



## ANALYTICAL REPORT

Lab Number:	L2330403
Client:	Polaris Applied Science, Inc 11232 120th Ave NE Suite 200 Kirkland, WA 98033
ATTN:	Greg Challenger
Phone:	(206) 369-5686
Project Name:	WESTEN MARINER OIL SPILL NRDA
Project Number:	Not Specified
Report Date:	07/24/23

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**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2330403-01	WM001	TISSUE	ALASKA	03/23/23 08:24	05/31/23
L2330403-02	WM002	TISSUE	ALASKA	03/23/23 08:30	05/31/23
L2330403-03	WM003	TISSUE	ALASKA	03/23/23 08:37	05/31/23
L2330403-04	WM004	TISSUE	ALASKA	03/23/23 08:44	05/31/23
L2330403-05	WM005	TISSUE	ALASKA	03/23/23 08:44	05/31/23
L2330403-06	WM006	TISSUE	ALASKA	03/23/23 08:53	05/31/23
L2330403-07	WM007		ALASKA	03/23/23 08:57	05/31/23
L2330403-08	WM008		ALASKA	03/23/23 08:58	05/31/23
L2330403-09	WM009		ALASKA	03/23/23 09:01	05/31/23
L2330403-10	WM010	TISSUE	ALASKA	03/23/23 09:24	05/31/23
L2330403-11	WM011	TISSUE	ALASKA	03/23/23 09:30	05/31/23
L2330403-12	WM012	TISSUE	ALASKA	03/23/23 09:30	05/31/23
L2330403-13	WM013	TISSUE	ALASKA	03/23/23 09:34	05/31/23
L2330403-14	WM014	TISSUE	ALASKA	03/23/23 09:34	05/31/23
L2330403-15	WM015		ALASKA	03/23/23 09:40	05/31/23
L2330403-16	WM016		ALASKA	03/23/23 09:42	05/31/23
L2330403-17	WM017		ALASKA	03/23/23 09:44	05/31/23
L2330403-18	WM018	TISSUE	ALASKA	03/23/23 10:05	05/31/23
L2330403-19	WM019	TISSUE	ALASKA	03/23/23 10:07	05/31/23
L2330403-20	WM020	TISSUE	ALASKA	03/23/23 10:14	05/31/23
L2330403-21	WM021		ALASKA	03/23/23 10:22	05/31/23
L2330403-22	WM022		ALASKA	03/23/23 10:25	05/31/23
L2330403-23	WM023		ALASKA	03/23/23 10:30	05/31/23
L2330403-24	WM024		ALASKA	03/23/23 10:46	05/31/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2330403-25	WM025		ALASKA	03/23/23 10:51	05/31/23
L2330403-26	WM026		ALASKA	03/23/23 10:55	05/31/23
L2330403-27	WM027		ALASKA	03/23/23 11:14	05/31/23
L2330403-28	WM028		ALASKA	03/23/23 11:17	05/31/23
L2330403-29	WM029		ALASKA	03/23/23 11:20	05/31/23
L2330403-30	WM030		ALASKA	03/23/23 11:36	05/31/23
L2330403-31	WM031		ALASKA	03/23/23 11:43	05/31/23
L2330403-32	WM032		ALASKA	03/23/23 11:46	05/31/23
L2330403-33	WM033		ALASKA	03/23/23 11:55	05/31/23
L2330403-34	WM034		ALASKA	03/23/23 11:57	05/31/23
L2330403-35	WM035		ALASKA	03/23/23 12:01	05/31/23
L2330403-36	WM036		ALASKA	03/24/23 08:07	05/31/23
L2330403-37	WM037		ALASKA	03/24/23 08:09	05/31/23
L2330403-38	WM038		ALASKA	03/24/23 08:13	05/31/23
L2330403-39	WM039		ALASKA	03/24/23 08:29	05/31/23
L2330403-40	WM040		ALASKA	03/24/23 08:31	05/31/23
L2330403-41	WM041		ALASKA	03/24/23 08:34	05/31/23
L2330403-42	WM042		ALASKA	03/24/23 08:59	05/31/23
L2330403-43	WM043	TISSUE	ALASKA	03/24/23 09:02	05/31/23
L2330403-44	WM044		ALASKA	03/24/23 09:05	05/31/23
L2330403-45	WM045	TISSUE	ALASKA	03/24/23 09:09	05/31/23
L2330403-46	WM046		ALASKA	03/24/23 09:16	05/31/23
L2330403-47	WM047		ALASKA	03/24/23 09:19	05/31/23
L2330403-48	WM048		ALASKA	03/24/23 09:29	05/31/23
L2330403-49	WM049		ALASKA	03/24/23 09:50	05/31/23
L2330403-50	WM050		ALASKA	03/24/23 09:52	05/31/23
L2330403-51	WM051		ALASKA	03/24/23 09:54	05/31/23
L2330403-52	WM052		ALASKA	03/24/23 10:15	05/31/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2330403-53	WM053		ALASKA	03/24/23 10:24	05/31/23
L2330403-54	WM054		ALASKA	03/24/23 10:28	05/31/23
L2330403-55	WM055		ALASKA	03/24/23 10:34	05/31/23
L2330403-56	WM056		ALASKA	03/24/23 10:37	05/31/23
L2330403-57	WM057		ALASKA	03/24/23 10:44	05/31/23
L2330403-58	WM058		ALASKA	03/24/23 10:51	05/31/23
L2330403-59	WM059		ALASKA	03/24/23 10:51	05/31/23
L2330403-60	WM060		ALASKA	03/24/23 10:57	05/31/23
L2330403-61	WM061		ALASKA	03/24/23 11:24	05/31/23
L2330403-62	WM062		ALASKA	03/24/23 11:27	05/31/23
L2330403-63	WM063		ALASKA	03/24/23 11:30	05/31/23
L2330403-64	WM064		ALASKA	03/24/23 11:47	05/31/23
L2330403-65	WM065		ALASKA	03/24/23 11:49	05/31/23
L2330403-66	WM066		ALASKA	03/24/23 11:52	05/31/23
L2330403-67	WMCOMP01	TISSUE	ALASKA	06/09/23 20:30	06/09/23
L2330403-68	WMCOMP02	TISSUE	ALASKA	06/09/23 20:50	06/09/23
L2330403-69	WMCOMP03	TISSUE	ALASKA	06/10/23 17:50	06/10/23
L2330403-70	WMCOMP04	TISSUE	ALASKA	06/10/23 18:25	06/10/23
L2330403-71	WMCOMP05	TISSUE	ALASKA	06/10/23 19:00	06/10/23
L2330403-72	WMCOMP06	TISSUE	ALASKA	06/10/23 20:00	06/10/23
L2330403-73	WMCOMP07	TISSUE	ALASKA	06/10/23 20:30	06/10/23
L2330403-74	WMCOMP08	TISSUE	ALASKA	06/10/23 21:45	06/10/23
L2330403-75	WMCOMP09	TISSUE	ALASKA	06/10/23 22:20	06/10/23
L2330403-76	WMCOMP10	TISSUE	ALASKA	06/10/23 23:00	06/10/23

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt

The tissue samples were frozen upon receipt in order to arrest the holding time.

#### Saturated Hydrocarbons

The WG1796063-1 Method Blank, associated with L2330403-20, -43, -45, -67, -68, -69, -70, -71, -72, -73, -74, -75, and -76, has a concentration above the reporting limit for n-Pentacosane (C25); however, this compound is "C" qualified. Associated field sample results are "B" qualified if the concentrations are less than 10x the concentrations in the blank.

The WG1795261-2/-3 LCS/LCSD recoveries, associated with L2330403-01, -02, -03, -04, -05, -06, -10, -11, -12, -13, -14, -18, and -19, were outside the acceptance criteria for individual target compounds; however, re-extraction could not be performed due to limited sample volume. The results of the original analyses are reported; however, all results are considered to have a potentially low bias for nonane (c9) (47%/39%) and decane (c10) (47%).

The WG1796063-3 LCSD recoveries, associated with L2330403-20, -43, -45, -67, -68, -69, -70, -71, -72, -73, -74, -75, and -76, were outside the acceptance criteria for individual target compounds; however, re-extraction could not be performed due to limited sample mass. The results of the original analyses are reported; however, all results are considered to have a potentially low bias for nonane (c9) (46%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Elizabeth Porta

Title: Technical Director/Representative

Date: 07/24/23

# ORGANICS

# SEMIVOLATILES



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-01  
**Client ID:** WM001  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:24  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/13/23 17:36  
**Analyst:** MJS  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	1.90	J	ug/kg	1.40	0.203	1
C1-Decalins	4.89		ug/kg	1.40	0.203	1
C2-Decalins	15.4		ug/kg	1.40	0.203	1
C3-Decalins	21.4		ug/kg	1.40	0.203	1
C4-Decalins	40.3		ug/kg	1.40	0.203	1
Naphthalene	0.747	J	ug/kg	4.66	0.558	1
C1-Naphthalenes	0.888	J	ug/kg	4.66	0.558	1
C2-Naphthalenes	1.68	J	ug/kg	4.66	0.558	1
C3-Naphthalenes	2.11	J	ug/kg	4.66	0.558	1
C4-Naphthalenes	4.25	J	ug/kg	4.66	0.558	1
2-Methylnaphthalene	0.557	J	ug/kg	2.80	0.353	1
1-Methylnaphthalene	0.567	J	ug/kg	2.80	0.313	1
Benzothiophene	ND		ug/kg	2.80	0.163	1
C1-Benzo(b)thiophenes	1.03	J	ug/kg	2.80	0.163	1
C2-Benzo(b)thiophenes	0.641	J	ug/kg	2.80	0.163	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.80	0.163	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.80	0.163	1
Biphenyl	0.572	J	ug/kg	2.80	0.340	1
2,6-Dimethylnaphthalene	0.460	J	ug/kg	2.80	0.174	1
Dibenzofuran	ND		ug/kg	2.80	0.362	1
Acenaphthylene	0.259	J	ug/kg	2.80	0.163	1
Acenaphthene	0.435	J	ug/kg	2.80	0.196	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.80	0.379	1
Fluorene	0.378	J	ug/kg	2.80	0.323	1
C1-Fluorenes	ND		ug/kg	2.80	0.323	1
C2-Fluorenes	3.28		ug/kg	2.80	0.323	1
C3-Fluorenes	7.85		ug/kg	2.80	0.323	1
Dibenzothiophene	ND		ug/kg	2.80	0.216	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-01

Date Collected: 03/23/23 08:24

Client ID: WM001

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.80	0.216	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.80	0.216	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.80	0.216	1
C1-Dibenzothiophenes BS	0.857	J	ug/kg	2.80	0.216	1
C2-Dibenzothiophenes	1.30	J	ug/kg	2.80	0.216	1
C3-Dibenzothiophenes	1.83	J	ug/kg	2.80	0.216	1
C4-Dibenzothiophenes	ND		ug/kg	2.80	0.216	1
Phenanthrene	0.978	J	ug/kg	2.80	0.308	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.80	0.308	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.80	0.308	1
2-Methylanthracene (2MA)	ND		ug/kg	2.80	0.308	1
9/4-Methylphenanthrene (9MP)	0.368	J	ug/kg	2.80	0.308	1
C1-Phenanthrenes/Anthracenes	1.56	J	ug/kg	2.80	0.308	1
C2-Phenanthrenes/Anthr BS	3.75		ug/kg	2.80	0.308	1
C3-Phenanthrenes/Anthracenes	4.66		ug/kg	2.80	0.308	1
C4-Phenanthrenes/Anthracenes	3.22		ug/kg	2.80	0.308	1
Retene	ND		ug/kg	2.80	0.384	1
Anthracene	ND		ug/kg	2.80	0.157	1
Carbazole	ND		ug/kg	2.80	1.03	1
1-Methylphenanthrene	0.267	J	ug/kg	2.80	0.182	1
Fluoranthene	0.684	J	ug/kg	2.80	0.287	1
Benzo(b)fluorene	ND		ug/kg	2.80	0.214	1
Pyrene	1.11	J	ug/kg	2.80	0.183	1
C1-Fluoranthenes/Pyrenes	2.61	J	ug/kg	2.80	0.183	1
C2-Fluoranthenes/Pyrenes	2.54	J	ug/kg	2.80	0.183	1
C3-Fluoranthenes/Pyrenes	1.51	J	ug/kg	2.80	0.183	1
C4-Fluoranthenes/Pyrenes	1.05	J	ug/kg	2.80	0.183	1
Naphthobenzothiophenes	ND		ug/kg	2.80	0.233	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.80	0.233	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.80	0.233	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.80	0.233	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.80	0.233	1
Benz(a)anthracene	ND		ug/kg	2.80	0.422	1
Chrysene/Triphenylene	0.498	J	ug/kg	2.80	0.194	1
C1-Chrysenes	0.395	J	ug/kg	2.80	0.194	1
C2-Chrysenes BS	ND		ug/kg	2.80	0.194	1
C3-Chrysenes	ND		ug/kg	2.80	0.194	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-01  
**Client ID:** WM001  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:24  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.80	0.194	1
Benzo(b)fluoranthene	0.411	J	ug/kg	2.80	0.184	1
Benzo(j)+(k)fluoranthene	0.374	J	ug/kg	2.80	0.291	1
Benzo(a)fluoranthene	ND		ug/kg	2.80	0.291	1
Benzo(e)pyrene	0.282	J	ug/kg	2.80	0.198	1
Benzo(a)pyrene	0.360	J	ug/kg	2.80	0.180	1
Perylene	0.774	J	ug/kg	2.80	0.267	1
Indeno(1,2,3-cd)pyrene	0.756	J	ug/kg	2.80	0.373	1
Dibenz(a,h)+(a,c)anthracene	0.617	J	ug/kg	2.80	0.401	1
Benzo(g,h,i)perylene	0.889	J	ug/kg	2.80	0.276	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	61		50-130
Phenanthrene-d10	90		50-130
Benzo(a)pyrene-d12	108		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-02

Date Collected: 03/23/23 08:30

Client ID: WM002

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/02/23 19:25

Cleanup Method: EPA 3611B

Analyst: CNC

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.47	0.214	1
C1-Decalins	0.570	J	ug/kg	1.47	0.214	1
C2-Decalins	1.49		ug/kg	1.47	0.214	1
C3-Decalins	3.12		ug/kg	1.47	0.214	1
C4-Decalins	4.80		ug/kg	1.47	0.214	1
Naphthalene	ND		ug/kg	4.90	0.586	1
C1-Naphthalenes	ND		ug/kg	4.90	0.586	1
C2-Naphthalenes	ND		ug/kg	4.90	0.586	1
C3-Naphthalenes	ND		ug/kg	4.90	0.586	1
C4-Naphthalenes	ND		ug/kg	4.90	0.586	1
2-Methylnaphthalene	ND		ug/kg	2.94	0.370	1
1-Methylnaphthalene	ND		ug/kg	2.94	0.329	1
Benzothiophene	ND		ug/kg	2.94	0.171	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
Biphenyl	ND		ug/kg	2.94	0.357	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.94	0.183	1
Dibenzofuran	ND		ug/kg	2.94	0.380	1
Acenaphthylene	ND		ug/kg	2.94	0.171	1
Acenaphthene	ND		ug/kg	2.94	0.206	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.94	0.398	1
Fluorene	ND		ug/kg	2.94	0.339	1
C1-Fluorenes	ND		ug/kg	2.94	0.339	1
C2-Fluorenes	ND		ug/kg	2.94	0.339	1
C3-Fluorenes	ND		ug/kg	2.94	0.339	1
Dibenzothiophene	ND		ug/kg	2.94	0.227	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-02

Date Collected: 03/23/23 08:30

Client ID: WM002

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.94	0.227	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.94	0.227	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.94	0.227	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.94	0.227	1
C2-Dibenzothiophenes	0.539	J	ug/kg	2.94	0.227	1
C3-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
C4-Dibenzothiophenes	1.62	J	ug/kg	2.94	0.227	1
Phenanthrene	0.479	J	ug/kg	2.94	0.324	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.94	0.324	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.94	0.324	1
2-Methylanthracene (2MA)	ND		ug/kg	2.94	0.324	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.94	0.324	1
C1-Phenanthrenes/Anthracenes	0.376	J	ug/kg	2.94	0.324	1
C2-Phenanthrenes/Anthr BS	0.597	J	ug/kg	2.94	0.324	1
C3-Phenanthrenes/Anthracenes	0.696	J	ug/kg	2.94	0.324	1
C4-Phenanthrenes/Anthracenes	0.864	J	ug/kg	2.94	0.324	1
Retene	ND		ug/kg	2.94	0.404	1
Anthracene	ND		ug/kg	2.94	0.165	1
Carbazole	ND		ug/kg	2.94	1.08	1
1-Methylphenanthrene	ND		ug/kg	2.94	0.191	1
Fluoranthene	0.317	J	ug/kg	2.94	0.302	1
Benzo(b)fluorene	ND		ug/kg	2.94	0.225	1
Pyrene	ND		ug/kg	2.94	0.192	1
C1-Fluoranthenes/Pyrenes	0.390	J	ug/kg	2.94	0.192	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
Benz(a)anthracene	ND		ug/kg	2.94	0.443	1
Chrysene/Triphenylene	0.230	J	ug/kg	2.94	0.204	1
C1-Chrysenes	ND		ug/kg	2.94	0.204	1
C2-Chrysenes BS	ND		ug/kg	2.94	0.204	1
C3-Chrysenes	ND		ug/kg	2.94	0.204	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-02  
**Client ID:** WM002  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.94	0.204	1
Benzo(b)fluoranthene	ND		ug/kg	2.94	0.194	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.94	0.306	1
Benzo(a)fluoranthene	ND		ug/kg	2.94	0.306	1
Benzo(e)pyrene	ND		ug/kg	2.94	0.208	1
Benzo(a)pyrene	ND		ug/kg	2.94	0.189	1
Perylene	0.908	J	ug/kg	2.94	0.280	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.94	0.392	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.94	0.422	1
Benzo(g,h,i)perylene	ND		ug/kg	2.94	0.290	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	51		50-130
Phenanthrene-d10	62		50-130
Benzo(a)pyrene-d12	79		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-03  
**Client ID:** WM003  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:37  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/02/23 20:51  
**Analyst:** CNC  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	6.71	J	ug/kg	1.50	0.218	1
C1-Decalins	34.6		ug/kg	1.50	0.218	1
C2-Decalins	168		ug/kg	1.50	0.218	1
C3-Decalins	331		ug/kg	1.50	0.218	1
C4-Decalins	594		ug/kg	1.50	0.218	1
Naphthalene	0.696	J	ug/kg	5.00	0.598	1
C1-Naphthalenes	0.793	J	ug/kg	5.00	0.598	1
C2-Naphthalenes	2.23	J	ug/kg	5.00	0.598	1
C3-Naphthalenes	6.44		ug/kg	5.00	0.598	1
C4-Naphthalenes	31.2		ug/kg	5.00	0.598	1
2-Methylnaphthalene	ND		ug/kg	3.00	0.378	1
1-Methylnaphthalene	ND		ug/kg	3.00	0.336	1
Benzothiophene	ND		ug/kg	3.00	0.175	1
C1-Benzo(b)thiophenes	1.81	J	ug/kg	3.00	0.175	1
C2-Benzo(b)thiophenes	5.79		ug/kg	3.00	0.175	1
C3-Benzo(b)thiophenes	29.1		ug/kg	3.00	0.175	1
C4-Benzo(b)thiophenes	44.7		ug/kg	3.00	0.175	1
Biphenyl	1.33	J	ug/kg	3.00	0.364	1
2,6-Dimethylnaphthalene	0.241	J	ug/kg	3.00	0.187	1
Dibenzofuran	0.531	J	ug/kg	3.00	0.388	1
Acenaphthylene	1.71	J	ug/kg	3.00	0.175	1
Acenaphthene	1.33	J	ug/kg	3.00	0.210	1
2,3,5-Trimethylnaphthalene	0.483	J	ug/kg	3.00	0.406	1
Fluorene	ND		ug/kg	3.00	0.346	1
C1-Fluorenes	5.21		ug/kg	3.00	0.346	1
C2-Fluorenes	12.9		ug/kg	3.00	0.346	1
C3-Fluorenes	31.1		ug/kg	3.00	0.346	1
Dibenzothiophene	0.701	J	ug/kg	3.00	0.232	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-03

Date Collected: 03/23/23 08:37

Client ID: WM003

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	0.347	J	ug/kg	3.00	0.232	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	3.00	0.232	1
1-Methyldibenzothiophene(1MDT)	0.394	J	ug/kg	3.00	0.232	1
C1-Dibenzothiophenes BS	5.54		ug/kg	3.00	0.232	1
C2-Dibenzothiophenes	9.14		ug/kg	3.00	0.232	1
C3-Dibenzothiophenes	ND		ug/kg	3.00	0.232	1
C4-Dibenzothiophenes	17.6		ug/kg	3.00	0.232	1
Phenanthrene	1.73	J	ug/kg	3.00	0.330	1
3-Methylphenanthrene (3MP)	0.465	J	ug/kg	3.00	0.330	1
2-Methylphenanthrene (2MP)	0.943	J	ug/kg	3.00	0.330	1
2-Methylanthracene (2MA)	ND		ug/kg	3.00	0.330	1
9/4-Methylphenanthrene (9MP)	0.592	J	ug/kg	3.00	0.330	1
C1-Phenanthrenes/Anthracenes	5.13		ug/kg	3.00	0.330	1
C2-Phenanthrenes/Anthr BS	19.4		ug/kg	3.00	0.330	1
C3-Phenanthrenes/Anthracenes	25.1		ug/kg	3.00	0.330	1
C4-Phenanthrenes/Anthracenes	23.3		ug/kg	3.00	0.330	1
Retene	ND		ug/kg	3.00	0.412	1
Anthracene	ND		ug/kg	3.00	0.168	1
Carbazole	ND		ug/kg	3.00	1.10	1
1-Methylphenanthrene	0.215	J	ug/kg	3.00	0.195	1
Fluoranthene	0.746	J	ug/kg	3.00	0.308	1
Benzo(b)fluorene	ND		ug/kg	3.00	0.230	1
Pyrene	1.81	J	ug/kg	3.00	0.196	1
C1-Fluoranthenes/Pyrenes	5.86		ug/kg	3.00	0.196	1
C2-Fluoranthenes/Pyrenes	7.27		ug/kg	3.00	0.196	1
C3-Fluoranthenes/Pyrenes	6.37		ug/kg	3.00	0.196	1
C4-Fluoranthenes/Pyrenes	4.02		ug/kg	3.00	0.196	1
Naphthobenzothiophenes	ND		ug/kg	3.00	0.250	1
C1-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250	1
C2-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250	1
C3-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250	1
C4-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250	1
Benz(a)anthracene	ND		ug/kg	3.00	0.452	1
Chrysene/Triphenylene	0.629	J	ug/kg	3.00	0.208	1
C1-Chrysenes	1.26	J	ug/kg	3.00	0.208	1
C2-Chrysenes BS	ND		ug/kg	3.00	0.208	1
C3-Chrysenes	ND		ug/kg	3.00	0.208	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-03  
**Client ID:** WM003  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:37  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	3.00	0.208	1
Benzo(b)fluoranthene	0.276	J	ug/kg	3.00	0.198	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	3.00	0.312	1
Benzo(a)fluoranthene	ND		ug/kg	3.00	0.312	1
Benzo(e)pyrene	0.286	J	ug/kg	3.00	0.212	1
Benzo(a)pyrene	ND		ug/kg	3.00	0.193	1
Perylene	2.33	J	ug/kg	3.00	0.286	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	3.00	0.400	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	3.00	0.430	1
Benzo(g,h,i)perylene	ND		ug/kg	3.00	0.296	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	66		50-130
Phenanthrene-d10	60		50-130
Benzo(a)pyrene-d12	84		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-04  
**Client ID:** WM004  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:44  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/02/23 22:17  
**Analyst:** CNC  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.39	0.203	1
C1-Decalins	0.986	J	ug/kg	1.39	0.203	1
C2-Decalins	3.38		ug/kg	1.39	0.203	1
C3-Decalins	7.22		ug/kg	1.39	0.203	1
C4-Decalins	14.9		ug/kg	1.39	0.203	1
Naphthalene	ND		ug/kg	4.65	0.556	1
C1-Naphthalenes	ND		ug/kg	4.65	0.556	1
C2-Naphthalenes	0.704	J	ug/kg	4.65	0.556	1
C3-Naphthalenes	0.898	J	ug/kg	4.65	0.556	1
C4-Naphthalenes	ND		ug/kg	4.65	0.556	1
2-Methylnaphthalene	ND		ug/kg	2.79	0.351	1
1-Methylnaphthalene	ND		ug/kg	2.79	0.312	1
Benzothiophene	ND		ug/kg	2.79	0.162	1
C1-Benzo(b)thiophenes	0.489	J	ug/kg	2.79	0.162	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.79	0.162	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.79	0.162	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.79	0.162	1
Biphenyl	ND		ug/kg	2.79	0.338	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.79	0.174	1
Dibenzofuran	ND		ug/kg	2.79	0.360	1
Acenaphthylene	ND		ug/kg	2.79	0.162	1
Acenaphthene	ND		ug/kg	2.79	0.195	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.79	0.377	1
Fluorene	ND		ug/kg	2.79	0.322	1
C1-Fluorenes	0.399	J	ug/kg	2.79	0.322	1
C2-Fluorenes	1.03	J	ug/kg	2.79	0.322	1
C3-Fluorenes	3.87		ug/kg	2.79	0.322	1
Dibenzothiophene	ND		ug/kg	2.79	0.216	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-04

Date Collected: 03/23/23 08:44

Client ID: WM004

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.79	0.216	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.79	0.216	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.79	0.216	1
C1-Dibenzothiophenes BS	0.321	J	ug/kg	2.79	0.216	1
C2-Dibenzothiophenes	0.686	J	ug/kg	2.79	0.216	1
C3-Dibenzothiophenes	ND		ug/kg	2.79	0.216	1
C4-Dibenzothiophenes	1.10	J	ug/kg	2.79	0.216	1
Phenanthrene	0.486	J	ug/kg	2.79	0.307	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.79	0.307	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.79	0.307	1
2-Methylanthracene (2MA)	ND		ug/kg	2.79	0.307	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.79	0.307	1
C1-Phenanthrenes/Anthracenes	0.765	J	ug/kg	2.79	0.307	1
C2-Phenanthrenes/Anthr BS	0.792	J	ug/kg	2.79	0.307	1
C3-Phenanthrenes/Anthracenes	1.06	J	ug/kg	2.79	0.307	1
C4-Phenanthrenes/Anthracenes	1.08	J	ug/kg	2.79	0.307	1
Retene	ND		ug/kg	2.79	0.383	1
Anthracene	ND		ug/kg	2.79	0.156	1
Carbazole	ND		ug/kg	2.79	1.03	1
1-Methylphenanthrene	ND		ug/kg	2.79	0.181	1
Fluoranthene	0.353	J	ug/kg	2.79	0.286	1
Benzo(b)fluorene	ND		ug/kg	2.79	0.214	1
Pyrene	0.289	J	ug/kg	2.79	0.182	1
C1-Fluoranthenes/Pyrenes	0.538	J	ug/kg	2.79	0.182	1
C2-Fluoranthenes/Pyrenes	0.760	J	ug/kg	2.79	0.182	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.79	0.182	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.79	0.182	1
Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
Benz(a)anthracene	ND		ug/kg	2.79	0.420	1
Chrysene/Triphenylene	ND		ug/kg	2.79	0.193	1
C1-Chrysenes	0.199	J	ug/kg	2.79	0.193	1
C2-Chrysenes BS	ND		ug/kg	2.79	0.193	1
C3-Chrysenes	ND		ug/kg	2.79	0.193	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-04  
**Client ID:** WM004  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:44  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.79	0.193	1
Benzo(b)fluoranthene	ND		ug/kg	2.79	0.184	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.79	0.290	1
Benzo(a)fluoranthene	ND		ug/kg	2.79	0.290	1
Benzo(e)pyrene	ND		ug/kg	2.79	0.197	1
Benzo(a)pyrene	ND		ug/kg	2.79	0.179	1
Perylene	0.588	J	ug/kg	2.79	0.266	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.79	0.372	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.79	0.400	1
Benzo(g,h,i)perylene	ND		ug/kg	2.79	0.275	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	54		50-130
Phenanthrene-d10	62		50-130
Benzo(a)pyrene-d12	76		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-05  
**Client ID:** WM005  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:44  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/02/23 23:42  
**Analyst:** CNC  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.39	0.202	1
C1-Decalins	0.767	J	ug/kg	1.39	0.202	1
C2-Decalins	3.26		ug/kg	1.39	0.202	1
C3-Decalins	6.03		ug/kg	1.39	0.202	1
C4-Decalins	13.8		ug/kg	1.39	0.202	1
Naphthalene	ND		ug/kg	4.63	0.554	1
C1-Naphthalenes	ND		ug/kg	4.63	0.554	1
C2-Naphthalenes	0.688	J	ug/kg	4.63	0.554	1
C3-Naphthalenes	0.666	J	ug/kg	4.63	0.554	1
C4-Naphthalenes	ND		ug/kg	4.63	0.554	1
2-Methylnaphthalene	ND		ug/kg	2.78	0.350	1
1-Methylnaphthalene	ND		ug/kg	2.78	0.311	1
Benzothiophene	ND		ug/kg	2.78	0.162	1
C1-Benzo(b)thiophenes	0.408	J	ug/kg	2.78	0.162	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.78	0.162	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.78	0.162	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.78	0.162	1
Biphenyl	ND		ug/kg	2.78	0.337	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.78	0.173	1
Dibenzofuran	ND		ug/kg	2.78	0.359	1
Acenaphthylene	ND		ug/kg	2.78	0.162	1
Acenaphthene	ND		ug/kg	2.78	0.194	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.78	0.376	1
Fluorene	ND		ug/kg	2.78	0.320	1
C1-Fluorenes	0.324	J	ug/kg	2.78	0.320	1
C2-Fluorenes	ND		ug/kg	2.78	0.320	1
C3-Fluorenes	ND		ug/kg	2.78	0.320	1
Dibenzothiophene	ND		ug/kg	2.78	0.215	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS****Lab ID:** L2330403-05**Date Collected:** 03/23/23 08:44**Client ID:** WM005**Date Received:** 05/31/23**Sample Location:** ALASKA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.78	0.215	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.78	0.215	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.78	0.215	1
C1-Dibenzothiophenes BS	0.240	J	ug/kg	2.78	0.215	1
C2-Dibenzothiophenes	0.469	J	ug/kg	2.78	0.215	1
C3-Dibenzothiophenes	ND		ug/kg	2.78	0.215	1
C4-Dibenzothiophenes	0.748	J	ug/kg	2.78	0.215	1
Phenanthrene	0.492	J	ug/kg	2.78	0.306	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.78	0.306	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.78	0.306	1
2-Methylanthracene (2MA)	ND		ug/kg	2.78	0.306	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.78	0.306	1
C1-Phenanthrenes/Anthracenes	0.397	J	ug/kg	2.78	0.306	1
C2-Phenanthrenes/Anthr BS	0.699	J	ug/kg	2.78	0.306	1
C3-Phenanthrenes/Anthracenes	0.866	J	ug/kg	2.78	0.306	1
C4-Phenanthrenes/Anthracenes	0.975	J	ug/kg	2.78	0.306	1
Retene	ND		ug/kg	2.78	0.381	1
Anthracene	ND		ug/kg	2.78	0.156	1
Carbazole	ND		ug/kg	2.78	1.02	1
1-Methylphenanthrene	ND		ug/kg	2.78	0.180	1
Fluoranthene	ND		ug/kg	2.78	0.285	1
Benzo(b)fluorene	ND		ug/kg	2.78	0.213	1
Pyrene	ND		ug/kg	2.78	0.181	1
C1-Fluoranthenes/Pyrenes	0.366	J	ug/kg	2.78	0.181	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.78	0.181	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.78	0.181	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.78	0.181	1
Naphthobenzothiophenes	ND		ug/kg	2.78	0.231	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.78	0.231	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.78	0.231	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.78	0.231	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.78	0.231	1
Benz(a)anthracene	ND		ug/kg	2.78	0.418	1
Chrysene/Triphenylene	0.223	J	ug/kg	2.78	0.192	1
C1-Chrysenes	0.215	J	ug/kg	2.78	0.192	1
C2-Chrysenes BS	ND		ug/kg	2.78	0.192	1
C3-Chrysenes	ND		ug/kg	2.78	0.192	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-05  
**Client ID:** WM005  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:44  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.78	0.192	1
Benzo(b)fluoranthene	ND		ug/kg	2.78	0.183	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.78	0.289	1
Benzo(a)fluoranthene	ND		ug/kg	2.78	0.289	1
Benzo(e)pyrene	ND		ug/kg	2.78	0.196	1
Benzo(a)pyrene	ND		ug/kg	2.78	0.178	1
Perylene	0.706	J	ug/kg	2.78	0.265	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.78	0.370	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.78	0.398	1
Benzo(g,h,i)perylene	ND		ug/kg	2.78	0.274	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	51		50-130
Phenanthrene-d10	61		50-130
Benzo(a)pyrene-d12	77		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-06

