72168-28**

Matrix: Water

Date Collected: 10/07/21 15:20

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1022.9 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 14:59	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-029**

**Lab Sample ID: 570-72168-29**

Matrix: Water

Date Collected: 10/07/21 15:30

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1021.2 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 15:18	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-030**

**Lab Sample ID: 570-72168-30**

Matrix: Water

Date Collected: 10/07/21 15:32

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1022.4 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 15:38	AJ2Q	ECL 1

Instrument ID: GCMSAAA

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-031**  
**Date Collected: 10/07/21 15:40**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-31**  
**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	3510C			1022.2 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 15:57	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-032**  
**Date Collected: 10/07/21 15:42**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-32**  
**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	3510C			1021.6 mL	2 mL	184917	10/08/21 05:28	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 16:17	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-033**  
**Date Collected: 10/07/21 15:50**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-33**  
**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	3510C			1023.6 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 16:36	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-034**  
**Date Collected: 10/07/21 15:52**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-34**  
**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	3510C			1024.2 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185015	10/08/21 16:55	AJ2Q	ECL 1

Instrument ID: GCMSAAA

**Client Sample ID: HB-W-20211007-035**  
**Date Collected: 10/07/21 16:05**  
**Date Received: 10/07/21 18:45**

**Lab Sample ID: 570-72168-35**  
**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	3510C			1024.5 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 14:54	AJ2Q	ECL 1

Instrument ID: GCMSMM

# Lab Chronicle

Client: Moffatt & Nichol  
Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-036**

**Lab Sample ID: 570-72168-36**

Matrix: Water

Date Collected: 10/07/21 16:02

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1025.5 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 15:17	AJ2Q	ECL 1

Instrument ID: GCMSMM

**Client Sample ID: HB-W-20211007-037**

**Lab Sample ID: 570-72168-37**

Matrix: Water

Date Collected: 10/07/21 16:15

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1024.5 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 15:40	AJ2Q	ECL 1

Instrument ID: GCMSMM

**Client Sample ID: HB-W-20211007-038**

**Lab Sample ID: 570-72168-38**

Matrix: Water

Date Collected: 10/07/21 16:15

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1026.8 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 16:19	AJ2Q	ECL 1

Instrument ID: GCMSMM

**Client Sample ID: HB-W-20211007-039**

**Lab Sample ID: 570-72168-39**

Matrix: Water

Date Collected: 10/07/21 16:25

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1017.9 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 16:42	AJ2Q	ECL 1

Instrument ID: GCMSMM

**Client Sample ID: HB-W-20211007-040**

**Lab Sample ID: 570-72168-40**

Matrix: Water

Date Collected: 10/07/21 16:30

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1026.2 mL	2 mL	184917	10/08/21 05:29	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 17:05	AJ2Q	ECL 1

Instrument ID: GCMSMM

# Lab Chronicle

Client: Moffatt & Nichol  
 Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

**Client Sample ID: HB-W-20211007-005-DUP**

**Lab Sample ID: 570-72168-41**

Matrix: Water

Date Collected: 10/07/21 12:20

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1016.8 mL	2 mL	184919	10/08/21 06:59	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 13:24	AJ2Q	ECL 1

Instrument ID: GCMSMM

**Client Sample ID: HB-W-20211007-014-DUP**

**Lab Sample ID: 570-72168-42**

Matrix: Water

Date Collected: 10/07/21 13:15

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1019.5 mL	2 mL	184919	10/08/21 06:59	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 13:46	AJ2Q	ECL 1

Instrument ID: GCMSMM

**Client Sample ID: HB-W-20211007-025-DUP**

**Lab Sample ID: 570-72168-43**

Matrix: Water

Date Collected: 10/07/21 15:05

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1014.6 mL	2 mL	184919	10/08/21 06:59	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 14:09	AJ2Q	ECL 1

