FIVE-YEAR SAMPLING SUMMARY REPORT

LARAMIE FORMER YTTRIUM PLANT

LARAMIE RIVERS CONSERVATION DISTRICT

LARAMIE, WY

January 9, 2023

Project #: 17R-001-008

SUBMITTED BY: Trihydro Corporation

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List of Acronyms

bgs	Below ground surface
BP	British Petroleum
ºC	Degrees Celsius
CoC	Chain-of-Custody
COC	Contaminants of Concern
DO	Dissolved Oxygen
DRO	Diesel Range Organics
ft	Feet
LRCD	Laramie Rivers Conservation District
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MDL	Method Detection Limit
mV	Millivolts
NTU	Nephelometric Turbidity Units
ORP	Oxygen-Reduction Potential
PID	Photoionization Detector
RA	Remedy Agreement
RL	Reporting Limit (Practical Quantitation Limit in this report)
RSS	Residential Screening Standards
SAP	Sampling and Analysis Plan
Site	Laramie Former Yttrium Plant
SVOCs	Semi-Volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons

List of Acronyms (cont.)

VRP	Voluntary Remediation Program
WDEQ	Wyoming Department of Environmental Quality

1.0 INTRODUCTION

This "Five-Year Groundwater Summary Report" documents the activities and results associated with annual groundwater sampling events conducted 2018 and 2022 at the Laramie Former Yttrium Plant (Site) located in Laramie, Wyoming (#58.162). The groundwater monitoring was conducted by Trihydro Corporation (Trihydro) on behalf of the Laramie Rivers Conservation District (LRCD). The Site was previously owned by LRCD and is currently owned by Getset Properties, LLC (Getset). The Site entered the VRP and the Wyoming Brownfields Assistance Program on February 21, 2012. A Remedy Agreement (RA) was signed between the WDEQ and LRCD on July 5, 2016. (WDEQ 2016)

The Site is located in Laramie, Wyoming and encompasses approximately 3.1 acres as shown on the Site Location Map (Figure 1-1). The original Site was 5.6 acres, but 3.5 acres of the southern portion of the Site were sold to the State of Wyoming in 2015 for construction of the Harney Street viaduct. The Site address is 971 North Cedar Street, Laramie, WY 82072. The Site is currently zoned I-2 industrial.

1.1 BACKGROUND

The Site was formerly used as part of the Midwest and Standard Oil Refineries (1921-1932), and as an yttrium processing plant (1956-1957). In the 1970s and 1980s, the property was reportedly utilized as a logging business, an automotive paint and body shop, and a trash disposal business office. The refinery operations in the 1920s and 1930s manufactured products including gasoline, kerosene, furnace oil, distillate, fuel oil, and various grades of road oils which were shipped to Salt Lake City via the adjacent rail line (URS 2011). The property has been abandoned for approximately the last 20 years. The property was purchased by the LRDC3-5 in 2012 and most recently by Getset in 2021.

1.1.1 GEOLOGY AND HYDROGEOLOGY

The property is underlain by alluvial floodplain deposits from the Laramie River. The deposits are composed of interlayered sands and gravels. Alluvium is approximately 10 to 12 ft thick in the area and extends along the Laramie River for about 0.5 mile east of the property, 12 miles west and south of the property, and approximately 30 miles north of the property (URS 2011). Very fine-grained sandstone underlies the alluvium in the area and is exposed in the bed of the Laramie River west of the site. The age and origin of the sandstone is unknown but is likely equivalent to the gray shale identified during drilling activities associated with the Phase II site assessment. Beneath this shale/sandstone lie three major bedrock units. From shallowest to deepest, they are identified as the Satanka Shale, followed by the Casper Formation, followed by the Sherman Granite.

There is an unconfined water table aquifer in the alluvial material underlying the property, which was found in the previous Phase II site assessment to be 4.9 to 7.95 ft bgs (URS 2011). The alluvial deposits are expected to be highly permeable. The fractured sandstone of the Casper Aquifer is the principal water-bearing unit in the area and provides a portion of the municipal water supply for the City of Laramie. The Casper Aquifer is under artesian pressure in the Laramie area and is recharged to the east in the foothills of the Laramie Range. Wells drawing water from the Casper Aquifer can be up to 1,500 ft deep west of the property.

Taken in its entirety, the Satanka Shale is a regional confining layer overlying the Casper Aquifer. However, permeable sandstones in the Satanka Shale provide water to many domestic and stock wells in the Laramie area. Approximately 300 ft of interbedded shale, siltstone, and sandstone isolates the Casper Aquifer from overlying aquifers, including permeable beds within the Satanka Shale.

Shallow groundwater typically flows in a northwesterly direction toward the Laramie River. Based on investigations to date on the property, water-level data indicate that the depth to water ranges from 5 to 8 ft bgs at the site location.

1.1.2 OBJECTIVE

The objective of the sampling and analysis activities described below is to monitor contaminants of concern (COCs) in groundwater at the Site per the 2016 RA. A site specific SAP addendum was prepared in order to guide completion of the work. The SAP Addendum was submitted to WDEQ on June 26, 2018 (Trihydro 2018). In January 2014, six soil borings and six new monitoring wells were installed and sampled at the Site. Data collected during these activities are summarized in the "Well Completion and Quarterly Sampling Report" submitted on March 18, 2014 (Trihydro 2014). Of the six monitoring wells completed at the Site, four (LYMW04, LYMW06, LYMW10, LYMW11) were selected for continued monitoring. Monitoring wells LYMW06 and LYMW10 were destroyed during site demolition activities. Monitoring well LYMW06 was replaced by LYMW06R in June 2018. Monitoring well LYMW10 was replaced by LYMW10R in January 2019. Figure 1-2 shows historical and current well locations.

2.0 GROUNDWATER MONITORING PROCEDURES

Annual groundwater sampling between 2018 and 2022 included gauging fluid levels and collecting groundwater samples from four monitoring wells as shown on Figure 1-2. Procedures for fluid level gauging, groundwater sampling, sample handling, and quality assurance/quality control are described below.

2.1 FLUID LEVEL GAUGING PROCEDURES

Groundwater levels were measured in the four monitoring wells using an oil/water interface probe. The probe and tape were decontaminated with Simple Green and distilled water between wells.

2.2 WELL PURGING AND GROUNDWATER SAMPLING PROCEDURES

In accordance with the SAP, low-flow sampling procedures were used during the sampling events. The low-flow sampling was completed in accordance with procedures described in SAP. A bladder pump was used to extract water at a slow rate (<0.5 L/min) to minimize drawdown in the wells. Fluid levels were measured before purging and during sampling. A water-quality meter fitted with a flow-through cell was used to measure field parameters during purging to determine when the water in the well had stabilized. Stabilized water in the well indicates that the water being discharged from the well is representative of formation water and not stagnant water stored in the well casing. The water is considered stable when the following criteria are met over three consecutive readings:

- pH ± 0.1 pH unit
- temperature ± 0.2 degrees Celsius (3% variance)
- conductivity ± 3%
- turbidity ± 10% or maintained below 10 NTUs
- DO ± 10%
- ORP ± 10 mV

After field parameters had stabilized in accordance with the SAP and Fact Sheet #29, samples were collected directly from the dedicated tubing, without disturbance to flow rate, into prepared/pre-preserved sample containers provided by the analytical laboratory.

Each sample was placed in a laboratory-supplied sample container with appropriate preservatives, labeled, and placed on ice in an insulated container for delivery to the laboratory. The samples were accompanied by a Chain of Custody

(CoC) record during transport. Purging volumes and water quality field parameters were noted on the Groundwater Sampling Field Forms included in Appendix A.

The samples were submitted to the laboratory for analysis of the following constituents:

- SVOCs (1-methylnaphthalene, benzo(a)anthracene, dibenz(a,h)anthracene)
- TPH-DRO
- Total metals (arsenic, boron, cobalt, iron, lead, manganese, mercury, thallium)

2.3 SAMPLE HANDLING PROCEDURES

Collected groundwater samples were placed on ice in opaque coolers and maintained at a temperature of 4+/- 2 ºC as soon as possible. A complete CoC form was placed in a zip-lock type bag and shipped in the coolers with the samples during sampling event. The samples were shipped overnight to TestAmerica (Arvada, CO).

Note that samples collected in 2021 were received at the laboratory out of temperature range due to shipping delays. Trihydro consulted with the LRCD Project Manager and decided to analyze the samples rather than resampling the wells.

2.4 QUALITY ASSURANCE/QUALITY CONTROL

Quality control samples were submitted during each sampling event per the SAP as follows:

- Equipment blanks were collected and submitted for analysis of target analytes.
- Field duplicates were collected as duplicates for analysis of target analytes.

The quality assurance samples were submitted to the laboratory and reviewed as part of the data validation reports.

3.0 DATA QUALITY AND RESULTS

Trihydro performed annual groundwater sampling at the Site between 2018 and 2022. Results from the sampling events are summarized below. A discussion of data usability is also provided in this section.

3.1 EVALUATION OF GROUNDWATER MONITORING RESULTS

During the five-year reporting period, water-level data and groundwater quality samples were collected from four monitoring wells. Quality control samples (equipment blanks and blind duplicates) were also collected from the monitoring well network as part of the collection activities. Water level and groundwater quality results are summarized below.

3.1.1 WATER LEVEL RESULTS

Depth to water and groundwater elevations are presented in Table 3-1. Data from 2014 are presented for comparison purposes. Measuring point elevations are not available for 2018 data; therefore, corrected water elevation was not calculated for the 2018 data. The depth to groundwater across the Site ranged between approximately 5.5 feet and 7.5 feet below measuring point (ft bmp) between 2019 and 2022. Groundwater elevations varied by less than 0.5 feet at each well during the reporting period. No free-phase hydrocarbons were detected in the monitored wells. A potentiometric surface map of the 2022 data is presented as Figure 3-1. As shown on Figure 3-1, the groundwater flow direction is toward the northwest, which is consistent with previous data for the area.

3.1.2 GROUNDWATER QUALITY RESULTS

Analytical data are presented in Table 3-2. Analytical results are compared to water cleanup levels indicated in the 2016 RA. Laboratory reports are provided in Appendix B. The observed exceedances in the samples are as follows:

Semi-Volatile Organic Compounds:

As shown on Table 3-2, 1-methylnaphthalene was detected at concentrations exceeding the water cleanup level in samples from wells LYMW04, LYMW06R, LYMW10R, and LYMW11 in at least one sampling event during the reporting period. Benzo(a)anthracene was detected at concentrations exceeding the cleanup levels at wells LYMW10R (2019 and 2022) and LYMW11 (2022). Dibenz(a,h)anthracene was detected at concentrations exceeding the water cleanup level in the samples from wells LYMW10R and LYMW11. Figure 3-2 shows wells with SVOC concentrations exceeding the cleanup levels in 2022. The reporting limit (RL) and the method detection limit (MDL) exceeded the cleanup levels for dibenz(a,h)anthracene in 2019 and 2020 at each of the wells. Based on sample results

before and after these events, it is likely that detections of dibenz(a,h)anthracene occurred only in well LYMW10R in 2019 and 2020.

Total Petroleum Hydrocarbons as Diesel Range Organics:

TPH-DRO results are listed on Table 3-2 and wells with exceedances are shown on Figure 3-3. TPH-DRO was not detected at concentrations exceeding the water cleanup levels at the Site during the reporting period.

Total Metals:

Results are shown on Table 3-2 and Figure 3-4. Total boron and total manganese concentrations exceeded the cleanup levels in each well between 2018 and 2022. Total boron concentrations have remained relatively consistent in each well during the reporting period with concentrations slightly decreasing in well LYMW11 in 2022. Total manganese concentrations have decreased in wells LYMW06R and LYMW11 while concentrations in well LYMW04 remained relatively consistent. Total manganese concentrations in well LYMW10R increased slightly from 2018 to 2022. Total arsenic, cobalt, iron, lead, mercury, and thallium were not detected at concentrations exceeding the cleanup levels during the five-year reporting period.

Field Parameters:

Field parameters are shown on Table 3-3. Field parameters are recorded during sampling to indicate stable groundwater conditions. Cleanup levels are not applied to the field parameters. Note that turbidity values during the 2018 and 2022 sampling events were higher than values from other events during the reporting period. The 2018 turbidity values seem to indicate that the wells needed re-development as visual observation showed higher volumes of sediment in the wells. The wells were re-developed prior to the 2019 sampling event. The 2022 turbidity values may be indicative of higher sediment volumes in the wells, but visual observation did not corroborate these values. The values may be a result of water quality meter error. The meter was re-calibrated several times during the event.

3.2 DATA USABILITY

Tier II Data Validations were performed on the analytical data from each sampling event during the five-year reporting period. The individual Tier II Data Validation Reports are available upon request and provide a detailed assessment of the precision, accuracy, method compliance, and completeness for the data packages submitted by the analytical laboratory.

Data for the groundwater samples collected during the reporting period were qualified for one or more issues related to holding time limits, calibration criteria, system performance criteria, MS/MSD limits, surrogate standard recoveries, field duplicate relative percent difference (RPD) values, and detections in laboratory blanks.

Data that were not qualified meet the Site data quality objectives. Results that were assigned qualifiers other than an R (rejected, data not usable) may be used for Site evaluation; however, the reasons for qualification were considered when interpreting the sample concentrations.

4.0 CONCLUSIONS AND PROPOSED FUTURE ACTIVITIES

This report is intended to present the results of sampling activities between 2018 and 2022. Future activities will help to determine what, if any, further action is necessary at the Site.

4.1 CONCLUSIONS

Groundwater at the Site flows to the northwest. Detections exceeding the groundwater cleanup levels included SVOCs (1-methylnaphthalene, benzo(a)anthracene, and dibenz(a,h)anthracene) and total metals (boron and manganese). Downgradient well LYMW06R shows the least number of exceedances. Analytes with exceedances (total boron and manganese) are stable or decreasing. Reductions and limited increases in concentrations of COCs across the Site indicate that groundwater conditions are improving. Continued monitored natural attenuation per the 2016 RA is a reasonable remedy. Since analyte concentrations are relatively consistent from year to year, a reduction in sampling frequency (every 2 to 3 years) may be warranted.

4.2 PROPOSED FUTURE ACTIVITIES

Getset is currently (as of December 2022) building an automotive parts distribution and retail center at the Site. This use is consistent with the 2016 Use Control Area (City of Laramie 2016). The development included removal of a portion of the existing concrete foundations at the Site and limited excavation for new footings and foundation for the building. The building and parking areas are being constructed as to maintain the existing monitoring well network.

5.0 REFERENCES

City of Laramie. 2016. City Council Resolution No. CC 2016-31. Resolution of the City of Laramie City Council Approving a Petition by the Laramie Rivers Conservation District to Establish a Use Control Area as allowed by Wyoming Statutes 35-11-1609 at 971 N. Cedar Street. April 5, 2016.

Trihydro. 2014. Well Completion and Quarterly Sampling Report, Laramie Former Yttrium Plant, Wyoming Department of Environmental Quality, Voluntary Remediation Program Site #58.162, Laramie, Wyoming. March 18, 2014.

Trihydro. 2018. Remedy Implementation Work Plan and Sampling and Analysis Plan Addendum, Laramie Former Yttrium Plant, Wyoming Department of Environmental Quality, Voluntary Remediation Program Site #58.162, Laramie, Wyoming. June 26, 2018.

URS Corporation. 2011. Phase II – Analytical Results Report for Targeted Brownfields Assessment. Laramie, Wyoming. December 7, 2011.

URS Corporation. 2012a. Phase I Environmental Site Assessment for Targeted Brownfields Assessment. Laramie, Wyoming. May 10, 2012.

URS Corporation. 2012b. Phase II – Analytical Results Report for Targeted Brownfields Assessment. Laramie, Wyoming. Laramie, Wyoming. October 29, 2012.

WDEQ. 2016. Remedy Agreement, Voluntary Remediation Program (VRP) Site #58.162, July 5, 2016.

TABLES

TABLE 3-1. FLUID LEVELS
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Location	Date Measured	Measuring Point Elevation (ft-msl)	Depth to Product (ft-bmp)	Depth to Water (ft-bmp)	Corrected Water Elevation (ft-msl)	Depth Gauged (ft-bmp)
LYMW04	1/27/2014	NA	NA	9.99	NA	14.14
LYMW04	9/20/2018	NA	ND	9.50	NA	12.60
LYMW04	10/02/2019	7139.75	ND	7.08	7132.67	10.55
LYMW04	9/01/2020	7139.75	ND	7.36	7132.39	11.00
LYMW04	9/08/2021	7139.75	ND	7.32	7132.43	11.00
LYMW04	8/30/2022	7139.75	ND	6.96	7132.79	11.00
LYMW06	1/27/2014	NA	NA	9.35	NA	13.85
LYMW06R	9/20/2018	NA	ND	6.80	NA	12.00
LYMW06R	10/03/2019	7138.82	ND	6.43	7132.39	12.00
LYMW06R	9/01/2020	7138.82	ND	6.21	7132.61	12.01
LYMW06R	9/08/2021	7138.82	ND	6.67	7132.15	12.00
LYMW06R	8/30/2022	7138.82	ND	6.31	7132.51	12.00
LYMW10	1/27/2014	NA	NA	6.35	NA	12.74
LYMW10R	2/19/2019	NA	ND	6.91	NA	12.65
LYMW10R	10/03/2019	7138.86	ND	6.26	7132.60	12.60
LYMW10R	9/01/2020	7138.86	ND	6.52	7132.34	12.59
LYMW10R	9/08/2021	7138.86	ND	6.45	7132.41	12.42
LYMW10R	8/30/2022	7138.86	ND	6.09	7132.77	12.50
LYMW11	1/24/2014	NA	NA	5.54	NA	12.38
LYMW11	9/20/2018	NA	ND	8.56	NA	12.84
LYMW11	10/02/2019	7138.42	ND	5.59	7132.83	10.25
LYMW11	9/01/2020	7138.42	ND	5.86	7132.56	11.30
LYMW11	9/08/2021	7138.42	ND	5.79	7132.63	11.25
LYMW11	8/30/2022	7138.42	ND	5.45	7132.97	11.26

ft-bmp - feet below measuring point
ft-msl - feet above mean sea level

NOTES:
Monitoring well LYMW04 was converted to flush mount in October 2018
Monitoring well LYMW06 was replaced by LYMW06R in June 2018
Monitoring well LYMW10 was replaced by LYMW10R in January 2019
Monitoring well LYMW11 was converted to flush mount in October 2018

TABLE 3-2. ANALYTICAL RESULTS
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Location ID	Date Sampled	1-Methyl-naphthalene (ug/L)	Benzo(a)-anthracene (ug/L)	Dibenz (a,h) anthracene (ug/L)	Diesel Range Organics (ug/L)	Arsenic, Total (ug/L)	Boron, Total (ug/L)
LYMW04	06/04/12	**36**	0.016	ND(0.004)	3300	4.8	--
	01/27/14	**3**	ND(0.0034)	ND(0.0051)	2000	ND(0.33)	**1800**
	04/02/14	**3.8 J**	ND(0.0032)	ND(0.0049)	1500	ND(0.33)	**1900**
	09/20/18	0.21 J	ND(0.0043)	ND(0.0042)	810 J	ND(4.4)	**1800**
	10/02/19	**5.7**	ND(0.029)	**ND(0.029)**	1100/ND(1100)U*	0.45 J	**1600**
	09/02/20	0.17 J	ND(0.029)	**ND(0.028)**	720	0.52 J	**1700**
	09/08/21	**4.9 J**	ND(0.011) UJ	ND(0.011) UJ	1000 J	0.81 J	**1600**
	09/01/22	**3.6**	ND(0.012)	ND(0.012)	1100	0.41 J	**1700**
LYMW04 Dup	01/27/14	2.5	ND(0.0034)	ND(0.0051)	2100	ND(0.33)	**1800**
	09/20/18	0.29 J	ND(0.0047)	ND(0.0046)	ND(32) R	ND(4.4)	**1900**
	10/02/19	**6.7**	ND(0.028)	**ND(0.027)**	1100/ND(1100)U*	ND(0.33)	**1600**
	09/02/20	0.31 J	ND(0.028)	**ND(0.028)**	630	0.44 J	**1700**
	09/08/21	**4.8 J**	ND(0.012) UJ	ND(0.012) UJ	830 J	0.44 J	**1600**
LYMW06	06/04/12	0.05	ND(0.0031)	ND(0.0041)	1700	ND(4)	--
	01/27/14	ND(0.0057)	ND(0.0032)	ND(0.0049)	1400	ND(0.33)	**2000**
	04/03/14	ND(0.0057)	ND(0.0032)	ND(0.0048)	980	ND(0.33)	**2000**
LYMW06 Dup	04/03/14	ND(0.0057)	ND(0.0032)	ND(0.0048)	1100	ND(0.33)	**2000**
LYMW06R	09/20/18	**7.3**	ND(0.0043)	ND(0.0042)	1700	ND(4.4)	**1900**
	10/03/19	0.22	ND(0.028)	**ND(0.028) UJ**	970/ND(970)U*	ND(0.33)	**1700**
	09/02/20	0.03 J	ND(0.028)	**ND(0.028)**	720	ND(0.33)	**1700**
	09/08/21	ND(0.0089) UJ	ND(0.012) UJ	ND(0.012) UJ	710 J	1.3 J	**1700**
	09/01/22	ND(0.0092)	ND(0.012)	ND(0.012)	720	0.64 J	**1700**
LYMW10	01/27/14	**4**	0.014 J	0.0056 J	2900	0.67 J	**1700**
	04/03/14	2.5 J	0.021 J	**0.018 J**	2700	0.48 J	**2000**
LYMW10R	02/25/19	**110**	**0.5**	**0.31**	8400	ND(4.4)	**1700**
	10/03/19	**49**	0.055 J	**ND(0.026) UJ**	4100 JB	1.2 J	**1600**
	09/02/20	**35**	0.078 J	**ND(0.028)**	3500	1.1 J	**1700**
	09/08/21	**28 J**	0.072 J	**0.028 J**	4300 J	1.3 J	**1300**
	08/30/22	**15 J+**	**0.28**	**0.17**	3900	1.5 J	**2100**
Remedy Agreement 2016 CULs		2.933	0.123	0.0123	10,000	10	750

Notes:
Monitoring well LYMW06 was replaced by LYMW06R in June 2018
Monitoring well LYMW10 was replaced by LYMW10R in January 2019
ug/L - micrograms per liter
U - Evaluated to be undetected at the reporting limit
J - Estimated concentration (2021 samples arrived at lab out of temperature)
UJ - Estimated reporting limit
JB - Estimated concentration due to blank concentration
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.
The method detection limit (MDL) was used as the reporting limit.