Date Collected: 03/23/23 08:53

Client ID: WM006

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/13/23 19:01

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	0.339	J	ug/kg	1.38	0.201	1
C1-Decalins	2.35		ug/kg	1.38	0.201	1
C2-Decalins	11.4		ug/kg	1.38	0.201	1
C3-Decalins	22.3		ug/kg	1.38	0.201	1
C4-Decalins	43.0		ug/kg	1.38	0.201	1
Naphthalene	0.773	J	ug/kg	4.61	0.552	1
C1-Naphthalenes	ND		ug/kg	4.61	0.552	1
C2-Naphthalenes	0.709	J	ug/kg	4.61	0.552	1
C3-Naphthalenes	0.741	J	ug/kg	4.61	0.552	1
C4-Naphthalenes	2.30	J	ug/kg	4.61	0.552	1
2-Methylnaphthalene	0.425	J	ug/kg	2.77	0.349	1
1-Methylnaphthalene	ND		ug/kg	2.77	0.310	1
Benzothiophene	ND		ug/kg	2.77	0.161	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
Biphenyl	0.615	J	ug/kg	2.77	0.336	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.77	0.172	1
Dibenzofuran	ND		ug/kg	2.77	0.358	1
Acenaphthylene	0.319	J	ug/kg	2.77	0.161	1
Acenaphthene	0.206	J	ug/kg	2.77	0.194	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.77	0.374	1
Fluorene	ND		ug/kg	2.77	0.319	1
C1-Fluorenes	ND		ug/kg	2.77	0.319	1
C2-Fluorenes	2.30	J	ug/kg	2.77	0.319	1
C3-Fluorenes	6.62		ug/kg	2.77	0.319	1
Dibenzothiophene	ND		ug/kg	2.77	0.214	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-06

Date Collected: 03/23/23 08:53

Client ID: WM006

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.77	0.214	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.77	0.214	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.77	0.214	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.77	0.214	1
C2-Dibenzothiophenes	ND		ug/kg	2.77	0.214	1
C3-Dibenzothiophenes	ND		ug/kg	2.77	0.214	1
C4-Dibenzothiophenes	ND		ug/kg	2.77	0.214	1
Phenanthrene	0.912	J	ug/kg	2.77	0.304	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.77	0.304	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.77	0.304	1
2-Methylanthracene (2MA)	ND		ug/kg	2.77	0.304	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.77	0.304	1
C1-Phenanthrenes/Anthracenes	0.932	J	ug/kg	2.77	0.304	1
C2-Phenanthrenes/Anthr BS	1.86	J	ug/kg	2.77	0.304	1
C3-Phenanthrenes/Anthracenes	2.04	J	ug/kg	2.77	0.304	1
C4-Phenanthrenes/Anthracenes	2.71	J	ug/kg	2.77	0.304	1
Retene	ND		ug/kg	2.77	0.380	1
Anthracene	ND		ug/kg	2.77	0.155	1
Carbazole	ND		ug/kg	2.77	1.02	1
1-Methylphenanthrene	ND		ug/kg	2.77	0.180	1
Fluoranthene	0.436	J	ug/kg	2.77	0.284	1
Benzo(b)fluorene	ND		ug/kg	2.77	0.212	1
Pyrene	0.308	J	ug/kg	2.77	0.181	1
C1-Fluoranthenes/Pyrenes	0.786	J	ug/kg	2.77	0.181	1
C2-Fluoranthenes/Pyrenes	0.836	J	ug/kg	2.77	0.181	1
C3-Fluoranthenes/Pyrenes	0.726	J	ug/kg	2.77	0.181	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.77	0.181	1
Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
Benz(a)anthracene	ND		ug/kg	2.77	0.417	1
Chrysene/Triphenylene	0.364	J	ug/kg	2.77	0.192	1
C1-Chrysenes	ND		ug/kg	2.77	0.192	1
C2-Chrysenes BS	ND		ug/kg	2.77	0.192	1
C3-Chrysenes	ND		ug/kg	2.77	0.192	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-06  
**Client ID:** WM006  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:53  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.77	0.192	1
Benzo(b)fluoranthene	0.265	J	ug/kg	2.77	0.182	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.77	0.288	1
Benzo(a)fluoranthene	ND		ug/kg	2.77	0.288	1
Benzo(e)pyrene	0.262	J	ug/kg	2.77	0.196	1
Benzo(a)pyrene	ND		ug/kg	2.77	0.178	1
Perylene	0.992	J	ug/kg	2.77	0.264	1
Indeno(1,2,3-cd)pyrene	0.473	J	ug/kg	2.77	0.369	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.77	0.397	1
Benzo(g,h,i)perylene	0.743	J	ug/kg	2.77	0.273	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	64		50-130
Phenanthrene-d10	86		50-130
Benzo(a)pyrene-d12	99		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-10

Date Collected: 03/23/23 09:24

Client ID: WM010

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/13/23 20:26

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.38	0.200	1
C1-Decalins	0.619	J	ug/kg	1.38	0.200	1
C2-Decalins	1.95		ug/kg	1.38	0.200	1
C3-Decalins	5.17		ug/kg	1.38	0.200	1
C4-Decalins	10.4		ug/kg	1.38	0.200	1
Naphthalene	0.647	J	ug/kg	4.59	0.549	1
C1-Naphthalenes	ND		ug/kg	4.59	0.549	1
C2-Naphthalenes	0.661	J	ug/kg	4.59	0.549	1
C3-Naphthalenes	0.698	J	ug/kg	4.59	0.549	1
C4-Naphthalenes	ND		ug/kg	4.59	0.549	1
2-Methylnaphthalene	ND		ug/kg	2.75	0.347	1
1-Methylnaphthalene	ND		ug/kg	2.75	0.308	1
Benzothiophene	ND		ug/kg	2.75	0.160	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.75	0.160	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.75	0.160	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.75	0.160	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.75	0.160	1
Biphenyl	0.362	J	ug/kg	2.75	0.334	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.75	0.171	1
Dibenzofuran	ND		ug/kg	2.75	0.356	1
Acenaphthylene	0.306	J	ug/kg	2.75	0.160	1
Acenaphthene	ND		ug/kg	2.75	0.193	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.75	0.372	1
Fluorene	ND		ug/kg	2.75	0.317	1
C1-Fluorenes	0.507	J	ug/kg	2.75	0.317	1
C2-Fluorenes	1.20	J	ug/kg	2.75	0.317	1
C3-Fluorenes	ND		ug/kg	2.75	0.317	1
Dibenzothiophene	ND		ug/kg	2.75	0.213	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-10

Date Collected: 03/23/23 09:24

Client ID: WM010

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	0.231	J	ug/kg	2.75	0.213	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.75	0.213	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.75	0.213	1
C1-Dibenzothiophenes BS	0.577	J	ug/kg	2.75	0.213	1
C2-Dibenzothiophenes	1.28	J	ug/kg	2.75	0.213	1
C3-Dibenzothiophenes	1.59	J	ug/kg	2.75	0.213	1
C4-Dibenzothiophenes	ND		ug/kg	2.75	0.213	1
Phenanthrene	1.02	J	ug/kg	2.75	0.303	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.75	0.303	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.75	0.303	1
2-Methylanthracene (2MA)	ND		ug/kg	2.75	0.303	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.75	0.303	1
C1-Phenanthrenes/Anthracenes	0.997	J	ug/kg	2.75	0.303	1
C2-Phenanthrenes/Anthr BS	1.25	J	ug/kg	2.75	0.303	1
C3-Phenanthrenes/Anthracenes	1.09	J	ug/kg	2.75	0.303	1
C4-Phenanthrenes/Anthracenes	1.46	J	ug/kg	2.75	0.303	1
Retene	0.454	J	ug/kg	2.75	0.378	1
Anthracene	0.216	J	ug/kg	2.75	0.154	1
Carbazole	ND		ug/kg	2.75	1.01	1
1-Methylphenanthrene	0.287	J	ug/kg	2.75	0.179	1
Fluoranthene	0.966	J	ug/kg	2.75	0.282	1
Benzo(b)fluorene	0.348	J	ug/kg	2.75	0.211	1
Pyrene	0.993	J	ug/kg	2.75	0.180	1
C1-Fluoranthenes/Pyrenes	1.17	J	ug/kg	2.75	0.180	1
C2-Fluoranthenes/Pyrenes	1.15	J	ug/kg	2.75	0.180	1
C3-Fluoranthenes/Pyrenes	0.897	J	ug/kg	2.75	0.180	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.75	0.180	1
Naphthobenzothiophenes	0.392	J	ug/kg	2.75	0.229	1
C1-Naphthobenzothiophenes	0.394	J	ug/kg	2.75	0.229	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.75	0.229	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.75	0.229	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.75	0.229	1
Benz(a)anthracene	0.604	J	ug/kg	2.75	0.415	1
Chrysene/Triphenylene	0.748	J	ug/kg	2.75	0.191	1
C1-Chrysenes	0.411	J	ug/kg	2.75	0.191	1
C2-Chrysenes BS	ND		ug/kg	2.75	0.191	1
C3-Chrysenes	ND		ug/kg	2.75	0.191	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-10  
**Client ID:** WM010  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:24  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.75	0.191	1
Benzo(b)fluoranthene	0.702	J	ug/kg	2.75	0.181	1
Benzo(j)+(k)fluoranthene	0.595	J	ug/kg	2.75	0.286	1
Benzo(a)fluoranthene	ND		ug/kg	2.75	0.286	1
Benzo(e)pyrene	0.676	J	ug/kg	2.75	0.194	1
Benzo(a)pyrene	0.527	J	ug/kg	2.75	0.177	1
Perylene	0.706	J	ug/kg	2.75	0.262	1
Indeno(1,2,3-cd)pyrene	0.806	J	ug/kg	2.75	0.367	1
Dibenz(a,h)+(a,c)anthracene	0.516	J	ug/kg	2.75	0.394	1
Benzo(g,h,i)perylene	0.941	J	ug/kg	2.75	0.272	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	58		50-130
Phenanthrene-d10	85		50-130
Benzo(a)pyrene-d12	102		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-11

Date Collected: 03/23/23 09:30

Client ID: WM011

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/13/23 21:50

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	0.257	J	ug/kg	1.26	0.183	1
C1-Decalins	0.507	J	ug/kg	1.26	0.183	1
C2-Decalins	ND		ug/kg	1.26	0.183	1
C3-Decalins	ND		ug/kg	1.26	0.183	1
C4-Decalins	5.93		ug/kg	1.26	0.183	1
Naphthalene	0.562	J	ug/kg	4.20	0.502	1
C1-Naphthalenes	ND		ug/kg	4.20	0.502	1
C2-Naphthalenes	0.614	J	ug/kg	4.20	0.502	1
C3-Naphthalenes	ND		ug/kg	4.20	0.502	1
C4-Naphthalenes	ND		ug/kg	4.20	0.502	1
2-Methylnaphthalene	ND		ug/kg	2.52	0.318	1
1-Methylnaphthalene	ND		ug/kg	2.52	0.282	1
Benzothiophene	ND		ug/kg	2.52	0.147	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.52	0.147	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.52	0.147	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.52	0.147	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.52	0.147	1
Biphenyl	0.348	J	ug/kg	2.52	0.306	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.52	0.157	1
Dibenzofuran	ND		ug/kg	2.52	0.326	1
Acenaphthylene	ND		ug/kg	2.52	0.147	1
Acenaphthene	ND		ug/kg	2.52	0.176	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.52	0.341	1
Fluorene	ND		ug/kg	2.52	0.291	1
C1-Fluorenes	ND		ug/kg	2.52	0.291	1
C2-Fluorenes	ND		ug/kg	2.52	0.291	1
C3-Fluorenes	ND		ug/kg	2.52	0.291	1
Dibenzothiophene	ND		ug/kg	2.52	0.195	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-11

Date Collected: 03/23/23 09:30

Client ID: WM011

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.52	0.195	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.52	0.195	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.52	0.195	1
C1-Dibenzothiophenes BS	0.443	J	ug/kg	2.52	0.195	1
C2-Dibenzothiophenes	0.683	J	ug/kg	2.52	0.195	1
C3-Dibenzothiophenes	ND		ug/kg	2.52	0.195	1
C4-Dibenzothiophenes	ND		ug/kg	2.52	0.195	1
Phenanthrene	0.724	J	ug/kg	2.52	0.277	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.52	0.277	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.52	0.277	1
2-Methylanthracene (2MA)	ND		ug/kg	2.52	0.277	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.52	0.277	1
C1-Phenanthrenes/Anthracenes	0.546	J	ug/kg	2.52	0.277	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.52	0.277	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.52	0.277	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.52	0.277	1
Retene	ND		ug/kg	2.52	0.346	1
Anthracene	ND		ug/kg	2.52	0.142	1
Carbazole	ND		ug/kg	2.52	0.928	1
1-Methylphenanthrene	ND		ug/kg	2.52	0.164	1
Fluoranthene	0.451	J	ug/kg	2.52	0.259	1
Benzo(b)fluorene	ND		ug/kg	2.52	0.193	1
Pyrene	0.284	J	ug/kg	2.52	0.164	1
C1-Fluoranthenes/Pyrenes	0.540	J	ug/kg	2.52	0.164	1
C2-Fluoranthenes/Pyrenes	0.654	J	ug/kg	2.52	0.164	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.52	0.164	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.52	0.164	1
Naphthobenzothiophenes	ND		ug/kg	2.52	0.210	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.52	0.210	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.52	0.210	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.52	0.210	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.52	0.210	1
Benz(a)anthracene	ND		ug/kg	2.52	0.380	1
Chrysene/Triphenylene	0.210	J	ug/kg	2.52	0.175	1
C1-Chrysenes	ND		ug/kg	2.52	0.175	1
C2-Chrysenes BS	ND		ug/kg	2.52	0.175	1
C3-Chrysenes	ND		ug/kg	2.52	0.175	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-11  
**Client ID:** WM011  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.52	0.175	1
Benzo(b)fluoranthene	ND		ug/kg	2.52	0.166	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.52	0.262	1
Benzo(a)fluoranthene	ND		ug/kg	2.52	0.262	1
Benzo(e)pyrene	ND		ug/kg	2.52	0.178	1
Benzo(a)pyrene	ND		ug/kg	2.52	0.162	1
Perylene	0.325	J	ug/kg	2.52	0.240	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.52	0.336	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.52	0.361	1
Benzo(g,h,i)perylene	0.336	J	ug/kg	2.52	0.249	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	57		50-130
Phenanthrene-d10	85		50-130
Benzo(a)pyrene-d12	99		50-130



**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-12

Date Collected: 03/23/23 09:30

Client ID: WM012

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/03/23 06:51

Cleanup Method: EPA 3611B

Analyst: CNC

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.32	0.192	1
C1-Decalins	0.533	J	ug/kg	1.32	0.192	1
C2-Decalins	2.39		ug/kg	1.32	0.192	1
C3-Decalins	7.24		ug/kg	1.32	0.192	1
C4-Decalins	21.0		ug/kg	1.32	0.192	1
Naphthalene	ND		ug/kg	4.41	0.527	1
C1-Naphthalenes	ND		ug/kg	4.41	0.527	1
C2-Naphthalenes	ND		ug/kg	4.41	0.527	1
C3-Naphthalenes	0.634	J	ug/kg	4.41	0.527	1
C4-Naphthalenes	ND		ug/kg	4.41	0.527	1
2-Methylnaphthalene	ND		ug/kg	2.64	0.333	1
1-Methylnaphthalene	ND		ug/kg	2.64	0.296	1
Benzothiophene	ND		ug/kg	2.64	0.154	1
C1-Benzo(b)thiophenes	0.495	J	ug/kg	2.64	0.154	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.64	0.154	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.64	0.154	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.64	0.154	1
Biphenyl	0.354	J	ug/kg	2.64	0.321	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.64	0.165	1
Dibenzofuran	ND		ug/kg	2.64	0.342	1
Acenaphthylene	ND		ug/kg	2.64	0.154	1
Acenaphthene	0.196	J	ug/kg	2.64	0.185	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.64	0.358	1
Fluorene	ND		ug/kg	2.64	0.305	1
C1-Fluorenes	0.498	J	ug/kg	2.64	0.305	1
C2-Fluorenes	ND		ug/kg	2.64	0.305	1
C3-Fluorenes	ND		ug/kg	2.64	0.305	1
Dibenzothiophene	ND		ug/kg	2.64	0.204	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS****Lab ID:** L2330403-12**Date Collected:** 03/23/23 09:30**Client ID:** WM012**Date Received:** 05/31/23**Sample Location:** ALASKA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.64	0.204	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.64	0.204	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.64	0.204	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.64	0.204	1
C2-Dibenzothiophenes	0.729	J	ug/kg	2.64	0.204	1
C3-Dibenzothiophenes	ND		ug/kg	2.64	0.204	1
C4-Dibenzothiophenes	1.26	J	ug/kg	2.64	0.204	1
Phenanthrene	0.704	J	ug/kg	2.64	0.291	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.64	0.291	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.64	0.291	1
2-Methylanthracene (2MA)	ND		ug/kg	2.64	0.291	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.64	0.291	1
C1-Phenanthrenes/Anthracenes	0.487	J	ug/kg	2.64	0.291	1
C2-Phenanthrenes/Anthr BS	0.683	J	ug/kg	2.64	0.291	1
C3-Phenanthrenes/Anthracenes	0.846	J	ug/kg	2.64	0.291	1
C4-Phenanthrenes/Anthracenes	1.05	J	ug/kg	2.64	0.291	1
Retene	ND		ug/kg	2.64	0.363	1
Anthracene	0.160	J	ug/kg	2.64	0.148	1
Carbazole	ND		ug/kg	2.64	0.974	1
1-Methylphenanthrene	ND		ug/kg	2.64	0.172	1
Fluoranthene	0.470	J	ug/kg	2.64	0.272	1
Benzo(b)fluorene	ND		ug/kg	2.64	0.203	1
Pyrene	0.280	J	ug/kg	2.64	0.173	1
C1-Fluoranthenes/Pyrenes	0.562	J	ug/kg	2.64	0.173	1
C2-Fluoranthenes/Pyrenes	0.829	J	ug/kg	2.64	0.173	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.64	0.173	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.64	0.173	1
Naphthobenzothiophenes	ND		ug/kg	2.64	0.220	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.64	0.220	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.64	0.220	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.64	0.220	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.64	0.220	1
Benz(a)anthracene	ND		ug/kg	2.64	0.398	1
Chrysene/Triphenylene	0.327	J	ug/kg	2.64	0.183	1
C1-Chrysenes	0.219	J	ug/kg	2.64	0.183	1
C2-Chrysenes BS	ND		ug/kg	2.64	0.183	1
C3-Chrysenes	ND		ug/kg	2.64	0.183	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-12  
**Client ID:** WM012  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.64	0.183	1
Benzo(b)fluoranthene	ND		ug/kg	2.64	0.174	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.64	0.275	1
Benzo(a)fluoranthene	ND		ug/kg	2.64	0.275	1
Benzo(e)pyrene	ND		ug/kg	2.64	0.187	1
Benzo(a)pyrene	ND		ug/kg	2.64	0.170	1
Perylene	0.925	J	ug/kg	2.64	0.252	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.64	0.353	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.64	0.379	1
Benzo(g,h,i)perylene	0.307	J	ug/kg	2.64	0.261	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	51		50-130
Phenanthrene-d10	59		50-130
Benzo(a)pyrene-d12	76		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-13  
**Client ID:** WM013  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/03/23 08:17  
**Analyst:** CNC  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.48	0.215	1
C1-Decalins	0.568	J	ug/kg	1.48	0.215	1
C2-Decalins	ND		ug/kg	1.48	0.215	1
C3-Decalins	ND		ug/kg	1.48	0.215	1
C4-Decalins	5.33		ug/kg	1.48	0.215	1
Naphthalene	ND		ug/kg	4.93	0.590	1
C1-Naphthalenes	ND		ug/kg	4.93	0.590	1
C2-Naphthalenes	ND		ug/kg	4.93	0.590	1
C3-Naphthalenes	ND		ug/kg	4.93	0.590	1
C4-Naphthalenes	ND		ug/kg	4.93	0.590	1
2-Methylnaphthalene	ND		ug/kg	2.96	0.373	1
1-Methylnaphthalene	ND		ug/kg	2.96	0.331	1
Benzothiophene	ND		ug/kg	2.96	0.172	1
C1-Benzo(b)thiophenes	0.540	J	ug/kg	2.96	0.172	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.96	0.172	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.96	0.172	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.96	0.172	1
Biphenyl	ND		ug/kg	2.96	0.359	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.96	0.184	1
Dibenzofuran	ND		ug/kg	2.96	0.383	1
Acenaphthylene	ND		ug/kg	2.96	0.172	1
Acenaphthene	ND		ug/kg	2.96	0.207	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.96	0.400	1
Fluorene	ND		ug/kg	2.96	0.341	1
C1-Fluorenes	ND		ug/kg	2.96	0.341	1
C2-Fluorenes	ND		ug/kg	2.96	0.341	1
C3-Fluorenes	ND		ug/kg	2.96	0.341	1
Dibenzothiophene	ND		ug/kg	2.96	0.229	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-13

Date Collected: 03/23/23 09:34

Client ID: WM013

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.96	0.229	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.96	0.229	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.96	0.229	1
C1-Dibenzothiophenes BS	0.264	J	ug/kg	2.96	0.229	1
C2-Dibenzothiophenes	0.562	J	ug/kg	2.96	0.229	1
C3-Dibenzothiophenes	ND		ug/kg	2.96	0.229	1
C4-Dibenzothiophenes	1.32	J	ug/kg	2.96	0.229	1
Phenanthrene	0.550	J	ug/kg	2.96	0.325	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.96	0.325	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.96	0.325	1
2-Methylanthracene (2MA)	ND		ug/kg	2.96	0.325	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.96	0.325	1
C1-Phenanthrenes/Anthracenes	0.358	J	ug/kg	2.96	0.325	1
C2-Phenanthrenes/Anthr BS	0.509	J	ug/kg	2.96	0.325	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.96	0.325	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.96	0.325	1
Retene	ND		ug/kg	2.96	0.406	1
Anthracene	ND		ug/kg	2.96	0.166	1
Carbazole	ND		ug/kg	2.96	1.09	1
1-Methylphenanthrene	ND		ug/kg	2.96	0.192	1
Fluoranthene	ND		ug/kg	2.96	0.304	1
Benzo(b)fluorene	ND		ug/kg	2.96	0.227	1
Pyrene	ND		ug/kg	2.96	0.193	1
C1-Fluoranthenes/Pyrenes	0.388	J	ug/kg	2.96	0.193	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.96	0.193	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.96	0.193	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.96	0.193	1
Naphthobenzothiophenes	ND		ug/kg	2.96	0.246	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.96	0.246	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.96	0.246	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.96	0.246	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.96	0.246	1
Benz(a)anthracene	ND		ug/kg	2.96	0.446	1
Chrysene/Triphenylene	ND		ug/kg	2.96	0.205	1
C1-Chrysenes	ND		ug/kg	2.96	0.205	1
C2-Chrysenes BS	ND		ug/kg	2.96	0.205	1
C3-Chrysenes	ND		ug/kg	2.96	0.205	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-13  
**Client ID:** WM013  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.96	0.205	1
Benzo(b)fluoranthene	ND		ug/kg	2.96	0.195	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.96	0.308	1
Benzo(a)fluoranthene	ND		ug/kg	2.96	0.308	1
Benzo(e)pyrene	ND		ug/kg	2.96	0.209	1
Benzo(a)pyrene	ND		ug/kg	2.96	0.190	1
Perylene	0.381	J	ug/kg	2.96	0.282	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.96	0.394	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.96	0.424	1
Benzo(g,h,i)perylene	ND		ug/kg	2.96	0.292	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	50		50-130
Phenanthrene-d10	60		50-130
Benzo(a)pyrene-d12	76		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-14  
**Client ID:** WM014  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/03/23 09:43  
**Analyst:** CNC  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.44	0.210	1
C1-Decalins	0.502	J	ug/kg	1.44	0.210	1
C2-Decalins	2.21		ug/kg	1.44	0.210	1
C3-Decalins	3.07		ug/kg	1.44	0.210	1
C4-Decalins	9.15		ug/kg	1.44	0.210	1
Naphthalene	ND		ug/kg	4.82	0.576	1
C1-Naphthalenes	ND		ug/kg	4.82	0.576	1
C2-Naphthalenes	ND		ug/kg	4.82	0.576	1
C3-Naphthalenes	ND		ug/kg	4.82	0.576	1
C4-Naphthalenes	ND		ug/kg	4.82	0.576	1
2-Methylnaphthalene	ND		ug/kg	2.89	0.364	1
1-Methylnaphthalene	ND		ug/kg	2.89	0.324	1
Benzothiophene	ND		ug/kg	2.89	0.168	1
C1-Benzo(b)thiophenes	0.566	J	ug/kg	2.89	0.168	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
Biphenyl	ND		ug/kg	2.89	0.351	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.89	0.180	1
Dibenzofuran	ND		ug/kg	2.89	0.374	1
Acenaphthylene	ND		ug/kg	2.89	0.168	1
Acenaphthene	ND		ug/kg	2.89	0.202	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.89	0.391	1
Fluorene	ND		ug/kg	2.89	0.333	1
C1-Fluorenes	ND		ug/kg	2.89	0.333	1
C2-Fluorenes	ND		ug/kg	2.89	0.333	1
C3-Fluorenes	ND		ug/kg	2.89	0.333	1
Dibenzothiophene	ND		ug/kg	2.89	0.224	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-14

Date Collected: 03/23/23 09:34

Client ID: WM014

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.89	0.224	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.89	0.224	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.89	0.224	1
C1-Dibenzothiophenes BS	0.264	J	ug/kg	2.89	0.224	1
C2-Dibenzothiophenes	0.607	J	ug/kg	2.89	0.224	1
C3-Dibenzothiophenes	ND		ug/kg	2.89	0.224	1
C4-Dibenzothiophenes	1.61	J	ug/kg	2.89	0.224	1
Phenanthrene	0.619	J	ug/kg	2.89	0.318	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.89	0.318	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.89	0.318	1
2-Methylanthracene (2MA)	ND		ug/kg	2.89	0.318	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.89	0.318	1
C1-Phenanthrenes/Anthracenes	0.542	J	ug/kg	2.89	0.318	1
C2-Phenanthrenes/Anthr BS	0.479	J	ug/kg	2.89	0.318	1
C3-Phenanthrenes/Anthracenes	0.554	J	ug/kg	2.89	0.318	1
C4-Phenanthrenes/Anthracenes	0.837	J	ug/kg	2.89	0.318	1
Retene	ND		ug/kg	2.89	0.397	1
Anthracene	ND		ug/kg	2.89	0.162	1
Carbazole	ND		ug/kg	2.89	1.06	1
1-Methylphenanthrene	ND		ug/kg	2.89	0.188	1
Fluoranthene	0.301	J	ug/kg	2.89	0.297	1
Benzo(b)fluorene	ND		ug/kg	2.89	0.222	1
Pyrene	ND		ug/kg	2.89	0.189	1
C1-Fluoranthenes/Pyrenes	0.310	J	ug/kg	2.89	0.189	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
Benz(a)anthracene	ND		ug/kg	2.89	0.435	1
Chrysene/Triphenylene	0.228	J	ug/kg	2.89	0.200	1
C1-Chrysenes	ND		ug/kg	2.89	0.200	1
C2-Chrysenes BS	ND		ug/kg	2.89	0.200	1
C3-Chrysenes	ND		ug/kg	2.89	0.200	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-14  
**Client ID:** WM014  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.89	0.200	1
Benzo(b)fluoranthene	ND		ug/kg	2.89	0.190	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.89	0.300	1
Benzo(a)fluoranthene	ND		ug/kg	2.89	0.300	1
Benzo(e)pyrene	ND		ug/kg	2.89	0.204	1
Benzo(a)pyrene	ND		ug/kg	2.89	0.186	1
Perylene	0.667	J	ug/kg	2.89	0.276	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.89	0.385	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.89	0.414	1
Benzo(g,h,i)perylene	ND		ug/kg	2.89	0.285	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	50		50-130
Phenanthrene-d10	60		50-130
Benzo(a)pyrene-d12	75		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-18  
**Client ID:** WM018  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:05  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/03/23 11:09  
**Analyst:** CNC  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.33	0.193	1
C1-Decalins	0.440	J	ug/kg	1.33	0.193	1
C2-Decalins	1.60		ug/kg	1.33	0.193	1
C3-Decalins	3.73		ug/kg	1.33	0.193	1
C4-Decalins	12.6		ug/kg	1.33	0.193	1
Naphthalene	ND		ug/kg	4.42	0.529	1
C1-Naphthalenes	ND		ug/kg	4.42	0.529	1
C2-Naphthalenes	0.632	J	ug/kg	4.42	0.529	1
C3-Naphthalenes	0.665	J	ug/kg	4.42	0.529	1
C4-Naphthalenes	ND		ug/kg	4.42	0.529	1
2-Methylnaphthalene	ND		ug/kg	2.65	0.334	1
1-Methylnaphthalene	ND		ug/kg	2.65	0.297	1
Benzothiophene	ND		ug/kg	2.65	0.154	1
C1-Benzo(b)thiophenes	0.728	J	ug/kg	2.65	0.154	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.65	0.154	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.65	0.154	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.65	0.154	1
Biphenyl	ND		ug/kg	2.65	0.322	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.65	0.165	1
Dibenzofuran	ND		ug/kg	2.65	0.343	1
Acenaphthylene	ND		ug/kg	2.65	0.154	1
Acenaphthene	ND		ug/kg	2.65	0.186	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.65	0.359	1
Fluorene	ND		ug/kg	2.65	0.306	1
C1-Fluorenes	0.386	J	ug/kg	2.65	0.306	1
C2-Fluorenes	ND		ug/kg	2.65	0.306	1
C3-Fluorenes	ND		ug/kg	2.65	0.306	1
Dibenzothiophene	ND		ug/kg	2.65	0.205	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-18