Instrument ID: GCMSMM

**Client Sample ID: HB-W-20211007-035-DUP**

**Lab Sample ID: 570-72168-44**

Matrix: Water

Date Collected: 10/07/21 16:05

Date Received: 10/07/21 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1017.3 mL	2 mL	184919	10/08/21 06:59	H1SH	ECL 1
Total/NA	Analysis	8270C SIM		1			185044	10/08/21 14:32	AJ2Q	ECL 1

Instrument ID: GCMSMM

## Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

## Accreditation/Certification Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

### Laboratory: Eurofins Calscience LLC

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

Authority	Program	Identification Number	Expiration Date
California	State	2944	09-30-22

1

2

3

4

5

6

7

8

9

10

11

12

13

14

## Method Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs (GC/MS SIM)	SW846	ECL 1
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1

**Protocol References:**

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

**Laboratory References:**

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

# Sample Summary

Client: Moffatt & Nichol

Project/Site: Huntington Beach Oil Spill Sample

Job ID: 570-72168-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-72168-1	HB-W-20211007-001	Water	10/07/21 17:20	10/07/21 18:45
570-72168-2	HB-W-20211007-002	Water	10/07/21 17:30	10/07/21 18:45
570-72168-3	HB-W-20211007-003	Water	10/07/21 17:35	10/07/21 18:45
570-72168-4	HB-W-20211007-004	Water	10/07/21 12:20	10/07/21 18:45
570-72168-5	HB-W-20211007-005	Water	10/07/21 12:20	10/07/21 18:45
570-72168-6	HB-W-20211007-006	Water	10/07/21 12:25	10/07/21 18:45
570-72168-7	HB-W-20211007-007	Water	10/07/21 12:30	10/07/21 18:45
570-72168-8	HB-W-20211007-008	Water	10/07/21 12:35	10/07/21 18:45
570-72168-9	HB-W-20211007-009	Water	10/07/21 12:43	10/07/21 18:45
570-72168-10	HB-W-20211007-010	Water	10/07/21 12:50	10/07/21 18:45
570-72168-11	HB-W-20211007-011	Water	10/07/21 12:55	10/07/21 18:45
570-72168-12	HB-W-20211007-012	Water	10/07/21 13:10	10/07/21 18:45
570-72168-13	HB-W-20211007-013	Water	10/07/21 13:05	10/07/21 18:45
570-72168-14	HB-W-20211007-014	Water	10/07/21 13:15	10/07/21 18:45
570-72168-15	HB-W-20211007-015	Water	10/07/21 13:45	10/07/21 18:45
570-72168-16	HB-W-20211007-016	Water	10/07/21 13:50	10/07/21 18:45
570-72168-17	HB-W-20211007-017	Water	10/07/21 14:00	10/07/21 18:45
570-72168-18	HB-W-20211007-018	Water	10/07/21 14:05	10/07/21 18:45
570-72168-19	HB-W-20211007-019	Water	10/07/21 14:15	10/07/21 18:45
570-72168-20	HB-W-20211007-020	Water	10/07/21 14:30	10/07/21 18:45
570-72168-21	HB-W-20211007-021	Water	10/07/21 14:42	10/07/21 18:45
570-72168-22	HB-W-20211007-022	Water	10/07/21 14:50	10/07/21 18:45
570-72168-23	HB-W-20211007-023	Water	10/07/21 14:55	10/07/21 18:45
570-72168-24	HB-W-20211007-024	Water	10/07/21 14:55	10/07/21 18:45
570-72168-25	HB-W-20211007-025	Water	10/07/21 15:05	10/07/21 18:45
570-72168-26	HB-W-20211007-026	Water	10/07/21 15:10	10/07/21 18:45
570-72168-27	HB-W-20211007-027	Water	10/07/21 15:20	10/07/21 18:45
570-72168-28	HB-W-20211007-028	Water	10/07/21 15:20	10/07/21 18:45
570-72168-29	HB-W-20211007-029	Water	10/07/21 15:30	10/07/21 18:45
570-72168-30	HB-W-20211007-030	Water	10/07/21 15:32	10/07/21 18:45
570-72168-31	HB-W-20211007-031	Water	10/07/21 15:40	10/07/21 18:45
570-72168-32	HB-W-20211007-032	Water	10/07/21 15:42	10/07/21 18:45
570-72168-33	HB-W-20211007-033	Water	10/07/21 15:50	10/07/21 18:45
570-72168-34	HB-W-20211007-034	Water	10/07/21 15:52	10/07/21 18:45
570-72168-35	HB-W-20211007-035	Water	10/07/21 16:05	10/07/21 18:45
570-72168-36	HB-W-20211007-036	Water	10/07/21 16:02	10/07/21 18:45
570-72168-37	HB-W-20211007-037	Water	10/07/21 16:15	10/07/21 18:45
570-72168-38	HB-W-20211007-038	Water	10/07/21 16:15	10/07/21 18:45
570-72168-39	HB-W-20211007-039	Water	10/07/21 16:25	10/07/21 18:45
570-72168-40	HB-W-20211007-040	Water	10/07/21 16:30	10/07/21 18:45
570-72168-41	HB-W-20211007-005-DUP	Water	10/07/21 12:20	10/07/21 18:45
570-72168-42	HB-W-20211007-014-DUP	Water	10/07/21 13:15	10/07/21 18:45
570-72168-43	HB-W-20211007-025-DUP	Water	10/07/21 15:05	10/07/21 18:45
570-72168-44	HB-W-20211007-035-DUP	Water	10/07/21 16:05	10/07/21 18:45