TABLE 3-2. ANALYTICAL RESULTS
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Location ID	Date Sampled	Cobalt, Total (ug/L)	Iron, Total (ug/L)	Lead, Total (ug/L)	Manganese, Total (ug/L)	Mercury, Total (ug/L)	Thallium, Total (ug/L)
LYMW04	06/04/12	9.4	**38200**	**16.7**	**1460**	ND(0.016)	**ND(2.5)**
	01/27/14	0.18 J	17000	ND(0.18)	**1600**	ND(0.027)	ND(0.05)
	04/02/14	0.18 J	19000	ND(0.18)	**1500**	ND(0.027)	0.074J/ND(1)U*
	09/20/18	ND(1.2)	5700	ND(2.7)	**630**	ND(0.027)	ND(0.05)
	10/02/19	ND(1.2)	3100	ND(2.7)	**590**	ND(0.027)	ND(0.089)
	09/02/20	ND(1.2)	3900	3.3 J	**420**	0.047J B/ND(0.2)U*	ND(0.089)
	09/08/21	ND(1.2)	4400	2.9 J	**480**	0.084 J	ND(0.089)
	09/01/22	ND(0.56)	6000	ND(2.7)	**570**	ND(0.061)	ND(0.089)
LYMW04 Dup	01/27/14	0.2 J	17000	ND(0.18)	**1600**	ND(0.027)	0.064J B/ND(1)U*
	09/20/18	ND(1.2)	5100	ND(2.7)	**600**	ND(0.027)	ND(0.05)
	10/02/19	ND(1.2)	2600	ND(2.7)	**560**	ND(0.027)	ND(0.089)
	09/02/20	ND(1.2)	3800	ND(2.7)	**410**	0.05J B/ND(0.2)U*	ND(0.089)
	09/08/21	ND(1.2)	3800	ND(2.7)	**460**	0.046 J	ND(0.089)
LYMW06	06/04/12	3.5	**29500**	**40.3**	**5120**	**19.1**	**3.5**
	01/27/14	0.06 J	22000	ND(0.18)	**5100**	ND(0.027)	ND(0.05)
	04/03/14	0.055 J	20000	ND(0.18)	**4100**	ND(0.027)	0.13J/ND(1)U*
LYMW06 Dup	04/03/14	0.061 J	20000	ND(0.18)	**4200**	ND(0.027)	ND(0.05)
LYMW06R	09/20/18	ND(1.2)	19000	ND(2.7)	**2700**	ND(0.027)	ND(0.05)
	10/03/19	ND(1.2)	16000	ND(2.7)	**2200**	ND(0.027)	ND(0.089)
	09/02/20	ND(1.2)	11000	ND(2.7)	**1500**	0.048J B/ND(0.2)U*	ND(0.089)
	09/08/21	ND(1.2)	13000	3.2 J	**1400**	0.038 J	ND(0.089)
	09/01/22	ND(0.56)	12000	ND(2.7)	**1300**	ND(0.061)	ND(0.089)
LYMW10	01/27/14	0.17 J	150	ND(0.18)	**1900**	ND(0.027)	ND(0.05)
	04/03/14	0.32 J	620	0.21 J	**2100**	ND(0.027)	ND(0.05)
LYMW10R	02/25/19	ND(1.2)	68 J	ND(2.7)	**580**	ND(0.027)	ND(0.089)
	10/03/19	ND(1.2)	360	ND(2.7)	**630**	ND(0.027)	ND(0.089)
	09/02/20	ND(1.2)	590	ND(2.7)	**1000**	0.077J B/ND(0.2)U*	ND(0.089)
	09/08/21	ND(1.2)	150	ND(2.7)	**800**	0.049 J	ND(0.089)
	08/30/22	0.58 J	2800	ND(2.7)	**1200**	ND(0.061)	ND(0.089)
Remedy Agreement 2016 CULs		10	23,300	15	50	2	2

Notes:
Monitoring well LYMW06 was replaced by LYMW06R in June 2018
Monitoring well LYMW10 was replaced by LYMW10R in January 2019
ug/L - micrograms per liter
U - Evaluated to be undetected at the reporting limit
J - Estimated concentration (2021 samples arrived at lab out of temperature)
UJ - Estimated reporting limit
JB - Estimated concentration due to blank concentration
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.
The method detection limit (MDL) was used as the reporting limit.

TABLE 3-2. ANALYTICAL RESULTS
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Location ID	Date Sampled	1-Methyl-naphthalene (ug/L)	Benzo(a)-anthracene (ug/L)	Dibenz (a,h) anthracene (ug/L)	Diesel Range Organics (ug/L)	Arsenic, Total (ug/L)	Boron, Total (ug/L)
LYMW11	01/24/14	**3.2**	ND(0.0031)	ND(0.0047)	1800	0.44 J	**2500**
	04/02/14	2.3	ND(0.0031)	ND(0.0047)	2000	0.56 J	**2300**
	09/20/18	**3.5**	0.049 U	**0.018 J**	4200	ND(4.4)	**1300**
	10/02/19	**5.5**	ND(0.028)	**ND(0.028)**	2400 JB	0.6 J	**1700**
	09/01/20	1.1	ND(0.029)	**ND(0.028)**	2200	0.46 J	**1900**
	09/08/21	2 J	0.04 J	ND(0.011) UJ	2700 J	0.59 J	**1700**
	08/31/22	**11**	**0.19**	**0.079**	4800	1.9 J	630
LYMW11 Dup	08/31/22	**8.2**	**0.22**	**0.094**	5100	2.1 J	630
Remedy Agreement 2016 CULs		2.933	0.123	0.0123	10,000	10	750

Notes:
Monitoring well LYMW06 was replaced by LYMW06R in June 2018
Monitoring well LYMW10 was replaced by LYMW10R in January 2019
ug/L - micrograms per liter
U - Evaluated to be undetected at the reporting limit
J - Estimated concentration (2021 samples arrived at lab out of temperature)
UJ - Estimated reporting limit
JB - Estimated concentration due to blank concentration
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.
The method detection limit (MDL) was used as the reporting limit.

TABLE 3-2. ANALYTICAL RESULTS
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Location ID	Date Sampled	Cobalt, Total (ug/L)	Iron, Total (ug/L)	Lead, Total (ug/L)	Manganese, Total (ug/L)	Mercury, Total (ug/L)	Thallium, Total (ug/L)
LYMW11	01/24/14	0.49 J	19000	0.69 J	**5100**	ND(0.027)	0.094J/ND(1)U*
	04/02/14	0.15 J	19000	ND(0.18)	**5300**	ND(0.027)	ND(0.05)
	09/20/18	ND(1.2)	10000	4.5 J	**2900**	0.042 J	ND(0.05)
	10/02/19	ND(1.2)	16000	ND(2.7)	**3600**	ND(0.027)	ND(0.089)
	09/01/20	ND(1.2)	15000	ND(2.7)	**3100**	0.04J B/ND(0.2)U*	ND(0.089)
	09/08/21	ND(1.2)	13000	ND(2.7)	**2700**	0.081 J	ND(0.089)
	08/31/22	ND(0.56)	4500	6.9 J	**920**	ND(0.061)	ND(0.089)
LYMW11 Dup	08/31/22	ND(0.56)	5100	7.9 J	**920**	ND(0.061)	ND(0.089)
Remedy Agreement 2016 CULs		10	23,300	15	50	2	2

Notes:
Monitoring well LYMW06 was replaced by LYMW06R in June 2018
Monitoring well LYMW10 was replaced by LYMW10R in January 2019
ug/L - micrograms per liter
U - Evaluated to be undetected at the reporting limit
J - Estimated concentration (2021 samples arrived at lab out of temperature)
UJ - Estimated reporting limit
JB - Estimated concentration due to blank concentration
* - The first result represents the laboratory reported concentration. The second result was evaluated to be undetected at the reported concentration by the data validator. The result was determined to be a false positive.
The method detection limit (MDL) was used as the reporting limit.

TABLE 3-3. FIELD PARAMETERS
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Location ID	Date Sampled	pH (Std Units)	Temperature (oC)	Specific Conductance Field (uS/cm)	Turbidity, Field (NTU)	Oxygen, Dissolved (mg/L)	Oxidation-Reduction Potential (mV)
LYMW04	01/27/14	6.99	6.02	2172	3.2	-0.49	-82
	04/02/14	7.15	5.39	2051	2.3	0.05	-176
	09/20/18	7	14.09	3218	288.34	0.1	-34.4
	10/02/19	6.96	14.31	3002	82.2	0.31	-146.5
	09/02/20	7.29	13.99	3002	12.38	3.15	-41.5
	09/08/21	6.38	14.38	2476	27.32	0.05	-165.7
	09/01/22	6.14	14	2656	626.7	1.21	-201.8
LYMW06	01/27/14	7.02	4.98	2310	5.9	0.31	-122
	04/03/14	7.15	4.17	2099	10.8	0.06	-94
LYMW06R	09/20/18	6.78	13.6	3542	82.4	0.03	-215.6
	10/03/19	6.95	12.42	3403	50.06	0.05	-295.8
	09/02/20	6.73	13.21	3372	17.77	1.18	-79.6
	09/08/21	6.69	12.75	2774	48.76	1.12	-233.8
	09/01/22	6.93	12.5	2824	508.3	1.31	-122.7
LYMW10	01/27/14	7.31	5.78	2651	4.2	-0.64	-335
	04/02/14	7.52	6.21	2716	15.7	-0.04	-301
LYMW10R	02/25/19	7.42	6.69	4166	256.2	0.31	-265.5
	10/03/19	7.4	12.74	4011	13.42	0.07	-410.2
	09/02/20	7.25	13.71	4118	16.37	4.56	-236.8
	09/08/21	7.41	13.71	3472	10.04	0.04	-431.5
	08/30/22	7.43	13.5	3674	196.74	1.68	-291.5
LYMW11	01/24/14	6.96	7.24	2643	11.7	0.08	-96
	04/02/14	7.21	5.7	2359	1.2	0.02	-285
	09/20/18	7.14	15.04	2677	215.51	0.51	-265.4
	10/02/19	6.99	12.4	3304	48.04	0.05	-326.1
	09/02/20	6.54	16.82	3403	32.07	1.05	-252.9
	09/08/21	6.79	14.43	3173	35.69	0.47	-338.2
	08/31/22	7.31	15.5	2472	143.2	1.12	-297.7

Notes:
Monitoring well LYMW06 was replaced by LYMW06R in June 2018
Monitoring well LYMW10 was replaced by LYMW10R in January 2019
Std Units - Standard Units
oC - degrees Celcius
uS/cm - microsiemens per centimeter
NTU - nephelometric turbidity units
mg/L - milligrams per liter
mV - millivolts

FIGURES

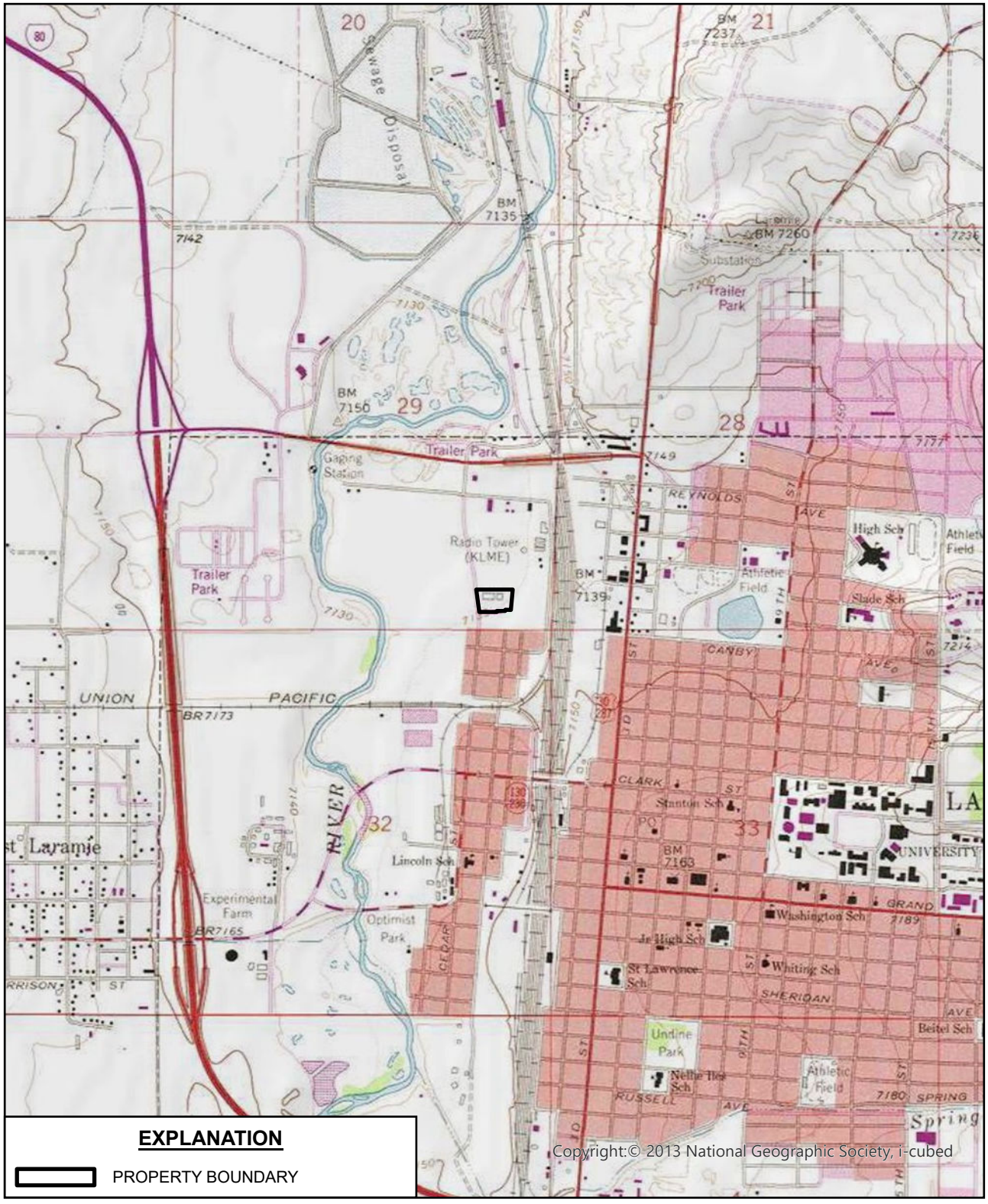

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FIGURE 1-1

SITE LOCATION MAP

LARAMIE RIVERS CONSERVATION DISTRICT
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Drawn By: BR	Checked By: RA	Scale: 1" = 2,000'	Date: 12/20/22	File: 1_SiteLocation_Fig1-1

EXPLANATION

- ON-SITE WELL (SAMPLED)
- ON-SITE WELL (DESTROYED)
- ON-SITE WELL (NOT SAMPLED)
- PROPERTY BOUNDARY

N

0 60'

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FIGURE 1-2

GROUNDWATER WELL LOCATIONS

LARAMIE RIVERS CONSERVATION DISTRICT
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Drawn By: BR	Checked By: RA	Scale: 1" = 60'	Date: 12/21/22	File: 2_LRCD_WellLocs_Fig1-2

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EXPLANATION

- GROUNDWATER MONITORING WELL
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- POTENTIOMETRIC SURFACE CONTOUR, 0.1 FOOT INTERVAL (DASHED WHERE INFERRED)
- PROPERTY BOUNDARY

N

0 60'

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FIGURE 3-1

POTENTIOMETRIC SURFACE MAP
AUGUST 2022

LARAMIE RIVERS CONSERVATION DISTRICT
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Drawn By: BR	Checked By: RA	Scale: 1" = 60'	Date: 12/21/22	File: 3_LRCD_PSurf_Fig3-1

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EXPLANATION

- EXCEEDS GROUNDWATER CLEANUP LEVELS*
- DOES NOT EXCEED GROUNDWATER CLEANUP LEVELS*
- PROPERTY BOUNDARY

*2016 REMEDY AGREEMENT WATER CLEANUP LEVELS

N

0 60'

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FIGURE 3-2

GROUNDWATER QUALITY EXCEEDANCES
SEMI-VOLATILES
AUGUST 2022

LARAMIE RIVERS CONSERVATION DISTRICT
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING

Drawn By: BR	Checked By: RA	Scale: 1" = 60'	Date: 12/21/22	File: 4_LRCD_GW_SVOCs_Fig3-2

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EXPLANATION

DOES NOT EXCEED GROUNDWATER CLEANUP LEVELS*

PROPERTY BOUNDARY

N

0 60'

*2016 REMEDY AGREEMENT WATER CLEANUP LEVELS

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FIGURE 3-3

GROUNDWATER QUALITY EXCEEDANCES TOTAL PETROLEUM HYDROCARBON DIESEL RANGE ORGANICS, AUGUST 2022

LARAMIE RIVERS CONSERVATION DISTRICT LARAMIE FORMER YTTRIUM PLANT LARAMIE, WYOMING

Drawn By: BR	Checked By: RA	Scale: 1" = 60'	Date: 12/21/22	File: 5_LRCD_GW_TPH_Fig3-3

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EXPLANATION

EXCEEDS GROUNDWATER CLEANUP LEVELS*

PROPERTY BOUNDARY

N

0 60'

*2016 REMEDY AGREEMENT WATER CLEANUP LEVELS

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FIGURE 3-4

GROUNDWATER QUALITY EXCEEDANCES METALS AUGUST 2022

**LARAMIE RIVERS CONSERVATION DISTRICT
LARAMIE FORMER YTTRIUM PLANT
LARAMIE, WYOMING**

Drawn By: BR	Checked By: RA	Scale: 1" = 60'	Date: 12/21/22	File: 6_LRCD_GW_Metals_Fig3-4

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APPENDIX A

FIELD FORMS

Location	Date	LNAPL	Groundwater	TotalDepth	Comment
LYMW04	9-20-18	ND	9.50	12.60	
LYMW06R	9-20-18	ND	6.80	12.00	
LYMW10	02/19/19	ND	6.91	12.65	~~could not find~~
LYMW11	9-20-18	ND	8.56	12.84	

Trihydro CORPORATION

Project Number: 17R-001-003
Sampler ID:

Project: Former Laramie Yttrium Plant GROUNDWATER SAMPLING

Date: 9-20-18

Well ID: LYMW11

Time: Arrival: 1246 Sample: 1325

Total Depth (ft): 12.84

Well Diameter: 2"

DTP (ft): ND

Gallons per foot: 0.163

Depth to Water (ft): 8.56

Gallons per Casing Volume (gal): .697

Water Column (ft): 4.28

Calculated Purge Volume (gal): 2.09

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth: 10.70

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1303	8.58	200	7.07	28.71	2623	.75	-178.0	217.89	
1306	8.58	200	7.16	18.68	2131	.60	-271.8	286.14	
1309	8.55	200	7.12	16.38	2409	.55	-285.3	213.38	
1312	8.55	200	7.11	15.75	2583	.48	-281.6	202.18	
1315	8.54	200	7.12	15.47	2628	.53	-272.6	223.97	
1318	8.55	200	7.13	15.16	2655	.56	-267.6	222.41	
1321	8.55	200	7.14	15.04	2677	.51	-265.4	215.51	

Well Condition: good

Analytes: TAL Metals, TPH-DRO

QA/QC Samples:

Clarity/Color: Black / grey

Sheen: None

Odor: Strong Sulfur

Comments:

Trihydro CORPORATION

Project Number: 17R-001-003
Sampler ID:

Project: Former Laramie Yttrium Plant GROUNDWATER SAMPLING

Date: 9-20-18

Well ID: LYMW06R

Time: *Arrival:* 1500 *Sample:* 1600

Total Depth (ft): 12.00

Well Diameter: 2"

DTP (ft): ND

Gallons per foot: 0.163

Depth to Water (ft): 6.80

Gallons per Casing Volume (gal): .847

Water Column (ft): 5.20

Calculated Purge Volume (gal): 2.54

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth: 9.40

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1503	6.81	200	7.03	20.96	3045	.49	-210.7	356.69	
1506	6.81	200	6.96	16.37	3414	.20	-223.7	1533.5	
1509	6.81	200	6.97	15.08	3449	.09	-230.5	1255.8	
1512	6.81	200	6.97	14.55	3468	.08	-233.0	1179.0	
1515	6.81	200	6.95	14.23	3504	.07	-231.7	841.83	
1518	6.81	200	6.88	14.03	3517	.06	-227.1	599.80	
1521	6.81	200	6.82	13.93	3526	.06	-220.1	582.66	
1524	6.81	200	6.78	13.83	3504	.05	-217.5	271.17	
1527	6.81	200	6.76	13.76	3545	.05	-216.2	232.83	
1530	6.81	200	6.76	13.74	3552	.04	-216.3	165.33	
1533	6.81	200	6.77	13.71	3551	.04	-216.5	154.80	
1536	6.81	200	6.77	13.64	3552	.04	-215.8	130.04	
1539	6.81	200	6.78	13.59	3541	.04	-215.4	98.71	
1542	6.81	200	6.78	13.60	3542	.03	-215.6	82.40	

Well Condition: good
Analytes: 5 IM Metals, TPH-DRO
QA/QC Samples:

Clarity/Color: gray/Black
Sheen: None
Odor: Sulfur

Comments: 1517 - collected FB1-20180920

1600 - purged 3 gallons

Trihydro CORPORATION

Project Number: 021-016-001
Sampler ID:

WDEQ VRP - Laramie Former Yttrium Plant
Project: **Low Flow Sampling**

Date: 2-25-19

Well ID: LYMW10

Time: *Arrival:* 0925 *Sample:* 1030

Total Depth (ft): 12.62

Well Diameter: 2"

DTP (ft): ND

Gallons per foot: ~~.994~~ .982

Depth to Water (ft): 6.59

Gallons per Casing Volume (gal): 2.94

Water Column (ft): 6.03

Calculated Purge Volume (gal):

Sample Method: Bladder Pump

Actual Purge Volume (gal):

Inlet Depth: 10'

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance ~~(uS/cm)~~	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 0.1*	*±0.2 degrees Celcius (3% variance)*	Ms/cm *± 3%*	*± 10%*	*± 10*	*±10% or <10 NTU*	*NA*
0958	6.74	250	6.90	8.55	0.08	7.92	26.3	2618.3	
1001	6.74	200	7.53	6.93	4166.1	2.52	-217.4	2294.7	
1004	6.74	200	7.52	6.94	4108.8	1.41	-231.7	1700.7	
1007	6.74	200	7.54	6.78	3147.6	5.31	-196.2	1229.3	
1010	6.74	200	7.51	6.65	3786.6	1.41	-229.4	761.87	
1013	6.74	200	7.48	6.66	3837.9	0.93	-243.4	804.73	
1016	6.74	200	7.48	6.70	0.08	0.63	-251.4	527.72	
1019	6.74	200	7.45	6.64	4159.9	0.52	-257.8	329.33	
1022	6.74	200	7.44	6.65	4167.0	0.39	-262.6	273.36	
1025	6.69	200	7.42	6.69	4166.7	0.31	-265.5	256.20	

Well Condition: good
Analytes:
QA/QC Samples:

Clarity/Color: Brown
Sheen: yes
Odor: Sulphur

Comments:
Specific Conductance: Ms/cm

Trihydro CORPORATION

Project Number: 17R-001-003
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 9-20-18

Well ID: **LYMW04**

Time: Arrival: 1024 Sample: 1142

Total Depth (ft): 12.60

Well Diameter: 2"

DTP (ft): ND

Gallons per foot: 0.163

Depth to Water (ft): 9.51

Gallons per Casing Volume (gal): .420

Water Column (ft): 3.09

Calculated Purge Volume (gal): 1.51

Sample Method: Low Flow

Actual Purge Volume (gal): 2 gallons

Inlet Depth: 11.05

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1107	9.55	200	6.97	17.91	2974	3.82	173.1	564.82	
1112	9.55	200	6.98	15.17	3193	.78	21	382.58	
1116	9.55	200	6.99	14.58	3203	.32	-2.1	263.87	
1119	9.55	200	7.00	14.30	3212	.20	-12.2	233.58	
1122	9.55	200	7.00	14.10	3227	.16	-20.2	227.08	
1125	9.55	200	7.00	13.98	3224	.13	-24.6	225.75	
1128	9.55	200	7.00	13.97	3227	.13	-28.7	243.41	
1131	9.55	200	7.00	14.44	3239	.13	-30.2	310.71	
1134	9.55	200	7.00	14.20	3215	.11	-31.4	273.57	
1137	9.55	200	7.00	14.15	3223	.10	-33.2	284.67	
1140	9.55	200	7.00	14.09	3218	.10	-34.4	288.34	

Well Condition: good

Analytes: SIM, Metals, TPH-DRO

QA/QC Samples:

Clarity/Color: Cloudy

Sheen: None

Odor: sulfur

Comments:

strong sulfur odor collected BD1-20180920

Trihydro CORPORATION

Project Number: 021-016-001
Sampler ID:

WDEQ VRP - Laramie Former Yttrium Plant
Project: **Low Flow Sampling**

Date: 10/2/19

Well ID: LYMW04

Time: Arrival: 930 Sample: 1109

Total Depth (ft): 10.55

Well Diameter: 2"

DTP (ft): N/A

Gallons per foot: 0.163

Depth to Water (ft): 7.08

Gallons per Casing Volume (gal): 0.57

Water Column (ft): 3.47

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal): 0.5 gal.