Date Collected: 03/23/23 10:05

Client ID: WM018

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.65	0.205	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.65	0.205	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.65	0.205	1
C1-Dibenzothiophenes BS	0.218	J	ug/kg	2.65	0.205	1
C2-Dibenzothiophenes	0.591	J	ug/kg	2.65	0.205	1
C3-Dibenzothiophenes	ND		ug/kg	2.65	0.205	1
C4-Dibenzothiophenes	1.38	J	ug/kg	2.65	0.205	1
Phenanthrene	0.577	J	ug/kg	2.65	0.292	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.65	0.292	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.65	0.292	1
2-Methylanthracene (2MA)	ND		ug/kg	2.65	0.292	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.65	0.292	1
C1-Phenanthrenes/Anthracenes	0.346	J	ug/kg	2.65	0.292	1
C2-Phenanthrenes/Anthr BS	0.718	J	ug/kg	2.65	0.292	1
C3-Phenanthrenes/Anthracenes	0.688	J	ug/kg	2.65	0.292	1
C4-Phenanthrenes/Anthracenes	0.856	J	ug/kg	2.65	0.292	1
Retene	ND		ug/kg	2.65	0.365	1
Anthracene	ND		ug/kg	2.65	0.149	1
Carbazole	ND		ug/kg	2.65	0.977	1
1-Methylphenanthrene	ND		ug/kg	2.65	0.172	1
Fluoranthene	0.392	J	ug/kg	2.65	0.272	1
Benzo(b)fluorene	ND		ug/kg	2.65	0.204	1
Pyrene	0.256	J	ug/kg	2.65	0.173	1
C1-Fluoranthenes/Pyrenes	0.521	J	ug/kg	2.65	0.173	1
C2-Fluoranthenes/Pyrenes	0.644	J	ug/kg	2.65	0.173	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.65	0.173	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.65	0.173	1
Naphthobenzothiophenes	ND		ug/kg	2.65	0.221	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.65	0.221	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.65	0.221	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.65	0.221	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.65	0.221	1
Benz(a)anthracene	ND		ug/kg	2.65	0.400	1
Chrysene/Triphenylene	0.201	J	ug/kg	2.65	0.184	1
C1-Chrysenes	ND		ug/kg	2.65	0.184	1
C2-Chrysenes BS	ND		ug/kg	2.65	0.184	1
C3-Chrysenes	ND		ug/kg	2.65	0.184	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-18  
**Client ID:** WM018  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:05  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.65	0.184	1
Benzo(b)fluoranthene	ND		ug/kg	2.65	0.175	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.65	0.276	1
Benzo(a)fluoranthene	ND		ug/kg	2.65	0.276	1
Benzo(e)pyrene	ND		ug/kg	2.65	0.188	1
Benzo(a)pyrene	ND		ug/kg	2.65	0.170	1
Perylene	0.325	J	ug/kg	2.65	0.253	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.65	0.354	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.65	0.380	1
Benzo(g,h,i)perylene	ND		ug/kg	2.65	0.262	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	53		50-130
Phenanthrene-d10	61		50-130
Benzo(a)pyrene-d12	75		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-19  
**Client ID:** WM019  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:07  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/03/23 12:49  
**Analyst:** CNC  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 11:10  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.42	0.207	1
C1-Decalins	ND		ug/kg	1.42	0.207	1
C2-Decalins	ND		ug/kg	1.42	0.207	1
C3-Decalins	5.12		ug/kg	1.42	0.207	1
C4-Decalins	21.2		ug/kg	1.42	0.207	1
Naphthalene	ND		ug/kg	4.74	0.567	1
C1-Naphthalenes	ND		ug/kg	4.74	0.567	1
C2-Naphthalenes	ND		ug/kg	4.74	0.567	1
C3-Naphthalenes	ND		ug/kg	4.74	0.567	1
C4-Naphthalenes	ND		ug/kg	4.74	0.567	1
2-Methylnaphthalene	ND		ug/kg	2.85	0.359	1
1-Methylnaphthalene	ND		ug/kg	2.85	0.319	1
Benzothiophene	ND		ug/kg	2.85	0.166	1
C1-Benzo(b)thiophenes	0.559	J	ug/kg	2.85	0.166	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.85	0.166	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.85	0.166	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.85	0.166	1
Biphenyl	0.387	J	ug/kg	2.85	0.345	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.85	0.177	1
Dibenzofuran	ND		ug/kg	2.85	0.368	1
Acenaphthylene	ND		ug/kg	2.85	0.166	1
Acenaphthene	ND		ug/kg	2.85	0.199	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.85	0.385	1
Fluorene	ND		ug/kg	2.85	0.328	1
C1-Fluorenes	0.428	J	ug/kg	2.85	0.328	1
C2-Fluorenes	ND		ug/kg	2.85	0.328	1
C3-Fluorenes	ND		ug/kg	2.85	0.328	1
Dibenzothiophene	ND		ug/kg	2.85	0.220	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-19

Date Collected: 03/23/23 10:07

Client ID: WM019

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.85	0.220	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.85	0.220	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.85	0.220	1
C1-Dibenzothiophenes BS	0.282	J	ug/kg	2.85	0.220	1
C2-Dibenzothiophenes	0.614	J	ug/kg	2.85	0.220	1
C3-Dibenzothiophenes	ND		ug/kg	2.85	0.220	1
C4-Dibenzothiophenes	1.46	J	ug/kg	2.85	0.220	1
Phenanthrene	0.569	J	ug/kg	2.85	0.313	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.85	0.313	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.85	0.313	1
2-Methylanthracene (2MA)	ND		ug/kg	2.85	0.313	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.85	0.313	1
C1-Phenanthrenes/Anthracenes	0.606	J	ug/kg	2.85	0.313	1
C2-Phenanthrenes/Anthr BS	0.627	J	ug/kg	2.85	0.313	1
C3-Phenanthrenes/Anthracenes	0.907	J	ug/kg	2.85	0.313	1
C4-Phenanthrenes/Anthracenes	0.920	J	ug/kg	2.85	0.313	1
Retene	ND		ug/kg	2.85	0.391	1
Anthracene	ND		ug/kg	2.85	0.160	1
Carbazole	ND		ug/kg	2.85	1.05	1
1-Methylphenanthrene	ND		ug/kg	2.85	0.185	1
Fluoranthene	0.340	J	ug/kg	2.85	0.292	1
Benzo(b)fluorene	ND		ug/kg	2.85	0.218	1
Pyrene	ND		ug/kg	2.85	0.186	1
C1-Fluoranthenes/Pyrenes	0.335	J	ug/kg	2.85	0.186	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.85	0.186	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.85	0.186	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.85	0.186	1
Naphthobenzothiophenes	ND		ug/kg	2.85	0.237	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.85	0.237	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.85	0.237	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.85	0.237	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.85	0.237	1
Benz(a)anthracene	ND		ug/kg	2.85	0.429	1
Chrysene/Triphenylene	0.213	J	ug/kg	2.85	0.197	1
C1-Chrysenes	ND		ug/kg	2.85	0.197	1
C2-Chrysenes BS	ND		ug/kg	2.85	0.197	1
C3-Chrysenes	ND		ug/kg	2.85	0.197	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-19  
**Client ID:** WM019  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:07  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.85	0.197	1
Benzo(b)fluoranthene	ND		ug/kg	2.85	0.187	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.85	0.296	1
Benzo(a)fluoranthene	ND		ug/kg	2.85	0.296	1
Benzo(e)pyrene	ND		ug/kg	2.85	0.201	1
Benzo(a)pyrene	ND		ug/kg	2.85	0.183	1
Perylene	0.376	J	ug/kg	2.85	0.271	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.85	0.380	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.85	0.408	1
Benzo(g,h,i)perylene	ND		ug/kg	2.85	0.281	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	51		50-130
Phenanthrene-d10	60		50-130
Benzo(a)pyrene-d12	76		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-20

Date Collected: 03/23/23 10:14

Client ID: WM020

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/26/23 10:40

Analytical Date: 07/14/23 19:04

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/29/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.50	0.218	1
C1-Decalins	0.531	J	ug/kg	1.50	0.218	1
C2-Decalins	2.94		ug/kg	1.50	0.218	1
C3-Decalins	10.2		ug/kg	1.50	0.218	1
C4-Decalins	27.5		ug/kg	1.50	0.218	1
Naphthalene	ND		ug/kg	4.99	0.597	1
C1-Naphthalenes	ND		ug/kg	4.99	0.597	1
C2-Naphthalenes	0.682	J	ug/kg	4.99	0.597	1
C3-Naphthalenes	0.751	J	ug/kg	4.99	0.597	1
C4-Naphthalenes	ND		ug/kg	4.99	0.597	1
2-Methylnaphthalene	ND		ug/kg	2.99	0.377	1
1-Methylnaphthalene	ND		ug/kg	2.99	0.335	1
Benzothiophene	ND		ug/kg	2.99	0.174	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.99	0.174	1
C2-Benzo(b)thiophenes	0.616	J	ug/kg	2.99	0.174	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.99	0.174	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.99	0.174	1
Biphenyl	ND		ug/kg	2.99	0.363	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.99	0.186	1
Dibenzofuran	ND		ug/kg	2.99	0.387	1
Acenaphthylene	ND		ug/kg	2.99	0.174	1
Acenaphthene	0.249	J	ug/kg	2.99	0.210	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.99	0.405	1
Fluorene	ND		ug/kg	2.99	0.345	1
C1-Fluorenes	ND		ug/kg	2.99	0.345	1
C2-Fluorenes	ND		ug/kg	2.99	0.345	1
C3-Fluorenes	ND		ug/kg	2.99	0.345	1
Dibenzothiophene	ND		ug/kg	2.99	0.232	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-20

Date Collected: 03/23/23 10:14

Client ID: WM020

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.99	0.232	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.99	0.232	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.99	0.232	1
C1-Dibenzothiophenes BS	0.610	J	ug/kg	2.99	0.232	1
C2-Dibenzothiophenes	ND		ug/kg	2.99	0.232	1
C3-Dibenzothiophenes	ND		ug/kg	2.99	0.232	1
C4-Dibenzothiophenes	ND		ug/kg	2.99	0.232	1
Phenanthrene	0.896	J	ug/kg	2.99	0.329	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.99	0.329	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.99	0.329	1
2-Methylanthracene (2MA)	ND		ug/kg	2.99	0.329	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.99	0.329	1
C1-Phenanthrenes/Anthracenes	0.887	J	ug/kg	2.99	0.329	1
C2-Phenanthrenes/Anthr BS	1.45	J	ug/kg	2.99	0.329	1
C3-Phenanthrenes/Anthracenes	1.28	J	ug/kg	2.99	0.329	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.99	0.329	1
Retene	ND		ug/kg	2.99	0.411	1
Anthracene	ND		ug/kg	2.99	0.168	1
Carbazole	ND		ug/kg	2.99	1.10	1
1-Methylphenanthrene	ND		ug/kg	2.99	0.194	1
Fluoranthene	0.588	J	ug/kg	2.99	0.307	1
Benzo(b)fluorene	ND		ug/kg	2.99	0.230	1
Pyrene	0.418	J	ug/kg	2.99	0.195	1
C1-Fluoranthenes/Pyrenes	0.791	J	ug/kg	2.99	0.195	1
C2-Fluoranthenes/Pyrenes	0.737	J	ug/kg	2.99	0.195	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.99	0.195	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.99	0.195	1
Naphthobenzothiophenes	ND		ug/kg	2.99	0.250	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.99	0.250	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.99	0.250	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.99	0.250	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.99	0.250	1
Benz(a)anthracene	ND		ug/kg	2.99	0.451	1
Chrysene/Triphenylene	0.374	J	ug/kg	2.99	0.208	1
C1-Chrysenes	ND		ug/kg	2.99	0.208	1
C2-Chrysenes BS	ND		ug/kg	2.99	0.208	1
C3-Chrysenes	ND		ug/kg	2.99	0.208	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-20  
**Client ID:** WM020  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:14  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.99	0.208	1
Benzo(b)fluoranthene	0.276	J	ug/kg	2.99	0.197	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.99	0.311	1
Benzo(a)fluoranthene	ND		ug/kg	2.99	0.311	1
Benzo(e)pyrene	ND		ug/kg	2.99	0.212	1
Benzo(a)pyrene	0.323	J	ug/kg	2.99	0.192	1
Perylene	0.288	J	ug/kg	2.99	0.285	1
Indeno(1,2,3-cd)pyrene	0.841	J	ug/kg	2.99	0.399	1
Dibenz(a,h)+(a,c)anthracene	0.957	J	ug/kg	2.99	0.429	1
Benzo(g,h,i)perylene	0.588	J	ug/kg	2.99	0.295	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	80		50-130
Phenanthrene-d10	86		50-130
Benzo(a)pyrene-d12	91		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-43  
**Client ID:** WM043  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:02  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/14/23 20:28  
**Analyst:** MJS  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.38	0.201	1
C1-Decalins	ND		ug/kg	1.38	0.201	1
C2-Decalins	ND		ug/kg	1.38	0.201	1
C3-Decalins	ND		ug/kg	1.38	0.201	1
C4-Decalins	ND		ug/kg	1.38	0.201	1
Naphthalene	0.558	J	ug/kg	4.61	0.552	1
C1-Naphthalenes	ND		ug/kg	4.61	0.552	1
C2-Naphthalenes	ND		ug/kg	4.61	0.552	1
C3-Naphthalenes	ND		ug/kg	4.61	0.552	1
C4-Naphthalenes	ND		ug/kg	4.61	0.552	1
2-Methylnaphthalene	ND		ug/kg	2.77	0.349	1
1-Methylnaphthalene	ND		ug/kg	2.77	0.310	1
Benzothiophene	ND		ug/kg	2.77	0.161	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
C2-Benzo(b)thiophenes	0.369	J	ug/kg	2.77	0.161	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
Biphenyl	ND		ug/kg	2.77	0.336	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.77	0.172	1
Dibenzofuran	ND		ug/kg	2.77	0.358	1
Acenaphthylene	ND		ug/kg	2.77	0.161	1
Acenaphthene	ND		ug/kg	2.77	0.194	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.77	0.374	1
Fluorene	ND		ug/kg	2.77	0.319	1
C1-Fluorenes	ND		ug/kg	2.77	0.319	1
C2-Fluorenes	ND		ug/kg	2.77	0.319	1
C3-Fluorenes	ND		ug/kg	2.77	0.319	1
Dibenzothiophene	ND		ug/kg	2.77	0.214	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-43

Date Collected: 03/24/23 09:02

Client ID: WM043

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.77	0.214	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.77	0.214	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.77	0.214	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.77	0.214	1
C2-Dibenzothiophenes	0.497	J	ug/kg	2.77	0.214	1
C3-Dibenzothiophenes	ND		ug/kg	2.77	0.214	1
C4-Dibenzothiophenes	ND		ug/kg	2.77	0.214	1
Phenanthrene	0.721	J	ug/kg	2.77	0.304	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.77	0.304	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.77	0.304	1
2-Methylanthracene (2MA)	ND		ug/kg	2.77	0.304	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.77	0.304	1
C1-Phenanthrenes/Anthracenes	0.498	J	ug/kg	2.77	0.304	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.77	0.304	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.77	0.304	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.77	0.304	1
Retene	ND		ug/kg	2.77	0.380	1
Anthracene	ND		ug/kg	2.77	0.155	1
Carbazole	ND		ug/kg	2.77	1.02	1
1-Methylphenanthrene	ND		ug/kg	2.77	0.180	1
Fluoranthene	0.662	J	ug/kg	2.77	0.284	1
Benzo(b)fluorene	ND		ug/kg	2.77	0.212	1
Pyrene	0.497	J	ug/kg	2.77	0.181	1
C1-Fluoranthenes/Pyrenes	0.487	J	ug/kg	2.77	0.181	1
C2-Fluoranthenes/Pyrenes	0.341	J	ug/kg	2.77	0.181	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.77	0.181	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.77	0.181	1
Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
Benz(a)anthracene	ND		ug/kg	2.77	0.417	1
Chrysene/Triphenylene	0.566	J	ug/kg	2.77	0.192	1
C1-Chrysenes	0.294	J	ug/kg	2.77	0.192	1
C2-Chrysenes BS	ND		ug/kg	2.77	0.192	1
C3-Chrysenes	ND		ug/kg	2.77	0.192	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-43  
**Client ID:** WM043  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:02  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.77	0.192	1
Benzo(b)fluoranthene	0.460	J	ug/kg	2.77	0.182	1
Benzo(j)+(k)fluoranthene	0.368	J	ug/kg	2.77	0.288	1
Benzo(a)fluoranthene	ND		ug/kg	2.77	0.288	1
Benzo(e)pyrene	0.386	J	ug/kg	2.77	0.196	1
Benzo(a)pyrene	0.406	J	ug/kg	2.77	0.178	1
Perylene	0.690	J	ug/kg	2.77	0.264	1
Indeno(1,2,3-cd)pyrene	0.649	J	ug/kg	2.77	0.369	1
Dibenz(a,h)+(a,c)anthracene	0.433	J	ug/kg	2.77	0.397	1
Benzo(g,h,i)perylene	0.807	J	ug/kg	2.77	0.273	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	81		50-130
Phenanthrene-d10	84		50-130
Benzo(a)pyrene-d12	87		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-45  
**Client ID:** WM045  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:09  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/14/23 21:53  
**Analyst:** MJS  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.39	0.203	1
C1-Decalins	0.604	J	ug/kg	1.39	0.203	1
C2-Decalins	ND		ug/kg	1.39	0.203	1
C3-Decalins	ND		ug/kg	1.39	0.203	1
C4-Decalins	ND		ug/kg	1.39	0.203	1
Naphthalene	ND		ug/kg	4.65	0.556	1
C1-Naphthalenes	ND		ug/kg	4.65	0.556	1
C2-Naphthalenes	ND		ug/kg	4.65	0.556	1
C3-Naphthalenes	ND		ug/kg	4.65	0.556	1
C4-Naphthalenes	ND		ug/kg	4.65	0.556	1
2-Methylnaphthalene	ND		ug/kg	2.79	0.351	1
1-Methylnaphthalene	ND		ug/kg	2.79	0.312	1
Benzothiophene	ND		ug/kg	2.79	0.162	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.79	0.162	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.79	0.162	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.79	0.162	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.79	0.162	1
Biphenyl	0.385	J	ug/kg	2.79	0.338	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.79	0.174	1
Dibenzofuran	ND		ug/kg	2.79	0.360	1
Acenaphthylene	ND		ug/kg	2.79	0.162	1
Acenaphthene	ND		ug/kg	2.79	0.195	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.79	0.377	1
Fluorene	ND		ug/kg	2.79	0.322	1
C1-Fluorenes	ND		ug/kg	2.79	0.322	1
C2-Fluorenes	ND		ug/kg	2.79	0.322	1
C3-Fluorenes	ND		ug/kg	2.79	0.322	1
Dibenzothiophene	ND		ug/kg	2.79	0.216	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-45

Date Collected: 03/24/23 09:09

Client ID: WM045

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.79	0.216	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.79	0.216	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.79	0.216	1
C1-Dibenzothiophenes BS	0.321	J	ug/kg	2.79	0.216	1
C2-Dibenzothiophenes	0.851	J	ug/kg	2.79	0.216	1
C3-Dibenzothiophenes	0.803	J	ug/kg	2.79	0.216	1
C4-Dibenzothiophenes	ND		ug/kg	2.79	0.216	1
Phenanthrene	0.811	J	ug/kg	2.79	0.307	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.79	0.307	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.79	0.307	1
2-Methylanthracene (2MA)	ND		ug/kg	2.79	0.307	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.79	0.307	1
C1-Phenanthrenes/Anthracenes	0.445	J	ug/kg	2.79	0.307	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.79	0.307	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.79	0.307	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.79	0.307	1
Retene	ND		ug/kg	2.79	0.383	1
Anthracene	ND		ug/kg	2.79	0.156	1
Carbazole	ND		ug/kg	2.79	1.03	1
1-Methylphenanthrene	ND		ug/kg	2.79	0.181	1
Fluoranthene	0.642	J	ug/kg	2.79	0.286	1
Benzo(b)fluorene	ND		ug/kg	2.79	0.214	1
Pyrene	0.321	J	ug/kg	2.79	0.182	1
C1-Fluoranthenes/Pyrenes	0.363	J	ug/kg	2.79	0.182	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.79	0.182	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.79	0.182	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.79	0.182	1
Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.79	0.232	1
Benz(a)anthracene	ND		ug/kg	2.79	0.420	1
Chrysene/Triphenylene	0.253	J	ug/kg	2.79	0.193	1
C1-Chrysenes	ND		ug/kg	2.79	0.193	1
C2-Chrysenes BS	ND		ug/kg	2.79	0.193	1
C3-Chrysenes	ND		ug/kg	2.79	0.193	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-45  
**Client ID:** WM045  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:09  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.79	0.193	1
Benzo(b)fluoranthene	0.189	J	ug/kg	2.79	0.184	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.79	0.290	1
Benzo(a)fluoranthene	ND		ug/kg	2.79	0.290	1
Benzo(e)pyrene	ND		ug/kg	2.79	0.197	1
Benzo(a)pyrene	ND		ug/kg	2.79	0.179	1
Perylene	0.372	J	ug/kg	2.79	0.266	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.79	0.372	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.79	0.400	1
Benzo(g,h,i)perylene	ND		ug/kg	2.79	0.275	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	85		50-130
Phenanthrene-d10	92		50-130
Benzo(a)pyrene-d12	101		50-130



**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-67

Date Collected: 06/09/23 20:30

Client ID: WMCOMP01

Date Received: 06/09/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/26/23 10:40

Analytical Date: 07/14/23 23:17

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/29/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.47	0.213	1
C1-Decalins	0.845	J	ug/kg	1.47	0.213	1
C2-Decalins	4.52		ug/kg	1.47	0.213	1
C3-Decalins	18.9		ug/kg	1.47	0.213	1
C4-Decalins	35.8		ug/kg	1.47	0.213	1
Naphthalene	0.685	J	ug/kg	4.89	0.585	1
C1-Naphthalenes	ND		ug/kg	4.89	0.585	1
C2-Naphthalenes	0.585	J	ug/kg	4.89	0.585	1
C3-Naphthalenes	0.663	J	ug/kg	4.89	0.585	1
C4-Naphthalenes	ND		ug/kg	4.89	0.585	1
2-Methylnaphthalene	ND		ug/kg	2.94	0.370	1
1-Methylnaphthalene	ND		ug/kg	2.94	0.329	1
Benzothiophene	ND		ug/kg	2.94	0.171	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C2-Benzo(b)thiophenes	0.559	J	ug/kg	2.94	0.171	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
Biphenyl	0.402	J	ug/kg	2.94	0.356	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.94	0.183	1
Dibenzofuran	ND		ug/kg	2.94	0.380	1
Acenaphthylene	0.283	J	ug/kg	2.94	0.171	1
Acenaphthene	0.310	J	ug/kg	2.94	0.205	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.94	0.397	1
Fluorene	ND		ug/kg	2.94	0.338	1
C1-Fluorenes	ND		ug/kg	2.94	0.338	1
C2-Fluorenes	ND		ug/kg	2.94	0.338	1
C3-Fluorenes	ND		ug/kg	2.94	0.338	1
Dibenzothiophene	ND		ug/kg	2.94	0.227	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS****Lab ID:** L2330403-67**Date Collected:** 06/09/23 20:30**Client ID:** WMCOMP01**Date Received:** 06/09/23**Sample Location:** ALASKA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.94	0.227	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.94	0.227	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.94	0.227	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.94	0.227	1
C2-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
C3-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
C4-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
Phenanthrene	0.943	J	ug/kg	2.94	0.323	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.94	0.323	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.94	0.323	1
2-Methylanthracene (2MA)	ND		ug/kg	2.94	0.323	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.94	0.323	1
C1-Phenanthrenes/Anthracenes	0.856	J	ug/kg	2.94	0.323	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.94	0.323	1
C3-Phenanthrenes/Anthracenes	0.991	J	ug/kg	2.94	0.323	1
C4-Phenanthrenes/Anthracenes	1.63	J	ug/kg	2.94	0.323	1
Retene	ND		ug/kg	2.94	0.403	1
Anthracene	ND		ug/kg	2.94	0.165	1
Carbazole	ND		ug/kg	2.94	1.08	1
1-Methylphenanthrene	ND		ug/kg	2.94	0.191	1
Fluoranthene	0.478	J	ug/kg	2.94	0.301	1
Benzo(b)fluorene	ND		ug/kg	2.94	0.225	1
Pyrene	0.313	J	ug/kg	2.94	0.192	1
C1-Fluoranthenes/Pyrenes	0.474	J	ug/kg	2.94	0.192	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
Benz(a)anthracene	ND		ug/kg	2.94	0.442	1
Chrysene/Triphenylene	0.268	J	ug/kg	2.94	0.204	1
C1-Chrysenes	ND		ug/kg	2.94	0.204	1
C2-Chrysenes BS	ND		ug/kg	2.94	0.204	1
C3-Chrysenes	ND		ug/kg	2.94	0.204	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-67  
**Client ID:** WMCOMP01  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:30  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.94	0.204	1
Benzo(b)fluoranthene	ND		ug/kg	2.94	0.193	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.94	0.305	1
Benzo(a)fluoranthene	ND		ug/kg	2.94	0.305	1
Benzo(e)pyrene	ND		ug/kg	2.94	0.207	1
Benzo(a)pyrene	ND		ug/kg	2.94	0.188	1
Perylene	0.802	J	ug/kg	2.94	0.280	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.94	0.391	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.94	0.421	1
Benzo(g,h,i)perylene	ND		ug/kg	2.94	0.290	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	75		50-130
Phenanthrene-d10	85		50-130
Benzo(a)pyrene-d12	91		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-68  
**Client ID:** WMCOMP02  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:50  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/15/23 00:42  
**Analyst:** MJS  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.47	0.213	1
C1-Decalins	0.349	J	ug/kg	1.47	0.213	1
C2-Decalins	2.54		ug/kg	1.47	0.213	1
C3-Decalins	10.6		ug/kg	1.47	0.213	1
C4-Decalins	28.6		ug/kg	1.47	0.213	1
Naphthalene	ND		ug/kg	4.89	0.585	1
C1-Naphthalenes	ND		ug/kg	4.89	0.585	1
C2-Naphthalenes	ND		ug/kg	4.89	0.585	1
C3-Naphthalenes	0.686	J	ug/kg	4.89	0.585	1
C4-Naphthalenes	ND		ug/kg	4.89	0.585	1
2-Methylnaphthalene	ND		ug/kg	2.94	0.370	1
1-Methylnaphthalene	ND		ug/kg	2.94	0.329	1
Benzothiophene	ND		ug/kg	2.94	0.171	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
Biphenyl	ND		ug/kg	2.94	0.356	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.94	0.183	1
Dibenzofuran	ND		ug/kg	2.94	0.380	1
Acenaphthylene	0.268	J	ug/kg	2.94	0.171	1
Acenaphthene	ND		ug/kg	2.94	0.205	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.94	0.397	1
Fluorene	ND		ug/kg	2.94	0.338	1
C1-Fluorenes	ND		ug/kg	2.94	0.338	1
C2-Fluorenes	ND		ug/kg	2.94	0.338	1
C3-Fluorenes	ND		ug/kg	2.94	0.338	1
Dibenzothiophene	ND		ug/kg	2.94	0.227	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-68

Date Collected: 06/09/23 20:50

Client ID: WMCOMP02

Date Received: 06/09/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.94	0.227	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.94	0.227	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.94	0.227	1
C1-Dibenzothiophenes BS	0.948	J	ug/kg	2.94	0.227	1
C2-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
C3-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
C4-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
Phenanthrene	1.01	J	ug/kg	2.94	0.323	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.94	0.323	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.94	0.323	1
2-Methylanthracene (2MA)	ND		ug/kg	2.94	0.323	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.94	0.323	1
C1-Phenanthrenes/Anthracenes	0.950	J	ug/kg	2.94	0.323	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.94	0.323	1
C3-Phenanthrenes/Anthracenes	1.47	J	ug/kg	2.94	0.323	1
C4-Phenanthrenes/Anthracenes	1.59	J	ug/kg	2.94	0.323	1
Retene	ND		ug/kg	2.94	0.403	1
Anthracene	ND		ug/kg	2.94	0.165	1
Carbazole	ND		ug/kg	2.94	1.08	1
1-Methylphenanthrene	ND		ug/kg	2.94	0.191	1
Fluoranthene	0.538	J	ug/kg	2.94	0.301	1
Benzo(b)fluorene	ND		ug/kg	2.94	0.225	1
Pyrene	0.422	J	ug/kg	2.94	0.192	1
C1-Fluoranthenes/Pyrenes	0.698	J	ug/kg	2.94	0.192	1
C2-Fluoranthenes/Pyrenes	0.740	J	ug/kg	2.94	0.192	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
Benz(a)anthracene	ND		ug/kg	2.94	0.442	1
Chrysene/Triphenylene	0.446	J	ug/kg	2.94	0.204	1
C1-Chrysenes	0.331	J	ug/kg	2.94	0.204	1
C2-Chrysenes BS	ND		ug/kg	2.94	0.204	1
C3-Chrysenes	ND		ug/kg	2.94	0.204	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-68  
**Client ID:** WMCOMP02  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:50  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.94	0.204	1
Benzo(b)fluoranthene	0.323	J	ug/kg	2.94	0.193	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.94	0.305	1
Benzo(a)fluoranthene	ND		ug/kg	2.94	0.305	1
Benzo(e)pyrene	0.335	J	ug/kg	2.94	0.207	1
Benzo(a)pyrene	0.214	J	ug/kg	2.94	0.188	1
Perylene	0.466	J	ug/kg	2.94	0.280	1
Indeno(1,2,3-cd)pyrene	0.406	J	ug/kg	2.94	0.391	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.94	0.421	1
Benzo(g,h,i)perylene	0.640	J	ug/kg	2.94	0.290	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	58		50-130
Phenanthrene-d10	78		50-130
Benzo(a)pyrene-d12	86		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-69