Calscience

7440 Lincoln Way Garden Grove CA 92841-1427 • (714) 895-5494

For customer service / sample drop off information contact JS26\_sales@eurofinsus.com or call us



## CHAIN OF CUSTODY RECORD

10-07-21

DATE

5

PAGE

OF

MOFFATT AND NICHOL		CLIENT PROJECT NAME / NUMBER Huntington Beach Oil Spill		PO NO	
ADDRESS 555 ANTON BLVD # 400	CITY COSTA MESA	STATE CA	ZIP	PROJECT CONTACT SHELLY ANGHERA (sanghera@moffattnichol.com)	
TEL 657-261-2699		E MAIL Sanghera@moffattnichol.com		SAMPLER(S) (PRINT) <i>C. Webb</i> <i>M. Battles</i>	
REQUESTED ANALYSES					
Please check box or fill in blank as needed					
7470A - Mercury (CVA)					
6010B - Metals (ICP)					
PAHS (EPA 8270 SIM)					
DRO / DRO (EPA 8015)					
Field Filtered					
Preserved					
Unpreserved					
LOG CODE					
SPECIAL INSTRUCTIONS					
RUSH/TAT					
SO CAL OIL SPILL PROJECT					
C/O CARLA HOLLOWELL (@ EUROFINS)					
COELT EDF	SW = Seawater	STANDARD			
TURNAROUND TIME (Business days may apply to any TAT not STANDARD)					
<input checked="" type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> STANDARD					
SPECIAL INSTRUCTIONS					
LAB USE ONLY	SAMPLE ID	SAMPLING DATE	TIME	MATRIX	NO OF CONT
1	HB-W 20211007-001	07-10-21	5:20	SW	2
2	HB-W 20211007-002	07-10-21	5:30	SW	2
3	HB-W 20211007-003	07-10-21	5:35	SW	2
4	HB-W 20211007-004	07-10-21	12:20 pm	SW	2
5	HB-W 20211007-005	07-10-21	12:20	SW	2
6	HB-W 20211007-006	07-10-21	12:25	SW	2
7	HB-W 20211007-007	07-10-21	12:30	SW	2
8	HB-W 20211007-008	07-10-21	12:35	SW	2
9	HB-W 20211007-009	07-10-21	12:43	SW	2
10	HB-W 20211007-010	07-10-21	12:50	SW	2
Received by (Signature) <i>E. C. I.</i>					
Received by (Signature/Affiliation) <i>E. C. I.</i>					
Received by (Signature/Affiliation) <i>E. C. I.</i>					
Received by (Signature/Affiliation) <i>E. C. I.</i>					
Received by (Signature/Affiliation) <i>E. C. I.</i>					
Received by (Signature/Affiliation) <i>E. C. I.</i>					
Received by (Signature/Affiliation) <i>E. C. I.</i>					
Date	Time	Date	Time	Date	Time
10-7-2021	18:01	10-7-2021	18:57	10-7-2021	18:57