Inlet Depth: 8 ft

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (uS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 0.1*	*±0.2 degrees Celcius (3% variance)*	*± 3%*	*± 10%*	*± 10*	*±10% or <10 NTU*	*NA*
1042	7.08	0.75	6.97	14.72	3029.8	1.13	83.8	286.67	
1045	7.10	0.75	6.98	14.13	3011.5	0.77	-40.4	250.72	
1048	7.10	0.75	6.97	13.91	3008.0	0.62	-85.9	201.57	
1051	7.10	0.75	6.99	13.92	3002.7	0.49	-107.5	170.28	
1054	7.10	0.75	6.99	14.01	3002.7	0.37	-133.0	122.25	
1057	7.10	0.75	6.99	13.88	3002.2	0.31	-140.7	105.44	
1100	7.10	0.75	7.00	13.78	3001.2	0.30	-143.2	88.24	
1103	7.10	0.75	6.99	14.04	3002.8	0.30	-145.4	~~-145.4~~ 75.93	
1106	7.10	0.75	7.00	13.96	3000.8	0.30	-147.9	76.14	
1109	7.10	0.75	6.96	14.31	3002.0	0.31	-146.5	82.20	

Well Condition: Good
Analytes: LVI 8270D SIM, Metals, DRO
QA/QC Samples:

Clarity/Color: Clear
Sheen: Hydrocarbon
Odor: NO

Comments:
Begin purging: 1035
Begin collecting parameters: 1042
Collect: 1109
Collect BD1 20191002: 1245

Trihydro CORPORATION

Project Number: 021-016-001
Sampler ID:

WDEQ VRP - Laramie Former Yttrium Plant
Project: **Low Flow Sampling**

Date: 10/2/19

Well ID: LYMW11

Time: *Arrival:* 1420 *Sample:*

Total Depth (ft): 10.25

Well Diameter: 2"

DTP (ft): N/A

Gallons per foot: 0.163

Depth to Water (ft): 5.59

Gallons per Casing Volume (gal): 0.76

Water Column (ft): 4.66

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal): 1.5 gal

Inlet Depth: 9ft

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate ~~(L/min)~~ mL/min	pH (s.u.)	Temp (°C)	Specific Conductance (uS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 0.1*	*±0.2 degrees Celcius (3% variance)*	*± 3%*	*± 10%*	*± 10*	*±10% or <10 NTU*	*NA*
1429	5.59	150	7.05	14.31	2954.3	0.48	-285.1	1152.3	
1432	5.60	150	7.03	13.65	3118.3	0.11	-295.0	853.39	
1435	5.60	150	7.03	13.54	3195.9	0.08	-298.3	701.95	
1438	5.60	150	7.02	13.39	3276.3	0.07	-299.9	528.86	
1441	5.60	150	7.02	13.26	3302.5	0.08	-302.6	327.25	
1444	5.60	150	7.02	13.15	3313.8	0.06	-304.4	284.29	
1447	5.60	150	7.03	13.05	3307.0	0.05	-311.4	219.16	
1450	5.60	150	7.02	12.94	3308.8	0.05	-314.9	210.98	
1453	5.60	150	7.02	12.87	3324.6	0.05	-318.9	190.79	
1456	5.60	150	7.02	12.74	3308.0	0.05	-321.7	152.12	
1459	5.60	150	7.02	12.71	3307.2	0.06	-322.2	126.17	
1502	5.60	150	7.01	12.77	3303.2	0.05	-324.9	79.35	
1505	5.60	150	7.01	12.79	3307.9	0.06	-324.4	86.77	
1508	5.60	150	7.00	12.67	3303.4	0.04	-326.3	72.11	
1511	5.60	150	7.00	12.65	3303.9	0.04	-325.6	58.13	
1514	5.60	150	6.99	12.40	3303.6	0.05	-326.1	48.04	

Well Condition: good

Clarity/Color: Grey

Analytes: LVI 8270D SIM, Metals, DRO

Sheen: NO

QA/QC Samples:

Odor: Hydrocarbon

Comments:
1427: Begin purging
1429: Begin collecting parameters
1516: Collect

Trihydro CORPORATION

Project Number: 021-016-001
Sampler ID:

Project: WDEQ VRP - Laramie Former Yttrium Plant
Low Flow Sampling

Date: 10/3/19

Well ID: LyMW10

Time: Arrival: 1215 Sample: 1300

Total Depth (ft): 12.60

Well Diameter: 2"

DTP (ft): N/A

Gallons per foot: 0.163

Depth to Water (ft): 6.26

Gallons per Casing Volume (gal): ~~6.34~~ 1.03

Water Column (ft): 6.34

Calculated Purge Volume (gal):

Sample Method: Low flow

Actual Purge Volume (gal):

Inlet Depth: 11FT

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (~~L~~/min)	pH (s.u.)	Temp (°C)	Specific Conductance (uS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	*ML/Min -- *	*± 0.1*	*±0.2 degrees Celcius (3% variance)*	*± 3%*	*± 10%*	*± 10*	*±10% or <10 NTU*	*NA*
1218	6.26	150	7.17	14.32	3768.0	1.39	-284.9	152.95	
1221	6.35	150	7.36	13.64	3882.4	0.15	-348.1	155.66	
1224	6.35	150	7.33	13.36	3904.9	0.10	-366.8	104.45	
1227	6.35	150	7.36	13.28	3912.7	0.08	-375.2	85.89	
1230	6.35	150	7.38	13.00	3940.6	0.07	-381.2	84.10	
1233	6.35	150	7.39	12.85	3952.3	0.07	-384.8	54.87	
1236	6.35	150	7.39	1281	3940.5	0.09	-389.0	44.51	
1239	6.35	150	7.37	12.86	3947.8	0.06	-392.5	34.23	
1242	6.35	150	7.40	12.79	3957.9	0.05	-399.0	30.98	
1245	6.35	150	7.40	12.76	3968.3	0.07	-402.3	18.86	
1248	6.35	150	7.39	12.73	3983.8	0.06	-405.1	19.63	
1251	6.35	150	7.39	12.59	3995.0	0.09	-407.5	24.90	
1254	6.35	150	7.36	12.73	4001.3	0.06	-407.2	15.73	
1257	6.35	150	7.40	12.72	4002.5	0.05	-411.8	9.30	
1300	6.35	150	7.40	12.74	4010.7	0.07	-410.2	13.42	

Well Condition: Good
Analytes: EW1 8270D SIM, Metals, DRO
QA/QC Samples:

Clarity/Color: Clear/Pale Yellow
Sheen: No
Odor: Hydrocarbon

Comments:
1218 - Begin ~~purging~~ collecting parameters 1215 began purging
1300 - collect

Trihydro CORPORATION

Project Number: 021-016-001
Sampler ID:

Project: WDEQ VRP - Laramie Former Yttrium Plant
Project: Low Flow Sampling

Date: 10/3/19

Well ID: LYMW06R

Time: Arrival: 1357 Sample: 1440

Total Depth (ft): 12.00

Well Diameter: 2"

DTP (ft): N/A

Gallons per foot: 0.163

Depth to Water (ft): 6.43

Gallons per Casing Volume (gal): 0.91

Water Column (ft): 5.57

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal): 1.5 gal

Inlet Depth: 11 ft

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (uS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	mL/min --	*± 0.1*	*±0.2 degrees Celcius (3% variance)*	*± 3%*	*± 10%*	*± 10*	*±10% or <10 NTU*	*NA*
1400	6.43	150	7.00	14.33	3388.3	1.08	-280.1	1630.4	
1403	6.50	150	6.96	13.35	3409.4	0.25	-288.5	1282.2	
1406	6.50	150	6.95	13.07	3409.8	0.14	-290.8	758.32	
1409	6.50	150	6.95	12.91	3408.6	0.10	-292.8	369.53	
1412	6.50	150	6.95	12.81	3407.7	0.09	-293.1	300.80	
1415	6.50	150	6.95	12.73	3406.2	0.07	-293.7	204.07	
1418	6.50	150	6.95	12.67	3404.9	0.07	-294.6	159.41	
1421	6.50	150	6.90	12.68	3403.5	0.06	-290.2	150.12	
1424	6.50	150	6.93	12.60	3414.6	0.05	-293.4	100.23	
1427	6.50	150	6.94	12.50	3405.5	0.05	-294.2	126.23	
1430	6.50	150	6.94	12.43	3408.5	0.05	-295.6	91.94	
1433	6.50	150	6.94	12.45	3405.2	0.05	-296.0	79.86	
1436	6.50	150	6.95	12.43	3403.7	0.05	-295.9	62.39	
1439	6.50	150	6.95	12.42	3402.8	0.05	-295.8	50.06	

Well Condition: Good
Analytes: LV1 8270D SIM Metals, DRO
QA/QC Samples:

Clarity/Color: Brown
Sheen: No
Odor: Hydrocarbon

Comments:
1357 - Begin purging
1400 - Begin collecting parameters
1440 - Collect

Trihydro CORPORATION

Project Number: 17R-001-006
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 9.2.2020

Well ID: **LYMW04**

Time: *Arrival:* 1409 *Sample:* 1440

Total Depth (ft): 11.00

Well Diameter: 2"

DTP (ft): —

Gallons per foot: 0.163

Depth to Water (ft): 7.29

Gallons per Casing Volume (gal): .637

Water Column (ft): 3.91

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	.1 ~~±10%~~	3% ~~None~~	3% ~~±10%~~	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	10% ~~None~~ <10	*NA*
1406	7.29	.275	6.64	20.99	3,086	2.75	-44.6	86.17	
1412	7.29	.275	6.63	15.62	3,062	2.24	-78.8	73.02	
1415	7.29	.275	6.52	14.89	3,034	2.80	-66.9	66.60	
1418	7.29	.275	6.48	14.50	3,027	3.13	-56.8	45.61	
1421	7.29	.275	6.45	14.41	3,018	3.19	-51.9	29.44	
1424	7.29	.275	6.45	14.19	3,013	3.27	-48.7	24.72	
1427	7.29	.275	6.44	14.13	3,025	3.30	-45.9	18.59	
1430	7.29	.275	6.42	14.09	3,028	3.19	-44.7	11.37	
1433	7.29	.275	6.42	14.08	3,013	3.13	-42.8	11.37	
1436	7.29	.275	6.41	13.99	3,002	3.15	-41.5	12.38	

Well Condition: Good

Clarity/Color: Clear, yellowish

Analytes:

Sheen: None

QA/QC Samples: BD1-20200902

Odor: Strong

Comments:

3 cycles 11.5sec inlet 275 mL/m
9.5sec discharge 25psi

Trihydro CORPORATION

Project Number: 17R-001-006
Sampler ID:

Project: **Former Laramie Yttrium Plant** **GROUNDWATER SAMPLING**

Date: 9-2-2020

Well ID: **LYMW06R** Page 1 of 3

Time: *Arrival:* 944 *Sample:* 1125

Total Depth (ft): 12.01

Well Diameter: 2"

DTP (ft): –

Gallons per foot: 0.163

Depth to Water (ft): 6.71

Gallons per Casing Volume (gal): .86

Water Column (ft): 5.3

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	–	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
944	6.73	.100	6.68	15.87	3,507	3.67	-90.2	508.83	
947	6.73	.100	6.49	13.87	3,416	1.55	-118.1	778.78	
950	6.73	.100	6.43	14.17	3,417	1.47	-101.7	663.08	
953	6.73	.100	6.40	14.65	3,416	1.51	-92.7	609.69	
956	6.73	.100	6.40	14.02	3,393	1.44	-93.5	626.76	
959	6.73	.100	6.39	13.95	3,384	1.33	-93.8	503.70	
1002	6.73	.100	6.39	13.82	3,381	1.29	-92.5	421.10	
1005	6.73	.100	6.39	13.80	3,382	1.28	-93.4	339.29	
1008	6.73	.100	6.39	13.67	3,379	1.26	-94.6	279.38	
1011	6.73	.100	6.38	13.66	3,379	1.26	-95.5	215.84	
1014	6.73	.100	6.37	13.71	3,379	1.24	-90.3	187.94	
1017	6.73	.100	6.37	13.93	3,379	1.27	-90.3	209.82	
1020	6.73	.100	6.36	13.77	3,378	1.24	-94.3	173.06	
1023	6.73	.100	6.36	13.91	3,376	1.23	-91.6	143.72	

Well Condition: good

Clarity/Color: Brownish/Cloudy

Analytes:

Sheen: None

QA/QC Samples:

Odor: Moderate

Comments:

Trihydro CORPORATION

Project Number: 17R-001-006
Sampler ID:

Former Laramie Yttrium Plant
Project: **GROUNDWATER SAMPLING**

Date: 9-2-2020

Well ID: **LYMW06R** Page 2 of 3

Time: *Arrival:* 944 *Sample:* 1125

Total Depth (ft): 12.01

Well Diameter: 2"

DTP (ft): –

Gallons per foot: 0.163

Depth to Water (ft): 6.71

Gallons per Casing Volume (gal): .86

Water Column (ft): 5.3

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1026	6.73	.100	6.36	13.87	3,377	1.25	-94.9	131.70	
1029	6.73	.100	6.35	13.92	3,373	1.23	-88.3	114.64	
1032	6.73	.100	6.34	13.96	3,388	1.22	-89.8	90.98	
1035	6.73	.100	6.34	13.97	3,380	1.21	-86.7	75.53	
1038	6.73	.100	6.34	13.99	3,380	1.20	-89.8	72.46	
1041	6.73	.100	6.33	14.03	3,378	1.20	-85.4	56.97	
1044	6.73	.100	6.35	12.78	3,376	1.27	-84.4	103.35	
1047	6.73	.100	6.35	13.37	3,387	1.20	-89.4	58.80	
1050	6.73	.100	6.34	14.00	3,390	1.23	-78.9	44.28	
1053	6.73	.100	6.35	13.82	3,362	1.26	-94.4	67.34	
1056	6.73	.100	6.35	13.30	3,374	1.22	-94.4	80.67	
1059	6.73	.100	6.35	13.13	3,376	1.20	-90.5	41.63	
1102	6.73	.100	6.34	13.17	3,378	1.18	-85.3	35.11	
1105	6.73	.100	6.34	13.26	3,376	1.18	-83.3	24.01	

Well Condition:
Analytes:
QA/QC Samples:

Clarity/Color:
Sheen:
Odor:

Comments:

Trihydro CORPORATION

Project Number: 17R-001-006
Sampler ID:

Project: **Former Laramie Yttrium Plant** **GROUNDWATER SAMPLING**

Date: 9-2-2020

Well ID: **LYMW06R** Page 3 of 3

Time: *Arrival:* 944 *Sample:* 1125

Total Depth (ft): 12.01

Well Diameter: 2"

DTP (ft): –

Gallons per foot: 0.163

Depth to Water (ft): 6.71

Gallons per Casing Volume (gal): .86

Water Column (ft): 5.3

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	–	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1108	6.73	.100	6.34	13.18	3,370	1.18	-83.2	28.09	
1111	6.73	.100	6.34	13.17	3,378	1.18	-80.2	19.21	
1114	6.73	.100	6.34	13.17	3,372	1.18	-82.1	16.51	
1117	6.73	.100	6.34	13.14	3,374	1.17	-80.8	20.76	
1120	6.73	.100	6.33	13.21	3,372	1.18	-74.6	17.77	

Well Condition:
Analytes:
QA/QC Samples:

Clarity/Color:
Sheen:
Odor:

Comments:

Trihydro CORPORATION

Project Number: 17R-001-006
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 9-2-2020

Well ID: **LYMW10**

Time: *Arrival:* 1209 *Sample:* 1320

Total Depth (ft): 12.59

Well Diameter: 2"

DTP (ft): —

Gallons per foot: 0.163

Depth to Water (ft): 6.31

Gallons per Casing Volume (gal): 1.02

Water Column (ft): 6.28

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	.1 ~~± 10%~~	3% ~~None~~	3% ~~±10%~~	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	10% ~~None~~ <10	*NA*
1209	6.58	.250	6.65	23.26	3,936	3.26	-179.8	~~342.25~~ 188.5	
1212	6.54	.250	7.03	14.16	4,246.	5.41	-199.9	~~188.5~~ 342.25	
1215	6.54	.250	7.64	14.97	4,175.	5.05	-214.1	305.59	
1218	6.31	.260	7.14	13.89	4,110	5.51	-220.6	307.09	
1221	6.31	.250	7.08	14.00	4,069	5.55	-231.8	486.75	
1224	6.31	.250	7.15	13.94	4,068	5.79	-233.3	321.84	
1227	6.31	.250	7.18	13.96	4,071	5.87	-233.6	252.92	
1230	6.31	.250	7.18	13.96	4,073	5.84	-235.1	214.23	
1233	6.31	.250	7.19	13.93	4,074	5.91	-234.0	193.0	
1236	6.31	.250	7.19	13.99	4,070	5.76	-234.5	162.48	
1239	6.31	.250	7.20	13.82	4,056	5.81	-234.5	163.66	
1242	6.31	.250	7.22	13.70	4,076	5.83	-234.0	97.31	
1245	6.31	.250	7.23	13.66	4072	5.72	-233.3	77.69	
1248	6.31	.250	7.21	13.79	4072	5.42	-234.9	71.54	
1251	6.31	.250	7.22	14.18	4,098	5.71	-234.7	54.25	

Well Condition: Good

Analytes:

QA/QC Samples:

Clarity/Color: Grey / Cloudy

Sheen: None

Odor: Slight / Sulfur

Comments:

Trihydro CORPORATION

Project Number: 17R-001-006
Sampler ID:

Project: Former Laramie Yttrium Plant
GROUNDWATER SAMPLING

Date: 9-2-2020

Well ID: LYMW10 Page 2 of 2

Time: *Arrival:* 1209 *Sample:* 1320

Total Depth (ft): 12.59

Well Diameter: 2"

DTP (ft): –

Gallons per foot: 0.163

Depth to Water (ft): 6.31

Gallons per Casing Volume (gal): 1.02

Water Column (ft): 6.28

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1254	6.31	.250	7.20	14.55	4,097	4.63	-237.7	35.46	
1257	6.31	.250	7.21	13.86	4,099	4.49	-238.3	36.29	
1300	6.31	.250	7.22	14.10	4,119	4.58	-237.7	25.10	
1303	6.31	.250	7.23	13.86	4,109	4.53	-237.8	23.73	
1306	6.31	.250	7.24	13.89	4,115	4.55	-237.4	18.46	
1309	6.31	.250	7.25	13.68	4,115	4.57	-237.3	20.49	
1312	6.31	.250	7.25	13.71	4,118	4.56	-236.8	16.37	

Well Condition:
Analytes:
QA/QC Samples:
Clarity/Color:
Sheen:
Odor:

Comments:

Trihydro CORPORATION

Project Number: 17R-001-006
Sampler ID:

Project: Former Laramie Yttrium Plant GROUNDWATER SAMPLING
Date: 9-1-2020

Well ID: LYMW11
Time: Arrival: 1500 Sample: 1610

Total Depth (ft): 11.30
Well Diameter: 2"

DTP (ft): –
Gallons per foot: 0.163

Depth to Water (ft): 5.86
Gallons per Casing Volume (gal): .88

Water Column (ft): 5.44
Calculated Purge Volume (gal):

Sample Method: Low Flow
Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	.1 ~~± 10%~~	3% ~~None~~	3% ~~3-10%~~	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	10% ~~Consec.~~ <10	*NA*
1509	5.86	.100	6.44	21.15	3,072	2.37	-112.3	502.34	
1512	5.86	.100	6.60	16.92	3,272	1.16	-185.7	811.46	
1515	5.86	.100	6.60	16.86	3,340	1.11	-203.8	693.54	
1518	5.86	.100	6.59	16.73	3,388	1.10	-208.9	549.82	
1521	5.86	.100	6.62	16.62	3,410	1.09	-212.0	401.17	
1524	5.86	.100	6.58	16.52	3,408	1.09	-213.1	280.71	
1527	5.86	.100	6.57	16.27	3,398	1.07	-212.7	228.11	
1530	5.87	.100	6.55	16.21	3,420	1.07	-211.0	199.34	
1533	5.87	.100	6.56	16.17	3,431	1.07	-213.6	154.46	
1536	5.87	.100	6.56	16.09	3,423	1.07	-213.2	129.82	
1539	5.87	.100	6.54	16.55	3,408	1.06	-213.6	119.66	
1542	5.87	.100	6.53	16.22	3,436	1.07	-215.9	108.36	
1545	5.87	.100	6.54	16.35	3,429	1.05	-218.8	76.71	
1548	5.87	.100	6.54	16.53	3,424	1.05	-220.9	73.06	
1551	5.87	.100	6.54	16.33	3,408	1.05	-224.4	62.38	

Well Condition: Good
Clarity/Color: Grey/cloudy
Analytes:
Sheen: None
QA/QC Samples:
Odor: Slight

Comments:

Trihydro CORPORATION

Project Number: 17R-001-006
Sampler ID:

Project: **Former Laramie Yttrium Plant**
GROUNDWATER SAMPLING

Date: 9-1-2020

Well ID: **LYMW11** Page 2 of 2

Time: *Arrival:* *Sample:*

Total Depth (ft): 11.30

Well Diameter: 2"

DTP (ft): –

Gallons per foot: 0.163

Depth to Water (ft): 5.86

Gallons per Casing Volume (gal): .88

Water Column (ft): 5.44

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	–	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1554	5.87	.100	6.52	16.27	3,444	1.06	-228.9	61.11	
1557	5.87	.100	6.54	16.30	3,436	1.05	-235.3	40.30	
1600	5.87	.100	6.55	15.99	3,403	1.06	-242.3	37.88	
1603	5.87	.100	6.54	16.37	3,373	1.04	-248.0	35.30	
1606	5.87	.100	6.54	16.82	3,403	1.05	-252.9	32.07	

Well Condition: Good

Clarity/Color:

Analytes:

Sheen:

QA/QC Samples:

Odor:

Comments:

FLUID LEVEL DATA
FORMER LARAMIE YTTRIUM PLANT
LARAMIE, WYOMING

Location	Date	LNAPL	Groundwater	TotalDepth	Previous TD	Comment
LYMW04	9-1-2020		7.36	11.00	10.55	
LYMW06R	9-1-2020		6.21	12.01	12.00	
LYMW10	9-1-2020		6.52	12.59	12.60	
LYMW11	9-1-2020		5.86	11.30	10.25	

Trihydro CORPORATION

Project Number: 17R-001-007
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 9-8-21

Well ID: **LYMW04**

Time: *Arrival:* 1157 *Sample:* 1220

Total Depth (ft): 11.00

Well Diameter: 2"

DTP (ft): —

Gallons per foot: 0.163

Depth to Water (ft): 7.32

Gallons per Casing Volume (gal):

Water Column (ft):