Date Collected: 06/10/23 17:50

Client ID: WMCOMP03

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/26/23 10:40

Analytical Date: 07/15/23 02:06

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/29/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.33	0.194	1
C1-Decalins	ND		ug/kg	1.33	0.194	1
C2-Decalins	ND		ug/kg	1.33	0.194	1
C3-Decalins	ND		ug/kg	1.33	0.194	1
C4-Decalins	ND		ug/kg	1.33	0.194	1
Naphthalene	ND		ug/kg	4.45	0.532	1
C1-Naphthalenes	ND		ug/kg	4.45	0.532	1
C2-Naphthalenes	ND		ug/kg	4.45	0.532	1
C3-Naphthalenes	ND		ug/kg	4.45	0.532	1
C4-Naphthalenes	ND		ug/kg	4.45	0.532	1
2-Methylnaphthalene	ND		ug/kg	2.67	0.336	1
1-Methylnaphthalene	ND		ug/kg	2.67	0.299	1
Benzothiophene	ND		ug/kg	2.67	0.155	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.67	0.155	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.67	0.155	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.67	0.155	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.67	0.155	1
Biphenyl	ND		ug/kg	2.67	0.324	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.67	0.166	1
Dibenzofuran	ND		ug/kg	2.67	0.345	1
Acenaphthylene	ND		ug/kg	2.67	0.155	1
Acenaphthene	ND		ug/kg	2.67	0.187	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.67	0.361	1
Fluorene	ND		ug/kg	2.67	0.308	1
C1-Fluorenes	ND		ug/kg	2.67	0.308	1
C2-Fluorenes	ND		ug/kg	2.67	0.308	1
C3-Fluorenes	ND		ug/kg	2.67	0.308	1
Dibenzothiophene	ND		ug/kg	2.67	0.206	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-69

Date Collected: 06/10/23 17:50

Client ID: WMCOMP03

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.67	0.206	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.67	0.206	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.67	0.206	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.67	0.206	1
C2-Dibenzothiophenes	0.507	J	ug/kg	2.67	0.206	1
C3-Dibenzothiophenes	ND		ug/kg	2.67	0.206	1
C4-Dibenzothiophenes	ND		ug/kg	2.67	0.206	1
Phenanthrene	0.605	J	ug/kg	2.67	0.294	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.67	0.294	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.67	0.294	1
2-Methylanthracene (2MA)	ND		ug/kg	2.67	0.294	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.67	0.294	1
C1-Phenanthrenes/Anthracenes	0.406	J	ug/kg	2.67	0.294	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.67	0.294	1
C3-Phenanthrenes/Anthracenes	0.346	J	ug/kg	2.67	0.294	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.67	0.294	1
Retene	ND		ug/kg	2.67	0.366	1
Anthracene	ND		ug/kg	2.67	0.150	1
Carbazole	ND		ug/kg	2.67	0.982	1
1-Methylphenanthrene	ND		ug/kg	2.67	0.173	1
Fluoranthene	0.376	J	ug/kg	2.67	0.274	1
Benzo(b)fluorene	ND		ug/kg	2.67	0.205	1
Pyrene	0.358	J	ug/kg	2.67	0.174	1
C1-Fluoranthenes/Pyrenes	0.497	J	ug/kg	2.67	0.174	1
C2-Fluoranthenes/Pyrenes	0.295	J	ug/kg	2.67	0.174	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.67	0.174	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.67	0.174	1
Naphthobenzothiophenes	0.365	J	ug/kg	2.67	0.222	1
C1-Naphthobenzothiophenes	0.245	J	ug/kg	2.67	0.222	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.67	0.222	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.67	0.222	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.67	0.222	1
Benz(a)anthracene	0.448	J	ug/kg	2.67	0.402	1
Chrysene/Triphenylene	0.700	J	ug/kg	2.67	0.185	1
C1-Chrysenes	0.365	J	ug/kg	2.67	0.185	1
C2-Chrysenes BS	ND		ug/kg	2.67	0.185	1
C3-Chrysenes	ND		ug/kg	2.67	0.185	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-69  
**Client ID:** WMCOMP03  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 17:50  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.67	0.185	1
Benzo(b)fluoranthene	0.722	J	ug/kg	2.67	0.176	1
Benzo(j)+(k)fluoranthene	0.585	J	ug/kg	2.67	0.278	1
Benzo(a)fluoranthene	ND		ug/kg	2.67	0.278	1
Benzo(e)pyrene	0.689	J	ug/kg	2.67	0.189	1
Benzo(a)pyrene	0.512	J	ug/kg	2.67	0.171	1
Perylene	0.479	J	ug/kg	2.67	0.254	1
Indeno(1,2,3-cd)pyrene	0.796	J	ug/kg	2.67	0.356	1
Dibenz(a,h)+(a,c)anthracene	0.428	J	ug/kg	2.67	0.382	1
Benzo(g,h,i)perylene	1.16	J	ug/kg	2.67	0.263	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	74		50-130
Phenanthrene-d10	81		50-130
Benzo(a)pyrene-d12	89		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-70

Date Collected: 06/10/23 18:25

Client ID: WMCOMP04

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/26/23 10:40

Analytical Date: 07/15/23 04:55

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/29/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.44	0.209	1
C1-Decalins	0.457	J	ug/kg	1.44	0.209	1
C2-Decalins	ND		ug/kg	1.44	0.209	1
C3-Decalins	ND		ug/kg	1.44	0.209	1
C4-Decalins	ND		ug/kg	1.44	0.209	1
Naphthalene	0.599	J	ug/kg	4.79	0.573	1
C1-Naphthalenes	ND		ug/kg	4.79	0.573	1
C2-Naphthalenes	ND		ug/kg	4.79	0.573	1
C3-Naphthalenes	ND		ug/kg	4.79	0.573	1
C4-Naphthalenes	ND		ug/kg	4.79	0.573	1
2-Methylnaphthalene	ND		ug/kg	2.87	0.362	1
1-Methylnaphthalene	ND		ug/kg	2.87	0.322	1
Benzothiophene	ND		ug/kg	2.87	0.167	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.87	0.167	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.87	0.167	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.87	0.167	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.87	0.167	1
Biphenyl	ND		ug/kg	2.87	0.349	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.87	0.179	1
Dibenzofuran	ND		ug/kg	2.87	0.372	1
Acenaphthylene	ND		ug/kg	2.87	0.167	1
Acenaphthene	ND		ug/kg	2.87	0.201	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.87	0.389	1
Fluorene	ND		ug/kg	2.87	0.331	1
C1-Fluorenes	ND		ug/kg	2.87	0.331	1
C2-Fluorenes	ND		ug/kg	2.87	0.331	1
C3-Fluorenes	ND		ug/kg	2.87	0.331	1
Dibenzothiophene	ND		ug/kg	2.87	0.222	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-70

Date Collected: 06/10/23 18:25

Client ID: WMCOMP04

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.87	0.222	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.87	0.222	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.87	0.222	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.87	0.222	1
C2-Dibenzothiophenes	0.517	J	ug/kg	2.87	0.222	1
C3-Dibenzothiophenes	ND		ug/kg	2.87	0.222	1
C4-Dibenzothiophenes	ND		ug/kg	2.87	0.222	1
Phenanthrene	0.712	J	ug/kg	2.87	0.316	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.87	0.316	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.87	0.316	1
2-Methylanthracene (2MA)	ND		ug/kg	2.87	0.316	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.87	0.316	1
C1-Phenanthrenes/Anthracenes	ND		ug/kg	2.87	0.316	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.87	0.316	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.87	0.316	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.87	0.316	1
Retene	ND		ug/kg	2.87	0.395	1
Anthracene	ND		ug/kg	2.87	0.161	1
Carbazole	ND		ug/kg	2.87	1.06	1
1-Methylphenanthrene	ND		ug/kg	2.87	0.186	1
Fluoranthene	ND		ug/kg	2.87	0.295	1
Benzo(b)fluorene	ND		ug/kg	2.87	0.220	1
Pyrene	ND		ug/kg	2.87	0.188	1
C1-Fluoranthenes/Pyrenes	ND		ug/kg	2.87	0.188	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.87	0.188	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.87	0.188	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.87	0.188	1
Naphthobenzothiophenes	ND		ug/kg	2.87	0.239	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.87	0.239	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.87	0.239	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.87	0.239	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.87	0.239	1
Benz(a)anthracene	ND		ug/kg	2.87	0.433	1
Chrysene/Triphenylene	0.256	J	ug/kg	2.87	0.199	1
C1-Chrysenes	ND		ug/kg	2.87	0.199	1
C2-Chrysenes BS	ND		ug/kg	2.87	0.199	1
C3-Chrysenes	ND		ug/kg	2.87	0.199	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-70  
**Client ID:** WMCOMP04  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 18:25  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.87	0.199	1
Benzo(b)fluoranthene	ND		ug/kg	2.87	0.189	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.87	0.299	1
Benzo(a)fluoranthene	ND		ug/kg	2.87	0.299	1
Benzo(e)pyrene	ND		ug/kg	2.87	0.203	1
Benzo(a)pyrene	0.194	J	ug/kg	2.87	0.184	1
Perylene	ND		ug/kg	2.87	0.274	1
Indeno(1,2,3-cd)pyrene	0.465	J	ug/kg	2.87	0.383	1
Dibenz(a,h)+(a,c)anthracene	0.500	J	ug/kg	2.87	0.412	1
Benzo(g,h,i)perylene	0.339	J	ug/kg	2.87	0.284	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	85		50-130
Phenanthrene-d10	86		50-130
Benzo(a)pyrene-d12	92		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-71

Date Collected: 06/10/23 19:00

Client ID: WMCOMP05

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/26/23 10:40

Analytical Date: 07/15/23 06:19

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/29/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.47	0.214	1
C1-Decalins	0.438	J	ug/kg	1.47	0.214	1
C2-Decalins	ND		ug/kg	1.47	0.214	1
C3-Decalins	ND		ug/kg	1.47	0.214	1
C4-Decalins	ND		ug/kg	1.47	0.214	1
Naphthalene	0.596	J	ug/kg	4.90	0.586	1
C1-Naphthalenes	ND		ug/kg	4.90	0.586	1
C2-Naphthalenes	ND		ug/kg	4.90	0.586	1
C3-Naphthalenes	ND		ug/kg	4.90	0.586	1
C4-Naphthalenes	ND		ug/kg	4.90	0.586	1
2-Methylnaphthalene	ND		ug/kg	2.94	0.370	1
1-Methylnaphthalene	ND		ug/kg	2.94	0.329	1
Benzothiophene	ND		ug/kg	2.94	0.171	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C2-Benzo(b)thiophenes	0.298	J	ug/kg	2.94	0.171	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.94	0.171	1
Biphenyl	ND		ug/kg	2.94	0.357	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.94	0.183	1
Dibenzofuran	ND		ug/kg	2.94	0.380	1
Acenaphthylene	ND		ug/kg	2.94	0.171	1
Acenaphthene	ND		ug/kg	2.94	0.206	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.94	0.398	1
Fluorene	ND		ug/kg	2.94	0.339	1
C1-Fluorenes	ND		ug/kg	2.94	0.339	1
C2-Fluorenes	ND		ug/kg	2.94	0.339	1
C3-Fluorenes	ND		ug/kg	2.94	0.339	1
Dibenzothiophene	ND		ug/kg	2.94	0.227	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS****Lab ID:** L2330403-71**Date Collected:** 06/10/23 19:00**Client ID:** WMCOMP05**Date Received:** 06/10/23**Sample Location:** ALASKA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.94	0.227	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.94	0.227	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.94	0.227	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.94	0.227	1
C2-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
C3-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
C4-Dibenzothiophenes	ND		ug/kg	2.94	0.227	1
Phenanthrene	0.579	J	ug/kg	2.94	0.324	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.94	0.324	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.94	0.324	1
2-Methylanthracene (2MA)	ND		ug/kg	2.94	0.324	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.94	0.324	1
C1-Phenanthrenes/Anthracenes	ND		ug/kg	2.94	0.324	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.94	0.324	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.94	0.324	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.94	0.324	1
Retene	ND		ug/kg	2.94	0.404	1
Anthracene	ND		ug/kg	2.94	0.165	1
Carbazole	ND		ug/kg	2.94	1.08	1
1-Methylphenanthrene	ND		ug/kg	2.94	0.191	1
Fluoranthene	ND		ug/kg	2.94	0.302	1
Benzo(b)fluorene	ND		ug/kg	2.94	0.225	1
Pyrene	ND		ug/kg	2.94	0.192	1
C1-Fluoranthenes/Pyrenes	0.236	J	ug/kg	2.94	0.192	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.94	0.192	1
Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.94	0.245	1
Benz(a)anthracene	ND		ug/kg	2.94	0.443	1
Chrysene/Triphenylene	ND		ug/kg	2.94	0.204	1
C1-Chrysenes	ND		ug/kg	2.94	0.204	1
C2-Chrysenes BS	ND		ug/kg	2.94	0.204	1
C3-Chrysenes	ND		ug/kg	2.94	0.204	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-71  
**Client ID:** WMCOMP05  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 19:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.94	0.204	1
Benzo(b)fluoranthene	ND		ug/kg	2.94	0.194	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.94	0.306	1
Benzo(a)fluoranthene	ND		ug/kg	2.94	0.306	1
Benzo(e)pyrene	ND		ug/kg	2.94	0.208	1
Benzo(a)pyrene	ND		ug/kg	2.94	0.189	1
Perylene	0.344	J	ug/kg	2.94	0.280	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.94	0.392	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.94	0.422	1
Benzo(g,h,i)perylene	ND		ug/kg	2.94	0.290	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	77		50-130
Phenanthrene-d10	82		50-130
Benzo(a)pyrene-d12	86		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-72  
**Client ID:** WMCOMP06  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/15/23 07:43  
**Analyst:** MJS  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.46	0.212	1
C1-Decalins	0.472	J	ug/kg	1.46	0.212	1
C2-Decalins	ND		ug/kg	1.46	0.212	1
C3-Decalins	ND		ug/kg	1.46	0.212	1
C4-Decalins	ND		ug/kg	1.46	0.212	1
Naphthalene	0.651	J	ug/kg	4.85	0.580	1
C1-Naphthalenes	ND		ug/kg	4.85	0.580	1
C2-Naphthalenes	ND		ug/kg	4.85	0.580	1
C3-Naphthalenes	ND		ug/kg	4.85	0.580	1
C4-Naphthalenes	ND		ug/kg	4.85	0.580	1
2-Methylnaphthalene	ND		ug/kg	2.91	0.367	1
1-Methylnaphthalene	ND		ug/kg	2.91	0.326	1
Benzothiophene	ND		ug/kg	2.91	0.170	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.91	0.170	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.91	0.170	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.91	0.170	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.91	0.170	1
Biphenyl	0.376	J	ug/kg	2.91	0.353	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.91	0.181	1
Dibenzofuran	ND		ug/kg	2.91	0.377	1
Acenaphthylene	ND		ug/kg	2.91	0.170	1
Acenaphthene	ND		ug/kg	2.91	0.204	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.91	0.394	1
Fluorene	ND		ug/kg	2.91	0.336	1
C1-Fluorenes	ND		ug/kg	2.91	0.336	1
C2-Fluorenes	ND		ug/kg	2.91	0.336	1
C3-Fluorenes	ND		ug/kg	2.91	0.336	1
Dibenzothiophene	ND		ug/kg	2.91	0.225	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS****Lab ID:** L2330403-72**Date Collected:** 06/10/23 20:00**Client ID:** WMCOMP06**Date Received:** 06/10/23**Sample Location:** ALASKA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.91	0.225	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.91	0.225	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.91	0.225	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.91	0.225	1
C2-Dibenzothiophenes	ND		ug/kg	2.91	0.225	1
C3-Dibenzothiophenes	ND		ug/kg	2.91	0.225	1
C4-Dibenzothiophenes	ND		ug/kg	2.91	0.225	1
Phenanthrene	0.683	J	ug/kg	2.91	0.320	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.91	0.320	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.91	0.320	1
2-Methylanthracene (2MA)	ND		ug/kg	2.91	0.320	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.91	0.320	1
C1-Phenanthrenes/Anthracenes	0.364	J	ug/kg	2.91	0.320	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.91	0.320	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.91	0.320	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.91	0.320	1
Retene	ND		ug/kg	2.91	0.400	1
Anthracene	ND		ug/kg	2.91	0.163	1
Carbazole	ND		ug/kg	2.91	1.07	1
1-Methylphenanthrene	ND		ug/kg	2.91	0.189	1
Fluoranthene	0.309	J	ug/kg	2.91	0.299	1
Benzo(b)fluorene	ND		ug/kg	2.91	0.223	1
Pyrene	ND		ug/kg	2.91	0.190	1
C1-Fluoranthenes/Pyrenes	0.265	J	ug/kg	2.91	0.190	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.91	0.190	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.91	0.190	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.91	0.190	1
Naphthobenzothiophenes	ND		ug/kg	2.91	0.243	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.91	0.243	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.91	0.243	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.91	0.243	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.91	0.243	1
Benz(a)anthracene	ND		ug/kg	2.91	0.439	1
Chrysene/Triphenylene	0.203	J	ug/kg	2.91	0.202	1
C1-Chrysenes	ND		ug/kg	2.91	0.202	1
C2-Chrysenes BS	ND		ug/kg	2.91	0.202	1
C3-Chrysenes	ND		ug/kg	2.91	0.202	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-72  
**Client ID:** WMCOMP06  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.91	0.202	1
Benzo(b)fluoranthene	ND		ug/kg	2.91	0.192	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.91	0.303	1
Benzo(a)fluoranthene	ND		ug/kg	2.91	0.303	1
Benzo(e)pyrene	ND		ug/kg	2.91	0.206	1
Benzo(a)pyrene	ND		ug/kg	2.91	0.187	1
Perylene	0.410	J	ug/kg	2.91	0.278	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.91	0.388	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.91	0.417	1
Benzo(g,h,i)perylene	ND		ug/kg	2.91	0.287	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	87		50-130
Phenanthrene-d10	87		50-130
Benzo(a)pyrene-d12	92		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-73

Date Collected: 06/10/23 20:30

Client ID: WMCOMP07

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8270E-SIM(M)

Extraction Date: 06/26/23 10:40

Analytical Date: 07/15/23 09:08

Cleanup Method: EPA 3611B

Analyst: MJS

Cleanup Date: 06/29/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.44	0.210	1
C1-Decalins	0.434	J	ug/kg	1.44	0.210	1
C2-Decalins	ND		ug/kg	1.44	0.210	1
C3-Decalins	ND		ug/kg	1.44	0.210	1
C4-Decalins	ND		ug/kg	1.44	0.210	1
Naphthalene	0.775	J	ug/kg	4.82	0.576	1
C1-Naphthalenes	ND		ug/kg	4.82	0.576	1
C2-Naphthalenes	ND		ug/kg	4.82	0.576	1
C3-Naphthalenes	ND		ug/kg	4.82	0.576	1
C4-Naphthalenes	ND		ug/kg	4.82	0.576	1
2-Methylnaphthalene	ND		ug/kg	2.89	0.364	1
1-Methylnaphthalene	ND		ug/kg	2.89	0.324	1
Benzothiophene	ND		ug/kg	2.89	0.168	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
Biphenyl	0.361	J	ug/kg	2.89	0.351	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.89	0.180	1
Dibenzofuran	ND		ug/kg	2.89	0.374	1
Acenaphthylene	ND		ug/kg	2.89	0.168	1
Acenaphthene	ND		ug/kg	2.89	0.202	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.89	0.391	1
Fluorene	ND		ug/kg	2.89	0.333	1
C1-Fluorenes	ND		ug/kg	2.89	0.333	1
C2-Fluorenes	ND		ug/kg	2.89	0.333	1
C3-Fluorenes	ND		ug/kg	2.89	0.333	1
Dibenzothiophene	ND		ug/kg	2.89	0.224	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-73

Date Collected: 06/10/23 20:30

Client ID: WMCOMP07

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.89	0.224	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.89	0.224	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.89	0.224	1
C1-Dibenzothiophenes BS	0.285	J	ug/kg	2.89	0.224	1
C2-Dibenzothiophenes	0.652	J	ug/kg	2.89	0.224	1
C3-Dibenzothiophenes	ND		ug/kg	2.89	0.224	1
C4-Dibenzothiophenes	ND		ug/kg	2.89	0.224	1
Phenanthrene	0.710	J	ug/kg	2.89	0.318	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.89	0.318	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.89	0.318	1
2-Methylanthracene (2MA)	ND		ug/kg	2.89	0.318	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.89	0.318	1
C1-Phenanthrenes/Anthracenes	0.500	J	ug/kg	2.89	0.318	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.89	0.318	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.89	0.318	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.89	0.318	1
Retene	ND		ug/kg	2.89	0.397	1
Anthracene	ND		ug/kg	2.89	0.162	1
Carbazole	ND		ug/kg	2.89	1.06	1
1-Methylphenanthrene	ND		ug/kg	2.89	0.188	1
Fluoranthene	0.413	J	ug/kg	2.89	0.297	1
Benzo(b)fluorene	ND		ug/kg	2.89	0.222	1
Pyrene	0.300	J	ug/kg	2.89	0.189	1
C1-Fluoranthenes/Pyrenes	0.413	J	ug/kg	2.89	0.189	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
Benz(a)anthracene	ND		ug/kg	2.89	0.435	1
Chrysene/Triphenylene	0.391	J	ug/kg	2.89	0.200	1
C1-Chrysenes	ND		ug/kg	2.89	0.200	1
C2-Chrysenes BS	ND		ug/kg	2.89	0.200	1
C3-Chrysenes	ND		ug/kg	2.89	0.200	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-73  
**Client ID:** WMCOMP07  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:30  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.89	0.200	1
Benzo(b)fluoranthene	0.305	J	ug/kg	2.89	0.190	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.89	0.300	1
Benzo(a)fluoranthene	ND		ug/kg	2.89	0.300	1
Benzo(e)pyrene	0.340	J	ug/kg	2.89	0.204	1
Benzo(a)pyrene	0.201	J	ug/kg	2.89	0.186	1
Perylene	0.533	J	ug/kg	2.89	0.276	1
Indeno(1,2,3-cd)pyrene	0.404	J	ug/kg	2.89	0.385	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.89	0.414	1
Benzo(g,h,i)perylene	0.681	J	ug/kg	2.89	0.285	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	80		50-130
Phenanthrene-d10	83		50-130
Benzo(a)pyrene-d12	93		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-74  
**Client ID:** WMCOMP08  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 21:45  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/15/23 10:32  
**Analyst:** MJS  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.44	0.210	1
C1-Decalins	ND		ug/kg	1.44	0.210	1
C2-Decalins	ND		ug/kg	1.44	0.210	1
C3-Decalins	ND		ug/kg	1.44	0.210	1
C4-Decalins	ND		ug/kg	1.44	0.210	1
Naphthalene	0.698	J	ug/kg	4.82	0.576	1
C1-Naphthalenes	ND		ug/kg	4.82	0.576	1
C2-Naphthalenes	ND		ug/kg	4.82	0.576	1
C3-Naphthalenes	ND		ug/kg	4.82	0.576	1
C4-Naphthalenes	ND		ug/kg	4.82	0.576	1
2-Methylnaphthalene	ND		ug/kg	2.89	0.364	1
1-Methylnaphthalene	ND		ug/kg	2.89	0.324	1
Benzothiophene	ND		ug/kg	2.89	0.168	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.89	0.168	1
Biphenyl	0.397	J	ug/kg	2.89	0.351	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.89	0.180	1
Dibenzofuran	ND		ug/kg	2.89	0.374	1
Acenaphthylene	ND		ug/kg	2.89	0.168	1
Acenaphthene	ND		ug/kg	2.89	0.202	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.89	0.391	1
Fluorene	ND		ug/kg	2.89	0.333	1
C1-Fluorenes	ND		ug/kg	2.89	0.333	1
C2-Fluorenes	ND		ug/kg	2.89	0.333	1
C3-Fluorenes	ND		ug/kg	2.89	0.333	1
Dibenzothiophene	ND		ug/kg	2.89	0.224	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS****Lab ID:** L2330403-74**Date Collected:** 06/10/23 21:45**Client ID:** WMCOMP08**Date Received:** 06/10/23**Sample Location:** ALASKA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.89	0.224	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.89	0.224	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.89	0.224	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.89	0.224	1
C2-Dibenzothiophenes	ND		ug/kg	2.89	0.224	1
C3-Dibenzothiophenes	ND		ug/kg	2.89	0.224	1
C4-Dibenzothiophenes	ND		ug/kg	2.89	0.224	1
Phenanthrene	0.678	J	ug/kg	2.89	0.318	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.89	0.318	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.89	0.318	1
2-Methylanthracene (2MA)	ND		ug/kg	2.89	0.318	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.89	0.318	1
C1-Phenanthrenes/Anthracenes	0.338	J	ug/kg	2.89	0.318	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.89	0.318	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.89	0.318	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.89	0.318	1
Retene	ND		ug/kg	2.89	0.397	1
Anthracene	ND		ug/kg	2.89	0.162	1
Carbazole	ND		ug/kg	2.89	1.06	1
1-Methylphenanthrene	ND		ug/kg	2.89	0.188	1
Fluoranthene	0.341	J	ug/kg	2.89	0.297	1
Benzo(b)fluorene	ND		ug/kg	2.89	0.222	1
Pyrene	0.240	J	ug/kg	2.89	0.189	1
C1-Fluoranthenes/Pyrenes	0.314	J	ug/kg	2.89	0.189	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.89	0.189	1
Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.89	0.241	1
Benz(a)anthracene	ND		ug/kg	2.89	0.435	1
Chrysene/Triphenylene	0.356	J	ug/kg	2.89	0.200	1
C1-Chrysenes	ND		ug/kg	2.89	0.200	1
C2-Chrysenes BS	ND		ug/kg	2.89	0.200	1
C3-Chrysenes	ND		ug/kg	2.89	0.200	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-74  
**Client ID:** WMCOMP08  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 21:45  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.89	0.200	1
Benzo(b)fluoranthene	0.253	J	ug/kg	2.89	0.190	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.89	0.300	1
Benzo(a)fluoranthene	ND		ug/kg	2.89	0.300	1
Benzo(e)pyrene	0.254	J	ug/kg	2.89	0.204	1
Benzo(a)pyrene	0.196	J	ug/kg	2.89	0.186	1
Perylene	0.577	J	ug/kg	2.89	0.276	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.89	0.385	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.89	0.414	1
Benzo(g,h,i)perylene	0.309	J	ug/kg	2.89	0.285	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	88		50-130
Phenanthrene-d10	88		50-130
Benzo(a)pyrene-d12	93		50-130