06/02/14 Revision 1  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31



**CHAIN OF CUSTODY RECORD**

VO# / LAB USE ONLY

CalSience

A1-1427 • (714) 895-5191

7440 Lincoln Way Garden Grove CA 92841-1427 • (714) 895-5494  
For courier service / sample drop off information contact us26\_sales@eurofinnsus.com or call us

## CHAIN OF CUSTODY RECORD

		DATE 10-07-21	PAGE 3	OF 5
LABORATORY CLIENT MOFFATT AND NICHOL		CLIENT PROJECT NAME /NUMBER Huntington Beach Oil Spill		PO NO
ADDRESS 555 ANTON BLVD # 400	CITY COSTA MESA	STATE CA	ZIP	PROJECT CONTACT SHELLY ANGHERA (sanghera@moffattnichol.com)
TEL 657-261-2699		E-MAIL Sanghera@moffattnichol.com		SAMPLER(S) (PRINT) C. W. Webb M. Battles
<b>REQUESTED ANALYSES</b>				
Please check box or fill in blank as needed				
<input type="checkbox"/> SAME DAY <input checked="" type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> STANDARD				
<input type="checkbox"/> COELT EDF <input type="checkbox"/> SW = Seawater				
<b>SPECIAL INSTRUCTIONS</b> RUSH TAT SO CAL OIL SPILL PROJECT C/O CARLA HOLLOWELL (@ EUROFINS)				
LAB USE ONLY	SAMPLE ID	SAMPLING DATE	MATRIX TIME	NO OF CONT
21	HB-W-20211007-021	07-10-21	2:42 SW	2 X
22	HB-W-20211007-022	07-10-21	2:50 SW	2 X
23	HB-W-20211007-023	07-10-21	2:55 SW	2 X
24	HB-W-20211007-024	07-10-21	2:55 SW	2 X
25	HB-W-20211007-025	07-10-21	3:05 SW	2 X
26	HB-W-20211007-026	07-10-21	3:10 SW	2 X
27	HB-W-20211007-027	07-10-21	3:20 SW	2 X
28	HB-W-20211007-028	07-10-21	3:20 SW	2 X
29	HB-W-20211007-029	07-10-21	3:30 SW	2 X
30	HB-W-20211007-030	07-10-21	3:32 SW	2 X
Received by (Signature) <i>John T</i>				
Received by (Signature/Affiliation) <i>E CJ</i>				
Date 10-7-2021				
Time 18:01				
Relinquished by (Signature) <i>A. E. CJ</i>				
Received by (Signature/Affiliation) <i>J. J. Glazier</i>				
Date 10-7-2021				
Time 18:57				
Date 10-7-2021				
Time 18:57				
Date 10-7-2021				
Time 18:57				

7440 Lincoln Way Garden Grove CA 92841-1427 • (714) 895-5494

For courier service / sample drop off information contact us26\_sales@eurofinsus.com or call us

 1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100

6/02/14 Rev 5





## Login Sample Receipt Checklist

Client: Moffatt & Nichol

Job Number: 570-72168-3

**Login Number:** 72168

**List Source:** Eurofins Calscience LLC

**List Number:** 1

**Creator:** Cruise, Noel

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