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1157	7.32	.275	6.60	15.88	2,523.9	.28	-171.5	196.52	
1200	7.32	.275	6.45	14.93	2,510.0	.11	-161.3	69.63	
1203	7.32	.275	6.41	14.65	2,502	.08	-156.3	50.84	
1206	7.32	.275	6.40	14.45	2,481.9	.07	-158.1	39.29	
1209	7.32	.275	6.41	14.25	2,477.5	.06	-163.6	26.34	
1215	7.32	.275	6.38	14.38	2,476.0	.05	-165.7	27.32	

Well Condition: Good

Clarity/Color: Clear / Clear

Analytes:

Sheen: none

QA/QC Samples: BD1-20210908 1235

Odor: Strong

Comments:

Trihydro CORPORATION

Project Number: 17R-001-007
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Well ID: **LYMW06R**

Total Depth (ft): _____

DTP (ft): ~

Depth to Water (ft): 6.67

Water Column (ft): _____

Sample Method: Low Flow

Inlet Depth: _____

Date: 9.8.21

Time: Arrival: 1570 Sample: 1615

Well Diameter: 2"

Gallons per foot: 0.163

Gallons per Casing Volume (gal): _____

Calculated Purge Volume (gal): _____

Actual Purge Volume (gal): _____

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible* 6.81	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1534	~~7.50~~	.250	6.70	14.12	2,798.0	.40	-239.7	1,331.2	
1538	6.81	.250	6.72	13.88	2,796.3	.92	-237.6	649.82	
1541	6.69	.250	6.56	13.69	2,793.1	.95	-238.6	569.46	
1544	6.69	.250	6.54	13.40	2,786.1	0.98	-237.9	359.26	
1547	6.69	.250	6.53	13.41	2,782.4	1.03	-237.5	251.48	
1550	6.69	.250	6.53	13.20	2,788.6	0.99	-237.3	231.76	
1553	6.69	.250	6.52	13.13	2,783.8	1.11	-236.3	193.34	
1556	6.69	.250	6.51	13.02	2,777.2	1.00	-236.9	139.75	
1559	6.69	.250	6.51	12.89	2,777.0	.95	-237.2	107.43	
1602	6.69	.250	6.51	12.95	2,771.8	1.02	-236.0	93.47	
1605	6.69	.250	6.51	12.84	2,768.9	1.04	-235.7	72.95	
1608	6.69	.250	6.51	12.75	2,767.3	1.06	-235.1	66.01	
1611	6.69	.250	6.51	12.75	2,773.1	1.13	-234.1	61.46	
1614	6.69	.250	6.51	12.75	2,774.6	1.12	-233.8	48.76	

Well Condition: Good

Analytes: _____

QA/QC Samples: EB1-20210908

Clarity/Color: Cloudy / Brown

Sheen: None

Odor: Strong

Comments:

Trihydro CORPORATION

Project Number: 17R-001-007
Sampler ID:

Project: Former Laramie Yttrium Plant GROUNDWATER SAMPLING

Date: 9.8.21

Well ID: LYMW10

Time: Arrival: 1415 Sample: 1450

Total Depth (ft): 12.42

Well Diameter: 2"

DTP (ft):

Gallons per foot: 0.163

Depth to Water (ft): 6.45

Gallons per Casing Volume (gal):

Water Column (ft):

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1430	6.53	.275	7.16	21.65	3,360.7	3.09	-350.6	134.86	
1433	6.54	.275	7.45	14.44	3,394.9	.09	-345.1	65.90	
1436	6.54	.275	7.44	14.12	3,401.5	.06	-1107.3	43.45	
1439	6.54	.275	7.44	13.89	3,423.2	.05	-416.2	21.59	
1442	6.54	.275	7.43	13.82	3,438.4	.05	-422.9	17.71	
1445	6.54	.275	7.42	13.72	3,457.2	.05	-427.1	11.07	
1448	6.55	.275	7.41	13.71	3,472.1	.04	-431.5	10.04	

Well Condition: Good
Analytes:
QA/QC Samples: —

Clarity/Color: Clear / Tan
Sheen: None
Odor: Sulfur

Comments:

Trihydro CORPORATION

Project Number: 17R-001-007
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 9.8.21

Well ID: **LYMW11**

Time: *Arrival:* 1320 *Sample:* 1345

Total Depth (ft): 11.25

Well Diameter: 2"

DTP (ft):

Gallons per foot: 0.163

Depth to Water (ft): 5.79

Gallons per Casing Volume (gal):

Water Column (ft):

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1325	5.71	.300	7.23	16.88	2,977.8	.30	309.6	401.24	
1328	5.71	.300	6.96	15.18	3,080.7	0.46	322.1	330.11	
1331	5.71	.300	6.90	14.82	3,113.6	0.55	-325.6	198.88	
1334	5.71	.300	6.85	14.57	3,173.0	0.45	-328.4	112.13	
1337	5.71	.300	6.82	14.47	3,171.4	0.46	-332.6	84.88	
1340	5.71	.300	6.80	14.51	3,162.0	0.47	-335.9	52.59	
1343	5.71	.300	6.79	14.43	3,173.0	0.47	-338.2	35.69	

Well Condition: Good

Clarity/Color: Cloudy / Grey

Analytes:

Sheen: None

QA/QC Samples: —

Odor: Strong

Comments:

FLUID LEVEL DATA
FORMER LARAMIE YTTRIUM PLANT
LARAMIE, WYOMING

Location	Date	LNAPL	Groundwater	TotalDepth	Previous TD	Comment
LYMW04	9-8-21	—	7.32	11.00	11.00	Roots
LYMW06R	9-8-21		6.67	12.00	12.01	
LYMW10	9-8-21	—	6.45	12.42	12.59	Hard
LYMW11	9-8-21	—	5.79	11.25	11.30	

Trihydro CORPORATION

Project Number: 17R-001-007
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 9/1/22

Well ID: **LYMW04**

Time: *Arrival:* *Sample:* 1025

Total Depth (ft): 11.00

Well Diameter: 2"

DTP (ft): ND

Gallons per foot: 0.163

Depth to Water (ft): 6.96

Gallons per Casing Volume (gal):

Water Column (ft):

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1005	6.96		6.11	14.3	2638	1.35	-184.7	605.7	
1008	6.96		~~6.13~~ 6.13	14.3	2646	1.29	-193.5	613.2	
1011	6.96		6.13	14.3	2648	1.25	-198.4	614.3	
1014	6.96		6.14	14.2	2652	1.23	-201.9	624.2	
1017	6.96		6.14	14.2	2654	1.24	-204.5	624.1	
1020	6.96		6.14	14.0	2656	1.21	-207.8	626.7	

Well Condition: good

Clarity/Color: Clear / clear

Analytes:

Sheen:

QA/QC Samples:

Odor: Strong

Comments:

Water appears to be clearer ~~than~~ JS than actual turbidity is showing. Possible problem with the sensor.

Trihydro CORPORATION

Project Number: 17R-001-007
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 9/1/22

Well ID: **LYMW06R**

Time: *Arrival:* *Sample:* 0850

Total Depth (ft): 12.00

Well Diameter: 2"

DTP (ft): ND

Gallons per foot: 0.163

Depth to Water (ft): 6.31

Gallons per Casing Volume (gal):

Water Column (ft):

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
0825	6.31		6.79	12.1	2822	1.52	-79.9	182.3	
0828	6.31		6.85	12.4	2821	1.43	-99.9	155.7	
0831	6.31		6.89	12.3	2818	1.41	-109.8	250.9	
0834	6.31		6.90	12.4	2816	1.38	-114.3	365.4	
0837	6.31		6.91	12.9	2820	1.35	-117.3	425.1	
0840	6.31		6.92	12.4	2822	1.33	-119.7	468.8	
0843	6.31		6.93	12.4	2822	1.32	-121.6	490.6	
0846	6.31		6.93	12.5	2824	1.31	-122.7	508.3	

Well Condition: good

Clarity/Color: Cloudy / Brown

Analytes:

Sheen:

QA/QC Samples:

Odor:

Comments:

Trihydro CORPORATION

Project Number: 17R-001-007
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 8/30/2022

Well ID: **LYMW10**

Time: *Arrival:* *Sample:* 1350

Total Depth (ft): 12.50

Well Diameter: 2"

DTP (ft): ND

Gallons per foot: 0.163

Depth to Water (ft): 6.09

Gallons per Casing Volume (gal):

Water Column (ft):

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1325	6.30		7.40	13.4	3647	1.21	-324.1	195.7	
1328			7.39	13.3	3654	1.19	-326.5	170.3	
1331			7.43	13.7	3664	1.75	-301.1	154.4	
1334			7.39	13.3	3668	1.35	-311.6	183.53	
1337			7.38	13.3	3660	1.43	-307.5	210.88	
1340			7.52	13.8	3648	1.40	-285.8	198,23	
1343			7.42	13.3	3667	1.57	-301.1	191.58	
1346			7.40	13.3	3666	1.83	-303.9	199,43	
1349			7.43	13.5	3674	1.68	-291.5	196.74	

Well Condition:

Analytes:

QA/QC Samples:

Clarity/Color: Clear / Tan

Sheen: None

Odor: Strong

Comments: Purged ~4 gallons before collecting Breakers

Trihydro CORPORATION

Project Number: 17R-001-007
Sampler ID:

Project: **Former Laramie Yttrium Plant GROUNDWATER SAMPLING**

Date: 8/31/22

Well ID: **LYMW11**

Time: *Arrival:* *Sample:* 1455

Total Depth (ft): 11.26

Well Diameter: 2"

DTP (ft): ND

Gallons per foot: 0.163

Depth to Water (ft): 5.45

Gallons per Casing Volume (gal):

Water Column (ft):

Calculated Purge Volume (gal):

Sample Method: Low Flow

Actual Purge Volume (gal):

Inlet Depth:

Field Measurements/Water Conditions

Time	Depth to Water (ft)	Purge Rate (L/min)	pH (s.u.)	Temp (°C)	Specific Conductance (S/m)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Observations
Stabilization Criteria	*Drawdown <0.30' if possible*	--	*± 10%*	*None*	*± 10%*	*± 10% or <1mg/L*	*± 10% or between -10 and 10*	*None*	*NA*
1433			7.48	15.5	2419	1.19	-272.2	1210.1	
1436			7.44	16.5	2432	1.15	-277.4	652.7	
1439			7.41	15.5	2439	1.14	-280	382.5	
1442			7.38	15.6	2452	1.13	-282.3	125.8	
1445			7.34	15.8	2459	1.12	-286.8	145.6	
1448			7.31	15.8	2464	1.11	-292.3	148.4	
~~1451~~ 1451			7.31	15.5	2472	1.12	-297.7	143.2	

Well Condition: good

Analytes:

QA/QC Samples: BD1-20220831 @ 1500

Clarity/Color: cloudy / grey

Sheen: None

Odor:

Comments:
Took EB-20220830 at this location on 8/30/22 @ 1530

APPENDIX B

LABORATORY DATA REPORTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-114659-1
Client Project/Site: Former Laramie Yttrium Plant
Revision: 2

For:
Trihydro Corporation
1252 Commerce Drive
Laramie, Wyoming 82070

Attn: Ryan Athey

Authorized for release by:
3/19/2019 2:47:08 PM

Donna Rydberg, Senior Project Manager
(303)736-0192
donna.rydberg@testamericainc.com

Table of Contents

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 280-114659-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Trihydro Corporation

Project: Former Laramie Yttrium Plant

Report Number: 280-114659-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

REVISED REPORT - 3/19/2019
Arsenic and Thallium were reported in the original report by both method 6010C and 6020A. These two metals only need reported by method 6020A. The were removed from method 6010C.

REVISED REPORT - 1/15/19
The lab discovered a data entry error for the DRO QC (MB,LCS, LCSD) associated with prep batch 280-430729. Due to this data entry error the reporting limits in the QC samples are 1000X greater than the samples. This data entry error in the DRO QC has been corrected. The sample data was not affected.

RECEIPT
The samples were received on 9/21/2018 at 9:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.9º C and 3.4º C.

Receipt Exceptions

The sample container labels for sample ID LYMW11 list a collection time of 13:25. The Chain of Custody states the collection time as 13:29. Additionally, no time given for sample ID LYMW6R. The collection time for sample LYMW11 was logged per the chain of custody, and the collection time for LYMW6R was logged per container labels as 16:00.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)
Samples LYMW04 (280-114659-1), LYMW11 (280-114659-2), LYMW6R (280-114659-3), BD1-20180920 (280-114659-4) and FB1-20180920 (280-114659-5) were analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 09/24/2018 and analyzed on 09/28/2018.

Benzo[a]anthracene was detected in method blank MB 280-430682/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been flagged "B".

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

DIESEL RANGE ORGANICS
Samples LYMW04 (280-114659-1), LYMW11 (280-114659-2), LYMW6R (280-114659-3), BD1-20180920 (280-114659-4) and

Job ID: 280-114659-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

FB1-20180920 (280-114659-5) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015D - DRO. The samples were prepared on 09/24/2018 and analyzed on 09/27/2018.

The recoveries for surrogates n-Octacosane and o-Terphenyl failed the surrogate recovery criteria low in sample BD1-20180920 (280-114659-4). These surrogate compounds were inadvertently omitted during the extraction process for this sample. There is a solvent peak associated with this injection which demonstrates that there was no injection error. There was insufficient sample volume remaining to perform re-extraction and/or re-analysis; therefore, the data have been reported and qualified.

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

TOTAL METALS (ICP)

Samples LYMW04 (280-114659-1), LYMW11 (280-114659-2), LYMW6R (280-114659-3), BD1-20180920 (280-114659-4) and FB1-20180920 (280-114659-5) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 09/25/2018 and analyzed on 09/26/2018 and 09/28/2018.

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

TOTAL METALS (ICPMS)

Samples LYMW04 (280-114659-1), LYMW11 (280-114659-2), LYMW6R (280-114659-3), BD1-20180920 (280-114659-4) and FB1-20180920 (280-114659-5) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 09/25/2018 and analyzed on 09/26/2018.

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

TOTAL MERCURY

Samples LYMW04 (280-114659-1), LYMW11 (280-114659-2), LYMW6R (280-114659-3), BD1-20180920 (280-114659-4) and FB1-20180920 (280-114659-5) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 09/27/2018.

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

Detection Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

Client Sample ID: LYMW04 — Lab Sample ID: 280-114659-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	210		100	6.0	ng/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	0.81		0.24	0.031	mg/L	1		8015D	Total/NA
Boron	1800		100	4.4	ug/L	1		6010C	Total/NA
Iron	5700		100	22	ug/L	1		6010C	Total/NA
Manganese	630		10	0.26	ug/L	1		6010C	Total/NA
Arsenic	0.38	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: LYMW11 — Lab Sample ID: 280-114659-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	49	J B	100	4.2	ng/L	1		8270D SIM	Total/NA
Dibenz(a,h)anthracene	18	J	100	4.1	ng/L	1		8270D SIM	Total/NA
1-Methylnaphthalene	3500		100	5.9	ng/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	4.2		0.26	0.034	mg/L	1		8015D	Total/NA
Boron	1300		100	4.4	ug/L	1		6010C	Total/NA
Iron	10000		100	22	ug/L	1		6010C	Total/NA
Lead	4.5	J	9.0	2.7	ug/L	1		6010C	Total/NA
Manganese	2900		10	0.26	ug/L	1		6010C	Total/NA
Arsenic	1.1	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.042	J	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: LYMW6R — Lab Sample ID: 280-114659-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	7300		100	6.1	ng/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	1.7		0.26	0.033	mg/L	1		8015D	Total/NA
Boron	1900		100	4.4	ug/L	1		6010C	Total/NA
Iron	19000		100	22	ug/L	1		6010C	Total/NA
Manganese	2700		10	0.26	ug/L	1		6010C	Total/NA
Arsenic	0.40	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: BD1-20180920 — Lab Sample ID: 280-114659-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	290		110	6.6	ng/L	1		8270D SIM	Total/NA
Boron	1900		100	4.4	ug/L	1		6010C	Total/NA
Iron	5100		100	22	ug/L	1		6010C	Total/NA
Manganese	600		10	0.26	ug/L	1		6010C	Total/NA

Client Sample ID: FB1-20180920 — Lab Sample ID: 280-114659-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	0.052	J	0.24	0.031	mg/L	1		8015D	Total/NA
Manganese	0.57	J	10	0.26	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL DEN
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN

Protocol References:

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-114659-1	LYMW04	Water	09/20/18 11:42	09/21/18 09:05
280-114659-2	LYMW11	Water	09/20/18 13:29	09/21/18 09:05
280-114659-3	LYMW6R	Water	09/20/18 16:00	09/21/18 09:05
280-114659-4	BD1-20180920	Water	09/20/18 00:00	09/21/18 09:05
280-114659-5	FB1-20180920	Water	09/20/18 15:17	09/21/18 09:05

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: LYMW04
Date Collected: 09/20/18 11:42
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		100	4.3	ng/L		09/24/18 09:24	09/28/18 01:57	1
Dibenz(a,h)anthracene	ND		100	4.2	ng/L		09/24/18 09:24	09/28/18 01:57	1
1-Methylnaphthalene	**210**		100	6.0	ng/L		09/24/18 09:24	09/28/18 01:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*42 - 120*	*09/24/18 09:24*	*09/28/18 01:57*	*1*
Nitrobenzene-d5	*67*		*43 - 120*	*09/24/18 09:24*	*09/28/18 01:57*	*1*
Terphenyl-d14	*71*		*47 - 120*	*09/24/18 09:24*	*09/28/18 01:57*	*1*

Client Sample ID: LYMW11
Date Collected: 09/20/18 13:29
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**49**	**J B**	100	4.2	ng/L		09/24/18 09:24	09/28/18 02:26	1
Dibenz(a,h)anthracene	**18**	**J**	100	4.1	ng/L		09/24/18 09:24	09/28/18 02:26	1
1-Methylnaphthalene	**3500**		100	5.9	ng/L		09/24/18 09:24	09/28/18 02:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*42 - 120*	*09/24/18 09:24*	*09/28/18 02:26*	*1*
Nitrobenzene-d5	*67*		*43 - 120*	*09/24/18 09:24*	*09/28/18 02:26*	*1*
Terphenyl-d14	*65*		*47 - 120*	*09/24/18 09:24*	*09/28/18 02:26*	*1*

Client Sample ID: LYMW6R
Date Collected: 09/20/18 16:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		100	4.3	ng/L		09/24/18 09:24	09/28/18 02:55	1
Dibenz(a,h)anthracene	ND		100	4.2	ng/L		09/24/18 09:24	09/28/18 02:55	1
1-Methylnaphthalene	**7300**		100	6.1	ng/L		09/24/18 09:24	09/28/18 02:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*71*		*42 - 120*	*09/24/18 09:24*	*09/28/18 02:55*	*1*
Nitrobenzene-d5	*69*		*43 - 120*	*09/24/18 09:24*	*09/28/18 02:55*	*1*
Terphenyl-d14	*72*		*47 - 120*	*09/24/18 09:24*	*09/28/18 02:55*	*1*

Client Sample ID: BD1-20180920
Date Collected: 09/20/18 00:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		110	4.7	ng/L		09/24/18 09:24	09/28/18 03:24	1
Dibenz(a,h)anthracene	ND		110	4.6	ng/L		09/24/18 09:24	09/28/18 03:24	1
1-Methylnaphthalene	**290**		110	6.6	ng/L		09/24/18 09:24	09/28/18 03:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*86*		*42 - 120*	*09/24/18 09:24*	*09/28/18 03:24*	*1*
Nitrobenzene-d5	*85*		*43 - 120*	*09/24/18 09:24*	*09/28/18 03:24*	*1*
Terphenyl-d14	*74*		*47 - 120*	*09/24/18 09:24*	*09/28/18 03:24*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: FB1-20180920
Date Collected: 09/20/18 15:17
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		100	4.3	ng/L		09/24/18 09:24	09/28/18 04:22	1
Dibenz(a,h)anthracene	ND		100	4.2	ng/L		09/24/18 09:24	09/28/18 04:22	1
1-Methylnaphthalene	ND		100	6.1	ng/L		09/24/18 09:24	09/28/18 04:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*42 - 120*	*09/24/18 09:24*	*09/28/18 04:22*	*1*
Nitrobenzene-d5	*71*		*43 - 120*	*09/24/18 09:24*	*09/28/18 04:22*	*1*
Terphenyl-d14	*77*		*47 - 120*	*09/24/18 09:24*	*09/28/18 04:22*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: LYMW04
Date Collected: 09/20/18 11:42
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**0.81**		0.24	0.031	mg/L		09/24/18 11:45	09/27/18 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 115*	*09/24/18 11:45*	*09/27/18 16:38*	*1*
n-Octacosane	*85*		*26 - 152*	*09/24/18 11:45*	*09/27/18 16:38*	*1*

Client Sample ID: LYMW11
Date Collected: 09/20/18 13:29
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**4.2**		0.26	0.034	mg/L		09/24/18 11:45	09/27/18 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*50 - 115*	*09/24/18 11:45*	*09/27/18 16:58*	*1*
n-Octacosane	*81*		*26 - 152*	*09/24/18 11:45*	*09/27/18 16:58*	*1*

Client Sample ID: LYMW6R
Date Collected: 09/20/18 16:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.7**		0.26	0.033	mg/L		09/24/18 11:45	09/27/18 17:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*50 - 115*	*09/24/18 11:45*	*09/27/18 17:18*	*1*
n-Octacosane	*86*		*26 - 152*	*09/24/18 11:45*	*09/27/18 17:18*	*1*

Client Sample ID: BD1-20180920
Date Collected: 09/20/18 00:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.032	mg/L		09/24/18 11:45	09/27/18 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*0.08*	*X*	*50 - 115*	*09/24/18 11:45*	*09/27/18 17:38*	*1*
n-Octacosane	*0.004*	*X*	*26 - 152*	*09/24/18 11:45*	*09/27/18 17:38*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: FB1-20180920
Date Collected: 09/20/18 15:17
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.052	J	0.24	0.031	mg/L		09/24/18 11:45	09/27/18 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 115*	*09/24/18 11:45*	*09/27/18 17:58*	*1*
n-Octacosane	*84*		*26 - 152*	*09/24/18 11:45*	*09/27/18 17:58*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: LYMW04
Date Collected: 09/20/18 11:42
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1800		100	4.4	ug/L		09/25/18 17:00	09/26/18 17:30	1
Cobalt	ND		10	1.2	ug/L		09/25/18 17:00	09/26/18 17:30	1
Iron	5700		100	22	ug/L		09/25/18 17:00	09/26/18 17:30	1
Lead	ND		9.0	2.7	ug/L		09/25/18 17:00	09/28/18 19:06	1
Manganese	630		10	0.26	ug/L		09/25/18 17:00	09/26/18 17:30	1

Client Sample ID: LYMW11
Date Collected: 09/20/18 13:29
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1300		100	4.4	ug/L		09/25/18 17:00	09/26/18 17:34	1
Cobalt	ND		10	1.2	ug/L		09/25/18 17:00	09/26/18 17:34	1
Iron	10000		100	22	ug/L		09/25/18 17:00	09/26/18 17:34	1
Lead	4.5	J	9.0	2.7	ug/L		09/25/18 17:00	09/28/18 19:09	1
Manganese	2900		10	0.26	ug/L		09/25/18 17:00	09/26/18 17:34	1

Client Sample ID: LYMW6R
Date Collected: 09/20/18 16:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1900		100	4.4	ug/L		09/25/18 17:00	09/26/18 17:37	1
Cobalt	ND		10	1.2	ug/L		09/25/18 17:00	09/26/18 17:37	1
Iron	19000		100	22	ug/L		09/25/18 17:00	09/26/18 17:37	1
Lead	ND		9.0	2.7	ug/L		09/25/18 17:00	09/28/18 19:26	1
Manganese	2700		10	0.26	ug/L		09/25/18 17:00	09/26/18 17:37	1