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-75  
**Client ID:** WMCOMP09  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 22:20  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/15/23 11:57  
**Analyst:** MJS  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.45	0.210	1
C1-Decalins	ND		ug/kg	1.45	0.210	1
C2-Decalins	ND		ug/kg	1.45	0.210	1
C3-Decalins	ND		ug/kg	1.45	0.210	1
C4-Decalins	ND		ug/kg	1.45	0.210	1
Naphthalene	0.686	J	ug/kg	4.83	0.577	1
C1-Naphthalenes	ND		ug/kg	4.83	0.577	1
C2-Naphthalenes	ND		ug/kg	4.83	0.577	1
C3-Naphthalenes	ND		ug/kg	4.83	0.577	1
C4-Naphthalenes	ND		ug/kg	4.83	0.577	1
2-Methylnaphthalene	ND		ug/kg	2.90	0.365	1
1-Methylnaphthalene	ND		ug/kg	2.90	0.324	1
Benzothiophene	ND		ug/kg	2.90	0.168	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.90	0.168	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.90	0.168	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.90	0.168	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.90	0.168	1
Biphenyl	0.421	J	ug/kg	2.90	0.351	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.90	0.180	1
Dibenzofuran	ND		ug/kg	2.90	0.374	1
Acenaphthylene	ND		ug/kg	2.90	0.168	1
Acenaphthene	ND		ug/kg	2.90	0.203	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.90	0.392	1
Fluorene	ND		ug/kg	2.90	0.334	1
C1-Fluorenes	ND		ug/kg	2.90	0.334	1
C2-Fluorenes	ND		ug/kg	2.90	0.334	1
C3-Fluorenes	ND		ug/kg	2.90	0.334	1
Dibenzothiophene	ND		ug/kg	2.90	0.224	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS****Lab ID:** L2330403-75**Date Collected:** 06/10/23 22:20**Client ID:** WMCOMP09**Date Received:** 06/10/23**Sample Location:** ALASKA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.90	0.224	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.90	0.224	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.90	0.224	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.90	0.224	1
C2-Dibenzothiophenes	ND		ug/kg	2.90	0.224	1
C3-Dibenzothiophenes	ND		ug/kg	2.90	0.224	1
C4-Dibenzothiophenes	ND		ug/kg	2.90	0.224	1
Phenanthrene	0.890	J	ug/kg	2.90	0.318	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.90	0.318	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.90	0.318	1
2-Methylanthracene (2MA)	ND		ug/kg	2.90	0.318	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.90	0.318	1
C1-Phenanthrenes/Anthracenes	0.417	J	ug/kg	2.90	0.318	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.90	0.318	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.90	0.318	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.90	0.318	1
Retene	ND		ug/kg	2.90	0.398	1
Anthracene	ND		ug/kg	2.90	0.162	1
Carbazole	ND		ug/kg	2.90	1.06	1
1-Methylphenanthrene	ND		ug/kg	2.90	0.188	1
Fluoranthene	0.434	J	ug/kg	2.90	0.297	1
Benzo(b)fluorene	ND		ug/kg	2.90	0.222	1
Pyrene	0.368	J	ug/kg	2.90	0.189	1
C1-Fluoranthenes/Pyrenes	0.407	J	ug/kg	2.90	0.189	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.90	0.189	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.90	0.189	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.90	0.189	1
Naphthobenzothiophenes	ND		ug/kg	2.90	0.241	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.90	0.241	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.90	0.241	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.90	0.241	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.90	0.241	1
Benz(a)anthracene	ND		ug/kg	2.90	0.436	1
Chrysene/Triphenylene	0.395	J	ug/kg	2.90	0.201	1
C1-Chrysenes	0.209	J	ug/kg	2.90	0.201	1
C2-Chrysenes BS	ND		ug/kg	2.90	0.201	1
C3-Chrysenes	ND		ug/kg	2.90	0.201	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-75  
**Client ID:** WMCOMP09  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 22:20  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.90	0.201	1
Benzo(b)fluoranthene	0.282	J	ug/kg	2.90	0.191	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.90	0.301	1
Benzo(a)fluoranthene	ND		ug/kg	2.90	0.301	1
Benzo(e)pyrene	0.287	J	ug/kg	2.90	0.205	1
Benzo(a)pyrene	0.248	J	ug/kg	2.90	0.186	1
Perylene	0.467	J	ug/kg	2.90	0.276	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.90	0.386	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.90	0.415	1
Benzo(g,h,i)perylene	0.357	J	ug/kg	2.90	0.286	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	86		50-130
Phenanthrene-d10	90		50-130
Benzo(a)pyrene-d12	97		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-76  
**Client ID:** WMCOMP10  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 23:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/15/23 13:22  
**Analyst:** MJS  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
cis/trans-Decalin	ND		ug/kg	1.39	0.201	1
C1-Decalins	ND		ug/kg	1.39	0.201	1
C2-Decalins	ND		ug/kg	1.39	0.201	1
C3-Decalins	ND		ug/kg	1.39	0.201	1
C4-Decalins	ND		ug/kg	1.39	0.201	1
Naphthalene	ND		ug/kg	4.62	0.553	1
C1-Naphthalenes	ND		ug/kg	4.62	0.553	1
C2-Naphthalenes	ND		ug/kg	4.62	0.553	1
C3-Naphthalenes	ND		ug/kg	4.62	0.553	1
C4-Naphthalenes	ND		ug/kg	4.62	0.553	1
2-Methylnaphthalene	ND		ug/kg	2.77	0.349	1
1-Methylnaphthalene	ND		ug/kg	2.77	0.310	1
Benzothiophene	ND		ug/kg	2.77	0.161	1
C1-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
C2-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
C3-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
C4-Benzo(b)thiophenes	ND		ug/kg	2.77	0.161	1
Biphenyl	ND		ug/kg	2.77	0.336	1
2,6-Dimethylnaphthalene	ND		ug/kg	2.77	0.173	1
Dibenzofuran	ND		ug/kg	2.77	0.358	1
Acenaphthylene	ND		ug/kg	2.77	0.161	1
Acenaphthene	ND		ug/kg	2.77	0.194	1
2,3,5-Trimethylnaphthalene	ND		ug/kg	2.77	0.375	1
Fluorene	ND		ug/kg	2.77	0.320	1
C1-Fluorenes	ND		ug/kg	2.77	0.320	1
C2-Fluorenes	ND		ug/kg	2.77	0.320	1
C3-Fluorenes	ND		ug/kg	2.77	0.320	1
Dibenzothiophene	ND		ug/kg	2.77	0.214	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS****Lab ID:** L2330403-76**Date Collected:** 06/10/23 23:00**Client ID:** WMCOMP10**Date Received:** 06/10/23**Sample Location:** ALASKA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	2.77	0.214	1
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	2.77	0.214	1
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	2.77	0.214	1
C1-Dibenzothiophenes BS	ND		ug/kg	2.77	0.214	1
C2-Dibenzothiophenes	0.442	J	ug/kg	2.77	0.214	1
C3-Dibenzothiophenes	ND		ug/kg	2.77	0.214	1
C4-Dibenzothiophenes	ND		ug/kg	2.77	0.214	1
Phenanthrene	0.707	J	ug/kg	2.77	0.305	1
3-Methylphenanthrene (3MP)	ND		ug/kg	2.77	0.305	1
2-Methylphenanthrene (2MP)	ND		ug/kg	2.77	0.305	1
2-Methylanthracene (2MA)	ND		ug/kg	2.77	0.305	1
9/4-Methylphenanthrene (9MP)	ND		ug/kg	2.77	0.305	1
C1-Phenanthrenes/Anthracenes	0.308	J	ug/kg	2.77	0.305	1
C2-Phenanthrenes/Anthr BS	ND		ug/kg	2.77	0.305	1
C3-Phenanthrenes/Anthracenes	ND		ug/kg	2.77	0.305	1
C4-Phenanthrenes/Anthracenes	ND		ug/kg	2.77	0.305	1
Retene	ND		ug/kg	2.77	0.381	1
Anthracene	ND		ug/kg	2.77	0.156	1
Carbazole	ND		ug/kg	2.77	1.02	1
1-Methylphenanthrene	ND		ug/kg	2.77	0.180	1
Fluoranthene	ND		ug/kg	2.77	0.285	1
Benzo(b)fluorene	ND		ug/kg	2.77	0.212	1
Pyrene	ND		ug/kg	2.77	0.181	1
C1-Fluoranthenes/Pyrenes	ND		ug/kg	2.77	0.181	1
C2-Fluoranthenes/Pyrenes	ND		ug/kg	2.77	0.181	1
C3-Fluoranthenes/Pyrenes	ND		ug/kg	2.77	0.181	1
C4-Fluoranthenes/Pyrenes	ND		ug/kg	2.77	0.181	1
Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C1-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C2-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C3-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
C4-Naphthobenzothiophenes	ND		ug/kg	2.77	0.231	1
Benz(a)anthracene	ND		ug/kg	2.77	0.418	1
Chrysene/Triphenylene	ND		ug/kg	2.77	0.192	1
C1-Chrysenes	ND		ug/kg	2.77	0.192	1
C2-Chrysenes BS	ND		ug/kg	2.77	0.192	1
C3-Chrysenes	ND		ug/kg	2.77	0.192	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-76  
**Client ID:** WMCOMP10  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 23:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs - Mansfield Lab						
C4-Chrysenes	ND		ug/kg	2.77	0.192	1
Benzo(b)fluoranthene	ND		ug/kg	2.77	0.183	1
Benzo(j)+(k)fluoranthene	ND		ug/kg	2.77	0.288	1
Benzo(a)fluoranthene	ND		ug/kg	2.77	0.288	1
Benzo(e)pyrene	ND		ug/kg	2.77	0.196	1
Benzo(a)pyrene	ND		ug/kg	2.77	0.178	1
Perylene	ND		ug/kg	2.77	0.264	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2.77	0.370	1
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	2.77	0.397	1
Benzo(g,h,i)perylene	ND		ug/kg	2.77	0.274	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	83		50-130
Phenanthrene-d10	86		50-130
Benzo(a)pyrene-d12	95		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/02/23 13:41  
**Analyst:** CNC

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-06,10-14,18-19 Batch: WG1795261-1					
cis/trans-Decalin	ND		ug/kg	1.50	0.218
C1-Decalins	ND		ug/kg	1.50	0.218
C2-Decalins	ND		ug/kg	1.50	0.218
C3-Decalins	ND		ug/kg	1.50	0.218
C4-Decalins	ND		ug/kg	1.50	0.218
Naphthalene	ND		ug/kg	5.00	0.598
C1-Naphthalenes	ND		ug/kg	5.00	0.598
C2-Naphthalenes	ND		ug/kg	5.00	0.598
C3-Naphthalenes	ND		ug/kg	5.00	0.598
C4-Naphthalenes	ND		ug/kg	5.00	0.598
2-Methylnaphthalene	ND		ug/kg	3.00	0.378
1-Methylnaphthalene	ND		ug/kg	3.00	0.336
Benzothiophene	ND		ug/kg	3.00	0.175
C1-Benzo(b)thiophenes	ND		ug/kg	3.00	0.175
C2-Benzo(b)thiophenes	ND		ug/kg	3.00	0.175
C3-Benzo(b)thiophenes	ND		ug/kg	3.00	0.175
C4-Benzo(b)thiophenes	ND		ug/kg	3.00	0.175
Biphenyl	ND		ug/kg	3.00	0.364
2,6-Dimethylnaphthalene	ND		ug/kg	3.00	0.187
Dibenzofuran	ND		ug/kg	3.00	0.388
Acenaphthylene	ND		ug/kg	3.00	0.175
Acenaphthene	ND		ug/kg	3.00	0.210
2,3,5-Trimethylnaphthalene	ND		ug/kg	3.00	0.406
Fluorene	ND		ug/kg	3.00	0.346
C1-Fluorenes	1.16	J	ug/kg	3.00	0.346
C2-Fluorenes	1.76	J	ug/kg	3.00	0.346
C3-Fluorenes	ND		ug/kg	3.00	0.346
Dibenzothiophene	0.692	J	ug/kg	3.00	0.232
4-Methyldibenzothiophene(4MDT)	0.444	J	ug/kg	3.00	0.232

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/02/23 13:41  
**Analyst:** CNC

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-06,10-14,18-19 Batch: WG1795261-1					
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	3.00	0.232
1-Methyldibenzothiophene(1MDT)	0.543	J	ug/kg	3.00	0.232
C1-Dibenzothiophenes BS	1.34	J	ug/kg	3.00	0.232
C2-Dibenzothiophenes	2.21	J	ug/kg	3.00	0.232
C3-Dibenzothiophenes	1.74	J	ug/kg	3.00	0.232
C4-Dibenzothiophenes	ND		ug/kg	3.00	0.232
Phenanthrene	1.03	J	ug/kg	3.00	0.330
3-Methylphenanthrene (3MP)	ND		ug/kg	3.00	0.330
2-Methylphenanthrene (2MP)	ND		ug/kg	3.00	0.330
2-Methylanthracene (2MA)	ND		ug/kg	3.00	0.330
9/4-Methylphenanthrene (9MP)	ND		ug/kg	3.00	0.330
C1-Phenanthrenes/Anthracenes	1.23	J	ug/kg	3.00	0.330
C2-Phenanthrenes/Anthr BS	1.02	J	ug/kg	3.00	0.330
C3-Phenanthrenes/Anthracenes	0.779	J	ug/kg	3.00	0.330
C4-Phenanthrenes/Anthracenes	ND		ug/kg	3.00	0.330
Retene	0.539	J	ug/kg	3.00	0.412
Anthracene	0.185	J	ug/kg	3.00	0.168
Carbazole	ND		ug/kg	3.00	1.10
1-Methylphenanthrene	0.399	J	ug/kg	3.00	0.195
Fluoranthene	0.424	J	ug/kg	3.00	0.308
Benzo(b)fluorene	0.540	J	ug/kg	3.00	0.230
Pyrene	0.454	J	ug/kg	3.00	0.196
C1-Fluoranthenes/Pyrenes	1.07	J	ug/kg	3.00	0.196
C2-Fluoranthenes/Pyrenes	ND		ug/kg	3.00	0.196
C3-Fluoranthenes/Pyrenes	ND		ug/kg	3.00	0.196
C4-Fluoranthenes/Pyrenes	ND		ug/kg	3.00	0.196
Naphthobenzothiophenes	0.641	J	ug/kg	3.00	0.250
C1-Naphthobenzothiophenes	0.760	J	ug/kg	3.00	0.250
C2-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/02/23 13:41  
**Analyst:** CNC

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-06,10-14,18-19 Batch: WG1795261-1					
C3-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250
C4-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250
Benz(a)anthracene	0.694	J	ug/kg	3.00	0.452
Chrysene/Triphenylene	0.846	J	ug/kg	3.00	0.208
C1-Chrysenes	0.493	J	ug/kg	3.00	0.208
C2-Chrysenes BS	ND		ug/kg	3.00	0.208
C3-Chrysenes	ND		ug/kg	3.00	0.208
C4-Chrysenes	ND		ug/kg	3.00	0.208
Benzo(b)fluoranthene	0.865	J	ug/kg	3.00	0.198
Benzo(j)+(k)fluoranthene	0.763	J	ug/kg	3.00	0.312
Benzo(a)fluoranthene	ND		ug/kg	3.00	0.312
Benzo(e)pyrene	0.925	J	ug/kg	3.00	0.212
Benzo(a)pyrene	0.784	J	ug/kg	3.00	0.193
Perylene	0.760	J	ug/kg	3.00	0.286
Indeno(1,2,3-cd)pyrene	1.53	J	ug/kg	3.00	0.400
Dibenz(a,h)+(a,c)anthracene	0.902	J	ug/kg	3.00	0.430
Benzo(g,h,i)perylene	2.11	J	ug/kg	3.00	0.296

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	52		50-130
Phenanthrene-d10	59		50-130
Benzo(a)pyrene-d12	70		50-130



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/14/23 14:51  
**Analyst:** MJS

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 20,43,45,67-76 Batch: WG1796063-1					
cis/trans-Decalin	ND		ug/kg	1.50	0.218
C1-Decalins	ND		ug/kg	1.50	0.218
C2-Decalins	ND		ug/kg	1.50	0.218
C3-Decalins	ND		ug/kg	1.50	0.218
C4-Decalins	ND		ug/kg	1.50	0.218
Naphthalene	ND		ug/kg	5.00	0.598
C1-Naphthalenes	ND		ug/kg	5.00	0.598
C2-Naphthalenes	ND		ug/kg	5.00	0.598
C3-Naphthalenes	ND		ug/kg	5.00	0.598
C4-Naphthalenes	ND		ug/kg	5.00	0.598
2-Methylnaphthalene	ND		ug/kg	3.00	0.378
1-Methylnaphthalene	ND		ug/kg	3.00	0.336
Benzothiophene	ND		ug/kg	3.00	0.175
C1-Benzo(b)thiophenes	ND		ug/kg	3.00	0.175
C2-Benzo(b)thiophenes	ND		ug/kg	3.00	0.175
C3-Benzo(b)thiophenes	ND		ug/kg	3.00	0.175
C4-Benzo(b)thiophenes	ND		ug/kg	3.00	0.175
Biphenyl	ND		ug/kg	3.00	0.364
2,6-Dimethylnaphthalene	ND		ug/kg	3.00	0.187
Dibenzofuran	ND		ug/kg	3.00	0.388
Acenaphthylene	ND		ug/kg	3.00	0.175
Acenaphthene	ND		ug/kg	3.00	0.210
2,3,5-Trimethylnaphthalene	ND		ug/kg	3.00	0.406
Fluorene	ND		ug/kg	3.00	0.346
C1-Fluorenes	ND		ug/kg	3.00	0.346
C2-Fluorenes	ND		ug/kg	3.00	0.346
C3-Fluorenes	ND		ug/kg	3.00	0.346
Dibenzothiophene	ND		ug/kg	3.00	0.232
4-Methyldibenzothiophene(4MDT)	ND		ug/kg	3.00	0.232

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8270E-SIM(M)  
**Analytical Date:** 07/14/23 14:51  
**Analyst:** MJS

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 20,43,45,67-76 Batch: WG1796063-1					
2/3-Methyldibenzothiophene(2MDT)	ND		ug/kg	3.00	0.232
1-Methyldibenzothiophene(1MDT)	ND		ug/kg	3.00	0.232
C1-Dibenzothiophenes BS	ND		ug/kg	3.00	0.232
C2-Dibenzothiophenes	ND		ug/kg	3.00	0.232
C3-Dibenzothiophenes	ND		ug/kg	3.00	0.232
C4-Dibenzothiophenes	ND		ug/kg	3.00	0.232
Phenanthrene	0.780	J	ug/kg	3.00	0.330
3-Methylphenanthrene (3MP)	ND		ug/kg	3.00	0.330
2-Methylphenanthrene (2MP)	ND		ug/kg	3.00	0.330
2-Methylanthracene (2MA)	ND		ug/kg	3.00	0.330
9/4-Methylphenanthrene (9MP)	ND		ug/kg	3.00	0.330
C1-Phenanthrenes/Anthracenes	ND		ug/kg	3.00	0.330
C2-Phenanthrenes/Anthr BS	ND		ug/kg	3.00	0.330
C3-Phenanthrenes/Anthracenes	ND		ug/kg	3.00	0.330
C4-Phenanthrenes/Anthracenes	ND		ug/kg	3.00	0.330
Retene	ND		ug/kg	3.00	0.412
Anthracene	ND		ug/kg	3.00	0.168
Carbazole	ND		ug/kg	3.00	1.10
1-Methylphenanthrene	ND		ug/kg	3.00	0.195
Fluoranthene	0.349	J	ug/kg	3.00	0.308
Benzo(b)fluorene	ND		ug/kg	3.00	0.230
Pyrene	ND		ug/kg	3.00	0.196
C1-Fluoranthenes/Pyrenes	ND		ug/kg	3.00	0.196
C2-Fluoranthenes/Pyrenes	ND		ug/kg	3.00	0.196
C3-Fluoranthenes/Pyrenes	ND		ug/kg	3.00	0.196
C4-Fluoranthenes/Pyrenes	ND		ug/kg	3.00	0.196
Naphthobenzothiophenes	ND		ug/kg	3.00	0.250
C1-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250
C2-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM(M)  
 Analytical Date: 07/14/23 14:51  
 Analyst: MJS

Extraction Method: ALPHA OP-018  
 Extraction Date: 06/26/23 10:40  
 Cleanup Method: EPA 3611B  
 Cleanup Date: 06/29/23  
 Cleanup Method: EPA 3640A  
 Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 20,43,45,67-76 Batch: WG1796063-1					
C3-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250
C4-Naphthobenzothiophenes	ND		ug/kg	3.00	0.250
Benz(a)anthracene	ND		ug/kg	3.00	0.452
Chrysene/Triphenylene	ND		ug/kg	3.00	0.208
C1-Chrysenes	ND		ug/kg	3.00	0.208
C2-Chrysenes BS	ND		ug/kg	3.00	0.208
C3-Chrysenes	ND		ug/kg	3.00	0.208
C4-Chrysenes	ND		ug/kg	3.00	0.208
Benzo(b)fluoranthene	ND		ug/kg	3.00	0.198
Benzo(j)+(k)fluoranthene	ND		ug/kg	3.00	0.312
Benzo(a)fluoranthene	ND		ug/kg	3.00	0.312
Benzo(e)pyrene	ND		ug/kg	3.00	0.212
Benzo(a)pyrene	ND		ug/kg	3.00	0.193
Perylene	ND		ug/kg	3.00	0.286
Indeno(1,2,3-cd)pyrene	ND		ug/kg	3.00	0.400
Dibenz(a,h)+(a,c)anthracene	ND		ug/kg	3.00	0.430
Benzo(g,h,i)perylene	ND		ug/kg	3.00	0.296

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	78		50-130
Phenanthrene-d10	85		50-130
Benzo(a)pyrene-d12	93		50-130



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WESTEN MARINER OIL SPILL NRDA

**Project Number:** Not Specified

**Lab Number:** L2330403

**Report Date:** 07/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-06,10-14,18-19 Batch: WG1795261-2 WG1795261-3								
Naphthalene	50		52		50-130	4		30
2-Methylnaphthalene	50		51		50-130	2		30
Acenaphthylene	57		53		50-130	7		30
Acenaphthene	58		55		50-130	5		30
Fluorene	67		58		50-130	14		30
Phenanthrene	76		60		50-130	24		30
Anthracene	75		60		50-130	22		30
Fluoranthene	81		52		50-130	44	Q	30
Pyrene	83		56		50-130	39	Q	30
Benz(a)anthracene	89		74		50-130	18		30
Chrysene/Triphenylene	78		69		50-130	12		30
Benzo(b)fluoranthene	86		74		50-130	15		30
Benzo(j)+(k)fluoranthene	85		73		50-130	15		30
Benzo(a)pyrene	76		67		50-130	13		30
Indeno(1,2,3-cd)pyrene	91		75		50-130	19		30
Dibenz(a,h)+(a,c)anthracene	92		79		50-130	15		30
Benzo(g,h,i)perylene	80		71		50-130	12		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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PAHs - Mansfield Lab Associated sample(s): 01-06,10-14,18-19 Batch: WG1795261-2 WG1795261-3

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Naphthalene-d8	57		54		50-130
Phenanthrene-d10	84		64		50-130
Benzo(a)pyrene-d12	97		76		50-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WESTEN MARINER OIL SPILL NRDA

**Lab Number:** L2330403

**Project Number:** Not Specified

**Report Date:** 07/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 20,43,45,67-76 Batch: WG1796063-2 WG1796063-3								
Naphthalene	71		76		50-130	7		30
2-Methylnaphthalene	68		75		50-130	10		30
Acenaphthylene	66		77		50-130	15		30
Acenaphthene	70		80		50-130	13		30
Fluorene	76		90		50-130	17		30
Phenanthrene	81		96		50-130	17		30
Anthracene	76		93		50-130	20		30
Fluoranthene	81		96		50-130	17		30
Pyrene	82		98		50-130	18		30
Benz(a)anthracene	89		104		50-130	16		30
Chrysene/Triphenylene	83		95		50-130	13		30
Benzo(b)fluoranthene	89		103		50-130	15		30
Benzo(j)+(k)fluoranthene	88		102		50-130	15		30
Benzo(a)pyrene	76		89		50-130	16		30
Indeno(1,2,3-cd)pyrene	86		97		50-130	12		30
Dibenz(a,h)+(a,c)anthracene	85		100		50-130	16		30
Benzo(g,h,i)perylene	78		90		50-130	14		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
PAHs - Mansfield Lab Associated sample(s): 20,43,45,67-76 Batch: WG1796063-2 WG1796063-3								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Naphthalene-d8	74		80		50-130
Phenanthrene-d10	81		97		50-130
Benzo(a)pyrene-d12	85		100		50-130



# **PETROLEUM HYDROCARBONS**

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-01  
**Client ID:** WM001  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:24  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/04/23 06:38  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.186	0.055	1
n-Decane (C10)	ND		mg/kg	0.186	0.060	1
n-Undecane (C11)	ND		mg/kg	0.186	0.056	1
n-Dodecane (C12)	ND		mg/kg	0.186	0.041	1
n-Tridecane (C13)	ND		mg/kg	0.186	0.051	1
2,6,10-Trimethyldodecane (1380)	0.041	J	mg/kg	0.186	0.028	1
n-Tetradecane (C14)	0.029	J	mg/kg	0.186	0.028	1
2,6,10-Trimethyltridecane (1470)	0.074	J	mg/kg	0.186	0.022	1
n-Pentadecane (C15)	0.060	J	mg/kg	0.186	0.022	1
n-Hexadecane (C16)	0.048	J	mg/kg	0.186	0.028	1
Norpristane (1650)	ND		mg/kg	0.186	0.062	1
n-Heptadecane (C17)	ND		mg/kg	0.186	0.062	1
Pristane	0.068	J	mg/kg	0.186	0.040	1
n-Octadecane (C18)	ND		mg/kg	0.186	0.037	1
Phytane	0.050	J	mg/kg	0.186	0.023	1
n-Nonadecane (C19)	ND		mg/kg	0.186	0.048	1
n-Eicosane (C20)	ND		mg/kg	0.186	0.026	1
n-Heneicosane (C21)	ND		mg/kg	0.186	0.022	1
n-Docosane (C22)	ND		mg/kg	0.186	0.019	1
n-Tricosane (C23)	0.044	J	mg/kg	0.186	0.024	1
n-Tetracosane (C24)	0.050	J	mg/kg	0.186	0.031	1
n-Pentacosane (C25)	ND		mg/kg	0.186	0.099	1
n-Hexacosane (C26)	0.048	J	mg/kg	0.186	0.027	1
n-Heptacosane (C27)	0.049	J	mg/kg	0.186	0.023	1
n-Octacosane (C28)	0.043	J	mg/kg	0.186	0.040	1
n-Nonacosane (C29)	ND		mg/kg	0.186	0.124	1
n-Triacontane (C30)	0.028	J	mg/kg	0.186	0.021	1
n-Hentriacontane (C31)	ND		mg/kg	0.186	0.026	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-01  
**Client ID:** WM001  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:24  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.186	0.024	1
n-Tritriacontane (C33)	ND		mg/kg	0.186	0.026	1
n-Tetratriacontane (C34)	ND		mg/kg	0.186	0.030	1
n-Pentatriacontane (C35)	ND		mg/kg	0.186	0.033	1
n-Hexatriacontane (C36)	ND		mg/kg	0.186	0.037	1
n-Heptatriacontane (C37)	ND		mg/kg	0.186	0.041	1
n-Octatriacontane (C38)	ND		mg/kg	0.186	0.044	1
n-Nonatriacontane (C39)	ND		mg/kg	0.186	0.061	1
n-Tetracontane (C40)	ND		mg/kg	0.186	0.061	1
Total Petroleum Hydrocarbons (C9-C44)	43.3		mg/kg	6.16	1.35	1
Total Saturated Hydrocarbons	0.632	J	mg/kg	0.186	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	96		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-02  
**Client ID:** WM002  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/04/23 08:06  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	0.065	J	mg/kg	0.196	0.058	1
n-Decane (C10)	ND		mg/kg	0.196	0.063	1
n-Undecane (C11)	ND		mg/kg	0.196	0.059	1
n-Dodecane (C12)	ND		mg/kg	0.196	0.043	1
n-Tridecane (C13)	ND		mg/kg	0.196	0.054	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.196	0.030	1
n-Tetradecane (C14)	ND		mg/kg	0.196	0.030	1
2,6,10-Trimethyltridecane (1470)	0.050	J	mg/kg	0.196	0.023	1
n-Pentadecane (C15)	ND		mg/kg	0.196	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.196	0.030	1
Norpristane (1650)	ND		mg/kg	0.196	0.065	1
n-Heptadecane (C17)	ND		mg/kg	0.196	0.065	1
Pristane	ND		mg/kg	0.196	0.042	1
n-Octadecane (C18)	ND		mg/kg	0.196	0.039	1
Phytane	ND		mg/kg	0.196	0.025	1
n-Nonadecane (C19)	ND		mg/kg	0.196	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.196	0.028	1
n-Heneicosane (C21)	ND		mg/kg	0.196	0.024	1
n-Docosane (C22)	ND		mg/kg	0.196	0.020	1
n-Tricosane (C23)	0.042	J	mg/kg	0.196	0.025	1
n-Tetracosane (C24)	0.061	J	mg/kg	0.196	0.033	1
n-Pentacosane (C25)	ND		mg/kg	0.196	0.104	1
n-Hexacosane (C26)	0.084	J	mg/kg	0.196	0.029	1
n-Heptacosane (C27)	0.092	J	mg/kg	0.196	0.024	1
n-Octacosane (C28)	0.084	J	mg/kg	0.196	0.042	1
n-Nonacosane (C29)	ND		mg/kg	0.196	0.131	1
n-Triacontane (C30)	0.048	J	mg/kg	0.196	0.023	1
n-Hentriacontane (C31)	0.037	J	mg/kg	0.196	0.028	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-02  
**Client ID:** WM002  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.196	0.025	1
n-Tritriacontane (C33)	ND		mg/kg	0.196	0.028	1
n-Tetratriacontane (C34)	ND		mg/kg	0.196	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.196	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.196	0.039	1
n-Heptatriacontane (C37)	ND		mg/kg	0.196	0.044	1
n-Octatriacontane (C38)	ND		mg/kg	0.196	0.046	1
n-Nonatriacontane (C39)	ND		mg/kg	0.196	0.064	1
n-Tetracontane (C40)	ND		mg/kg	0.196	0.064	1
Total Petroleum Hydrocarbons (C9-C44)	6.16	J	mg/kg	6.47	1.42	1
Total Saturated Hydrocarbons	0.563	J	mg/kg	0.196	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	97		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-03  
**Client ID:** WM003  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:37  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/04/23 13:55  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.200	0.059	1
n-Decane (C10)	ND		mg/kg	0.200	0.064	1
n-Undecane (C11)	ND		mg/kg	0.200	0.060	1
n-Dodecane (C12)	0.107	J	mg/kg	0.200	0.044	1
n-Tridecane (C13)	0.121	J	mg/kg	0.200	0.055	1
2,6,10-Trimethyldodecane (1380)	0.670		mg/kg	0.200	0.030	1
n-Tetradecane (C14)	0.227		mg/kg	0.200	0.030	1
2,6,10-Trimethyltridecane (1470)	0.911		mg/kg	0.200	0.024	1
n-Pentadecane (C15)	0.378		mg/kg	0.200	0.024	1
n-Hexadecane (C16)	ND		mg/kg	0.200	0.030	1
Norpristane (1650)	ND		mg/kg	0.200	0.066	1
n-Heptadecane (C17)	ND		mg/kg	0.200	0.066	1
Pristane	0.632		mg/kg	0.200	0.043	1
n-Octadecane (C18)	ND		mg/kg	0.200	0.040	1
Phytane	0.402		mg/kg	0.200	0.025	1
n-Nonadecane (C19)	0.285		mg/kg	0.200	0.051	1
n-Eicosane (C20)	ND		mg/kg	0.200	0.028	1
n-Heneicosane (C21)	ND		mg/kg	0.200	0.024	1
n-Docosane (C22)	0.054	J	mg/kg	0.200	0.021	1
n-Tricosane (C23)	0.087	J	mg/kg	0.200	0.025	1
n-Tetracosane (C24)	0.107	J	mg/kg	0.200	0.034	1
n-Pentacosane (C25)	0.121	J	mg/kg	0.200	0.106	1
n-Hexacosane (C26)	0.109	J	mg/kg	0.200	0.029	1
n-Heptacosane (C27)	0.116	J	mg/kg	0.200	0.024	1
n-Octacosane (C28)	0.098	J	mg/kg	0.200	0.043	1
n-Nonacosane (C29)	ND		mg/kg	0.200	0.133	1
n-Triacontane (C30)	0.064	J	mg/kg	0.200	0.023	1
n-Hentriacontane (C31)	0.052	J	mg/kg	0.200	0.028	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-03  
**Client ID:** WM003  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:37  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.029	J	mg/kg	0.200	0.025	1
n-Tritriacontane (C33)	ND		mg/kg	0.200	0.028	1
n-Tetratriacontane (C34)	ND		mg/kg	0.200	0.032	1
n-Pentatriacontane (C35)	ND		mg/kg	0.200	0.035	1
n-Hexatriacontane (C36)	ND		mg/kg	0.200	0.040	1
n-Heptatriacontane (C37)	ND		mg/kg	0.200	0.044	1
n-Octatriacontane (C38)	ND		mg/kg	0.200	0.047	1
n-Nonatriacontane (C39)	ND		mg/kg	0.200	0.065	1
n-Tetracontane (C40)	ND		mg/kg	0.200	0.065	1
Total Petroleum Hydrocarbons (C9-C44)	258		mg/kg	6.60	1.45	1
Total Saturated Hydrocarbons	4.57	J	mg/kg	0.200	0.021	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	94		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-04

Date Collected: 03/23/23 08:44

Client ID: WM004

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8015D(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/04/23 15:23

Cleanup Method: EPA 3611B

Analyst: AMV

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.186	0.055	1
n-Decane (C10)	ND		mg/kg	0.186	0.059	1
n-Undecane (C11)	ND		mg/kg	0.186	0.056	1
n-Dodecane (C12)	ND		mg/kg	0.186	0.041	1
n-Tridecane (C13)	ND		mg/kg	0.186	0.051	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.186	0.028	1
n-Tetradecane (C14)	ND		mg/kg	0.186	0.028	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.186	0.022	1
n-Pentadecane (C15)	0.035	J	mg/kg	0.186	0.022	1
n-Hexadecane (C16)	ND		mg/kg	0.186	0.028	1
Norpristane (1650)	ND		mg/kg	0.186	0.061	1
n-Heptadecane (C17)	ND		mg/kg	0.186	0.061	1
Pristane	ND		mg/kg	0.186	0.040	1
n-Octadecane (C18)	ND		mg/kg	0.186	0.037	1
Phytane	ND		mg/kg	0.186	0.023	1
n-Nonadecane (C19)	ND		mg/kg	0.186	0.048	1
n-Eicosane (C20)	ND		mg/kg	0.186	0.026	1
n-Heneicosane (C21)	ND		mg/kg	0.186	0.022	1
n-Docosane (C22)	ND		mg/kg	0.186	0.019	1
n-Tricosane (C23)	ND		mg/kg	0.186	0.024	1
n-Tetracosane (C24)	ND		mg/kg	0.186	0.031	1
n-Pentacosane (C25)	ND		mg/kg	0.186	0.098	1
n-Hexacosane (C26)	ND		mg/kg	0.186	0.027	1
n-Heptacosane (C27)	0.028	J	mg/kg	0.186	0.022	1
n-Octacosane (C28)	ND		mg/kg	0.186	0.040	1
n-Nonacosane (C29)	ND		mg/kg	0.186	0.124	1
n-Triacontane (C30)	ND		mg/kg	0.186	0.021	1
n-Hentriacontane (C31)	ND		mg/kg	0.186	0.026	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-04  
**Client ID:** WM004  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:44  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.186	0.023	1
n-Tritriacontane (C33)	ND		mg/kg	0.186	0.026	1
n-Tetratriacontane (C34)	ND		mg/kg	0.186	0.030	1
n-Pentatriacontane (C35)	ND		mg/kg	0.186	0.032	1
n-Hexatriacontane (C36)	ND		mg/kg	0.186	0.037	1
n-Heptatriacontane (C37)	ND		mg/kg	0.186	0.041	1
n-Octatriacontane (C38)	ND		mg/kg	0.186	0.043	1
n-Nonatriacontane (C39)	ND		mg/kg	0.186	0.060	1
n-Tetracontane (C40)	ND		mg/kg	0.186	0.060	1
Total Petroleum Hydrocarbons (C9-C44)	17.5		mg/kg	6.13	1.35	1
Total Saturated Hydrocarbons	0.063	J	mg/kg	0.186	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	97		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-05

Date Collected: 03/23/23 08:44

Client ID: WM005

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8015D(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/04/23 16:50

Cleanup Method: EPA 3611B

Analyst: AMV

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.185	0.055	1
n-Decane (C10)	ND		mg/kg	0.185	0.059	1
n-Undecane (C11)	ND		mg/kg	0.185	0.055	1
n-Dodecane (C12)	ND		mg/kg	0.185	0.040	1
n-Tridecane (C13)	ND		mg/kg	0.185	0.051	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.185	0.028	1
n-Tetradecane (C14)	ND		mg/kg	0.185	0.028	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.185	0.022	1
n-Pentadecane (C15)	ND		mg/kg	0.185	0.022	1
n-Hexadecane (C16)	ND		mg/kg	0.185	0.028	1
Norpristane (1650)	ND		mg/kg	0.185	0.061	1
n-Heptadecane (C17)	ND		mg/kg	0.185	0.061	1
Pristane	ND		mg/kg	0.185	0.040	1
n-Octadecane (C18)	ND		mg/kg	0.185	0.037	1
Phytane	ND		mg/kg	0.185	0.023	1
n-Nonadecane (C19)	ND		mg/kg	0.185	0.048	1
n-Eicosane (C20)	ND		mg/kg	0.185	0.026	1
n-Heneicosane (C21)	ND		mg/kg	0.185	0.022	1
n-Docosane (C22)	ND		mg/kg	0.185	0.019	1
n-Tricosane (C23)	0.027	J	mg/kg	0.185	0.024	1
n-Tetracosane (C24)	0.034	J	mg/kg	0.185	0.031	1
n-Pentacosane (C25)	ND		mg/kg	0.185	0.098	1
n-Hexacosane (C26)	0.041	J	mg/kg	0.185	0.027	1
n-Heptacosane (C27)	0.042	J	mg/kg	0.185	0.022	1
n-Octacosane (C28)	ND		mg/kg	0.185	0.040	1
n-Nonacosane (C29)	ND		mg/kg	0.185	0.123	1
n-Triacontane (C30)	0.024	J	mg/kg	0.185	0.021	1
n-Hentriacontane (C31)	ND		mg/kg	0.185	0.026	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-05  
**Client ID:** WM005  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:44  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.185	0.023	1
n-Tritriacontane (C33)	ND		mg/kg	0.185	0.026	1
n-Tetratriacontane (C34)	ND		mg/kg	0.185	0.030	1
n-Pentatriacontane (C35)	ND		mg/kg	0.185	0.032	1
n-Hexatriacontane (C36)	ND		mg/kg	0.185	0.037	1
n-Heptatriacontane (C37)	ND		mg/kg	0.185	0.041	1
n-Octatriacontane (C38)	ND		mg/kg	0.185	0.043	1
n-Nonatriacontane (C39)	ND		mg/kg	0.185	0.060	1
n-Tetracontane (C40)	ND		mg/kg	0.185	0.060	1
Total Petroleum Hydrocarbons (C9-C44)	15.8		mg/kg	6.11	1.34	1
Total Saturated Hydrocarbons	0.168	J	mg/kg	0.185	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	97		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-06  
**Client ID:** WM006  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:53  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/04/23 18:17  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.184	0.055	1
n-Decane (C10)	ND		mg/kg	0.184	0.059	1
n-Undecane (C11)	ND		mg/kg	0.184	0.055	1
n-Dodecane (C12)	ND		mg/kg	0.184	0.040	1
n-Tridecane (C13)	ND		mg/kg	0.184	0.051	1
2,6,10-Trimethyldodecane (1380)	0.058	J	mg/kg	0.184	0.028	1
n-Tetradecane (C14)	0.043	J	mg/kg	0.184	0.028	1
2,6,10-Trimethyltridecane (1470)	0.067	J	mg/kg	0.184	0.022	1
n-Pentadecane (C15)	0.076	J	mg/kg	0.184	0.022	1
n-Hexadecane (C16)	0.052	J	mg/kg	0.184	0.028	1
Norpristane (1650)	ND		mg/kg	0.184	0.061	1
n-Heptadecane (C17)	ND		mg/kg	0.184	0.061	1
Pristane	0.046	J	mg/kg	0.184	0.039	1
n-Octadecane (C18)	ND		mg/kg	0.184	0.037	1
Phytane	ND		mg/kg	0.184	0.023	1
n-Nonadecane (C19)	ND		mg/kg	0.184	0.047	1
n-Eicosane (C20)	ND		mg/kg	0.184	0.026	1
n-Heneicosane (C21)	ND		mg/kg	0.184	0.022	1
n-Docosane (C22)	ND		mg/kg	0.184	0.019	1
n-Tricosane (C23)	0.044	J	mg/kg	0.184	0.024	1
n-Tetracosane (C24)	0.055	J	mg/kg	0.184	0.031	1
n-Pentacosane (C25)	ND		mg/kg	0.184	0.098	1
n-Hexacosane (C26)	0.084	J	mg/kg	0.184	0.027	1
n-Heptacosane (C27)	0.093	J	mg/kg	0.184	0.022	1
n-Octacosane (C28)	0.084	J	mg/kg	0.184	0.040	1
n-Nonacosane (C29)	ND		mg/kg	0.184	0.123	1
n-Triacontane (C30)	0.058	J	mg/kg	0.184	0.021	1
n-Hentriacontane (C31)	0.051	J	mg/kg	0.184	0.026	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-06  
**Client ID:** WM006  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:53  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.030	J	mg/kg	0.184	0.023	1
n-Tritriacontane (C33)	ND		mg/kg	0.184	0.026	1
n-Tetratriacontane (C34)	ND		mg/kg	0.184	0.029	1
n-Pentatriacontane (C35)	ND		mg/kg	0.184	0.032	1
n-Hexatriacontane (C36)	ND		mg/kg	0.184	0.037	1
n-Heptatriacontane (C37)	ND		mg/kg	0.184	0.041	1
n-Octatriacontane (C38)	ND		mg/kg	0.184	0.043	1
n-Nonatriacontane (C39)	ND		mg/kg	0.184	0.060	1
n-Tetracontane (C40)	ND		mg/kg	0.184	0.060	1
Total Petroleum Hydrocarbons (C9-C44)	42.5		mg/kg	6.09	1.34	1
Total Saturated Hydrocarbons	0.841	J	mg/kg	0.184	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	97		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-10

Date Collected: 03/23/23 09:24

Client ID: WM010

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8015D(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/04/23 19:45

Cleanup Method: EPA 3611B

Analyst: AMV

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.183	0.054	1
n-Decane (C10)	ND		mg/kg	0.183	0.059	1
n-Undecane (C11)	ND		mg/kg	0.183	0.055	1
n-Dodecane (C12)	ND		mg/kg	0.183	0.040	1
n-Tridecane (C13)	ND		mg/kg	0.183	0.050	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.183	0.028	1
n-Tetradecane (C14)	ND		mg/kg	0.183	0.028	1
2,6,10-Trimethyltridecane (1470)	0.024	J	mg/kg	0.183	0.022	1
n-Pentadecane (C15)	0.039	J	mg/kg	0.183	0.022	1
n-Hexadecane (C16)	ND		mg/kg	0.183	0.028	1
Norpristane (1650)	ND		mg/kg	0.183	0.061	1
n-Heptadecane (C17)	ND		mg/kg	0.183	0.061	1
Pristane	ND		mg/kg	0.183	0.039	1
n-Octadecane (C18)	ND		mg/kg	0.183	0.037	1
Phytane	ND		mg/kg	0.183	0.023	1
n-Nonadecane (C19)	ND		mg/kg	0.183	0.047	1
n-Eicosane (C20)	ND		mg/kg	0.183	0.026	1
n-Heneicosane (C21)	ND		mg/kg	0.183	0.022	1
n-Docosane (C22)	ND		mg/kg	0.183	0.019	1
n-Tricosane (C23)	0.026	J	mg/kg	0.183	0.023	1
n-Tetracosane (C24)	0.034	J	mg/kg	0.183	0.031	1
n-Pentacosane (C25)	ND		mg/kg	0.183	0.097	1
n-Hexacosane (C26)	0.038	J	mg/kg	0.183	0.027	1
n-Heptacosane (C27)	0.038	J	mg/kg	0.183	0.022	1
n-Octacosane (C28)	ND		mg/kg	0.183	0.039	1
n-Nonacosane (C29)	ND		mg/kg	0.183	0.122	1
n-Triacontane (C30)	ND		mg/kg	0.183	0.021	1
n-Hentriacontane (C31)	ND		mg/kg	0.183	0.026	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-10  
**Client ID:** WM010  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:24  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.183	0.023	1
n-Tritriacontane (C33)	ND		mg/kg	0.183	0.026	1
n-Tetratriacontane (C34)	ND		mg/kg	0.183	0.029	1
n-Pentatriacontane (C35)	ND		mg/kg	0.183	0.032	1
n-Hexatriacontane (C36)	ND		mg/kg	0.183	0.037	1
n-Heptatriacontane (C37)	ND		mg/kg	0.183	0.041	1
n-Octatriacontane (C38)	ND		mg/kg	0.183	0.043	1
n-Nonatriacontane (C39)	ND		mg/kg	0.183	0.060	1
n-Tetracontane (C40)	ND		mg/kg	0.183	0.060	1
Total Petroleum Hydrocarbons (C9-C44)	24.9		mg/kg	6.06	1.33	1
Total Saturated Hydrocarbons	0.198	J	mg/kg	0.183	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	99		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-11

Date Collected: 03/23/23 09:30

Client ID: WM011

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8015D(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/04/23 21:12

Cleanup Method: EPA 3611B

Analyst: AMV

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.168	0.050	1
n-Decane (C10)	ND		mg/kg	0.168	0.054	1
n-Undecane (C11)	ND		mg/kg	0.168	0.050	1
n-Dodecane (C12)	ND		mg/kg	0.168	0.037	1
n-Tridecane (C13)	ND		mg/kg	0.168	0.046	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.168	0.025	1
n-Tetradecane (C14)	ND		mg/kg	0.168	0.025	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.168	0.020	1
n-Pentadecane (C15)	0.027	J	mg/kg	0.168	0.020	1
n-Hexadecane (C16)	ND		mg/kg	0.168	0.025	1
Norpristane (1650)	ND		mg/kg	0.168	0.056	1
n-Heptadecane (C17)	ND		mg/kg	0.168	0.056	1
Pristane	ND		mg/kg	0.168	0.036	1
n-Octadecane (C18)	ND		mg/kg	0.168	0.034	1
Phytane	ND		mg/kg	0.168	0.021	1
n-Nonadecane (C19)	ND		mg/kg	0.168	0.043	1
n-Eicosane (C20)	ND		mg/kg	0.168	0.024	1
n-Heneicosane (C21)	ND		mg/kg	0.168	0.020	1
n-Docosane (C22)	ND		mg/kg	0.168	0.018	1
n-Tricosane (C23)	0.029	J	mg/kg	0.168	0.021	1
n-Tetracosane (C24)	0.036	J	mg/kg	0.168	0.028	1
n-Pentacosane (C25)	ND		mg/kg	0.168	0.089	1
n-Hexacosane (C26)	0.038	J	mg/kg	0.168	0.025	1
n-Heptacosane (C27)	0.037	J	mg/kg	0.168	0.020	1
n-Octacosane (C28)	ND		mg/kg	0.168	0.036	1
n-Nonacosane (C29)	ND		mg/kg	0.168	0.112	1
n-Triacontane (C30)	0.020	J	mg/kg	0.168	0.019	1
n-Hentriacontane (C31)	ND		mg/kg	0.168	0.024	1





**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-11  
**Client ID:** WM011  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.168	0.021	1
n-Tritriacontane (C33)	ND		mg/kg	0.168	0.024	1
n-Tetratriacontane (C34)	ND		mg/kg	0.168	0.027	1
n-Pentatriacontane (C35)	ND		mg/kg	0.168	0.029	1
n-Hexatriacontane (C36)	ND		mg/kg	0.168	0.033	1
n-Heptatriacontane (C37)	ND		mg/kg	0.168	0.037	1
n-Octatriacontane (C38)	ND		mg/kg	0.168	0.039	1
n-Nonatriacontane (C39)	ND		mg/kg	0.168	0.055	1
n-Tetracontane (C40)	ND		mg/kg	0.168	0.055	1
Total Petroleum Hydrocarbons (C9-C44)	16.6		mg/kg	5.55	1.22	1
Total Saturated Hydrocarbons	0.187	J	mg/kg	0.168	0.018	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	95		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-12

Date Collected: 03/23/23 09:30

Client ID: WM012

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8015D(M)

Extraction Date: 06/23/23 10:55

Analytical Date: 07/04/23 22:39

Cleanup Method: EPA 3611B

Analyst: AMV

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	0.061	J	mg/kg	0.176	0.052	1
n-Decane (C10)	ND		mg/kg	0.176	0.056	1
n-Undecane (C11)	ND		mg/kg	0.176	0.053	1
n-Dodecane (C12)	ND		mg/kg	0.176	0.038	1
n-Tridecane (C13)	ND		mg/kg	0.176	0.048	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.176	0.027	1
n-Tetradecane (C14)	ND		mg/kg	0.176	0.027	1
2,6,10-Trimethyltridecane (1470)	0.034	J	mg/kg	0.176	0.021	1
n-Pentadecane (C15)	ND		mg/kg	0.176	0.021	1
n-Hexadecane (C16)	0.027	J	mg/kg	0.176	0.027	1
Norpristane (1650)	ND		mg/kg	0.176	0.058	1
n-Heptadecane (C17)	ND		mg/kg	0.176	0.058	1
Pristane	ND		mg/kg	0.176	0.038	1
n-Octadecane (C18)	ND		mg/kg	0.176	0.035	1
Phytane	ND		mg/kg	0.176	0.022	1
n-Nonadecane (C19)	ND		mg/kg	0.176	0.045	1
n-Eicosane (C20)	ND		mg/kg	0.176	0.025	1
n-Heneicosane (C21)	ND		mg/kg	0.176	0.021	1
n-Docosane (C22)	ND		mg/kg	0.176	0.018	1
n-Tricosane (C23)	0.039	J	mg/kg	0.176	0.022	1
n-Tetracosane (C24)	0.055	J	mg/kg	0.176	0.030	1
n-Pentacosane (C25)	ND		mg/kg	0.176	0.093	1
n-Hexacosane (C26)	0.052	J	mg/kg	0.176	0.026	1
n-Heptacosane (C27)	0.048	J	mg/kg	0.176	0.021	1
n-Octacosane (C28)	0.052	J	mg/kg	0.176	0.038	1
n-Nonacosane (C29)	ND		mg/kg	0.176	0.117	1
n-Triacontane (C30)	0.027	J	mg/kg	0.176	0.020	1
n-Hentriacontane (C31)	ND		mg/kg	0.176	0.025	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-12  
**Client ID:** WM012  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.176	0.022	1
n-Tritriacontane (C33)	ND		mg/kg	0.176	0.025	1
n-Tetratriacontane (C34)	ND		mg/kg	0.176	0.028	1
n-Pentatriacontane (C35)	ND		mg/kg	0.176	0.031	1
n-Hexatriacontane (C36)	ND		mg/kg	0.176	0.035	1
n-Heptatriacontane (C37)	ND		mg/kg	0.176	0.039	1
n-Octatriacontane (C38)	ND		mg/kg	0.176	0.041	1
n-Nonatriacontane (C39)	ND		mg/kg	0.176	0.057	1
n-Tetracontane (C40)	ND		mg/kg	0.176	0.057	1
Total Petroleum Hydrocarbons (C9-C44)	23.8		mg/kg	5.82	1.28	1
Total Saturated Hydrocarbons	0.393	J	mg/kg	0.176	0.018	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	94		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-13  
**Client ID:** WM013  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/05/23 00:06  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.197	0.059	1
n-Decane (C10)	ND		mg/kg	0.197	0.063	1
n-Undecane (C11)	ND		mg/kg	0.197	0.059	1
n-Dodecane (C12)	ND		mg/kg	0.197	0.043	1
n-Tridecane (C13)	ND		mg/kg	0.197	0.054	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.197	0.030	1
n-Tetradecane (C14)	ND		mg/kg	0.197	0.030	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.197	0.024	1
n-Pentadecane (C15)	0.029	J	mg/kg	0.197	0.024	1
n-Hexadecane (C16)	ND		mg/kg	0.197	0.030	1
Norpristane (1650)	ND		mg/kg	0.197	0.065	1
n-Heptadecane (C17)	ND		mg/kg	0.197	0.065	1
Pristane	ND		mg/kg	0.197	0.042	1
n-Octadecane (C18)	ND		mg/kg	0.197	0.040	1
Phytane	ND		mg/kg	0.197	0.025	1
n-Nonadecane (C19)	ND		mg/kg	0.197	0.051	1
n-Eicosane (C20)	ND		mg/kg	0.197	0.028	1
n-Heneicosane (C21)	ND		mg/kg	0.197	0.024	1
n-Docosane (C22)	ND		mg/kg	0.197	0.021	1
n-Tricosane (C23)	0.038	J	mg/kg	0.197	0.025	1
n-Tetracosane (C24)	0.045	J	mg/kg	0.197	0.033	1
n-Pentacosane (C25)	ND		mg/kg	0.197	0.104	1
n-Hexacosane (C26)	0.043	J	mg/kg	0.197	0.029	1
n-Heptacosane (C27)	0.040	J	mg/kg	0.197	0.024	1
n-Octacosane (C28)	ND		mg/kg	0.197	0.042	1
n-Nonacosane (C29)	ND		mg/kg	0.197	0.131	1
n-Triacontane (C30)	ND		mg/kg	0.197	0.023	1
n-Hentriacontane (C31)	ND		mg/kg	0.197	0.028	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-13  
**Client ID:** WM013  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.197	0.025	1
n-Tritriacontane (C33)	ND		mg/kg	0.197	0.028	1
n-Tetratriacontane (C34)	ND		mg/kg	0.197	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.197	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.197	0.039	1
n-Heptatriacontane (C37)	ND		mg/kg	0.197	0.044	1
n-Octatriacontane (C38)	ND		mg/kg	0.197	0.046	1
n-Nonatriacontane (C39)	ND		mg/kg	0.197	0.064	1
n-Tetracontane (C40)	ND		mg/kg	0.197	0.064	1
Total Petroleum Hydrocarbons (C9-C44)	20.0		mg/kg	6.51	1.43	1
Total Saturated Hydrocarbons	0.196	J	mg/kg	0.197	0.021	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	95		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-14  
**Client ID:** WM014  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/05/23 01:33  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.193	0.057	1
n-Decane (C10)	ND		mg/kg	0.193	0.062	1
n-Undecane (C11)	ND		mg/kg	0.193	0.058	1
n-Dodecane (C12)	ND		mg/kg	0.193	0.042	1
n-Tridecane (C13)	ND		mg/kg	0.193	0.053	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.193	0.029	1
n-Tetradecane (C14)	ND		mg/kg	0.193	0.029	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.193	0.023	1
n-Pentadecane (C15)	ND		mg/kg	0.193	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.193	0.029	1
Norpristane (1650)	ND		mg/kg	0.193	0.064	1
n-Heptadecane (C17)	ND		mg/kg	0.193	0.064	1
Pristane	ND		mg/kg	0.193	0.041	1
n-Octadecane (C18)	ND		mg/kg	0.193	0.039	1
Phytane	ND		mg/kg	0.193	0.024	1
n-Nonadecane (C19)	ND		mg/kg	0.193	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.193	0.027	1
n-Heneicosane (C21)	ND		mg/kg	0.193	0.023	1
n-Docosane (C22)	ND		mg/kg	0.193	0.020	1
n-Tricosane (C23)	0.049	J	mg/kg	0.193	0.025	1
n-Tetracosane (C24)	0.065	J	mg/kg	0.193	0.032	1
n-Pentacosane (C25)	ND		mg/kg	0.193	0.102	1
n-Hexacosane (C26)	0.062	J	mg/kg	0.193	0.028	1
n-Heptacosane (C27)	0.059	J	mg/kg	0.193	0.023	1
n-Octacosane (C28)	0.055	J	mg/kg	0.193	0.041	1
n-Nonacosane (C29)	ND		mg/kg	0.193	0.128	1
n-Triacontane (C30)	0.030	J	mg/kg	0.193	0.022	1
n-Hentriacontane (C31)	ND		mg/kg	0.193	0.027	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-14  
**Client ID:** WM014  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.193	0.024	1
n-Tritriacontane (C33)	ND		mg/kg	0.193	0.027	1
n-Tetratriacontane (C34)	ND		mg/kg	0.193	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.193	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.193	0.038	1
n-Heptatriacontane (C37)	ND		mg/kg	0.193	0.043	1
n-Octatriacontane (C38)	ND		mg/kg	0.193	0.045	1
n-Nonatriacontane (C39)	ND		mg/kg	0.193	0.063	1
n-Tetracontane (C40)	ND		mg/kg	0.193	0.063	1
Total Petroleum Hydrocarbons (C9-C44)	18.9		mg/kg	6.36	1.40	1
Total Saturated Hydrocarbons	0.319	J	mg/kg	0.193	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	96		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-18  
**Client ID:** WM018  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:05  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/05/23 03:01  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.177	0.053	1
n-Decane (C10)	ND		mg/kg	0.177	0.057	1
n-Undecane (C11)	ND		mg/kg	0.177	0.053	1
n-Dodecane (C12)	ND		mg/kg	0.177	0.039	1
n-Tridecane (C13)	ND		mg/kg	0.177	0.049	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.177	0.027	1
n-Tetradecane (C14)	ND		mg/kg	0.177	0.027	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.177	0.021	1
n-Pentadecane (C15)	0.040	J	mg/kg	0.177	0.021	1
n-Hexadecane (C16)	0.029	J	mg/kg	0.177	0.027	1
Norpristane (1650)	ND		mg/kg	0.177	0.058	1
n-Heptadecane (C17)	ND		mg/kg	0.177	0.058	1
Pristane	ND		mg/kg	0.177	0.038	1
n-Octadecane (C18)	ND		mg/kg	0.177	0.036	1
Phytane	ND		mg/kg	0.177	0.022	1
n-Nonadecane (C19)	ND		mg/kg	0.177	0.046	1
n-Eicosane (C20)	ND		mg/kg	0.177	0.025	1
n-Heneicosane (C21)	ND		mg/kg	0.177	0.021	1
n-Docosane (C22)	ND		mg/kg	0.177	0.019	1
n-Tricosane (C23)	0.023	J	mg/kg	0.177	0.023	1
n-Tetracosane (C24)	ND		mg/kg	0.177	0.030	1
n-Pentacosane (C25)	ND		mg/kg	0.177	0.094	1
n-Hexacosane (C26)	0.029	J	mg/kg	0.177	0.026	1
n-Heptacosane (C27)	0.029	J	mg/kg	0.177	0.021	1
n-Octacosane (C28)	ND		mg/kg	0.177	0.038	1
n-Nonacosane (C29)	ND		mg/kg	0.177	0.118	1
n-Triacontane (C30)	ND		mg/kg	0.177	0.020	1
n-Hentriacontane (C31)	ND		mg/kg	0.177	0.025	1





**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-18  
**Client ID:** WM018  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:05  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.177	0.022	1
n-Tritriacontane (C33)	ND		mg/kg	0.177	0.025	1
n-Tetratriacontane (C34)	ND		mg/kg	0.177	0.028	1
n-Pentatriacontane (C35)	ND		mg/kg	0.177	0.031	1
n-Hexatriacontane (C36)	ND		mg/kg	0.177	0.035	1
n-Heptatriacontane (C37)	ND		mg/kg	0.177	0.039	1
n-Octatriacontane (C38)	ND		mg/kg	0.177	0.041	1
n-Nonatriacontane (C39)	ND		mg/kg	0.177	0.058	1
n-Tetracontane (C40)	ND		mg/kg	0.177	0.058	1
Total Petroleum Hydrocarbons (C9-C44)	20.6		mg/kg	5.84	1.28	1
Total Saturated Hydrocarbons	0.150	J	mg/kg	0.177	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	95		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-19

Date Collected: 03/23/23 10:07

Client ID: WM019

Date Received: 05/31/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8015D(M)