Client Sample ID: BD1-20180920
Date Collected: 09/20/18 00:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1900		100	4.4	ug/L		09/25/18 17:00	09/26/18 17:40	1
Cobalt	ND		10	1.2	ug/L		09/25/18 17:00	09/26/18 17:40	1
Iron	5100		100	22	ug/L		09/25/18 17:00	09/26/18 17:40	1
Lead	ND		9.0	2.7	ug/L		09/25/18 17:00	09/28/18 19:30	1
Manganese	600		10	0.26	ug/L		09/25/18 17:00	09/26/18 17:40	1

Method: 6010C - Metals (ICP)

Client Sample ID: FB1-20180920
Date Collected: 09/20/18 15:17
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	4.4	ug/L		09/25/18 17:00	09/26/18 17:44	1
Cobalt	ND		10	1.2	ug/L		09/25/18 17:00	09/26/18 17:44	1
Iron	ND		100	22	ug/L		09/25/18 17:00	09/26/18 17:44	1
Lead	ND		9.0	2.7	ug/L		09/25/18 17:00	09/28/18 19:33	1
Manganese	**0.57**	**J**	10	0.26	ug/L		09/25/18 17:00	09/26/18 17:44	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: LYMW04
Date Collected: 09/20/18 11:42
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.38**	**J**	5.0	0.33	ug/L		09/25/18 17:00	09/26/18 20:13	1
Thallium	ND		1.0	0.050	ug/L		09/25/18 17:00	09/26/18 04:22	1

Client Sample ID: LYMW11
Date Collected: 09/20/18 13:29
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.1**	**J**	5.0	0.33	ug/L		09/25/18 17:00	09/26/18 04:25	1
Thallium	ND		1.0	0.050	ug/L		09/25/18 17:00	09/26/18 04:25	1

Client Sample ID: LYMW6R
Date Collected: 09/20/18 16:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.40**	**J**	5.0	0.33	ug/L		09/25/18 17:00	09/26/18 20:16	1
Thallium	ND		1.0	0.050	ug/L		09/25/18 17:00	09/26/18 04:53	1

Client Sample ID: BD1-20180920
Date Collected: 09/20/18 00:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/25/18 17:00	09/26/18 20:20	1
Thallium	ND		1.0	0.050	ug/L		09/25/18 17:00	09/26/18 04:56	1

Client Sample ID: FB1-20180920
Date Collected: 09/20/18 15:17
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/25/18 17:00	09/26/18 05:00	1
Thallium	ND		1.0	0.050	ug/L		09/25/18 17:00	09/26/18 05:00	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW04
Date Collected: 09/20/18 11:42
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		09/27/18 11:05	09/27/18 16:13	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW11
Date Collected: 09/20/18 13:29
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.042**	**J**	0.20	0.027	ug/L		09/27/18 11:05	09/27/18 16:15	1

Client Sample ID: LYMW6R
Date Collected: 09/20/18 16:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		09/27/18 11:05	09/27/18 16:22	1

Client Sample ID: BD1-20180920
Date Collected: 09/20/18 00:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		09/27/18 11:05	09/27/18 16:24	1

Client Sample ID: FB1-20180920
Date Collected: 09/20/18 15:17
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		09/27/18 11:05	09/27/18 16:26	1

Surrogate Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(42-120)	(43-120)	(47-120)
280-114659-1	LYMW04	72	67	71
280-114659-2	LYMW11	64	67	65
280-114659-3	LYMW6R	71	69	72
280-114659-4	BD1-20180920	86	85	74
280-114659-5	FB1-20180920	77	71	77
LCS 280-430682/2-A	Lab Control Sample	73	77	77
LCSD 280-430682/3-A	Lab Control Sample Dup	73	74	70
MB 280-430682/1-A	Method Blank	58	60	69

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		OTPH	OTCN
Lab Sample ID	Client Sample ID	(50-115)	(26-152)
280-114659-1	LYMW04	74	85
280-114659-2	LYMW11	71	81
280-114659-3	LYMW6R	76	86
280-114659-4	BD1-20180920	0.08 X	0.004 X
280-114659-5	FB1-20180920	73	84
LCS 280-430729/2-A	Lab Control Sample	77	87
LCSD 280-430729/3-A	Lab Control Sample Dup	75	86
MB 280-430729/1-A	Method Blank	75	87

Surrogate Legend

OTPH = o-Terphenyl
OTCN = n-Octacosane

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 280-430682/1-A
Matrix: Water
Analysis Batch: 431289

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	12.4	J	100	4.2	ng/L		09/24/18 09:24	09/28/18 00:29	1
Dibenz(a,h)anthracene	ND		100	4.1	ng/L		09/24/18 09:24	09/28/18 00:29	1
1-Methylnaphthalene	ND		100	5.9	ng/L		09/24/18 09:24	09/28/18 00:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*58*		*42 - 120*	*09/24/18 09:24*	*09/28/18 00:29*	*1*
Nitrobenzene-d5	*60*		*43 - 120*	*09/24/18 09:24*	*09/28/18 00:29*	*1*
Terphenyl-d14	*69*		*47 - 120*	*09/24/18 09:24*	*09/28/18 00:29*	*1*

Lab Sample ID: LCS 280-430682/2-A
Matrix: Water
Analysis Batch: 431289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430682

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	900	998		ng/L		111	42 - 120
Dibenz(a,h)anthracene	900	988		ng/L		110	27 - 126
1-Methylnaphthalene	900	686		ng/L		76	44 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*73*		*42 - 120*
Nitrobenzene-d5	*77*		*43 - 120*
Terphenyl-d14	*77*		*47 - 120*

Lab Sample ID: LCSD 280-430682/3-A
Matrix: Water
Analysis Batch: 431289

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 430682

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene	900	926		ng/L		103	42 - 120	7	40
Dibenz(a,h)anthracene	900	832		ng/L		92	27 - 126	17	25
1-Methylnaphthalene	900	700		ng/L		78	44 - 150	2	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*73*		*42 - 120*
Nitrobenzene-d5	*74*		*43 - 120*
Terphenyl-d14	*70*		*47 - 120*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-430729/1-A
Matrix: Water
Analysis Batch: 431230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		09/24/18 11:45	09/27/18 15:37	1

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

Lab Sample ID: MB 280-430729/1-A
Matrix: Water
Analysis Batch: 431230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430729

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*75*		*50 - 115*	*09/24/18 11:45*	*09/27/18 15:37*	*1*
n-Octacosane	*87*		*26 - 152*	*09/24/18 11:45*	*09/27/18 15:37*	*1*

Lab Sample ID: LCS 280-430729/2-A
Matrix: Water
Analysis Batch: 431230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2.00	1.87		mg/L		94	54 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	*77*		*50 - 115*
n-Octacosane	*87*		*26 - 152*

Lab Sample ID: LCSD 280-430729/3-A
Matrix: Water
Analysis Batch: 431230

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 430729

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	2.00	1.82		mg/L		91	54 - 115	3	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	*75*		*50 - 115*
n-Octacosane	*86*		*26 - 152*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-430812/1-A
Matrix: Water
Analysis Batch: 431161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430812

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	4.4	ug/L		09/25/18 17:00	09/26/18 16:46	1
Cobalt	ND		10	1.2	ug/L		09/25/18 17:00	09/26/18 16:46	1
Iron	ND		100	22	ug/L		09/25/18 17:00	09/26/18 16:46	1
Manganese	ND		10	0.26	ug/L		09/25/18 17:00	09/26/18 16:46	1

Lab Sample ID: MB 280-430812/1-A
Matrix: Water
Analysis Batch: 431488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430812

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		9.0	2.7	ug/L		09/25/18 17:00	09/28/18 18:42	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-430812/2-A
Matrix: Water
Analysis Batch: 431161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1070		ug/L		107	86 - 110
Cobalt	500	498		ug/L		100	89 - 111
Iron	1000	1030		ug/L		103	89 - 115
Manganese	500	506		ug/L		101	90 - 110

Lab Sample ID: LCS 280-430812/2-A
Matrix: Water
Analysis Batch: 431488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	500	493		ug/L		99	89 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-430823/1-A
Matrix: Water
Analysis Batch: 431017

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430823

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/25/18 17:00	09/26/18 04:15	1
Thallium	ND		1.0	0.050	ug/L		09/25/18 17:00	09/26/18 04:15	1

Lab Sample ID: LCS 280-430823/2-A
Matrix: Water
Analysis Batch: 431017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430823

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	34.9		ug/L		87	85 - 117
Thallium	40.0	41.4		ug/L		104	85 - 118

Lab Sample ID: 280-114659-2 MS
Matrix: Water
Analysis Batch: 431017

Client Sample ID: LYMW11
Prep Type: Total/NA
Prep Batch: 430823

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.1	J	40.0	36.1		ug/L		88	85 - 117
Thallium	ND		40.0	39.7		ug/L		99	85 - 118

Lab Sample ID: 280-114659-2 MSD
Matrix: Water
Analysis Batch: 431017

Client Sample ID: LYMW11
Prep Type: Total/NA
Prep Batch: 430823

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.1	J	40.0	36.8		ug/L		89	85 - 117	2	20
Thallium	ND		40.0	39.7		ug/L		99	85 - 118	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-431104/1-A
Matrix: Water
Analysis Batch: 431340

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431104

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		09/27/18 11:05	09/27/18 15:33	1

Lab Sample ID: LCS 280-431104/2-A
Matrix: Water
Analysis Batch: 431340

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431104

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.13		ug/L		103	84 - 120

Lab Sample ID: LCSD 280-431104/3-A
Matrix: Water
Analysis Batch: 431340

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 431104

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	5.00	5.15		ug/L		103	84 - 120	0	15

QC Association Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

GC/MS Semi VOA

Prep Batch: 430682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	3510C	
280-114659-2	LYMW11	Total/NA	Water	3510C	
280-114659-3	LYMW6R	Total/NA	Water	3510C	
280-114659-4	BD1-20180920	Total/NA	Water	3510C	
280-114659-5	FB1-20180920	Total/NA	Water	3510C	
MB 280-430682/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-430682/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-430682/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 431289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	8270D SIM	430682
280-114659-2	LYMW11	Total/NA	Water	8270D SIM	430682
280-114659-3	LYMW6R	Total/NA	Water	8270D SIM	430682
280-114659-4	BD1-20180920	Total/NA	Water	8270D SIM	430682
280-114659-5	FB1-20180920	Total/NA	Water	8270D SIM	430682
MB 280-430682/1-A	Method Blank	Total/NA	Water	8270D SIM	430682
LCS 280-430682/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	430682
LCSD 280-430682/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	430682

GC Semi VOA

Prep Batch: 430729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	3510C	
280-114659-2	LYMW11	Total/NA	Water	3510C	
280-114659-3	LYMW6R	Total/NA	Water	3510C	
280-114659-4	BD1-20180920	Total/NA	Water	3510C	
280-114659-5	FB1-20180920	Total/NA	Water	3510C	
MB 280-430729/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-430729/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-430729/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 431230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	8015D	430729
280-114659-2	LYMW11	Total/NA	Water	8015D	430729
280-114659-3	LYMW6R	Total/NA	Water	8015D	430729
280-114659-4	BD1-20180920	Total/NA	Water	8015D	430729
280-114659-5	FB1-20180920	Total/NA	Water	8015D	430729
MB 280-430729/1-A	Method Blank	Total/NA	Water	8015D	430729
LCS 280-430729/2-A	Lab Control Sample	Total/NA	Water	8015D	430729
LCSD 280-430729/3-A	Lab Control Sample Dup	Total/NA	Water	8015D	430729

Metals

Prep Batch: 430812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	3010A	
280-114659-2	LYMW11	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 430812 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-3	LYMW6R	Total/NA	Water	3010A	
280-114659-4	BD1-20180920	Total/NA	Water	3010A	
280-114659-5	FB1-20180920	Total/NA	Water	3010A	
MB 280-430812/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-430812/2-A	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 430823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	3020A	
280-114659-2	LYMW11	Total/NA	Water	3020A	
280-114659-3	LYMW6R	Total/NA	Water	3020A	
280-114659-4	BD1-20180920	Total/NA	Water	3020A	
280-114659-5	FB1-20180920	Total/NA	Water	3020A	
MB 280-430823/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-430823/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-114659-2 MS	LYMW11	Total/NA	Water	3020A	
280-114659-2 MSD	LYMW11	Total/NA	Water	3020A	

Analysis Batch: 431017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	6020A	430823
280-114659-2	LYMW11	Total/NA	Water	6020A	430823
280-114659-3	LYMW6R	Total/NA	Water	6020A	430823
280-114659-4	BD1-20180920	Total/NA	Water	6020A	430823
280-114659-5	FB1-20180920	Total/NA	Water	6020A	430823
MB 280-430823/1-A	Method Blank	Total/NA	Water	6020A	430823
LCS 280-430823/2-A	Lab Control Sample	Total/NA	Water	6020A	430823
280-114659-2 MS	LYMW11	Total/NA	Water	6020A	430823
280-114659-2 MSD	LYMW11	Total/NA	Water	6020A	430823

Prep Batch: 431104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	7470A	
280-114659-2	LYMW11	Total/NA	Water	7470A	
280-114659-3	LYMW6R	Total/NA	Water	7470A	
280-114659-4	BD1-20180920	Total/NA	Water	7470A	
280-114659-5	FB1-20180920	Total/NA	Water	7470A	
MB 280-431104/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-431104/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-431104/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Analysis Batch: 431161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	6010C	430812
280-114659-2	LYMW11	Total/NA	Water	6010C	430812
280-114659-3	LYMW6R	Total/NA	Water	6010C	430812
280-114659-4	BD1-20180920	Total/NA	Water	6010C	430812
280-114659-5	FB1-20180920	Total/NA	Water	6010C	430812
MB 280-430812/1-A	Method Blank	Total/NA	Water	6010C	430812
LCS 280-430812/2-A	Lab Control Sample	Total/NA	Water	6010C	430812

Metals (Continued)

Analysis Batch: 431175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	6020A	430823
280-114659-3	LYMW6R	Total/NA	Water	6020A	430823
280-114659-4	BD1-20180920	Total/NA	Water	6020A	430823

Analysis Batch: 431340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	7470A	431104
280-114659-2	LYMW11	Total/NA	Water	7470A	431104
280-114659-3	LYMW6R	Total/NA	Water	7470A	431104
280-114659-4	BD1-20180920	Total/NA	Water	7470A	431104
280-114659-5	FB1-20180920	Total/NA	Water	7470A	431104
MB 280-431104/1-A	Method Blank	Total/NA	Water	7470A	431104
LCS 280-431104/2-A	Lab Control Sample	Total/NA	Water	7470A	431104
LCSD 280-431104/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	431104

Analysis Batch: 431488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-114659-1	LYMW04	Total/NA	Water	6010C	430812
280-114659-2	LYMW11	Total/NA	Water	6010C	430812
280-114659-3	LYMW6R	Total/NA	Water	6010C	430812
280-114659-4	BD1-20180920	Total/NA	Water	6010C	430812
280-114659-5	FB1-20180920	Total/NA	Water	6010C	430812
MB 280-430812/1-A	Method Blank	Total/NA	Water	6010C	430812
LCS 280-430812/2-A	Lab Control Sample	Total/NA	Water	6010C	430812

Lab Chronicle

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

Client Sample ID: LYMW04

Date Collected: 09/20/18 11:42
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			245.4 mL	1 mL	430682	09/24/18 09:24	JZ	TAL DEN
Total/NA	Analysis	8270D SIM		1			431289	09/28/18 01:57	MKW	TAL DEN
Total/NA	Prep	3510C			1035.7 mL	1 mL	430729	09/24/18 11:45	AAG	TAL DEN
Total/NA	Analysis	8015D		1			431230	09/27/18 16:38	CSM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431161	09/26/18 17:30	TEB	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431488	09/28/18 19:06	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	430823	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6020A		1			431017	09/26/18 04:22	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	430823	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6020A		1			431175	09/26/18 20:13	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	431104	09/27/18 11:05	THP	TAL DEN
Total/NA	Analysis	7470A		1			431340	09/27/18 16:13	THP	TAL DEN

Client Sample ID: LYMW11

Date Collected: 09/20/18 13:29
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			249.6 mL	1 mL	430682	09/24/18 09:24	JZ	TAL DEN
Total/NA	Analysis	8270D SIM		1			431289	09/28/18 02:26	MKW	TAL DEN
Total/NA	Prep	3510C			967.5 mL	1 mL	430729	09/24/18 11:45	AAG	TAL DEN
Total/NA	Analysis	8015D		1			431230	09/27/18 16:58	CSM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431161	09/26/18 17:34	TEB	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431488	09/28/18 19:09	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	430823	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6020A		1			431017	09/26/18 04:25	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	431104	09/27/18 11:05	THP	TAL DEN
Total/NA	Analysis	7470A		1			431340	09/27/18 16:15	THP	TAL DEN

Client Sample ID: LYMW6R

Date Collected: 09/20/18 16:00
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242.5 mL	1 mL	430682	09/24/18 09:24	JZ	TAL DEN
Total/NA	Analysis	8270D SIM		1			431289	09/28/18 02:55	MKW	TAL DEN
Total/NA	Prep	3510C			977.3 mL	1 mL	430729	09/24/18 11:45	AAG	TAL DEN
Total/NA	Analysis	8015D		1			431230	09/27/18 17:18	CSM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN

Lab Chronicle

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

Client Sample ID: LYMW6R

Lab Sample ID: 280-114659-3

Date Collected: 09/20/18 16:00
Matrix: Water
Date Received: 09/21/18 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			431161	09/26/18 17:37	TEB	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431488	09/28/18 19:26	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	430823	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6020A		1			431017	09/26/18 04:53	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	430823	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6020A		1			431175	09/26/18 20:16	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	431104	09/27/18 11:05	THP	TAL DEN
Total/NA	Analysis	7470A		1			431340	09/27/18 16:22	THP	TAL DEN

Client Sample ID: BD1-20180920

Lab Sample ID: 280-114659-4

Date Collected: 09/20/18 00:00
Matrix: Water
Date Received: 09/21/18 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			223.5 mL	1 mL	430682	09/24/18 09:24	JZ	TAL DEN
Total/NA	Analysis	8270D SIM		1			431289	09/28/18 03:24	MKW	TAL DEN
Total/NA	Prep	3510C			1013.7 mL	1 mL	430729	09/24/18 11:45	AAG	TAL DEN
Total/NA	Analysis	8015D		1			431230	09/27/18 17:38	CSM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431161	09/26/18 17:40	TEB	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431488	09/28/18 19:30	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	430823	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6020A		1			431017	09/26/18 04:56	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	430823	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6020A		1			431175	09/26/18 20:20	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	431104	09/27/18 11:05	THP	TAL DEN
Total/NA	Analysis	7470A		1			431340	09/27/18 16:24	THP	TAL DEN

Client Sample ID: FB1-20180920

Lab Sample ID: 280-114659-5

Date Collected: 09/20/18 15:17
Matrix: Water
Date Received: 09/21/18 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			242.6 mL	1 mL	430682	09/24/18 09:24	JZ	TAL DEN
Total/NA	Analysis	8270D SIM		1			431289	09/28/18 04:22	MKW	TAL DEN
Total/NA	Prep	3510C			1055.5 mL	1 mL	430729	09/24/18 11:45	AAG	TAL DEN
Total/NA	Analysis	8015D		1			431230	09/27/18 17:58	CSM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431161	09/26/18 17:44	TEB	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	430812	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6010C		1			431488	09/28/18 19:33	CML	TAL DEN

Lab Chronicle

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

Client Sample ID: FB1-20180920

Date Collected: 09/20/18 15:17
Date Received: 09/21/18 09:05

Lab Sample ID: 280-114659-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	430823	09/25/18 17:00	LRD	TAL DEN
Total/NA	Analysis	6020A		1			431017	09/26/18 05:00	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	431104	09/27/18 11:05	THP	TAL DEN
Total/NA	Analysis	7470A		1			431340	09/27/18 16:26	THP	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-114659-1

Laboratory: TestAmerica Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD / DOE		2907.01	10-31-19
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	01-08-20
Arizona	State Program	9	AZ0713	12-20-19
Arkansas DEQ	State Program	6	88-0687	06-01-19
California	State Program	9	2513	01-08-20
Connecticut	State Program	1	PH-0686	09-30-20
Florida	NELAP	4	E87667	06-30-19
Georgia	State Program	4	N/A	01-08-20
Illinois	NELAP	5	200017	04-30-19
Iowa	State Program	7	370	12-01-20
Kansas	NELAP	7	E-10166	04-30-19
Louisiana	NELAP	6	02096	06-30-19
Maine	State Program	1	CO0002	03-03-21
Minnesota	NELAP	5	8-999-405	12-31-19
Nevada	State Program	9	CO0026	07-31-19
New Hampshire	NELAP	1	205310	04-28-19
New Jersey	NELAP	2	CO004	06-30-19
New York	NELAP	2	11964	04-01-19
North Carolina (WW/SW)	State Program	4	358	12-31-19
North Dakota	State Program	8	R-034	01-08-20
Oklahoma	State Program	6	8614	08-31-19
Oregon	NELAP	10	4025	01-08-20
Pennsylvania	NELAP	3	68-00664	07-31-19
South Carolina	State Program	4	72002001	01-08-19 *
Texas	NELAP	6	T104704183-18-15	09-30-19
US Fish & Wildlife	Federal			07-31-19
USDA	Federal			03-26-21
Utah	NELAP	8	CO00026	07-31-19
Virginia	NELAP	3	460232	06-14-19
Washington	State Program	10	C583	08-03-19
West Virginia DEP	State Program	3	354	11-30-19
Wisconsin	State Program	5	999615430	08-31-19 *
Wyoming (UST)	A2LA	8	2907.01	10-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information			
Client Contact: Ryan Athey	Sampler: Ryan Miller	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):
	Phone: 307-760-0487	E-Mail: donna.rydberg@testamericainc.com	
COC No: 280-79474-26028.1	Page: Page 1 of 1	Job #:	

Company: Trihydro Corporation	
Address: 1252 Commerce Drive	Due Date Requested:
City: Laramie	TAT Requested (days):
State, Zip: WY, 82070	
Phone:	PO #: Purchase Order Requested
Email: rathey@trihydro.com	WO #:
Project Name: Former Laramie Yttrium Plant	Project #: 28018711
Site:	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA
M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM - 1-Methylnaphthalene, Benzo(a)anthracene,	6010C, 6020A, 7470A	8015D_DRO - Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N		
LYMW04	9-20-18	1142	G	Water	N	N	X	X	X	6	
LYMW11	9-20-18	1329	G	Water	N	N	X	X	X	6	
LYMW6R	9-20-18		G	Water	N	N	X	X	X	6	
BD1-20180920	9-20-18	—	G	Water	N	N	X	X	X	6	
FB1-20180920	9-20-18	1517	G	Water	N	N	X	X	X	6	
				Water							
				Water							

280-114659 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Ryan Miller	9-20-18 1721	THC	[illegible]	9/21/18 0905	TA DEN

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.4, 2.9 to.5 [illegible]

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Trihydro Corporation

Job Number: 280-114659-1

Login Number: 114659
List Number: 1
Creator: Quint, Jessica A

List Source: TestAmerica Denver

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-120563-1
Client Project/Site: Former Laramie Yttrium Plant
Revision: 1

For:
Trihydro Corporation
1252 Commerce Drive
Laramie, Wyoming 82070

Attn: Ryan Athey

Donna Rydberg

Authorized for release by:
3/19/2019 2:47:28 PM

Donna Rydberg, Senior Project Manager
(303)736-0192
donna.rydberg@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 280-120563-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Trihydro Corporation

Project: Former Laramie Yttrium Plant

Report Number: 280-120563-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

REVISED REPORT - 3/19/2019
Arsenic and Thallium were reported in the original report by both method 6010C and 6020A. These two metals only need reported by method 6020A. The were removed from method 6010C.