Extraction Date: 06/23/23 11:10

Analytical Date: 07/05/23 04:28

Cleanup Method: EPA 3611B

Analyst: AMV

Cleanup Date: 06/24/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.190	0.056	1
n-Decane (C10)	ND		mg/kg	0.190	0.061	1
n-Undecane (C11)	ND		mg/kg	0.190	0.057	1
n-Dodecane (C12)	ND		mg/kg	0.190	0.041	1
n-Tridecane (C13)	ND		mg/kg	0.190	0.052	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.190	0.029	1
n-Tetradecane (C14)	ND		mg/kg	0.190	0.029	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.190	0.023	1
n-Pentadecane (C15)	ND		mg/kg	0.190	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.190	0.029	1
Norpristane (1650)	ND		mg/kg	0.190	0.063	1
n-Heptadecane (C17)	ND		mg/kg	0.190	0.063	1
Pristane	ND		mg/kg	0.190	0.041	1
n-Octadecane (C18)	ND		mg/kg	0.190	0.038	1
Phytane	ND		mg/kg	0.190	0.024	1
n-Nonadecane (C19)	ND		mg/kg	0.190	0.049	1
n-Eicosane (C20)	ND		mg/kg	0.190	0.027	1
n-Heneicosane (C21)	ND		mg/kg	0.190	0.023	1
n-Docosane (C22)	ND		mg/kg	0.190	0.020	1
n-Tricosane (C23)	ND		mg/kg	0.190	0.024	1
n-Tetracosane (C24)	ND		mg/kg	0.190	0.032	1
n-Pentacosane (C25)	ND		mg/kg	0.190	0.100	1
n-Hexacosane (C26)	0.031	J	mg/kg	0.190	0.028	1
n-Heptacosane (C27)	0.032	J	mg/kg	0.190	0.023	1
n-Octacosane (C28)	ND		mg/kg	0.190	0.041	1
n-Nonacosane (C29)	ND		mg/kg	0.190	0.126	1
n-Triacontane (C30)	ND		mg/kg	0.190	0.022	1
n-Hentriacontane (C31)	ND		mg/kg	0.190	0.027	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-19  
**Client ID:** WM019  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:07  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	0.190	0.024	1
n-Tritriacontane (C33)	ND		mg/kg	0.190	0.027	1
n-Tetratriacontane (C34)	ND		mg/kg	0.190	0.030	1
n-Pentatriacontane (C35)	ND		mg/kg	0.190	0.033	1
n-Hexatriacontane (C36)	ND		mg/kg	0.190	0.038	1
n-Heptatriacontane (C37)	ND		mg/kg	0.190	0.042	1
n-Octatriacontane (C38)	ND		mg/kg	0.190	0.044	1
n-Nonatriacontane (C39)	ND		mg/kg	0.190	0.062	1
n-Tetracontane (C40)	ND		mg/kg	0.190	0.062	1
Total Petroleum Hydrocarbons (C9-C44)	18.8		mg/kg	6.26	1.38	1
Total Saturated Hydrocarbons	0.064	J	mg/kg	0.190	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	90		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-20  
**Client ID:** WM020  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:14  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/20/23 01:21  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.200	0.059	1
n-Decane (C10)	ND		mg/kg	0.200	0.064	1
n-Undecane (C11)	ND		mg/kg	0.200	0.060	1
n-Dodecane (C12)	ND		mg/kg	0.200	0.044	1
n-Tridecane (C13)	ND		mg/kg	0.200	0.055	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.200	0.030	1
n-Tetradecane (C14)	ND		mg/kg	0.200	0.030	1
2,6,10-Trimethyltridecane (1470)	0.030	J	mg/kg	0.200	0.024	1
n-Pentadecane (C15)	0.047	J	mg/kg	0.200	0.024	1
n-Hexadecane (C16)	0.034	J	mg/kg	0.200	0.030	1
Norpristane (1650)	ND		mg/kg	0.200	0.066	1
n-Heptadecane (C17)	ND		mg/kg	0.200	0.066	1
Pristane	ND		mg/kg	0.200	0.043	1
n-Octadecane (C18)	ND		mg/kg	0.200	0.040	1
Phytane	ND		mg/kg	0.200	0.025	1
n-Nonadecane (C19)	ND		mg/kg	0.200	0.051	1
n-Eicosane (C20)	ND		mg/kg	0.200	0.028	1
n-Heneicosane (C21)	ND		mg/kg	0.200	0.024	1
n-Docosane (C22)	0.046	J	mg/kg	0.200	0.021	1
n-Tricosane (C23)	0.123	J	mg/kg	0.200	0.025	1
n-Tetracosane (C24)	0.166	J	mg/kg	0.200	0.033	1
n-Pentacosane (C25)	0.296	CB	mg/kg	0.200	0.106	1
n-Hexacosane (C26)	0.179	J	mg/kg	0.200	0.029	1
n-Heptacosane (C27)	0.169	J	mg/kg	0.200	0.024	1
n-Octacosane (C28)	0.139	J	mg/kg	0.200	0.043	1
n-Nonacosane (C29)	ND		mg/kg	0.200	0.133	1
n-Triacontane (C30)	0.083	J	mg/kg	0.200	0.023	1
n-Hentriacontane (C31)	0.057	J	mg/kg	0.200	0.028	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-20  
**Client ID:** WM020  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:14  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.030	J	mg/kg	0.200	0.025	1
n-Tritriacontane (C33)	ND		mg/kg	0.200	0.028	1
n-Tetratriacontane (C34)	ND		mg/kg	0.200	0.032	1
n-Pentatriacontane (C35)	ND		mg/kg	0.200	0.035	1
n-Hexatriacontane (C36)	ND		mg/kg	0.200	0.040	1
n-Heptatriacontane (C37)	ND		mg/kg	0.200	0.044	1
n-Octatriacontane (C38)	ND		mg/kg	0.200	0.047	1
n-Nonatriacontane (C39)	ND		mg/kg	0.200	0.065	1
n-Tetracontane (C40)	ND		mg/kg	0.200	0.065	1
Total Petroleum Hydrocarbons (C9-C44)	27.9		mg/kg	6.59	1.45	1
Total Saturated Hydrocarbons	1.40	JB	mg/kg	0.200	0.021	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	87		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-43  
**Client ID:** WM043  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:02  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/20/23 02:49  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	0.066	J	mg/kg	0.184	0.055	1
n-Decane (C10)	ND		mg/kg	0.184	0.059	1
n-Undecane (C11)	ND		mg/kg	0.184	0.055	1
n-Dodecane (C12)	ND		mg/kg	0.184	0.040	1
n-Tridecane (C13)	ND		mg/kg	0.184	0.051	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.184	0.028	1
n-Tetradecane (C14)	ND		mg/kg	0.184	0.028	1
2,6,10-Trimethyltridecane (1470)	0.023	J	mg/kg	0.184	0.022	1
n-Pentadecane (C15)	ND		mg/kg	0.184	0.022	1
n-Hexadecane (C16)	ND		mg/kg	0.184	0.028	1
Norpristane (1650)	ND		mg/kg	0.184	0.061	1
n-Heptadecane (C17)	ND		mg/kg	0.184	0.061	1
Pristane	ND		mg/kg	0.184	0.039	1
n-Octadecane (C18)	ND		mg/kg	0.184	0.037	1
Phytane	ND		mg/kg	0.184	0.023	1
n-Nonadecane (C19)	ND		mg/kg	0.184	0.047	1
n-Eicosane (C20)	ND		mg/kg	0.184	0.026	1
n-Heneicosane (C21)	ND		mg/kg	0.184	0.022	1
n-Docosane (C22)	0.037	J	mg/kg	0.184	0.019	1
n-Tricosane (C23)	0.107	J	mg/kg	0.184	0.024	1
n-Tetracosane (C24)	0.155	J	mg/kg	0.184	0.031	1
n-Pentacosane (C25)	0.287	CB	mg/kg	0.184	0.098	1
n-Hexacosane (C26)	0.191		mg/kg	0.184	0.027	1
n-Heptacosane (C27)	0.198		mg/kg	0.184	0.022	1
n-Octacosane (C28)	0.168	J	mg/kg	0.184	0.040	1
n-Nonacosane (C29)	0.148	J	mg/kg	0.184	0.123	1
n-Triacontane (C30)	0.105	J	mg/kg	0.184	0.021	1
n-Hentriacontane (C31)	0.076	J	mg/kg	0.184	0.026	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-43  
**Client ID:** WM043  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:02  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.040	J	mg/kg	0.184	0.023	1
n-Tritriacontane (C33)	0.026	J	mg/kg	0.184	0.026	1
n-Tetratriacontane (C34)	ND		mg/kg	0.184	0.029	1
n-Pentatriacontane (C35)	ND		mg/kg	0.184	0.032	1
n-Hexatriacontane (C36)	ND		mg/kg	0.184	0.037	1
n-Heptatriacontane (C37)	ND		mg/kg	0.184	0.041	1
n-Octatriacontane (C38)	ND		mg/kg	0.184	0.043	1
n-Nonatriacontane (C39)	ND		mg/kg	0.184	0.060	1
n-Tetracontane (C40)	ND		mg/kg	0.184	0.060	1
Total Petroleum Hydrocarbons (C9-C44)	5.59	J	mg/kg	6.09	1.34	1
Total Saturated Hydrocarbons	1.63	JB	mg/kg	0.184	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	95		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-45  
**Client ID:** WM045  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:09  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/20/23 04:16  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.186	0.055	1
n-Decane (C10)	ND		mg/kg	0.186	0.059	1
n-Undecane (C11)	ND		mg/kg	0.186	0.056	1
n-Dodecane (C12)	ND		mg/kg	0.186	0.041	1
n-Tridecane (C13)	ND		mg/kg	0.186	0.051	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.186	0.028	1
n-Tetradecane (C14)	ND		mg/kg	0.186	0.028	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.186	0.022	1
n-Pentadecane (C15)	ND		mg/kg	0.186	0.022	1
n-Hexadecane (C16)	ND		mg/kg	0.186	0.028	1
Norpristane (1650)	ND		mg/kg	0.186	0.061	1
n-Heptadecane (C17)	ND		mg/kg	0.186	0.061	1
Pristane	ND		mg/kg	0.186	0.040	1
n-Octadecane (C18)	ND		mg/kg	0.186	0.037	1
Phytane	ND		mg/kg	0.186	0.023	1
n-Nonadecane (C19)	ND		mg/kg	0.186	0.048	1
n-Eicosane (C20)	ND		mg/kg	0.186	0.026	1
n-Heneicosane (C21)	0.023	J	mg/kg	0.186	0.022	1
n-Docosane (C22)	0.065	J	mg/kg	0.186	0.019	1
n-Tricosane (C23)	0.182	J	mg/kg	0.186	0.024	1
n-Tetracosane (C24)	0.257		mg/kg	0.186	0.031	1
n-Pentacosane (C25)	0.398	CB	mg/kg	0.186	0.098	1
n-Hexacosane (C26)	0.285		mg/kg	0.186	0.027	1
n-Heptacosane (C27)	0.271		mg/kg	0.186	0.022	1
n-Octacosane (C28)	0.220		mg/kg	0.186	0.040	1
n-Nonacosane (C29)	0.187		mg/kg	0.186	0.124	1
n-Triacontane (C30)	0.130	J	mg/kg	0.186	0.021	1
n-Hentriacontane (C31)	0.089	J	mg/kg	0.186	0.026	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-45  
**Client ID:** WM045  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:09  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.045	J	mg/kg	0.186	0.023	1
n-Tritriacontane (C33)	ND		mg/kg	0.186	0.026	1
n-Tetratriacontane (C34)	ND		mg/kg	0.186	0.030	1
n-Pentatriacontane (C35)	ND		mg/kg	0.186	0.032	1
n-Hexatriacontane (C36)	ND		mg/kg	0.186	0.037	1
n-Heptatriacontane (C37)	ND		mg/kg	0.186	0.041	1
n-Octatriacontane (C38)	ND		mg/kg	0.186	0.043	1
n-Nonatriacontane (C39)	ND		mg/kg	0.186	0.060	1
n-Tetracontane (C40)	ND		mg/kg	0.186	0.060	1
Total Petroleum Hydrocarbons (C9-C44)	4.06	J	mg/kg	6.13	1.35	1
Total Saturated Hydrocarbons	2.15	JB	mg/kg	0.186	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	92		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-67  
**Client ID:** WMCOMP01  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:30  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/20/23 05:43  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	0.128	J	mg/kg	0.196	0.058	1
n-Decane (C10)	0.073	J	mg/kg	0.196	0.062	1
n-Undecane (C11)	ND		mg/kg	0.196	0.058	1
n-Dodecane (C12)	ND		mg/kg	0.196	0.043	1
n-Tridecane (C13)	ND		mg/kg	0.196	0.054	1
2,6,10-Trimethyldodecane (1380)	0.055	J	mg/kg	0.196	0.029	1
n-Tetradecane (C14)	0.036	J	mg/kg	0.196	0.029	1
2,6,10-Trimethyltridecane (1470)	0.043	J	mg/kg	0.196	0.023	1
n-Pentadecane (C15)	0.078	J	mg/kg	0.196	0.023	1
n-Hexadecane (C16)	0.037	J	mg/kg	0.196	0.030	1
Norpristane (1650)	ND		mg/kg	0.196	0.065	1
n-Heptadecane (C17)	ND		mg/kg	0.196	0.065	1
Pristane	ND		mg/kg	0.196	0.042	1
n-Octadecane (C18)	ND		mg/kg	0.196	0.039	1
Phytane	ND		mg/kg	0.196	0.025	1
n-Nonadecane (C19)	ND		mg/kg	0.196	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.196	0.028	1
n-Heneicosane (C21)	ND		mg/kg	0.196	0.023	1
n-Docosane (C22)	0.021	J	mg/kg	0.196	0.020	1
n-Tricosane (C23)	0.066	J	mg/kg	0.196	0.025	1
n-Tetracosane (C24)	0.106	J	mg/kg	0.196	0.033	1
n-Pentacosane (C25)	0.250	CB	mg/kg	0.196	0.104	1
n-Hexacosane (C26)	0.153	J	mg/kg	0.196	0.029	1
n-Heptacosane (C27)	0.167	J	mg/kg	0.196	0.024	1
n-Octacosane (C28)	0.142	J	mg/kg	0.196	0.042	1
n-Nonacosane (C29)	0.137	J	mg/kg	0.196	0.130	1
n-Triacontane (C30)	0.091	J	mg/kg	0.196	0.022	1
n-Hentriacontane (C31)	0.071	J	mg/kg	0.196	0.028	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-67  
**Client ID:** WMCOMP01  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:30  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.036	J	mg/kg	0.196	0.025	1
n-Tritriacontane (C33)	0.030	J	mg/kg	0.196	0.028	1
n-Tetratriacontane (C34)	ND		mg/kg	0.196	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.196	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.196	0.039	1
n-Heptatriacontane (C37)	ND		mg/kg	0.196	0.044	1
n-Octatriacontane (C38)	ND		mg/kg	0.196	0.046	1
n-Nonatriacontane (C39)	ND		mg/kg	0.196	0.064	1
n-Tetracontane (C40)	ND		mg/kg	0.196	0.064	1
Total Petroleum Hydrocarbons (C9-C44)	28.7		mg/kg	6.46	1.42	1
Total Saturated Hydrocarbons	1.72	JB	mg/kg	0.196	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	86		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-68  
**Client ID:** WMCOMP02  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:50  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/20/23 07:10  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.196	0.058	1
n-Decane (C10)	ND		mg/kg	0.196	0.062	1
n-Undecane (C11)	ND		mg/kg	0.196	0.058	1
n-Dodecane (C12)	ND		mg/kg	0.196	0.043	1
n-Tridecane (C13)	ND		mg/kg	0.196	0.054	1
2,6,10-Trimethyldodecane (1380)	0.049	J	mg/kg	0.196	0.029	1
n-Tetradecane (C14)	0.036	J	mg/kg	0.196	0.029	1
2,6,10-Trimethyltridecane (1470)	0.047	J	mg/kg	0.196	0.023	1
n-Pentadecane (C15)	0.062	J	mg/kg	0.196	0.023	1
n-Hexadecane (C16)	0.040	J	mg/kg	0.196	0.030	1
Norpristane (1650)	ND		mg/kg	0.196	0.065	1
n-Heptadecane (C17)	ND		mg/kg	0.196	0.065	1
Pristane	ND		mg/kg	0.196	0.042	1
n-Octadecane (C18)	ND		mg/kg	0.196	0.039	1
Phytane	ND		mg/kg	0.196	0.025	1
n-Nonadecane (C19)	ND		mg/kg	0.196	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.196	0.028	1
n-Heneicosane (C21)	ND		mg/kg	0.196	0.023	1
n-Docosane (C22)	0.053	J	mg/kg	0.196	0.020	1
n-Tricosane (C23)	0.140	J	mg/kg	0.196	0.025	1
n-Tetracosane (C24)	0.206		mg/kg	0.196	0.033	1
n-Pentacosane (C25)	0.348	CB	mg/kg	0.196	0.104	1
n-Hexacosane (C26)	0.236		mg/kg	0.196	0.029	1
n-Heptacosane (C27)	0.237		mg/kg	0.196	0.024	1
n-Octacosane (C28)	0.200		mg/kg	0.196	0.042	1
n-Nonacosane (C29)	0.179	J	mg/kg	0.196	0.130	1
n-Triacontane (C30)	0.129	J	mg/kg	0.196	0.022	1
n-Hentriacontane (C31)	0.107	J	mg/kg	0.196	0.028	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-68  
**Client ID:** WMCOMP02  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:50  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.055	J	mg/kg	0.196	0.025	1
n-Tritriacontane (C33)	0.035	J	mg/kg	0.196	0.028	1
n-Tettratriacontane (C34)	ND		mg/kg	0.196	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.196	0.034	1
n-Hexatriacontane (C36)	0.043	J	mg/kg	0.196	0.039	1
n-Heptatriacontane (C37)	ND		mg/kg	0.196	0.044	1
n-Octatriacontane (C38)	ND		mg/kg	0.196	0.046	1
n-Nonatriacontane (C39)	ND		mg/kg	0.196	0.064	1
n-Tetracontane (C40)	ND		mg/kg	0.196	0.064	1
Total Petroleum Hydrocarbons (C9-C44)	34.4		mg/kg	6.46	1.42	1
Total Saturated Hydrocarbons	2.20	JB	mg/kg	0.196	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	89		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-69

Date Collected: 06/10/23 17:50

Client ID: WMCOMP03

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8015D(M)

Extraction Date: 06/26/23 10:40

Analytical Date: 07/20/23 08:37

Cleanup Method: EPA 3611B

Analyst: AMV

Cleanup Date: 06/29/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.178	0.053	1
n-Decane (C10)	ND		mg/kg	0.178	0.057	1
n-Undecane (C11)	ND		mg/kg	0.178	0.053	1
n-Dodecane (C12)	ND		mg/kg	0.178	0.039	1
n-Tridecane (C13)	ND		mg/kg	0.178	0.049	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.178	0.027	1
n-Tetradecane (C14)	ND		mg/kg	0.178	0.027	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.178	0.021	1
n-Pentadecane (C15)	0.048	J	mg/kg	0.178	0.021	1
n-Hexadecane (C16)	0.032	J	mg/kg	0.178	0.027	1
Norpristane (1650)	ND		mg/kg	0.178	0.059	1
n-Heptadecane (C17)	ND		mg/kg	0.178	0.059	1
Pristane	ND		mg/kg	0.178	0.038	1
n-Octadecane (C18)	ND		mg/kg	0.178	0.036	1
Phytane	ND		mg/kg	0.178	0.022	1
n-Nonadecane (C19)	ND		mg/kg	0.178	0.046	1
n-Eicosane (C20)	ND		mg/kg	0.178	0.025	1
n-Heneicosane (C21)	ND		mg/kg	0.178	0.021	1
n-Docosane (C22)	0.030	J	mg/kg	0.178	0.019	1
n-Tricosane (C23)	0.084	J	mg/kg	0.178	0.023	1
n-Tetracosane (C24)	0.125	J	mg/kg	0.178	0.030	1
n-Pentacosane (C25)	0.246	CB	mg/kg	0.178	0.094	1
n-Hexacosane (C26)	0.152	J	mg/kg	0.178	0.026	1
n-Heptacosane (C27)	0.156	J	mg/kg	0.178	0.021	1
n-Octacosane (C28)	0.133	J	mg/kg	0.178	0.038	1
n-Nonacosane (C29)	0.122	J	mg/kg	0.178	0.118	1
n-Triacontane (C30)	0.084	J	mg/kg	0.178	0.020	1
n-Hentriacontane (C31)	0.065	J	mg/kg	0.178	0.025	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-69  
**Client ID:** WMCOMP03  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 17:50  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.036	J	mg/kg	0.178	0.022	1
n-Tritriacontane (C33)	ND		mg/kg	0.178	0.025	1
n-Tetratriacontane (C34)	ND		mg/kg	0.178	0.028	1
n-Pentatriacontane (C35)	ND		mg/kg	0.178	0.031	1
n-Hexatriacontane (C36)	ND		mg/kg	0.178	0.035	1
n-Heptatriacontane (C37)	ND		mg/kg	0.178	0.040	1
n-Octatriacontane (C38)	ND		mg/kg	0.178	0.042	1
n-Nonatriacontane (C39)	ND		mg/kg	0.178	0.058	1
n-Tetracontane (C40)	ND		mg/kg	0.178	0.058	1
Total Petroleum Hydrocarbons (C9-C44)	3.37	J	mg/kg	5.87	1.29	1
Total Saturated Hydrocarbons	1.31	JB	mg/kg	0.178	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	86		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-70  
**Client ID:** WMCOMP04  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 18:25  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/21/23 23:13  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.192	0.057	1
n-Decane (C10)	ND		mg/kg	0.192	0.061	1
n-Undecane (C11)	ND		mg/kg	0.192	0.057	1
n-Dodecane (C12)	ND		mg/kg	0.192	0.042	1
n-Tridecane (C13)	ND		mg/kg	0.192	0.053	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.192	0.029	1
n-Tetradecane (C14)	ND		mg/kg	0.192	0.029	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.192	0.023	1
n-Pentadecane (C15)	0.071	J	mg/kg	0.192	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.192	0.029	1
Norpristane (1650)	ND		mg/kg	0.192	0.063	1
n-Heptadecane (C17)	ND		mg/kg	0.192	0.063	1
Pristane	ND		mg/kg	0.192	0.041	1
n-Octadecane (C18)	ND		mg/kg	0.192	0.038	1
Phytane	ND		mg/kg	0.192	0.024	1
n-Nonadecane (C19)	ND		mg/kg	0.192	0.049	1
n-Eicosane (C20)	ND		mg/kg	0.192	0.027	1
n-Heneicosane (C21)	ND		mg/kg	0.192	0.023	1
n-Docosane (C22)	0.028	J	mg/kg	0.192	0.020	1
n-Tricosane (C23)	0.081	J	mg/kg	0.192	0.024	1
n-Tetracosane (C24)	0.152	J	mg/kg	0.192	0.032	1
n-Pentacosane (C25)	0.285	CB	mg/kg	0.192	0.101	1
n-Hexacosane (C26)	0.200		mg/kg	0.192	0.028	1
n-Heptacosane (C27)	0.214		mg/kg	0.192	0.023	1
n-Octacosane (C28)	0.290		mg/kg	0.192	0.041	1
n-Nonacosane (C29)	0.175	J	mg/kg	0.192	0.128	1
n-Triacontane (C30)	0.126	J	mg/kg	0.192	0.022	1
n-Hentriacontane (C31)	0.094	J	mg/kg	0.192	0.027	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-70  
**Client ID:** WMCOMP04  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 18:25  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.057	J	mg/kg	0.192	0.024	1
n-Tritriacontane (C33)	0.040	J	mg/kg	0.192	0.027	1
n-Tetratriacontane (C34)	ND		mg/kg	0.192	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.192	0.033	1
n-Hexatriacontane (C36)	ND		mg/kg	0.192	0.038	1
n-Heptatriacontane (C37)	ND		mg/kg	0.192	0.043	1
n-Octatriacontane (C38)	ND		mg/kg	0.192	0.045	1
n-Nonatriacontane (C39)	ND		mg/kg	0.192	0.062	1
n-Tetracontane (C40)	ND		mg/kg	0.192	0.062	1
Total Petroleum Hydrocarbons (C9-C44)	8.33		mg/kg	6.32	1.39	1
Total Saturated Hydrocarbons	1.81	JB	mg/kg	0.192	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	97		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-71  
**Client ID:** WMCOMP05  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 19:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/22/23 00:37  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.196	0.058	1
n-Decane (C10)	ND		mg/kg	0.196	0.063	1
n-Undecane (C11)	ND		mg/kg	0.196	0.059	1
n-Dodecane (C12)	ND		mg/kg	0.196	0.043	1
n-Tridecane (C13)	ND		mg/kg	0.196	0.054	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.196	0.030	1
n-Tetradecane (C14)	ND		mg/kg	0.196	0.030	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.196	0.023	1
n-Pentadecane (C15)	0.059	J	mg/kg	0.196	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.196	0.030	1
Norpristane (1650)	ND		mg/kg	0.196	0.065	1
n-Heptadecane (C17)	ND		mg/kg	0.196	0.065	1
Pristane	ND		mg/kg	0.196	0.042	1
n-Octadecane (C18)	ND		mg/kg	0.196	0.039	1
Phytane	ND		mg/kg	0.196	0.025	1
n-Nonadecane (C19)	ND		mg/kg	0.196	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.196	0.028	1
n-Heneicosane (C21)	ND		mg/kg	0.196	0.024	1
n-Docosane (C22)	0.026	J	mg/kg	0.196	0.020	1
n-Tricosane (C23)	0.069	J	mg/kg	0.196	0.025	1
n-Tetracosane (C24)	0.147	J	mg/kg	0.196	0.033	1
n-Pentacosane (C25)	0.251	CB	mg/kg	0.196	0.104	1
n-Hexacosane (C26)	0.160	J	mg/kg	0.196	0.029	1
n-Heptacosane (C27)	0.176	J	mg/kg	0.196	0.024	1
n-Octacosane (C28)	0.240		mg/kg	0.196	0.042	1
n-Nonacosane (C29)	0.136	J	mg/kg	0.196	0.131	1
n-Triacontane (C30)	0.100	J	mg/kg	0.196	0.023	1
n-Hentriacontane (C31)	0.081	J	mg/kg	0.196	0.028	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-71  
**Client ID:** WMCOMP05  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 19:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.046	J	mg/kg	0.196	0.025	1
n-Tritriacontane (C33)	0.034	J	mg/kg	0.196	0.028	1
n-Tetratriacontane (C34)	ND		mg/kg	0.196	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.196	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.196	0.039	1
n-Heptatriacontane (C37)	ND		mg/kg	0.196	0.044	1
n-Octatriacontane (C38)	ND		mg/kg	0.196	0.046	1
n-Nonatriacontane (C39)	ND		mg/kg	0.196	0.064	1
n-Tetracontane (C40)	ND		mg/kg	0.196	0.064	1
Total Petroleum Hydrocarbons (C9-C44)	4.08	J	mg/kg	6.47	1.42	1
Total Saturated Hydrocarbons	1.52	JB	mg/kg	0.196	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	97		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-72  
**Client ID:** WMCOMP06  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/22/23 02:01  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	0.088	J	mg/kg	0.194	0.058	1
n-Decane (C10)	ND		mg/kg	0.194	0.062	1
n-Undecane (C11)	ND		mg/kg	0.194	0.058	1
n-Dodecane (C12)	ND		mg/kg	0.194	0.042	1
n-Tridecane (C13)	ND		mg/kg	0.194	0.053	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.194	0.029	1
n-Tetradecane (C14)	ND		mg/kg	0.194	0.029	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.194	0.023	1
n-Pentadecane (C15)	0.065	J	mg/kg	0.194	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.194	0.029	1
Norpristane (1650)	ND		mg/kg	0.194	0.064	1
n-Heptadecane (C17)	ND		mg/kg	0.194	0.064	1
Pristane	ND		mg/kg	0.194	0.042	1
n-Octadecane (C18)	ND		mg/kg	0.194	0.039	1
Phytane	ND		mg/kg	0.194	0.024	1
n-Nonadecane (C19)	ND		mg/kg	0.194	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.194	0.028	1
n-Heneicosane (C21)	ND		mg/kg	0.194	0.023	1
n-Docosane (C22)	0.024	J	mg/kg	0.194	0.020	1
n-Tricosane (C23)	0.068	J	mg/kg	0.194	0.025	1
n-Tetracosane (C24)	0.116	J	mg/kg	0.194	0.033	1
n-Pentacosane (C25)	0.250	CB	mg/kg	0.194	0.103	1
n-Hexacosane (C26)	0.167	J	mg/kg	0.194	0.029	1
n-Heptacosane (C27)	0.187	J	mg/kg	0.194	0.023	1
n-Octacosane (C28)	0.288		mg/kg	0.194	0.042	1
n-Nonacosane (C29)	0.147	J	mg/kg	0.194	0.129	1
n-Triacontane (C30)	0.108	J	mg/kg	0.194	0.022	1
n-Hentriacontane (C31)	0.090	J	mg/kg	0.194	0.028	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-72  
**Client ID:** WMCOMP06  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.047	J	mg/kg	0.194	0.025	1
n-Tritriacontane (C33)	0.032	J	mg/kg	0.194	0.027	1
n-Tetratriacontane (C34)	ND		mg/kg	0.194	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.194	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.194	0.039	1
n-Heptatriacontane (C37)	ND		mg/kg	0.194	0.043	1
n-Octatriacontane (C38)	ND		mg/kg	0.194	0.045	1
n-Nonatriacontane (C39)	ND		mg/kg	0.194	0.063	1
n-Tetracontane (C40)	ND		mg/kg	0.194	0.063	1
Total Petroleum Hydrocarbons (C9-C44)	2.99	J	mg/kg	6.41	1.41	1
Total Saturated Hydrocarbons	1.68	JB	mg/kg	0.194	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	99		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-73  
**Client ID:** WMCOMP07  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:30  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/22/23 03:25  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	0.084	J	mg/kg	0.193	0.057	1
n-Decane (C10)	ND		mg/kg	0.193	0.062	1
n-Undecane (C11)	ND		mg/kg	0.193	0.058	1
n-Dodecane (C12)	ND		mg/kg	0.193	0.042	1
n-Tridecane (C13)	ND		mg/kg	0.193	0.053	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.193	0.029	1
n-Tetradecane (C14)	ND		mg/kg	0.193	0.029	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.193	0.023	1
n-Pentadecane (C15)	0.067	J	mg/kg	0.193	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.193	0.029	1
Norpristane (1650)	ND		mg/kg	0.193	0.064	1
n-Heptadecane (C17)	ND		mg/kg	0.193	0.064	1
Pristane	ND		mg/kg	0.193	0.041	1
n-Octadecane (C18)	ND		mg/kg	0.193	0.039	1
Phytane	ND		mg/kg	0.193	0.024	1
n-Nonadecane (C19)	ND		mg/kg	0.193	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.193	0.027	1
n-Heneicosane (C21)	ND		mg/kg	0.193	0.023	1
n-Docosane (C22)	0.051	J	mg/kg	0.193	0.020	1
n-Tricosane (C23)	0.130	J	mg/kg	0.193	0.025	1
n-Tetracosane (C24)	0.196		mg/kg	0.193	0.032	1
n-Pentacosane (C25)	0.333	CB	mg/kg	0.193	0.102	1
n-Hexacosane (C26)	0.230		mg/kg	0.193	0.028	1
n-Heptacosane (C27)	0.232		mg/kg	0.193	0.023	1
n-Octacosane (C28)	0.303		mg/kg	0.193	0.041	1
n-Nonacosane (C29)	0.180	J	mg/kg	0.193	0.128	1
n-Triacontane (C30)	0.124	J	mg/kg	0.193	0.022	1
n-Hentriacontane (C31)	0.092	J	mg/kg	0.193	0.027	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-73  
**Client ID:** WMCOMP07  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:30  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.050	J	mg/kg	0.193	0.024	1
n-Tritriacontane (C33)	0.033	J	mg/kg	0.193	0.027	1
n-Tetratriacontane (C34)	ND		mg/kg	0.193	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.193	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.193	0.038	1
n-Heptatriacontane (C37)	ND		mg/kg	0.193	0.043	1
n-Octatriacontane (C38)	ND		mg/kg	0.193	0.045	1
n-Nonatriacontane (C39)	ND		mg/kg	0.193	0.063	1
n-Tetracontane (C40)	ND		mg/kg	0.193	0.063	1
Total Petroleum Hydrocarbons (C9-C44)	2.73	J	mg/kg	6.36	1.40	1
Total Saturated Hydrocarbons	2.10	JB	mg/kg	0.193	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	102		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**SAMPLE RESULTS**

Lab ID: L2330403-74

Date Collected: 06/10/23 21:45

Client ID: WMCOMP08

Date Received: 06/10/23

Sample Location: ALASKA

Field Prep: Not Specified

Sample Depth:

Matrix: Tissue

Extraction Method: ALPHA OP-018

Analytical Method: 1,8015D(M)