RECEIPT
The sample was received on 2/26/2019 at 8:45 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

The COC only requests 1-Methylnaphthalene and Benzo(a)anthracene on the COC. However, the quote also includes Dibenz (a,h)anthracene. The client was notified and directed the laboratory to report all three compounds.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)
Sample LYMW10 (280-120563-1) was analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 03/01/2019 and analyzed on 03/07/2019.

Sample LYMW10 (280-120563-1) required a 20X dilution prior to analysis for 1-Methylnaphthalene. The reporting limits have been adjusted accordingly.

The recovery for surrogate Nitrobenzene-d5 was outside the surrogate recovery criteria in both analytical runs for sample LYMW10 (280-120563-1). Evidence of matrix interference due to non-target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

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

DIESEL RANGE ORGANICS
Sample LYMW10 (280-120563-1) was analyzed for diesel range organics in accordance with EPA SW-846 Method 8015D - DRO. The samples were prepared on 02/26/2019 and analyzed on 02/27/2019.

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

Job ID: 280-120563-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

TOTAL METALS (ICP)

Sample LYMW10 (280-120563-1) was analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/28/2019 and analyzed on 03/01/2019 and 03/04/2019.

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

TOTAL METALS (ICPMS)

Sample LYMW10 (280-120563-1) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared and analyzed on 03/01/2019.

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

TOTAL MERCURY

Sample LYMW10 (280-120563-1) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 02/28/2019.

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

Detection Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

Client Sample ID: LYMW10 — Lab Sample ID: 280-120563-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	500		110	30	ng/L	1		8270D SIM	Total/NA
Dibenz(a,h)anthracene	310		110	29	ng/L	1		8270D SIM	Total/NA
1-Methylnaphthalene - DL	110000		2100	390	ng/L	20		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	8.4		0.24	0.031	mg/L	1		8015D	Total/NA
Boron	1700		100	4.4	ug/L	1		6010C	Total/NA
Iron	68	J	100	22	ug/L	1		6010C	Total/NA
Manganese	580		10	1.9	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL DEN
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN

Protocol References:

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-120563-1	LYMW10	Water	02/25/19 10:30	02/26/19 08:45

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: LYMW10
Date Collected: 02/25/19 10:30
Date Received: 02/26/19 08:45

Lab Sample ID: 280-120563-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**500**		110	30	ng/L		03/01/19 09:58	03/07/19 02:12	1
Dibenz(a,h)anthracene	**310**		110	29	ng/L		03/01/19 09:58	03/07/19 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*115*		*42 - 120*	*03/01/19 09:58*	*03/07/19 02:12*	*1*
Nitrobenzene-d5	*161*	*X*	*43 - 120*	*03/01/19 09:58*	*03/07/19 02:12*	*1*
Terphenyl-d14	*87*		*47 - 120*	*03/01/19 09:58*	*03/07/19 02:12*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Client Sample ID: LYMW10
Date Collected: 02/25/19 10:30
Date Received: 02/26/19 08:45

Lab Sample ID: 280-120563-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**110000**		2100	390	ng/L		03/01/19 09:58	03/07/19 19:06	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*	*D*	*42 - 120*	*03/01/19 09:58*	*03/07/19 19:06*	*20*
Nitrobenzene-d5	*0*	*X D*	*43 - 120*	*03/01/19 09:58*	*03/07/19 19:06*	*20*
Terphenyl-d14	*98*	*D*	*47 - 120*	*03/01/19 09:58*	*03/07/19 19:06*	*20*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: LYMW10
Date Collected: 02/25/19 10:30
Date Received: 02/26/19 08:45

Lab Sample ID: 280-120563-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**8.4**		0.24	0.031	mg/L		02/26/19 16:07	02/27/19 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 115*	*02/26/19 16:07*	*02/27/19 21:50*	*1*
n-Octacosane	*96*		*26 - 152*	*02/26/19 16:07*	*02/27/19 21:50*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: LYMW10
Date Collected: 02/25/19 10:30
Date Received: 02/26/19 08:45

Lab Sample ID: 280-120563-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**		100	4.4	ug/L		02/28/19 16:15	03/01/19 13:28	1
Cobalt	ND		10	1.2	ug/L		02/28/19 16:15	03/01/19 13:28	1
Iron	**68**	**J**	100	22	ug/L		02/28/19 16:15	03/04/19 15:45	1
Lead	ND		9.0	2.7	ug/L		02/28/19 16:15	03/01/19 13:28	1
Manganese	**580**		10	1.9	ug/L		02/28/19 16:15	03/04/19 15:45	1

Client Sample Results

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: LYMW10
Date Collected: 02/25/19 10:30
Date Received: 02/26/19 08:45

Lab Sample ID: 280-120563-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		03/01/19 07:30	03/01/19 16:08	1
Thallium	ND		1.0	0.089	ug/L		03/01/19 07:30	03/01/19 16:08	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW10
Date Collected: 02/25/19 10:30
Date Received: 02/26/19 08:45

Lab Sample ID: 280-120563-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		02/28/19 12:31	02/28/19 17:22	1

Surrogate Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(42-120)	(43-120)	(47-120)
280-120563-1	LYMW10	115	161 X	87
280-120563-1 - DL	LYMW10	96 D	0 X D	98 D
LCS 280-449328/2-A	Lab Control Sample	82	84	96
LCSD 280-449328/3-A	Lab Control Sample Dup	87	89	102
MB 280-449328/1-A	Method Blank	99	103	109

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		OTPH	OTCN
Lab Sample ID	Client Sample ID	(50-115)	(26-152)
280-120563-1	LYMW10	89	96
LCS 280-448948/2-A	Lab Control Sample	85	86
LCSD 280-448948/3-A	Lab Control Sample Dup	83	85
MB 280-448948/1-A	Method Blank	87	96

Surrogate Legend

OTPH = o-Terphenyl
OTCN = n-Octacosane

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 280-449328/1-A
Matrix: Water
Analysis Batch: 449891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 449328

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		100	28	ng/L		03/01/19 09:58	03/07/19 00:44	1
Dibenz(a,h)anthracene	ND		100	28	ng/L		03/01/19 09:58	03/07/19 00:44	1
1-Methylnaphthalene	ND		100	18	ng/L		03/01/19 09:58	03/07/19 00:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*99*		*42 - 120*	*03/01/19 09:58*	*03/07/19 00:44*	*1*
Nitrobenzene-d5	*103*		*43 - 120*	*03/01/19 09:58*	*03/07/19 00:44*	*1*
Terphenyl-d14	*109*		*47 - 120*	*03/01/19 09:58*	*03/07/19 00:44*	*1*

Lab Sample ID: LCS 280-449328/2-A
Matrix: Water
Analysis Batch: 449891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 449328

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	900	786		ng/L		87	42 - 120
Dibenz(a,h)anthracene	900	932		ng/L		104	27 - 126
1-Methylnaphthalene	900	670		ng/L		74	44 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*82*		*42 - 120*
Nitrobenzene-d5	*84*		*43 - 120*
Terphenyl-d14	*96*		*47 - 120*

Lab Sample ID: LCSD 280-449328/3-A
Matrix: Water
Analysis Batch: 449891

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 449328

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene	900	787		ng/L		87	42 - 120	0	40
Dibenz(a,h)anthracene	900	960		ng/L		107	27 - 126	3	25
1-Methylnaphthalene	900	672		ng/L		75	44 - 150	0	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*87*		*42 - 120*
Nitrobenzene-d5	*89*		*43 - 120*
Terphenyl-d14	*102*		*47 - 120*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-448948/1-A
Matrix: Water
Analysis Batch: 448996

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 448948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		02/26/19 16:07	02/27/19 18:13	1

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

Lab Sample ID: MB 280-448948/1-A
Matrix: Water
Analysis Batch: 448996

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 448948

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*87*		*50 - 115*	*02/26/19 16:07*	*02/27/19 18:13*	*1*
n-Octacosane	*96*		*26 - 152*	*02/26/19 16:07*	*02/27/19 18:13*	*1*

Lab Sample ID: LCS 280-448948/2-A
Matrix: Water
Analysis Batch: 448996

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 448948

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	1.98	1.85		mg/L		93	54 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	*85*		*50 - 115*
n-Octacosane	*86*		*26 - 152*

Lab Sample ID: LCSD 280-448948/3-A
Matrix: Water
Analysis Batch: 448996

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 448948

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	1.98	1.85		mg/L		93	54 - 115	0	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	*83*		*50 - 115*
n-Octacosane	*85*		*26 - 152*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-449229/1-A
Matrix: Water
Analysis Batch: 449494

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 449229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	4.4	ug/L		02/28/19 16:15	03/01/19 13:22	1
Cobalt	ND		10	1.2	ug/L		02/28/19 16:15	03/01/19 13:22	1
Lead	ND		9.0	2.7	ug/L		02/28/19 16:15	03/01/19 13:22	1

Lab Sample ID: MB 280-449229/1-A
Matrix: Water
Analysis Batch: 449609

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 449229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		100	22	ug/L		02/28/19 16:15	03/04/19 15:38	1
Manganese	ND		10	1.9	ug/L		02/28/19 16:15	03/04/19 15:38	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-449229/2-A
Matrix: Water
Analysis Batch: 449494

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 449229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1010		ug/L		101	86 - 110
Cobalt	500	487		ug/L		97	89 - 111
Lead	500	488		ug/L		98	89 - 110

Lab Sample ID: LCS 280-449229/2-A
Matrix: Water
Analysis Batch: 449609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 449229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1000	1020		ug/L		102	89 - 115
Manganese	500	505		ug/L		101	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-449248/1-A
Matrix: Water
Analysis Batch: 449477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 449248

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		03/01/19 07:30	03/01/19 15:27	1
Thallium	ND		1.0	0.089	ug/L		03/01/19 07:30	03/01/19 15:27	1

Lab Sample ID: LCS 280-449248/2-A
Matrix: Water
Analysis Batch: 449477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 449248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	37.0		ug/L		93	85 - 117
Thallium	40.0	40.0		ug/L		100	85 - 118

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-449142/1-A
Matrix: Water
Analysis Batch: 449308

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 449142

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		02/28/19 12:31	02/28/19 17:16	1

Lab Sample ID: LCS 280-449142/2-A
Matrix: Water
Analysis Batch: 449308

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 449142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.08		ug/L		102	84 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 280-449142/3-A
Matrix: Water
Analysis Batch: 449308

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 449142

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			5.00	5.21		ug/L		104	84 - 120	3	15

QC Association Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

GC/MS Semi VOA

Prep Batch: 449328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1 - DL	LYMW10	Total/NA	Water	3510C	
280-120563-1	LYMW10	Total/NA	Water	3510C	
MB 280-449328/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-449328/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-449328/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 449891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	8270D SIM	449328
MB 280-449328/1-A	Method Blank	Total/NA	Water	8270D SIM	449328
LCS 280-449328/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	449328
LCSD 280-449328/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	449328

Analysis Batch: 450033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1 - DL	LYMW10	Total/NA	Water	8270D SIM	449328

GC Semi VOA

Prep Batch: 448948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	3510C	
MB 280-448948/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-448948/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-448948/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 448996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	8015D	448948
MB 280-448948/1-A	Method Blank	Total/NA	Water	8015D	448948
LCS 280-448948/2-A	Lab Control Sample	Total/NA	Water	8015D	448948
LCSD 280-448948/3-A	Lab Control Sample Dup	Total/NA	Water	8015D	448948

Metals

Prep Batch: 449142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	7470A	
MB 280-449142/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-449142/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-449142/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Prep Batch: 449229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	3010A	
MB 280-449229/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-449229/2-A	Lab Control Sample	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 449248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	3020A	
MB 280-449248/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-449248/2-A	Lab Control Sample	Total/NA	Water	3020A	

Analysis Batch: 449308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	7470A	449142
MB 280-449142/1-A	Method Blank	Total/NA	Water	7470A	449142
LCS 280-449142/2-A	Lab Control Sample	Total/NA	Water	7470A	449142
LCSD 280-449142/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	449142

Analysis Batch: 449477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	6020A	449248
MB 280-449248/1-A	Method Blank	Total/NA	Water	6020A	449248
LCS 280-449248/2-A	Lab Control Sample	Total/NA	Water	6020A	449248

Analysis Batch: 449494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	6010C	449229
MB 280-449229/1-A	Method Blank	Total/NA	Water	6010C	449229
LCS 280-449229/2-A	Lab Control Sample	Total/NA	Water	6010C	449229

Analysis Batch: 449609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-120563-1	LYMW10	Total/NA	Water	6010C	449229
MB 280-449229/1-A	Method Blank	Total/NA	Water	6010C	449229
LCS 280-449229/2-A	Lab Control Sample	Total/NA	Water	6010C	449229

Lab Chronicle

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

Client Sample ID: LYMW10

Date Collected: 02/25/19 10:30
Date Received: 02/26/19 08:45

Lab Sample ID: 280-120563-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			236.2 mL	1 mL	449328	03/01/19 09:58	KJS	TAL DEN
Total/NA	Analysis	8270D SIM		1			449891	03/07/19 02:12	MKW	TAL DEN
Total/NA	Prep	3510C	DL		236.2 mL	1 mL	449328	03/01/19 09:58	KJS	TAL DEN
Total/NA	Analysis	8270D SIM	DL	20			450033	03/07/19 19:06	MKW	TAL DEN
Total/NA	Prep	3510C			1044.8 mL	1 mL	448948	02/26/19 16:07	AJE	TAL DEN
Total/NA	Analysis	8015D		1			448996	02/27/19 21:50	MPF	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	449229	02/28/19 16:15	DAL	TAL DEN
Total/NA	Analysis	6010C		1			449494	03/01/19 13:28	CML	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	449229	02/28/19 16:15	DAL	TAL DEN
Total/NA	Analysis	6010C		1			449609	03/04/19 15:45	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	449248	03/01/19 07:30	THP	TAL DEN
Total/NA	Analysis	6020A		1			449477	03/01/19 16:08	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	449142	02/28/19 12:31	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			449308	02/28/19 17:22	MRJ	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

TestAmerica Job ID: 280-120563-1

Laboratory: TestAmerica Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD / DOE		2907.01	10-31-19
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	01-08-20
Arizona	State Program	9	AZ0713	12-20-19
Arkansas DEQ	State Program	6	88-0687	06-01-19
California	State Program	9	2513	01-08-20
Connecticut	State Program	1	PH-0686	09-30-20
Florida	NELAP	4	E87667	06-30-19
Georgia	State Program	4	N/A	01-08-20
Illinois	NELAP	5	200017	04-30-19
Iowa	State Program	7	370	12-01-20
Kansas	NELAP	7	E-10166	04-30-19
Louisiana	NELAP	6	02096	06-30-19
Maine	State Program	1	CO0002	03-03-21
Minnesota	NELAP	5	8-999-405	12-31-19
Nevada	State Program	9	CO0026	07-31-19
New Hampshire	NELAP	1	205310	04-28-19
New Jersey	NELAP	2	CO004	06-30-19
New York	NELAP	2	11964	04-01-19
North Carolina (WW/SW)	State Program	4	358	12-31-19
North Dakota	State Program	8	R-034	01-08-20
Oklahoma	State Program	6	8614	08-31-19
Oregon	NELAP	10	4025	01-08-20
Pennsylvania	NELAP	3	68-00664	07-31-19
South Carolina	State Program	4	72002001	01-08-19 *
Texas	NELAP	6	T104704183-18-15	09-30-19
US Fish & Wildlife	Federal			07-31-19
USDA	Federal			03-26-21
Utah	NELAP	8	CO00026	07-31-19
Virginia	NELAP	3	460232	06-14-19
Washington	State Program	10	C583	08-03-19
West Virginia DEP	State Program	3	354	11-30-19
Wisconsin	State Program	5	999615430	08-31-19 *
Wyoming (UST)	A2LA	8	2907.01	10-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ryan Miller	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):	COC No: 280-79474-26028.1
Client Contact: Ryan Athey	Phone: 307-760-0487	E-Mail: donna.rydberg@testamericainc.com		Page: Page 1 of 1
Company: Trihydro Corporation		Analysis Requested		Job #:
Address: 1252 Commerce Drive	Due Date Requested:			
City: Laramie	TAT Requested (days):			
State, Zip: WY, 82070				
Phone: 307-745-7474	PO #: Purchase Order Requested			
Email: rathey@trihydro.com	WO #:			
Project Name: Former Laramie Yttrium Plant	Project #: 28018711			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM - 1-Methylnaphthalene, Benzo(a)anthracene,	6010C, 6020A, 7470A	8015D_DRO - Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N		
LYMW10	2-25-19	1030	G	Water	Y	N	X	X	X	6	
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

280-120563 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Ryan Miller	2-25-19 1200	THC		2/26/19 0845	TAUEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.0, 1.0, IR5, ** Received by SE, 2/26/19

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Trihydro Corporation

Job Number: 280-120563-1

Login Number: 120563
List Number: 1
Creator: Quint, Jessica A

List Source: TestAmerica Denver

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

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-129185-1
Client Project/Site: Former Laramie Yttrium Plant

For:
Trihydro Corporation
1252 Commerce Drive
Laramie, Wyoming 82070

Attn: Ryan Athey

Authorized for release by:
10/29/2019 7:07:55 AM

Donna Rydberg, Senior Project Manager
(303)736-0192
donna.rydberg@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-129185-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 280-129185-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Trihydro Corporation

Project: Former Laramie Yttrium Plant

Report Number: 280-129185-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/4/2019 at 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9º C and 3.8º C.

Receipt Exceptions

One 250 mL unpreserved amber glass bottle had a cracked lid for sample FB120191003 (280-129185-7).. No sample volume was lost and the lid was replaced. The replacement lid is marked with an "R" in green permanent marker.

When the coolers were received by the laboratory, the chain-of-custodies (COCs) were found affixed to the lids inside of the coolers with packaging tape on all four edges of the COCs. On both COCs the tape covered where sample control technicians would sign to receive the samples. The tape could not be removed without damaging the COC and in response a sample control technician made photocopies of the COCs. The photocopies were signed and the original COCs were kept.

On 10/8/2019 the Equipment Blank listed on the chain of custody was canceled as directed by the client (Ryan Athey). No data will be found in this report for this sample.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)

Samples LYMW04 (280-129185-1), BD120191002 (280-129185-2), LYMW11 (280-129185-3), LYMW10 (280-129185-5), LYMW06R (280-129185-6) and FB120191003 (280-129185-7) were analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 10/08/2019 and 10/10/2019 and analyzed on 10/19/2019, 10/20/2019 and 10/26/2019.

The relative percent difference between the LCS and LCSD for Dibenz(a,h)anthracene in batch 280-473603 exceeded the RPD limit. The individual spike recoveries were in control.

Sample LYMW10 (280-129185-5)[4X] required dilution prior to analysis to bring 1-Methylnaphthalene within the instrument calibration range. The reporting limits have been adjusted accordingly.

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

DIESEL RANGE ORGANICS

Samples LYMW04 (280-129185-1), BD120191002 (280-129185-2), LYMW11 (280-129185-3), LYMW10 (280-129185-5), LYMW06R

Job ID: 280-129185-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

(280-129185-6) and FB120191003 (280-129185-7) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015D - DRO. The samples were prepared on 10/08/2019 and analyzed on 10/14/2019 and 10/15/2019.

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

TOTAL METALS (ICP)

Samples LYMW04 (280-129185-1), BD120191002 (280-129185-2), LYMW11 (280-129185-3), LYMW10 (280-129185-5), LYMW06R (280-129185-6) and FB120191003 (280-129185-7) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/10/2019 and analyzed on 10/11/2019.

Boron was detected in method blank MB 280-473329/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been flagged "B". Refer to the QC report for details.

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

TOTAL METALS (ICPMS)

Samples LYMW04 (280-129185-1), BD120191002 (280-129185-2), LYMW11 (280-129185-3), LYMW10 (280-129185-5), LYMW06R (280-129185-6) and FB120191003 (280-129185-7) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 10/15/2019 and analyzed on 10/16/2019.

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

TOTAL MERCURY

Samples LYMW04 (280-129185-1), BD120191002 (280-129185-2), LYMW11 (280-129185-3), LYMW10 (280-129185-5), LYMW06R (280-129185-6) and FB120191003 (280-129185-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 10/08/2019 and analyzed on 10/09/2019.