Extraction Date: 06/26/23 10:40

Analytical Date: 07/22/23 04:49

Cleanup Method: EPA 3611B

Analyst: AMV

Cleanup Date: 06/29/23

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Cleanup Method: EPA 3640A

Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.193	0.057	1
n-Decane (C10)	ND		mg/kg	0.193	0.062	1
n-Undecane (C11)	ND		mg/kg	0.193	0.058	1
n-Dodecane (C12)	ND		mg/kg	0.193	0.042	1
n-Tridecane (C13)	ND		mg/kg	0.193	0.053	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.193	0.029	1
n-Tetradecane (C14)	ND		mg/kg	0.193	0.029	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.193	0.023	1
n-Pentadecane (C15)	0.057	J	mg/kg	0.193	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.193	0.029	1
Norpristane (1650)	ND		mg/kg	0.193	0.064	1
n-Heptadecane (C17)	ND		mg/kg	0.193	0.064	1
Pristane	ND		mg/kg	0.193	0.041	1
n-Octadecane (C18)	ND		mg/kg	0.193	0.039	1
Phytane	ND		mg/kg	0.193	0.024	1
n-Nonadecane (C19)	ND		mg/kg	0.193	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.193	0.027	1
n-Heneicosane (C21)	ND		mg/kg	0.193	0.023	1
n-Docosane (C22)	0.024	J	mg/kg	0.193	0.020	1
n-Tricosane (C23)	0.059	J	mg/kg	0.193	0.025	1
n-Tetracosane (C24)	0.097	J	mg/kg	0.193	0.032	1
n-Pentacosane (C25)	0.217	CB	mg/kg	0.193	0.102	1
n-Hexacosane (C26)	0.123	J	mg/kg	0.193	0.028	1
n-Heptacosane (C27)	0.133	J	mg/kg	0.193	0.023	1
n-Octacosane (C28)	0.159	J	mg/kg	0.193	0.041	1
n-Nonacosane (C29)	ND		mg/kg	0.193	0.128	1
n-Triacontane (C30)	0.079	J	mg/kg	0.193	0.022	1
n-Hentriacontane (C31)	0.069	J	mg/kg	0.193	0.027	1



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-74  
**Client ID:** WMCOMP08  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 21:45  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.041	J	mg/kg	0.193	0.024	1
n-Tritriacontane (C33)	0.032	J	mg/kg	0.193	0.027	1
n-Tetratriacontane (C34)	ND		mg/kg	0.193	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.193	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.193	0.038	1
n-Heptatriacontane (C37)	ND		mg/kg	0.193	0.043	1
n-Octatriacontane (C38)	ND		mg/kg	0.193	0.045	1
n-Nonatriacontane (C39)	ND		mg/kg	0.193	0.063	1
n-Tetracontane (C40)	ND		mg/kg	0.193	0.063	1
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/kg	6.36	1.40	1
Total Saturated Hydrocarbons	1.09	JB	mg/kg	0.193	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	121		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-75  
**Client ID:** WMCOMP09  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 22:20  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/22/23 06:13  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.193	0.057	1
n-Decane (C10)	ND		mg/kg	0.193	0.062	1
n-Undecane (C11)	ND		mg/kg	0.193	0.058	1
n-Dodecane (C12)	ND		mg/kg	0.193	0.042	1
n-Tridecane (C13)	ND		mg/kg	0.193	0.053	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.193	0.029	1
n-Tetradecane (C14)	ND		mg/kg	0.193	0.029	1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.193	0.023	1
n-Pentadecane (C15)	0.053	J	mg/kg	0.193	0.023	1
n-Hexadecane (C16)	ND		mg/kg	0.193	0.029	1
Norpristane (1650)	ND		mg/kg	0.193	0.064	1
n-Heptadecane (C17)	ND		mg/kg	0.193	0.064	1
Pristane	ND		mg/kg	0.193	0.041	1
n-Octadecane (C18)	ND		mg/kg	0.193	0.039	1
Phytane	ND		mg/kg	0.193	0.024	1
n-Nonadecane (C19)	ND		mg/kg	0.193	0.050	1
n-Eicosane (C20)	ND		mg/kg	0.193	0.027	1
n-Heneicosane (C21)	ND		mg/kg	0.193	0.023	1
n-Docosane (C22)	ND		mg/kg	0.193	0.020	1
n-Tricosane (C23)	0.037	J	mg/kg	0.193	0.025	1
n-Tetracosane (C24)	0.055	J	mg/kg	0.193	0.032	1
n-Pentacosane (C25)	0.182	JCB	mg/kg	0.193	0.102	1
n-Hexacosane (C26)	0.061	J	mg/kg	0.193	0.028	1
n-Heptacosane (C27)	0.064	J	mg/kg	0.193	0.023	1
n-Octacosane (C28)	0.208		mg/kg	0.193	0.041	1
n-Nonacosane (C29)	ND		mg/kg	0.193	0.129	1
n-Triacontane (C30)	0.042	J	mg/kg	0.193	0.022	1
n-Hentriacontane (C31)	0.041	J	mg/kg	0.193	0.027	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-75  
**Client ID:** WMCOMP09  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 22:20  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.025	J	mg/kg	0.193	0.024	1
n-Tritriacontane (C33)	ND		mg/kg	0.193	0.027	1
n-Tetratriacontane (C34)	ND		mg/kg	0.193	0.031	1
n-Pentatriacontane (C35)	ND		mg/kg	0.193	0.034	1
n-Hexatriacontane (C36)	ND		mg/kg	0.193	0.038	1
n-Heptatriacontane (C37)	ND		mg/kg	0.193	0.043	1
n-Octatriacontane (C38)	ND		mg/kg	0.193	0.045	1
n-Nonatriacontane (C39)	ND		mg/kg	0.193	0.063	1
n-Tetracontane (C40)	ND		mg/kg	0.193	0.063	1
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/kg	6.37	1.40	1
Total Saturated Hydrocarbons	0.768	JB	mg/kg	0.193	0.020	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	101		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-76  
**Client ID:** WMCOMP10  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 23:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Tissue  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/22/23 07:37  
**Analyst:** AMV  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/kg	0.185	0.055	1
n-Decane (C10)	ND		mg/kg	0.185	0.059	1
n-Undecane (C11)	ND		mg/kg	0.185	0.055	1
n-Dodecane (C12)	ND		mg/kg	0.185	0.040	1
n-Tridecane (C13)	ND		mg/kg	0.185	0.051	1
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.185	0.028	1
n-Tetradecane (C14)	ND		mg/kg	0.185	0.028	1
2,6,10-Trimethyltridecane (1470)	0.024	J	mg/kg	0.185	0.022	1
n-Pentadecane (C15)	0.049	J	mg/kg	0.185	0.022	1
n-Hexadecane (C16)	ND		mg/kg	0.185	0.028	1
Norpristane (1650)	ND		mg/kg	0.185	0.061	1
n-Heptadecane (C17)	ND		mg/kg	0.185	0.061	1
Pristane	ND		mg/kg	0.185	0.040	1
n-Octadecane (C18)	ND		mg/kg	0.185	0.037	1
Phytane	ND		mg/kg	0.185	0.023	1
n-Nonadecane (C19)	ND		mg/kg	0.185	0.048	1
n-Eicosane (C20)	ND		mg/kg	0.185	0.026	1
n-Heneicosane (C21)	ND		mg/kg	0.185	0.022	1
n-Docosane (C22)	0.023	J	mg/kg	0.185	0.019	1
n-Tricosane (C23)	0.052	J	mg/kg	0.185	0.024	1
n-Tetracosane (C24)	0.092	J	mg/kg	0.185	0.031	1
n-Pentacosane (C25)	0.203	CB	mg/kg	0.185	0.098	1
n-Hexacosane (C26)	0.087	J	mg/kg	0.185	0.027	1
n-Heptacosane (C27)	0.090	J	mg/kg	0.185	0.022	1
n-Octacosane (C28)	0.223	C	mg/kg	0.185	0.040	1
n-Nonacosane (C29)	ND		mg/kg	0.185	0.123	1
n-Triacontane (C30)	0.052	J	mg/kg	0.185	0.021	1
n-Hentriacontane (C31)	0.047	J	mg/kg	0.185	0.026	1

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

**SAMPLE RESULTS**

**Lab ID:** L2330403-76  
**Client ID:** WMCOMP10  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 23:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	0.029	J	mg/kg	0.185	0.023	1
n-Tritriacontane (C33)	ND		mg/kg	0.185	0.026	1
n-Tetratriacontane (C34)	ND		mg/kg	0.185	0.029	1
n-Pentatriacontane (C35)	ND		mg/kg	0.185	0.032	1
n-Hexatriacontane (C36)	ND		mg/kg	0.185	0.037	1
n-Heptatriacontane (C37)	ND		mg/kg	0.185	0.041	1
n-Octatriacontane (C38)	ND		mg/kg	0.185	0.043	1
n-Nonatriacontane (C39)	ND		mg/kg	0.185	0.060	1
n-Tetracontane (C40)	ND		mg/kg	0.185	0.060	1
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/kg	6.10	1.34	1
Total Saturated Hydrocarbons	0.972	JB	mg/kg	0.185	0.019	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	114		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/03/23 17:32  
**Analyst:** AMV

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/23/23 10:55  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/24/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01-06,10-14,18-19 Batch: WG1795261-1					
n-Nonane (C9)	ND		mg/kg	0.200	0.059
n-Decane (C10)	ND		mg/kg	0.200	0.064
n-Undecane (C11)	ND		mg/kg	0.200	0.060
n-Dodecane (C12)	ND		mg/kg	0.200	0.044
n-Tridecane (C13)	ND		mg/kg	0.200	0.055
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.200	0.030
n-Tetradecane (C14)	ND		mg/kg	0.200	0.030
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.200	0.024
n-Pentadecane (C15)	ND		mg/kg	0.200	0.024
n-Hexadecane (C16)	ND		mg/kg	0.200	0.030
Norpristane (1650)	ND		mg/kg	0.200	0.066
n-Heptadecane (C17)	ND		mg/kg	0.200	0.066
Pristane	ND		mg/kg	0.200	0.043
n-Octadecane (C18)	ND		mg/kg	0.200	0.040
Phytane	ND		mg/kg	0.200	0.025
n-Nonadecane (C19)	ND		mg/kg	0.200	0.051
n-Eicosane (C20)	ND		mg/kg	0.200	0.028
n-Heneicosane (C21)	ND		mg/kg	0.200	0.024
n-Docosane (C22)	ND		mg/kg	0.200	0.021
n-Tricosane (C23)	ND		mg/kg	0.200	0.025
n-Tetracosane (C24)	ND		mg/kg	0.200	0.034
n-Pentacosane (C25)	ND		mg/kg	0.200	0.106
n-Hexacosane (C26)	ND		mg/kg	0.200	0.029
n-Heptacosane (C27)	ND		mg/kg	0.200	0.024
n-Octacosane (C28)	ND		mg/kg	0.200	0.043
n-Nonacosane (C29)	ND		mg/kg	0.200	0.133
n-Triacontane (C30)	ND		mg/kg	0.200	0.023
n-Hentriacontane (C31)	ND		mg/kg	0.200	0.028
n-Dotriacontane (C32)	ND		mg/kg	0.200	0.025

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8015D(M)  
 Analytical Date: 07/03/23 17:32  
 Analyst: AMV

Extraction Method: ALPHA OP-018  
 Extraction Date: 06/23/23 10:55  
 Cleanup Method: EPA 3611B  
 Cleanup Date: 06/24/23  
 Cleanup Method: EPA 3640A  
 Cleanup Date: 06/27/23

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01-06,10-14,18-19 Batch: WG1795261-1					
n-Tritriacontane (C33)	ND		mg/kg	0.200	0.028
n-Tetratriacontane (C34)	ND		mg/kg	0.200	0.032
n-Pentatriacontane (C35)	ND		mg/kg	0.200	0.035
n-Hexatriacontane (C36)	ND		mg/kg	0.200	0.040
n-Heptatriacontane (C37)	ND		mg/kg	0.200	0.044
n-Octatriacontane (C38)	ND		mg/kg	0.200	0.047
n-Nonatriacontane (C39)	ND		mg/kg	0.200	0.065
n-Tetracontane (C40)	ND		mg/kg	0.200	0.065
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/kg	6.60	1.45
Total Saturated Hydrocarbons	ND		mg/kg	0.200	0.021

Surrogate	%Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	85		50-130

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 07/19/23 19:31  
**Analyst:** AMV

**Extraction Method:** ALPHA OP-018  
**Extraction Date:** 06/26/23 10:40  
**Cleanup Method:** EPA 3611B  
**Cleanup Date:** 06/29/23  
**Cleanup Method:** EPA 3640A  
**Cleanup Date:** 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 20,43,45,67-76 Batch: WG1796063-1					
n-Nonane (C9)	ND		mg/kg	0.200	0.059
n-Decane (C10)	ND		mg/kg	0.200	0.064
n-Undecane (C11)	ND		mg/kg	0.200	0.060
n-Dodecane (C12)	ND		mg/kg	0.200	0.044
n-Tridecane (C13)	ND		mg/kg	0.200	0.055
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	0.200	0.030
n-Tetradecane (C14)	ND		mg/kg	0.200	0.030
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	0.200	0.024
n-Pentadecane (C15)	ND		mg/kg	0.200	0.024
n-Hexadecane (C16)	ND		mg/kg	0.200	0.030
Norpristane (1650)	ND		mg/kg	0.200	0.066
n-Heptadecane (C17)	ND		mg/kg	0.200	0.066
Pristane	ND		mg/kg	0.200	0.043
n-Octadecane (C18)	ND		mg/kg	0.200	0.040
Phytane	ND		mg/kg	0.200	0.025
n-Nonadecane (C19)	ND		mg/kg	0.200	0.051
n-Eicosane (C20)	ND		mg/kg	0.200	0.028
n-Heneicosane (C21)	ND		mg/kg	0.200	0.024
n-Docosane (C22)	0.021	J	mg/kg	0.200	0.021
n-Tricosane (C23)	0.064	J	mg/kg	0.200	0.025
n-Tetracosane (C24)	0.096	J	mg/kg	0.200	0.034
n-Pentacosane (C25)	0.217	C	mg/kg	0.200	0.106
n-Hexacosane (C26)	0.105	J	mg/kg	0.200	0.029
n-Heptacosane (C27)	0.100	J	mg/kg	0.200	0.024
n-Octacosane (C28)	0.082	J	mg/kg	0.200	0.043
n-Nonacosane (C29)	ND		mg/kg	0.200	0.133
n-Triacontane (C30)	0.050	J	mg/kg	0.200	0.023
n-Hentriacontane (C31)	0.039	J	mg/kg	0.200	0.028
n-Dotriacontane (C32)	ND		mg/kg	0.200	0.025



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8015D(M)  
 Analytical Date: 07/19/23 19:31  
 Analyst: AMV

Extraction Method: ALPHA OP-018  
 Extraction Date: 06/26/23 10:40  
 Cleanup Method: EPA 3611B  
 Cleanup Date: 06/29/23  
 Cleanup Method: EPA 3640A  
 Cleanup Date: 06/30/23

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 20,43,45,67-76 Batch: WG1796063-1					
n-Tritriacontane (C33)	ND		mg/kg	0.200	0.028
n-Tetratriacontane (C34)	ND		mg/kg	0.200	0.032
n-Pentatriacontane (C35)	ND		mg/kg	0.200	0.035
n-Hexatriacontane (C36)	ND		mg/kg	0.200	0.040
n-Heptatriacontane (C37)	ND		mg/kg	0.200	0.044
n-Octatriacontane (C38)	ND		mg/kg	0.200	0.047
n-Nonatriacontane (C39)	ND		mg/kg	0.200	0.065
n-Tetracontane (C40)	ND		mg/kg	0.200	0.065
Total Petroleum Hydrocarbons (C9-C44)	6.19	J	mg/kg	6.60	1.45
Total Saturated Hydrocarbons	0.775	J	mg/kg	0.200	0.021

Surrogate	%Recovery	Qualifier	Acceptance Criteria
d50-Tetracosane	70		50-130

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** WESTEN MARINER OIL SPILL NRDA

**Project Number:** Not Specified

**Lab Number:** L2330403

**Report Date:** 07/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 01-06,10-14,18-19 Batch: WG1795261-2 WG1795261-3								
Nonane (C9)	47	Q	39	Q	50-130	19		30
n-Decane (C10)	56		47	Q	50-130	17		30
n-Dodecane (C12)	61		52		50-130	16		30
n-Tetradecane (C14)	64		58		50-130	10		30
n-Hexadecane (C16)	78		74		50-130	5		30
n-Octadecane (C18)	89		86		50-130	3		30
n-Nonadecane (C19)	90		87		50-130	3		30
n-Eicosane (C20)	91		87		50-130	4		30
n-Docosane (C22)	93		89		50-130	4		30
n-Tetracosane (C24)	98		93		50-130	5		30
n-Hexacosane (C26)	95		91		50-130	4		30
n-Octacosane (C28)	94		90		50-130	4		30
n-Triacontane (C30)	92		90		50-130	2		30
n-Hexatriacontane (C36)	73		82		50-130	12		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
d50-Tetracosane	93		89		50-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 20,43,45,67-76 Batch: WG1796063-2 WG1796063-3								
Nonane (C9)	61		46	Q	50-130	28		30
n-Decane (C10)	70		53		50-130	28		30
n-Dodecane (C12)	73		56		50-130	26		30
n-Tetradecane (C14)	71		55		50-130	25		30
n-Hexadecane (C16)	78		64		50-130	20		30
n-Octadecane (C18)	90		84		50-130	7		30
n-Nonadecane (C19)	92		86		50-130	7		30
n-Eicosane (C20)	93		88		50-130	6		30
n-Docosane (C22)	95		90		50-130	5		30
n-Tetracosane (C24)	101		94		50-130	7		30
n-Hexacosane (C26)	100		92		50-130	8		30
n-Octacosane (C28)	98		91		50-130	7		30
n-Triacontane (C30)	97		91		50-130	6		30
n-Hexatriacontane (C36)	86		82		50-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
d50-Tetracosane	89		83		50-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-01  
**Client ID:** WM001  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:24  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	84.5		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	0.672		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-02  
**Client ID:** WM002  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	88.3		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	0.941		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-03  
**Client ID:** WM003  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:37  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	84.3		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	2.00		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-04  
**Client ID:** WM004  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:44  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	82.8		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	1.12		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP





**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-05  
**Client ID:** WM005  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:44  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	87.6		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	0.815		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-06  
**Client ID:** WM006  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 08:53  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	85.1		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	1.84		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-10  
**Client ID:** WM010  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:24  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	84.8		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	0.954		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-11  
**Client ID:** WM011  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	86.2		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	0.807		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-12  
**Client ID:** WM012  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:30  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	83.6		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	1.34		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-13  
**Client ID:** WM013  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	85.6		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	1.10		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-14  
**Client ID:** WM014  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 09:34  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	86.3		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	1.00		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-18  
**Client ID:** WM018  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:05  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	82.6		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	0.212		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP





**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-19  
**Client ID:** WM019  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:07  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	85.1		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	1.29		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-20  
**Client ID:** WM020  
**Sample Location:** ALASKA

**Date Collected:** 03/23/23 10:14  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	85.4		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	1.12		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-43  
**Client ID:** WM043  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:02  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	86.3		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	0.959		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-45  
**Client ID:** WM045  
**Sample Location:** ALASKA

**Date Collected:** 03/24/23 09:09  
**Date Received:** 05/31/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	83.8		%	0.100	0.100	1	-	06/12/23 15:30	121,2540G	GRS
Percent Lipids	1.12		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-67  
**Client ID:** WMCOMP01  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:30  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	83.4		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	1.88		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-68  
**Client ID:** WMCOMP02  
**Sample Location:** ALASKA

**Date Collected:** 06/09/23 20:50  
**Date Received:** 06/09/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	85.4		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	1.57		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-69  
**Client ID:** WMCOMP03  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 17:50  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	86.7		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	1.28		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-70  
**Client ID:** WMCOMP04  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 18:25  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	87.2		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	1.46		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP





**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-71  
**Client ID:** WMCOMP05  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 19:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	87.5		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	1.33		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-72  
**Client ID:** WMCOMP06  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	86.1		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	2.25		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-73  
**Client ID:** WMCOMP07  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 20:30  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	84.9		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	2.00		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-74  
**Client ID:** WMCOMP08  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 21:45  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	86.1		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	1.77		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-75  
**Client ID:** WMCOMP09  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 22:20  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	85.1		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	1.16		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### SAMPLE RESULTS

**Lab ID:** L2330403-76  
**Client ID:** WMCOMP10  
**Sample Location:** ALASKA

**Date Collected:** 06/10/23 23:00  
**Date Received:** 06/10/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Tissue  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Moisture	84.5		%	0.100	0.100	1	-	06/14/23 13:21	121,2540G	GRS
Percent Lipids	1.85		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP



**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23

### Method Blank Analysis

#### Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab for sample(s): 01-06,10-14,18-19 Batch: WG1797924-1										
Percent Lipids	ND		%	0.100	NA	1	-	06/30/23 00:00	111,-	CP
General Chemistry - Mansfield Lab for sample(s): 20,43,45,67-76 Batch: WG1799782-1										
Percent Lipids	ND		%	0.100	NA	1	-	07/06/23 00:00	111,-	CP

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

## Lab Duplicate Analysis

*Batch Quality Control*

**Lab Number:** L2330403  
**Report Date:** 07/24/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-06,10-14,18-20,43,45 QC Batch ID: WG1790207-1 QC Sample: L2330403-01 Client ID: WM001						
Moisture	84.5	84.6	%	0		10
General Chemistry - Mansfield Lab Associated sample(s): 67-76 QC Batch ID: WG1791123-1 QC Sample: L2330403-67 Client ID: WMCOMP01						
Moisture	83.4	83.4	%	0		10
General Chemistry - Mansfield Lab Associated sample(s): 01-06,10-14,18-19 QC Batch ID: WG1797924-2 QC Sample: L2330403-01 Client ID: WM001						
Percent Lipids	0.672	0.746	%	10		20
General Chemistry - Mansfield Lab Associated sample(s): 20,43,45,67-76 QC Batch ID: WG1799782-2 QC Sample: L2330403-20 Client ID: WM020						
Percent Lipids	1.12	0.958	%	16		20



**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent
B	Absent
C	Absent
D	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2330403-01A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-01X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-02A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-02X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-03A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-03X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-04A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-04X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-05A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-05X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-06A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-06X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-07A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-08A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-09A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-10A	Bag	C	NA		-5.4	Y	Absent		A2-ARCHIVE()
L2330403-10X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2330403-11A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-11X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-12A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-12X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-13A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-13X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-14A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-14X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-15A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-16A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-17A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-18A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-18X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-19A	Bag	D	NA		2.3	Y	Absent		A2-ARCHIVE()
L2330403-19X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-20A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-20X	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-21A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-22A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-23A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-24A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-25A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-26A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-27A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-28A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-29A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2330403-30A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-31A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-32A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-33A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-34A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-35A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-36A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-37A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-38A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-39A	Bag	B	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-40A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-41A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-42A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-43A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-43X	Glass 250ml/8oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-44A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-45A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-45X	Glass 250ml/8oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-46A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-47A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-48A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-49A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-50A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-51A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-52A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-53A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-54A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-55A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2330403-56A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-57A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-58A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-59A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-60A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-61A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-62A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-63A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-64A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-65A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-66A	Bag	A	NA		-8.3	Y	Absent		A2-ARCHIVE()
L2330403-67A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-67X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-68A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-68X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-69A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-69X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-70A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-70X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-71A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-71X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-72A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-72X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-73A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-73X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-74A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()

**Project Name:** WESTEN MARINER OIL SPILL NRDA**Lab Number:** L2330403**Project Number:** Not Specified**Report Date:** 07/24/23**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2330403-74X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)
L2330403-75A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-75X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-LIPIDS(7),A2-ALKPAH(14)
L2330403-76A	Bag	NA	NA		-10.7	Y	Absent		A2-ARCHIVE()
L2330403-76X	Glass 120ml/4oz unpreserved	NA	NA		-10.7	Y	Absent		A2-SHC(14),A2-MOISTURE-2540(7),A2-ALKPAH(14),A2-LIPIDS(7)

**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)  Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

*Report Format: DU Report with 'J' Qualifiers*



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Chlordane:** The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Gasoline Range Organics (GRO):** Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenzo(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

#### Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers





**Project Name:** WESTEN MARINER OIL SPILL NRDA  
**Project Number:** Not Specified

**Lab Number:** L2330403  
**Report Date:** 07/24/23

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 111 NOAA Technical Memorandum NOS ORCA 130: Sampling and Analytical Methods of the National Status and Trends Program Mussel Watch Project: 1993-196 Update. March 1998.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 20

Department: **Quality Assurance**

Published Date: 6/16/2023 4:52:28 PM

Title: **Certificate/Approval Program Summary**

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**Certification Information**

The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility****EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

## NRDA Chain of Custody Form

6/1/23

L2330403

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## Sampler Information

Contact/Phone/Email: Sarah Allan / 907-202-1859 / sarah.allan@noaa.gov  
 Affiliation: NOAA  
 Incident Name: Western Mariner Oil Spill NRDA

## Lead Contact Information

Contact/Phone/Email: Sarah Allan / 907-202-1859 / sarah.allan@noaa.gov  
 Affiliation: NOAA  
 Survey/Project Name: Western Mariner Oil Spill NRDA

## Special Instructions

## Analyses requested

Lab Name:

A

B

C

D

E

F

# of containers

Waybill Number:

Lab Report #:

# of Coolers:

Cooler Temp:

Turn Around Time:

Sample ID

Sample Date

Sample Time

Matrix

Comments

0403

mm/dd/yyyy

(24-hr local)

Enter Analyses above, with preservative specified, if needed.  
 Enter x's in boxes below.

-01	WM001	03/23/2023	8:24	Tissue							Samples #1-10 shipped to Alpha Analytical Lab on 5/30/2023 in turquoise cooler.
-02	WM002	03/23/2023	8:30	Tissue							
-03	WM003	03/23/2023	8:37	Tissue							
-04	WM004	03/23/2023	8:44	Tissue							
-05	WM005	03/23/2023	8:44	Tissue							
-06	WM006	03/23/2023	8:53	Tissue							
-07	WM007	03/23/2023	8:57	Tissue							
-08	WM008	03/23/2023	8:58	Tissue							
-09	WM009	03/23/2023	9:01	Tissue							
-10	WM010	03/23/2023	9:24	Tissue							
-11	WM011	03/23/2023	9:30	Tissue							Samples #11-19 shipped to Alpha Analytical Lab on 5/30/2023 in small blue coolers.
-12	WM012	03/23/2023	9:30	Tissue							
-13	WM013	03/23/2023	9:34	Tissue							
-14	WM014	03/23/2023	9:34	Tissue							
-15	WM015	03/23/2023	9:40	Tissue							
-16	WM016	03/23/2023	9:42	Tissue							
-17	WM017	03/23/2023	9:44	Tissue							
-18	WM018	03/23/2023	10:05	Tissue							
-19	WM019	03/23/2023	10:07	Tissue							
-20	WM020	03/23/2023	10:14	Tissue							
-21	WM021	03/23/2023	10:22	Tissue							
-22	WM022	03/23/2023	10:25	Tissue							
-23	WM023	03/23/2023	10:30	Tissue							
-24	WM024	03/23/2023	10:46	Tissue							
-25	WM025	03/23/2023	10:51	Tissue							
-26	WM026	03/23/2023	10:55	Tissue							

## Relinquished by

## Received by

Date	Time	Signature	Printed Name/Org.	Date	Time	Signature	Printed Name/Org.
03/24/2023	18:07	Sarah E. Allan	Sarah Allan / NOAA	3/24/2023	18:08	Veronica W. Varela	Veronica W. Varela
05/30/2023	11:00	Veronica W. Varela	Veronica Varela / USFWS			FedEx	
6/1/23	11:02	FedEx		6/1/23	11:02	Mylen Gerstone	Mylen Gerstone



## NRDA Chain of Custody Form

Page 2 of 3

Sampler Information					Lead Contact Information								
Contact/Phone/Email:	Sarah Allan / 907-202-1859 / sarah.allan@noaa.gov				Contact/Phone/Email:	Sarah Allan / 907-202-1859 / sarah.allan@noaa.gov							
Affiliation:	NOAA				Affiliation:	NOAA							
Incident Name:	Western Mariner Oil Spill NRDA				Survey/Project Name	Western Mariner Oil Spill NRDA							
Special Instructions					Analyses requested						Lab Name:		
					A	B	C	D	E	F	# of containers	Waybill Number:	
Turn Around Time:													Lab Report #:
											# of Coolers:		
												Cooler Temp:	
												Comments	
Sample ID	Sample Date	Sample Time	Matrix	Enter Analyses above, with preservative specified, if needed. Enter x's in boxes below.									
	mm/dd/yyyy	(24-hr local)											
-27 WM027	03/23/2023	11:14	Tissue									Samples #27-39 shipped together	
-28 WM028	03/23/2023	11:17	Tissue									in Box # 1 to Alpha Analytical	
-29 WM029	03/23/2023	11:20	Tissue									Lab 5/30/2023	
-30 WM030	03/23/2023	11:36	Tissue										
-31 WM031	03/23/2023	11:43	Tissue										
-32 WM032	03/23/2023	11:46	Tissue										
-33 WM033	03/23/2023	11:55	Tissue										
-34 WM034	03/23/2023	11:57	Tissue										
-35 WM035	03/23/2023	12:01	Tissue										
-36 WM036	03/24/2023	8:07	Tissue										
-37 WM037	03/24/2023	8:09	Tissue										
-38 WM038	03/24/2023	8:13	Tissue										
-39 WM039	03/24/2023	8:29	Tissue										
-40 WM040	03/24/2023	8:31	Tissue									Samples #40-52 shipped	
-41 WM041	03/24/2023	8:34	Tissue									together in Box #2 to Alpha	
-42 WM042	03/24/2023	8:59	Tissue									Analytical Lab 5/30/2023	
-43 WM043	03/24/2023	9:02	Tissue										
-44 WM044	03/24/2023	9:05	Tissue										
-45 WM045	03/24/2023	9:09	Tissue										
-46 WM046	03/24/2023	9:16	Tissue										
-47 WM047	03/24/2023	9:19	Tissue										
-48 WM048	03/24/2023	9:29	Tissue										
-49 WM049	03/24/2023	9:50	Tissue										
-50 WM050	03/24/2023	9:52	Tissue										
-51 WM051	03/24/2023	9:54	Tissue										
-52 WM052	03/24/2023	10:15	Tissue										
Relinquished by					Received by								
Date	Time	Signature	Printed Name/Org.	Date	Time	Signature	Printed Name/Org.						
03/24/2023	18:08	Sarah Allan	Sarah Allan / NOAA	3/24/2023	18:09	Veronica W. Varela	Veronica W. Varela						
05/30/2023	11:20	Veronica W. Varela	Veronica Varela / USFWS			FedEx							
5/31/23	11:22	FedEx		5/31/23	11:22	Dylan LeBlanc	Dylan LeBlanc						

**NRDA Chain of Custody Form**

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