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

Detection Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-129185-1

Client Sample ID: LYMW04 — Lab Sample ID: 280-129185-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	5700		100	19	ng/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	1.1		0.24	0.032	mg/L	1		8015D	Total/NA
Boron	1600	B	100	4.4	ug/L	1		6010C	Total/NA
Iron	3100		100	22	ug/L	1		6010C	Total/NA
Manganese	590		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	0.45	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: BD120191002 — Lab Sample ID: 280-129185-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	6700		99	18	ng/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	1.1		0.24	0.031	mg/L	1		8015D	Total/NA
Boron	1600	B	100	4.4	ug/L	1		6010C	Total/NA
Iron	2600		100	22	ug/L	1		6010C	Total/NA
Manganese	560		10	1.9	ug/L	1		6010C	Total/NA

Client Sample ID: LYMW11 — Lab Sample ID: 280-129185-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	5500		100	18	ng/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	2.4		0.24	0.031	mg/L	1		8015D	Total/NA
Boron	1700	B	100	4.4	ug/L	1		6010C	Total/NA
Iron	16000		100	22	ug/L	1		6010C	Total/NA
Manganese	3600		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	0.60	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: LYMW10 — Lab Sample ID: 280-129185-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	55	J	94	27	ng/L	1		8270D SIM	Total/NA
1-Methylnaphthalene - DL	49000		380	69	ng/L	4		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	4.1		0.24	0.031	mg/L	1		8015D	Total/NA
Boron	1600	B	100	4.4	ug/L	1		6010C	Total/NA
Iron	360		100	22	ug/L	1		6010C	Total/NA
Manganese	630		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	1.2	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: LYMW06R — Lab Sample ID: 280-129185-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	220		99	18	ng/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	0.97		0.24	0.031	mg/L	1		8015D	Total/NA
Boron	1700	B	100	4.4	ug/L	1		6010C	Total/NA
Iron	16000		100	22	ug/L	1		6010C	Total/NA
Manganese	2200		10	1.9	ug/L	1		6010C	Total/NA

Client Sample ID: FB120191003 — Lab Sample ID: 280-129185-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.8		0.24	0.031	mg/L	1		8015D	Total/NA
Boron	12	J B	100	4.4	ug/L	1		6010C	Total/NA
Iron	28	J	100	22	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Trihydro Corporation
Job ID: 280-129185-1
Project/Site: Former Laramie Yttrium Plant

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL DEN
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN

Protocol References:

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

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Trihydro Corporation
Job ID: 280-129185-1
Project/Site: Former Laramie Yttrium Plant

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-129185-1	LYMW04	Water	10/02/19 11:09	10/04/19 09:40	
280-129185-2	BD120191002	Water	10/02/19 00:00	10/04/19 09:40	
280-129185-3	LYMW11	Water	10/02/19 15:16	10/04/19 09:40	
280-129185-5	LYMW10	Water	10/03/19 13:00	10/04/19 09:40	
280-129185-6	LYMW06R	Water	10/03/19 14:40	10/04/19 09:40	
280-129185-7	FB120191003	Water	10/03/19 14:55	10/04/19 09:40	

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: LYMW04
Date Collected: 10/02/19 11:09
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		100	29	ng/L		10/08/19 12:06	10/19/19 20:13	1
Dibenz(a,h)anthracene	ND		100	29	ng/L		10/08/19 12:06	10/19/19 20:13	1
1-Methylnaphthalene	**5700**		100	19	ng/L		10/08/19 12:06	10/19/19 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*84*		*42 - 120*	*10/08/19 12:06*	*10/19/19 20:13*	*1*
Nitrobenzene-d5	*96*		*43 - 120*	*10/08/19 12:06*	*10/19/19 20:13*	*1*
Terphenyl-d14	*101*		*47 - 120*	*10/08/19 12:06*	*10/19/19 20:13*	*1*

Client Sample ID: BD120191002
Date Collected: 10/02/19 00:00
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		99	28	ng/L		10/08/19 12:06	10/19/19 20:43	1
Dibenz(a,h)anthracene	ND		99	27	ng/L		10/08/19 12:06	10/19/19 20:43	1
1-Methylnaphthalene	**6700**		99	18	ng/L		10/08/19 12:06	10/19/19 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*89*		*42 - 120*	*10/08/19 12:06*	*10/19/19 20:43*	*1*
Nitrobenzene-d5	*103*		*43 - 120*	*10/08/19 12:06*	*10/19/19 20:43*	*1*
Terphenyl-d14	*108*		*47 - 120*	*10/08/19 12:06*	*10/19/19 20:43*	*1*

Client Sample ID: LYMW11
Date Collected: 10/02/19 15:16
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		100	28	ng/L		10/08/19 12:06	10/19/19 21:14	1
Dibenz(a,h)anthracene	ND		100	28	ng/L		10/08/19 12:06	10/19/19 21:14	1
1-Methylnaphthalene	**5500**		100	18	ng/L		10/08/19 12:06	10/19/19 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*42 - 120*	*10/08/19 12:06*	*10/19/19 21:14*	*1*
Nitrobenzene-d5	*93*		*43 - 120*	*10/08/19 12:06*	*10/19/19 21:14*	*1*
Terphenyl-d14	*103*		*47 - 120*	*10/08/19 12:06*	*10/19/19 21:14*	*1*

Client Sample ID: LYMW10
Date Collected: 10/03/19 13:00
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**55**	**J**	94	27	ng/L		10/10/19 14:32	10/19/19 23:14	1
Dibenz(a,h)anthracene	ND	*	94	26	ng/L		10/10/19 14:32	10/19/19 23:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*42 - 120*	*10/10/19 14:32*	*10/19/19 23:14*	*1*
Nitrobenzene-d5	*94*		*43 - 120*	*10/10/19 14:32*	*10/19/19 23:14*	*1*
Terphenyl-d14	*61*		*47 - 120*	*10/10/19 14:32*	*10/19/19 23:14*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: LYMW06R
Date Collected: 10/03/19 14:40
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		99	28	ng/L		10/10/19 14:32	10/19/19 23:44	1
Dibenz(a,h)anthracene	ND	*	99	28	ng/L		10/10/19 14:32	10/19/19 23:44	1
1-Methylnaphthalene	**220**		99	18	ng/L		10/10/19 14:32	10/19/19 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*42 - 120*	*10/10/19 14:32*	*10/19/19 23:44*	*1*
Nitrobenzene-d5	*83*		*43 - 120*	*10/10/19 14:32*	*10/19/19 23:44*	*1*
Terphenyl-d14	*84*		*47 - 120*	*10/10/19 14:32*	*10/19/19 23:44*	*1*

Client Sample ID: FB120191003
Date Collected: 10/03/19 14:55
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		97	27	ng/L		10/10/19 14:32	10/20/19 00:15	1
Dibenz(a,h)anthracene	ND	*	97	27	ng/L		10/10/19 14:32	10/20/19 00:15	1
1-Methylnaphthalene	ND		97	18	ng/L		10/10/19 14:32	10/20/19 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*42 - 120*	*10/10/19 14:32*	*10/20/19 00:15*	*1*
Nitrobenzene-d5	*88*		*43 - 120*	*10/10/19 14:32*	*10/20/19 00:15*	*1*
Terphenyl-d14	*97*		*47 - 120*	*10/10/19 14:32*	*10/20/19 00:15*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Client Sample ID: LYMW10
Date Collected: 10/03/19 13:00
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**49000**		380	69	ng/L		10/10/19 14:32	10/26/19 19:35	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*48*	*D*	*42 - 120*	*10/10/19 14:32*	*10/26/19 19:35*	*4*
Nitrobenzene-d5	*57*	*D*	*43 - 120*	*10/10/19 14:32*	*10/26/19 19:35*	*4*
Terphenyl-d14	*56*	*D*	*47 - 120*	*10/10/19 14:32*	*10/26/19 19:35*	*4*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: LYMW04
Date Collected: 10/02/19 11:09
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.1**		0.24	0.032	mg/L		10/08/19 21:05	10/14/19 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*72*		*50 - 115*	*10/08/19 21:05*	*10/14/19 23:30*	*1*
n-Octacosane	*81*		*26 - 152*	*10/08/19 21:05*	*10/14/19 23:30*	*1*

Client Sample ID: BD120191002
Date Collected: 10/02/19 00:00
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.1**		0.24	0.031	mg/L		10/08/19 21:05	10/14/19 23:50	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 115	10/08/19 21:05	10/14/19 23:50	1
n-Octacosane	83		26 - 152	10/08/19 21:05	10/14/19 23:50	1

Client Sample ID: LYMW11
Date Collected: 10/02/19 15:16
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2.4		0.24	0.031	mg/L		10/08/19 21:05	10/15/19 00:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 115	10/08/19 21:05	10/15/19 00:10	1
n-Octacosane	82		26 - 152	10/08/19 21:05	10/15/19 00:10	1

Client Sample ID: LYMW10
Date Collected: 10/03/19 13:00
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4.1		0.24	0.031	mg/L		10/08/19 21:05	10/15/19 00:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	72		50 - 115	10/08/19 21:05	10/15/19 00:30	1
n-Octacosane	85		26 - 152	10/08/19 21:05	10/15/19 00:30	1

Client Sample ID: LYMW06R
Date Collected: 10/03/19 14:40
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.97		0.24	0.031	mg/L		10/08/19 21:05	10/15/19 00:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	73		50 - 115	10/08/19 21:05	10/15/19 00:50	1
n-Octacosane	83		26 - 152	10/08/19 21:05	10/15/19 00:50	1

Client Sample ID: FB120191003
Date Collected: 10/03/19 14:55
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.8		0.24	0.031	mg/L		10/08/19 21:05	10/15/19 01:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 115	10/08/19 21:05	10/15/19 01:10	1
n-Octacosane	86		26 - 152	10/08/19 21:05	10/15/19 01:10	1

Method: 6010C - Metals (ICP)

Client Sample ID: LYMW04
Date Collected: 10/02/19 11:09
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1600	B	100	4.4	ug/L		10/10/19 07:55	10/11/19 16:21	1
Cobalt	ND		10	1.2	ug/L		10/10/19 07:55	10/11/19 16:21	1
Iron	3100		100	22	ug/L		10/10/19 07:55	10/11/19 16:21	1
Lead	ND		9.0	2.7	ug/L		10/10/19 07:55	10/11/19 16:21	1
Manganese	590		10	1.9	ug/L		10/10/19 07:55	10/11/19 16:21	1

Method: 6010C - Metals (ICP)

Client Sample ID: BD120191002
Date Collected: 10/02/19 00:00
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1600**	**B**	100	4.4	ug/L		10/10/19 07:55	10/11/19 16:24	1
Cobalt	ND		10	1.2	ug/L		10/10/19 07:55	10/11/19 16:24	1
Iron	**2600**		100	22	ug/L		10/10/19 07:55	10/11/19 16:24	1
Lead	ND		9.0	2.7	ug/L		10/10/19 07:55	10/11/19 16:24	1
Manganese	**560**		10	1.9	ug/L		10/10/19 07:55	10/11/19 16:24	1

Client Sample ID: LYMW11
Date Collected: 10/02/19 15:16
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**	**B**	100	4.4	ug/L		10/10/19 07:55	10/11/19 16:26	1
Cobalt	ND		10	1.2	ug/L		10/10/19 07:55	10/11/19 16:26	1
Iron	**16000**		100	22	ug/L		10/10/19 07:55	10/11/19 16:26	1
Lead	ND		9.0	2.7	ug/L		10/10/19 07:55	10/11/19 16:26	1
Manganese	**3600**		10	1.9	ug/L		10/10/19 07:55	10/11/19 16:26	1

Client Sample ID: LYMW10
Date Collected: 10/03/19 13:00
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1600**	**B**	100	4.4	ug/L		10/10/19 07:55	10/11/19 16:29	1
Cobalt	ND		10	1.2	ug/L		10/10/19 07:55	10/11/19 16:29	1
Iron	**360**		100	22	ug/L		10/10/19 07:55	10/11/19 16:29	1
Lead	ND		9.0	2.7	ug/L		10/10/19 07:55	10/11/19 16:29	1
Manganese	**630**		10	1.9	ug/L		10/10/19 07:55	10/11/19 16:29	1

Client Sample ID: LYMW06R
Date Collected: 10/03/19 14:40
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**	**B**	100	4.4	ug/L		10/10/19 07:55	10/11/19 16:31	1
Cobalt	ND		10	1.2	ug/L		10/10/19 07:55	10/11/19 16:31	1
Iron	**16000**		100	22	ug/L		10/10/19 07:55	10/11/19 16:31	1
Lead	ND		9.0	2.7	ug/L		10/10/19 07:55	10/11/19 16:31	1
Manganese	**2200**		10	1.9	ug/L		10/10/19 07:55	10/11/19 16:31	1

Client Sample ID: FB120191003
Date Collected: 10/03/19 14:55
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**12**	**J B**	100	4.4	ug/L		10/10/19 07:55	10/11/19 16:34	1
Cobalt	ND		10	1.2	ug/L		10/10/19 07:55	10/11/19 16:34	1
Iron	**28**	**J**	100	22	ug/L		10/10/19 07:55	10/11/19 16:34	1
Lead	ND		9.0	2.7	ug/L		10/10/19 07:55	10/11/19 16:34	1
Manganese	ND		10	1.9	ug/L		10/10/19 07:55	10/11/19 16:34	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: LYMW04
Date Collected: 10/02/19 11:09
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.45**	**J**	5.0	0.33	ug/L		10/15/19 08:05	10/16/19 00:22	1
Thallium	ND		1.0	0.089	ug/L		10/15/19 08:05	10/16/19 00:22	1

Client Sample ID: BD120191002
Date Collected: 10/02/19 00:00
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		10/15/19 08:05	10/16/19 00:26	1
Thallium	ND		1.0	0.089	ug/L		10/15/19 08:05	10/16/19 00:26	1

Client Sample ID: LYMW11
Date Collected: 10/02/19 15:16
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.60**	**J**	5.0	0.33	ug/L		10/15/19 08:05	10/16/19 00:41	1
Thallium	ND		1.0	0.089	ug/L		10/15/19 08:05	10/16/19 00:41	1

Client Sample ID: LYMW10
Date Collected: 10/03/19 13:00
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.2**	**J**	5.0	0.33	ug/L		10/15/19 08:05	10/16/19 00:45	1
Thallium	ND		1.0	0.089	ug/L		10/15/19 08:05	10/16/19 00:45	1

Client Sample ID: LYMW06R
Date Collected: 10/03/19 14:40
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		10/15/19 08:05	10/16/19 00:49	1
Thallium	ND		1.0	0.089	ug/L		10/15/19 08:05	10/16/19 00:49	1

Client Sample ID: FB120191003
Date Collected: 10/03/19 14:55
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		10/15/19 08:05	10/16/19 00:53	1
Thallium	ND		1.0	0.089	ug/L		10/15/19 08:05	10/16/19 00:53	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW04
Date Collected: 10/02/19 11:09
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		10/08/19 17:23	10/09/19 00:50	1

Client Sample ID: BD120191002
Date Collected: 10/02/19 00:00
Date Received: 10/04/19 09:40

Lab Sample ID: 280-129185-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		10/08/19 17:23	10/09/19 00:52	1

Client: Trihydro Corporation
Job ID: 280-129185-1
Project/Site: Former Laramie Yttrium Plant

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW11
Date Collected: 10/02/19 15:16
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		10/08/19 17:23	10/09/19 00:55	1

Client Sample ID: LYMW10
Date Collected: 10/03/19 13:00
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		10/08/19 17:23	10/09/19 00:57	1

Client Sample ID: LYMW06R
Date Collected: 10/03/19 14:40
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		10/08/19 17:23	10/09/19 01:04	1

Client Sample ID: FB120191003
Date Collected: 10/03/19 14:55
Date Received: 10/04/19 09:40
Lab Sample ID: 280-129185-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		10/08/19 17:23	10/09/19 01:06	1

Surrogate Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-129185-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FBP (42-120)	NBZ (43-120)	TPHL (47-120)
280-129185-1	LYMW04	84	96	101
280-129185-2	BD120191002	89	103	108
280-129185-3	LYMW11	91	93	103
280-129185-5	LYMW10	55	94	61
280-129185-5 - DL	LYMW10	48 D	57 D	56 D
280-129185-6	LYMW06R	78	83	84
280-129185-7	FB120191003	76	88	97
LCS 280-473242/2-A	Lab Control Sample	99	107	108
LCS 280-473603/2-A	Lab Control Sample	72	78	87
LCSD 280-473603/3-A	Lab Control Sample Dup	62	69	73
MB 280-473242/1-A	Method Blank	88	95	102
MB 280-473603/1-A	Method Blank	54	63	76

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH (50-115)	OTCN (26-152)
280-129185-1	LYMW04	72	81
280-129185-2	BD120191002	73	83
280-129185-3	LYMW11	68	82
280-129185-5	LYMW10	72	85
280-129185-6	LYMW06R	73	83
280-129185-7	FB120191003	76	86
LCS 280-473299/2-A	Lab Control Sample	77	84
LCSD 280-473299/3-A	Lab Control Sample Dup	70	68
MB 280-473299/1-A	Method Blank	74	83

Surrogate Legend

OTPH = o-Terphenyl
OTCN = n-Octacosane

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 280-473242/1-A
Matrix: Water
Analysis Batch: 474678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473242

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		100	28	ng/L		10/08/19 12:06	10/19/19 16:10	1
Dibenz(a,h)anthracene	ND		100	28	ng/L		10/08/19 12:06	10/19/19 16:10	1
1-Methylnaphthalene	ND		100	18	ng/L		10/08/19 12:06	10/19/19 16:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*88*		*42 - 120*	*10/08/19 12:06*	*10/19/19 16:10*	*1*
Nitrobenzene-d5	*95*		*43 - 120*	*10/08/19 12:06*	*10/19/19 16:10*	*1*
Terphenyl-d14	*102*		*47 - 120*	*10/08/19 12:06*	*10/19/19 16:10*	*1*

Lab Sample ID: LCS 280-473242/2-A
Matrix: Water
Analysis Batch: 474678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473242

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	900	847		ng/L		94	42 - 120
Dibenz(a,h)anthracene	900	852		ng/L		95	27 - 126
1-Methylnaphthalene	900	890		ng/L		99	44 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*99*		*42 - 120*
Nitrobenzene-d5	*107*		*43 - 120*
Terphenyl-d14	*108*		*47 - 120*

Lab Sample ID: MB 280-473603/1-A
Matrix: Water
Analysis Batch: 474678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473603

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		100	28	ng/L		10/10/19 14:32	10/19/19 21:44	1
Dibenz(a,h)anthracene	ND		100	28	ng/L		10/10/19 14:32	10/19/19 21:44	1
1-Methylnaphthalene	ND		100	18	ng/L		10/10/19 14:32	10/19/19 21:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*42 - 120*	*10/10/19 14:32*	*10/19/19 21:44*	*1*
Nitrobenzene-d5	*63*		*43 - 120*	*10/10/19 14:32*	*10/19/19 21:44*	*1*
Terphenyl-d14	*76*		*47 - 120*	*10/10/19 14:32*	*10/19/19 21:44*	*1*

Lab Sample ID: LCS 280-473603/2-A
Matrix: Water
Analysis Batch: 474678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473603

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	900	716		ng/L		80	42 - 120
Dibenz(a,h)anthracene	900	675		ng/L		75	27 - 126
1-Methylnaphthalene	900	648		ng/L		72	44 - 150

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 280-473603/2-A
Matrix: Water
Analysis Batch: 474678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473603

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*72*		*42 - 120*
Nitrobenzene-d5	*78*		*43 - 120*
Terphenyl-d14	*87*		*47 - 120*

Lab Sample ID: LCSD 280-473603/3-A
Matrix: Water
Analysis Batch: 474678

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 473603

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene			900	544		ng/L		60	42 - 120	27	40
Dibenz(a,h)anthracene			900	483	*	ng/L		54	27 - 126	33	25
1-Methylnaphthalene			900	549		ng/L		61	44 - 150	16	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*62*		*42 - 120*
Nitrobenzene-d5	*69*		*43 - 120*
Terphenyl-d14	*73*		*47 - 120*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-473299/1-A
Matrix: Water
Analysis Batch: 474006

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473299

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		10/08/19 21:05	10/14/19 23:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*50 - 115*	*10/08/19 21:05*	*10/14/19 23:10*	*1*
n-Octacosane	*83*		*26 - 152*	*10/08/19 21:05*	*10/14/19 23:10*	*1*

Lab Sample ID: LCS 280-473299/2-A
Matrix: Water
Analysis Batch: 474006

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473299

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]			1.98	1.78		mg/L		90	54 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*77*		*50 - 115*
n-Octacosane	*84*		*26 - 152*

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

Lab Sample ID: LCSD 280-473299/3-A
Matrix: Water
Analysis Batch: 474006

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 473299

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			1.98	1.57		mg/L		79	54 - 115	13	31

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*70*		*50 - 115*
n-Octacosane	*68*		*26 - 152*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-473329/1-A
Matrix: Water
Analysis Batch: 473890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473329

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.44	J	100	4.4	ug/L		10/10/19 07:55	10/11/19 15:14	1
Cobalt	ND		10	1.2	ug/L		10/10/19 07:55	10/11/19 15:14	1
Iron	ND		100	22	ug/L		10/10/19 07:55	10/11/19 15:14	1
Lead	ND		9.0	2.7	ug/L		10/10/19 07:55	10/11/19 15:14	1
Manganese	ND		10	1.9	ug/L		10/10/19 07:55	10/11/19 15:14	1

Lab Sample ID: LCS 280-473329/2-A
Matrix: Water
Analysis Batch: 473890

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473329

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Boron			1000	984		ug/L		98	86 - 110		
Cobalt			1000	966		ug/L		97	89 - 111		
Iron			10000	10000		ug/L		100	89 - 115		
Lead			1000	979		ug/L		98	89 - 110		
Manganese			1000	1030		ug/L		103	90 - 110		

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-473553/1-A
Matrix: Water
Analysis Batch: 474236

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473553

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		10/15/19 08:05	10/15/19 23:16	1
Thallium	ND		1.0	0.089	ug/L		10/15/19 08:05	10/15/19 23:16	1

Lab Sample ID: LCS 280-473553/2-A
Matrix: Water
Analysis Batch: 474236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473553

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			40.0	38.7		ug/L		97	85 - 117		
Thallium			40.0	39.2		ug/L		98	85 - 118		

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-129185-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-473279/1-A
Matrix: Water
Analysis Batch: 473381

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473279

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		10/08/19 17:23	10/09/19 00:46	1

Lab Sample ID: LCS 280-473279/2-A
Matrix: Water
Analysis Batch: 473381

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.20		ug/L		104	84 - 120

QC Association Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-129185-1

GC/MS Semi VOA

Prep Batch: 473242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	3510C	
280-129185-2	BD120191002	Total/NA	Water	3510C	
280-129185-3	LYMW11	Total/NA	Water	3510C	
MB 280-473242/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-473242/2-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 473603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-5	LYMW10	Total/NA	Water	3510C	
280-129185-5 - DL	LYMW10	Total/NA	Water	3510C	
280-129185-6	LYMW06R	Total/NA	Water	3510C	
280-129185-7	FB120191003	Total/NA	Water	3510C	
MB 280-473603/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-473603/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-473603/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 474678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	8270D SIM	473242
280-129185-2	BD120191002	Total/NA	Water	8270D SIM	473242
280-129185-3	LYMW11	Total/NA	Water	8270D SIM	473242
280-129185-5	LYMW10	Total/NA	Water	8270D SIM	473603
280-129185-6	LYMW06R	Total/NA	Water	8270D SIM	473603
280-129185-7	FB120191003	Total/NA	Water	8270D SIM	473603
MB 280-473242/1-A	Method Blank	Total/NA	Water	8270D SIM	473242
MB 280-473603/1-A	Method Blank	Total/NA	Water	8270D SIM	473603
LCS 280-473242/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	473242
LCS 280-473603/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	473603
LCSD 280-473603/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	473603

Analysis Batch: 475484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-5 - DL	LYMW10	Total/NA	Water	8270D SIM	473603

GC Semi VOA

Prep Batch: 473299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	3510C	
280-129185-2	BD120191002	Total/NA	Water	3510C	
280-129185-3	LYMW11	Total/NA	Water	3510C	
280-129185-5	LYMW10	Total/NA	Water	3510C	
280-129185-6	LYMW06R	Total/NA	Water	3510C	
280-129185-7	FB120191003	Total/NA	Water	3510C	
MB 280-473299/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-473299/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-473299/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 474006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	8015D	473299

GC Semi VOA (Continued)

Analysis Batch: 474006 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-2	BD120191002	Total/NA	Water	8015D	473299
280-129185-3	LYMW11	Total/NA	Water	8015D	473299
280-129185-5	LYMW10	Total/NA	Water	8015D	473299
280-129185-6	LYMW06R	Total/NA	Water	8015D	473299
280-129185-7	FB120191003	Total/NA	Water	8015D	473299
MB 280-473299/1-A	Method Blank	Total/NA	Water	8015D	473299
LCS 280-473299/2-A	Lab Control Sample	Total/NA	Water	8015D	473299
LCSD 280-473299/3-A	Lab Control Sample Dup	Total/NA	Water	8015D	473299

Metals

Prep Batch: 473279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	7470A	
280-129185-2	BD120191002	Total/NA	Water	7470A	
280-129185-3	LYMW11	Total/NA	Water	7470A	
280-129185-5	LYMW10	Total/NA	Water	7470A	
280-129185-6	LYMW06R	Total/NA	Water	7470A	
280-129185-7	FB120191003	Total/NA	Water	7470A	
MB 280-473279/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-473279/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 473329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	3010A	
280-129185-2	BD120191002	Total/NA	Water	3010A	
280-129185-3	LYMW11	Total/NA	Water	3010A	
280-129185-5	LYMW10	Total/NA	Water	3010A	
280-129185-6	LYMW06R	Total/NA	Water	3010A	
280-129185-7	FB120191003	Total/NA	Water	3010A	
MB 280-473329/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-473329/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 473381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	7470A	473279
280-129185-2	BD120191002	Total/NA	Water	7470A	473279
280-129185-3	LYMW11	Total/NA	Water	7470A	473279
280-129185-5	LYMW10	Total/NA	Water	7470A	473279
280-129185-6	LYMW06R	Total/NA	Water	7470A	473279
280-129185-7	FB120191003	Total/NA	Water	7470A	473279
MB 280-473279/1-A	Method Blank	Total/NA	Water	7470A	473279
LCS 280-473279/2-A	Lab Control Sample	Total/NA	Water	7470A	473279

Prep Batch: 473553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	3020A	
280-129185-2	BD120191002	Total/NA	Water	3020A	
280-129185-3	LYMW11	Total/NA	Water	3020A	
280-129185-5	LYMW10	Total/NA	Water	3020A	
280-129185-6	LYMW06R	Total/NA	Water	3020A	

Metals (Continued)

Prep Batch: 473553 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-7	FB120191003	Total/NA	Water	3020A	
MB 280-473553/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-473553/2-A	Lab Control Sample	Total/NA	Water	3020A	

Analysis Batch: 473890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	6010C	473329
280-129185-2	BD120191002	Total/NA	Water	6010C	473329
280-129185-3	LYMW11	Total/NA	Water	6010C	473329
280-129185-5	LYMW10	Total/NA	Water	6010C	473329
280-129185-6	LYMW06R	Total/NA	Water	6010C	473329
280-129185-7	FB120191003	Total/NA	Water	6010C	473329
MB 280-473329/1-A	Method Blank	Total/NA	Water	6010C	473329
LCS 280-473329/2-A	Lab Control Sample	Total/NA	Water	6010C	473329

Analysis Batch: 474236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129185-1	LYMW04	Total/NA	Water	6020A	473553
280-129185-2	BD120191002	Total/NA	Water	6020A	473553
280-129185-3	LYMW11	Total/NA	Water	6020A	473553
280-129185-5	LYMW10	Total/NA	Water	6020A	473553
280-129185-6	LYMW06R	Total/NA	Water	6020A	473553
280-129185-7	FB120191003	Total/NA	Water	6020A	473553
MB 280-473553/1-A	Method Blank	Total/NA	Water	6020A	473553
LCS 280-473553/2-A	Lab Control Sample	Total/NA	Water	6020A	473553

Lab Chronicle

Client: Trihydro Corporation
Job ID: 280-129185-1
Project/Site: Former Laramie Yttrium Plant

Client Sample ID: LYMW04
Lab Sample ID: 280-129185-1
Date Collected: 10/02/19 11:09
Matrix: Water
Date Received: 10/04/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			240.1 mL	1 mL	473242	10/08/19 12:06	NK	TAL DEN
Total/NA	Analysis	8270D SIM		1			474678	10/19/19 20:13	MKW	TAL DEN
Total/NA	Prep	3510C			1024.1 mL	1 mL	473299	10/08/19 21:05	KRJ	TAL DEN
Total/NA	Analysis	8015D		1			474006	10/14/19 23:30	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	473329	10/10/19 07:55	AL	TAL DEN
Total/NA	Analysis	6010C		1			473890	10/11/19 16:21	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	473553	10/15/19 08:05	AL	TAL DEN
Total/NA	Analysis	6020A		1			474236	10/16/19 00:22	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	473279	10/08/19 17:23	DAL	TAL DEN
Total/NA	Analysis	7470A		1			473381	10/09/19 00:50	DAL	TAL DEN

Client Sample ID: BD120191002
Lab Sample ID: 280-129185-2
Date Collected: 10/02/19 00:00
Matrix: Water
Date Received: 10/04/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			253 mL	1 mL	473242	10/08/19 12:06	NK	TAL DEN
Total/NA	Analysis	8270D SIM		1			474678	10/19/19 20:43	MKW	TAL DEN
Total/NA	Prep	3510C			1047.1 mL	1 mL	473299	10/08/19 21:05	KRJ	TAL DEN
Total/NA	Analysis	8015D		1			474006	10/14/19 23:50	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	473329	10/10/19 07:55	AL	TAL DEN
Total/NA	Analysis	6010C		1			473890	10/11/19 16:24	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	473553	10/15/19 08:05	AL	TAL DEN
Total/NA	Analysis	6020A		1			474236	10/16/19 00:26	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	473279	10/08/19 17:23	DAL	TAL DEN
Total/NA	Analysis	7470A		1			473381	10/09/19 00:52	DAL	TAL DEN

Client Sample ID: LYMW11
Lab Sample ID: 280-129185-3
Date Collected: 10/02/19 15:16
Matrix: Water
Date Received: 10/04/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			249.3 mL	1 mL	473242	10/08/19 12:06	NK	TAL DEN
Total/NA	Analysis	8270D SIM		1			474678	10/19/19 21:14	MKW	TAL DEN
Total/NA	Prep	3510C			1055 mL	1 mL	473299	10/08/19 21:05	KRJ	TAL DEN
Total/NA	Analysis	8015D		1			474006	10/15/19 00:10	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	473329	10/10/19 07:55	AL	TAL DEN
Total/NA	Analysis	6010C		1			473890	10/11/19 16:26	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	473553	10/15/19 08:05	AL	TAL DEN
Total/NA	Analysis	6020A		1			474236	10/16/19 00:41	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	473279	10/08/19 17:23	DAL	TAL DEN
Total/NA	Analysis	7470A		1			473381	10/09/19 00:55	DAL	TAL DEN

Lab Chronicle

Client: Trihydro Corporation
Job ID: 280-129185-1
Project/Site: Former Laramie Yttrium Plant

Client Sample ID: LYMW10
Lab Sample ID: 280-129185-5
Date Collected: 10/03/19 13:00
Matrix: Water
Date Received: 10/04/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			265.3 mL	1 mL	473603	10/10/19 14:32	NK	TAL DEN
Total/NA	Analysis	8270D SIM		1			474678	10/19/19 23:14	MKW	TAL DEN
Total/NA	Prep	3510C	DL		265.3 mL	1 mL	473603	10/10/19 14:32	NK	TAL DEN
Total/NA	Analysis	8270D SIM	DL	4			475484	10/26/19 19:35	MKW	TAL DEN
Total/NA	Prep	3510C			1040.9 mL	1 mL	473299	10/08/19 21:05	KRJ	TAL DEN
Total/NA	Analysis	8015D		1			474006	10/15/19 00:30	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	473329	10/10/19 07:55	AL	TAL DEN
Total/NA	Analysis	6010C		1			473890	10/11/19 16:29	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	473553	10/15/19 08:05	AL	TAL DEN
Total/NA	Analysis	6020A		1			474236	10/16/19 00:45	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	473279	10/08/19 17:23	DAL	TAL DEN
Total/NA	Analysis	7470A		1			473381	10/09/19 00:57	DAL	TAL DEN

Client Sample ID: LYMW06R
Lab Sample ID: 280-129185-6
Date Collected: 10/03/19 14:40
Matrix: Water
Date Received: 10/04/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			251.7 mL	1 mL	473603	10/10/19 14:32	NK	TAL DEN
Total/NA	Analysis	8270D SIM		1			474678	10/19/19 23:44	MKW	TAL DEN
Total/NA	Prep	3510C			1039.5 mL	1 mL	473299	10/08/19 21:05	KRJ	TAL DEN
Total/NA	Analysis	8015D		1			474006	10/15/19 00:50	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	473329	10/10/19 07:55	AL	TAL DEN
Total/NA	Analysis	6010C		1			473890	10/11/19 16:31	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	473553	10/15/19 08:05	AL	TAL DEN
Total/NA	Analysis	6020A		1			474236	10/16/19 00:49	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	473279	10/08/19 17:23	DAL	TAL DEN
Total/NA	Analysis	7470A		1			473381	10/09/19 01:04	DAL	TAL DEN

Client Sample ID: FB120191003
Lab Sample ID: 280-129185-7
Date Collected: 10/03/19 14:55
Matrix: Water
Date Received: 10/04/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			258.6 mL	1 mL	473603	10/10/19 14:32	NK	TAL DEN
Total/NA	Analysis	8270D SIM		1			474678	10/20/19 00:15	MKW	TAL DEN
Total/NA	Prep	3510C			1038.3 mL	1 mL	473299	10/08/19 21:05	KRJ	TAL DEN
Total/NA	Analysis	8015D		1			474006	10/15/19 01:10	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	473329	10/10/19 07:55	AL	TAL DEN
Total/NA	Analysis	6010C		1			473890	10/11/19 16:34	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	473553	10/15/19 08:05	AL	TAL DEN
Total/NA	Analysis	6020A		1			474236	10/16/19 00:53	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	473279	10/08/19 17:23	DAL	TAL DEN
Total/NA	Analysis	7470A		1			473381	10/09/19 01:06	DAL	TAL DEN

Lab Chronicle

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-129185-1

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Trihydro Corporation
Job ID: 280-129185-1
Project/Site: Former Laramie Yttrium Plant

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Arizona	State	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State	4025-011	01-08-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Maine	State Program	CO0002	03-03-21
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Hampshire	NELAP	205319	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State	<cert No.>	12-31-19
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State	72002001	01-08-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-19
West Virginia DEP	State Program	354	11-30-19
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing TestAmerica

Client Information	Sampler: NW / TS	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):	COC No:
Client Contact: Ryan Athey	Phone: 307-745-7474	E-Mail: donna.rydberg@testamericainc.com		Page:
Company: Trihydro Corporation		Analysis Requested		Job #:
Address: 1252 Commerce Drive	Due Date Requested:			Preservation Codes:
City: Laramie	TAT Requested (days):			
State, Zip: WY, 82070				
Phone: 307-745-7474	PO #: Job # 17R-001-005			
Email: rathey@trihydro.com	WO #: 19-403WO-L			
Project Name: Former Laramie Yttrium Plant	Project #: 28018711			
Site:	SSOW#:			

280-129185 Chain of Custody

A - Hexane
B - None
C - AsNaO2
D - Na2O4S
E - Na2SO3
F - Na2S2O3
G - H2SO4
H - TSP Dodecahydrate
I - Acetone
J - DI Water
K - EDTA
L - EDA
V - MCAA
W - pH 4-5
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8270D_SIM - SVOCs	6010C/6020A/7470A - Total Metals	8015D - DRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:			N	D	N		
LYMW04	10/2/19	1109	G	W		X	X	X	6	
BD12019 1002	10/2/19	—	G	W		X	X	X	6	
LYMW11	10/2/19	1516	G	W		X	X	X	6	
EB12019 1003	10/3/19	1500	G	W		X	X	X	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/3/19 1620	Trihydro		10/04/19 0940	UPS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 3.8, 1.9, IR8, CFO, PVR, 10/05/19

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing TestAmerica

Client Information	Sampler: NW/TS	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):	COC No:
Client Contact: Ryan Athey	Phone: 307-745-7474	E-Mail: donna.rydberg@testamericainc.com		Page:
Company: Trihydro Corporation				Job #:
Address: 1252 Commerce Drive	Due Date Requested:		Analysis Requested	
City: Laramie	TAT Requested (days):			Preservation Codes:
State, Zip: WY, 82070				A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Phone: 307-745-7474	PO #: Job # 17R-001-005			Other:
Email: rathey@trihydro.com	WO #: 19-403WO-L			
Project Name: Former Laramie Yttrium Plant	Project #: 28018711			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8270D_SIM - SVOCs	6010C/6020A/7470A - Total Metals	8015D - DRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:			N	D	N		
LYMW10	10/3/19	1300	G	W		X	X	X	6	
LYMW06R	10/3/19	1440	G	W		X	X	X	6	
FB120191003	10/3/19	1455	G	W		X	X	X	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:	Method of Shipment:	
Relinquished by:	Date/Time: 10/3/19 1620	Company: Trihydro	Received by:	Date/Time: 10/04/19 0940	Company: ETAVEN	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.8, 0.4, 1.8, C0, PM, 10/05/19

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Trihydro Corporation

Job Number: 280-129185-1

Login Number: 129185
List Number: 1
Creator: Petunin, Peter

List Source: Eurofins TestAmerica, Denver

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

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-140173-1
Client Project/Site: Former Laramie Yttrium Plant

For:
Trihydro Corporation
1252 Commerce Drive
Laramie, Wyoming 82070

Attn: Ryan Athey

Donna Rydberg

Authorized for release by:
9/18/2020 8:11:21 AM

Donna Rydberg, Senior Project Manager
(303)736-0192
Donna.Rydberg@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Trihydro Corporation
Job ID: 280-140173-1
Project/Site: Former Laramie Yttrium Plant

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-140173-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Trihydro Corporation

Project: Former Laramie Yttrium Plant

Report Number: 280-140173-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 9/4/2020 at 10:15 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1° C and 2.1° C.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)

Samples LYMW11 (280-140173-1), LYMW06R (280-140173-2), LYMW10 (280-140173-3), LYMW04 (280-140173-4), BD1-20200902 (280-140173-5) and EB1-20200902 (280-140173-6) were analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 09/07/2020 and analyzed on 09/11/2020 and 09/16/2020.

Sample LYMW10 (280-140173-3)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Nitrobenzene-d5 failed the surrogate recovery criteria low for LYMW10 (280-140173-3). Evidence of matrix interference due to non-target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

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

DIESEL RANGE ORGANICS

Samples LYMW11 (280-140173-1), LYMW06R (280-140173-2), LYMW10 (280-140173-3), LYMW04 (280-140173-4), BD1-20200902 (280-140173-5) and EB1-20200902 (280-140173-6) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015D - DRO. The samples were prepared on 09/07/2020 and analyzed on 09/10/2020.

Due to the high density of the sample matrix (>1.0 g/mL), the initial volume used for the following sample deviated from the standard procedure: BD1-20200902 (280-140173-5). The reporting limits (RLs) have been adjusted proportionately.

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

TOTAL METALS (ICP)

Samples LYMW11 (280-140173-1), LYMW06R (280-140173-2), LYMW10 (280-140173-3), LYMW04 (280-140173-4), BD1-20200902 (280-140173-5) and EB1-20200902 (280-140173-6) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared and analyzed on 09/09/2020.

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

Job ID: 280-140173-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

TOTAL METALS (ICPMS)

Samples LYMW11 (280-140173-1), LYMW06R (280-140173-2), LYMW10 (280-140173-3), LYMW04 (280-140173-4), BD1-20200902 (280-140173-5) and EB1-20200902 (280-140173-6) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared and analyzed on 09/09/2020.

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

TOTAL MERCURY

Samples LYMW11 (280-140173-1), LYMW06R (280-140173-2), LYMW10 (280-140173-3), LYMW04 (280-140173-4), BD1-20200902 (280-140173-5) and EB1-20200902 (280-140173-6) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/10/2020 and analyzed on 09/11/2020.

Mercury was detected in method blank MB 280-508585/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged"J". If the associated sample reported a result above the MDL and/or RL, the result has been flagged "B". Refer to the QC report for details.

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

Detection Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-140173-1

Client Sample ID: LYMW11 — Lab Sample ID: 280-140173-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	1.1		0.10	0.018	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	2200		240	32	ug/L	1		8015D	Total/NA
Boron	1900		100	4.4	ug/L	1		6010C	Total/NA
Iron	15000		100	22	ug/L	1		6010C	Total/NA
Manganese	3100		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	0.46	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.040	J B	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: LYMW06R — Lab Sample ID: 280-140173-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.030	J	0.10	0.018	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	720		240	31	ug/L	1		8015D	Total/NA
Boron	1700		100	4.4	ug/L	1		6010C	Total/NA
Iron	11000		100	22	ug/L	1		6010C	Total/NA
Manganese	1500		10	1.9	ug/L	1		6010C	Total/NA
Mercury	0.048	J B	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: LYMW10 — Lab Sample ID: 280-140173-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.078	J	0.10	0.029	ug/L	1		8270D SIM	Total/NA
1-Methylnaphthalene - DL	35		0.41	0.075	ug/L	4		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	3500		240	31	ug/L	1		8015D	Total/NA
Boron	1700		100	4.4	ug/L	1		6010C	Total/NA
Iron	590		100	22	ug/L	1		6010C	Total/NA
Manganese	1000		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	1.1	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.077	J B	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: LYMW04 — Lab Sample ID: 280-140173-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.17		0.10	0.019	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	720		240	31	ug/L	1		8015D	Total/NA
Boron	1700		100	4.4	ug/L	1		6010C	Total/NA
Iron	3900		100	22	ug/L	1		6010C	Total/NA
Lead	3.3	J	9.0	2.7	ug/L	1		6010C	Total/NA
Manganese	420		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	0.52	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.047	J B	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: BD1-20200902 — Lab Sample ID: 280-140173-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.31		0.10	0.018	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	630		240	31	ug/L	1		8015D	Total/NA
Boron	1700		100	4.4	ug/L	1		6010C	Total/NA
Iron	3800		100	22	ug/L	1		6010C	Total/NA
Manganese	410		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	0.44	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.050	J B	0.20	0.027	ug/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-140173-1

Client Sample ID: EB1-20200902

Lab Sample ID: 280-140173-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	34	J	240	31	ug/L	1		8015D	Total/NA
Boron	6.3	J	100	4.4	ug/L	1		6010C	Total/NA
Mercury	0.10	J B	0.20	0.027	ug/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-140173-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL DEN
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN

Protocol References:

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

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-140173-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140173-1	LYMW11	Water	09/01/20 16:10	09/04/20 10:15	
280-140173-2	LYMW06R	Water	09/02/20 11:25	09/04/20 10:15	
280-140173-3	LYMW10	Water	09/02/20 13:20	09/04/20 10:15	
280-140173-4	LYMW04	Water	09/02/20 14:40	09/04/20 10:15	
280-140173-5	BD1-20200902	Water	09/02/20 11:25	09/04/20 10:15	
280-140173-6	EB1-20200902	Water	09/02/20 15:15	09/04/20 10:15	

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: LYMW11
Date Collected: 09/01/20 16:10
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.10	0.029	ug/L		09/07/20 12:23	09/11/20 02:13	1
Dibenz(a,h)anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/11/20 02:13	1
1-Methylnaphthalene	**1.1**		0.10	0.018	ug/L		09/07/20 12:23	09/11/20 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*42 - 120*	*09/07/20 12:23*	*09/11/20 02:13*	*1*
Nitrobenzene-d5	*62*		*43 - 120*	*09/07/20 12:23*	*09/11/20 02:13*	*1*
Terphenyl-d14	*82*		*47 - 120*	*09/07/20 12:23*	*09/11/20 02:13*	*1*

Client Sample ID: LYMW06R
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/11/20 02:41	1
Dibenz(a,h)anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/11/20 02:41	1
1-Methylnaphthalene	**0.030**	**J**	0.10	0.018	ug/L		09/07/20 12:23	09/11/20 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*66*		*42 - 120*	*09/07/20 12:23*	*09/11/20 02:41*	*1*
Nitrobenzene-d5	*63*		*43 - 120*	*09/07/20 12:23*	*09/11/20 02:41*	*1*
Terphenyl-d14	*89*		*47 - 120*	*09/07/20 12:23*	*09/11/20 02:41*	*1*

Client Sample ID: LYMW10
Date Collected: 09/02/20 13:20
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.078**	**J**	0.10	0.029	ug/L		09/07/20 12:23	09/11/20 03:09	1
Dibenz(a,h)anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/11/20 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*56*		*42 - 120*	*09/07/20 12:23*	*09/11/20 03:09*	*1*
Nitrobenzene-d5	*21*	*X*	*43 - 120*	*09/07/20 12:23*	*09/11/20 03:09*	*1*
Terphenyl-d14	*89*		*47 - 120*	*09/07/20 12:23*	*09/11/20 03:09*	*1*

Client Sample ID: LYMW04
Date Collected: 09/02/20 14:40
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.10	0.029	ug/L		09/07/20 12:23	09/11/20 03:37	1
Dibenz(a,h)anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/11/20 03:37	1
1-Methylnaphthalene	**0.17**		0.10	0.019	ug/L		09/07/20 12:23	09/11/20 03:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*42 - 120*	*09/07/20 12:23*	*09/11/20 03:37*	*1*
Nitrobenzene-d5	*66*		*43 - 120*	*09/07/20 12:23*	*09/11/20 03:37*	*1*
Terphenyl-d14	*95*		*47 - 120*	*09/07/20 12:23*	*09/11/20 03:37*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: BD1-20200902
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/11/20 04:05	1
Dibenz(a,h)anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/11/20 04:05	1
1-Methylnaphthalene	**0.31**		0.10	0.018	ug/L		09/07/20 12:23	09/11/20 04:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*70*		*42 - 120*	*09/07/20 12:23*	*09/11/20 04:05*	*1*
Nitrobenzene-d5	*69*		*43 - 120*	*09/07/20 12:23*	*09/11/20 04:05*	*1*
Terphenyl-d14	*94*		*47 - 120*	*09/07/20 12:23*	*09/11/20 04:05*	*1*

Client Sample ID: EB1-20200902
Date Collected: 09/02/20 15:15
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.10	0.029	ug/L		09/07/20 12:23	09/11/20 04:33	1
Dibenz(a,h)anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/11/20 04:33	1
1-Methylnaphthalene	ND		0.10	0.019	ug/L		09/07/20 12:23	09/11/20 04:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*42 - 120*	*09/07/20 12:23*	*09/11/20 04:33*	*1*
Nitrobenzene-d5	*73*		*43 - 120*	*09/07/20 12:23*	*09/11/20 04:33*	*1*
Terphenyl-d14	*95*		*47 - 120*	*09/07/20 12:23*	*09/11/20 04:33*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Client Sample ID: LYMW10
Date Collected: 09/02/20 13:20
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**35**		0.41	0.075	ug/L		09/07/20 12:23	09/16/20 20:40	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*66*	*D*	*42 - 120*	*09/07/20 12:23*	*09/16/20 20:40*	*4*
Nitrobenzene-d5	*78*	*D*	*43 - 120*	*09/07/20 12:23*	*09/16/20 20:40*	*4*
Terphenyl-d14	*88*	*D*	*47 - 120*	*09/07/20 12:23*	*09/16/20 20:40*	*4*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: LYMW11
Date Collected: 09/01/20 16:10
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**2200**		240	32	ug/L		09/07/20 14:19	09/10/20 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 115*	*09/07/20 14:19*	*09/10/20 19:45*	*1*
n-Octacosane	*97*		*26 - 152*	*09/07/20 14:19*	*09/10/20 19:45*	*1*

Client Sample ID: LYMW06R
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**720**		240	31	ug/L		09/07/20 14:19	09/10/20 20:06	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 115	09/07/20 14:19	09/10/20 20:06	1
n-Octacosane	80		26 - 152	09/07/20 14:19	09/10/20 20:06	1

Client Sample ID: LYMW10
Date Collected: 09/02/20 13:20
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3500		240	31	ug/L		09/07/20 14:19	09/10/20 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 115	09/07/20 14:19	09/10/20 20:28	1
n-Octacosane	84		26 - 152	09/07/20 14:19	09/10/20 20:28	1

Client Sample ID: LYMW04
Date Collected: 09/02/20 14:40
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	720		240	31	ug/L		09/07/20 14:19	09/10/20 20:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 115	09/07/20 14:19	09/10/20 20:49	1
n-Octacosane	80		26 - 152	09/07/20 14:19	09/10/20 20:49	1

Client Sample ID: BD1-20200902
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	630		240	31	ug/L		09/07/20 14:19	09/10/20 21:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 115	09/07/20 14:19	09/10/20 21:11	1
n-Octacosane	79		26 - 152	09/07/20 14:19	09/10/20 21:11	1

Client Sample ID: EB1-20200902
Date Collected: 09/02/20 15:15
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	34	J	240	31	ug/L		09/07/20 14:19	09/10/20 21:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 115	09/07/20 14:19	09/10/20 21:32	1
n-Octacosane	77		26 - 152	09/07/20 14:19	09/10/20 21:32	1

Method: 6010C - Metals (ICP)

Client Sample ID: LYMW11
Date Collected: 09/01/20 16:10
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1900		100	4.4	ug/L		09/09/20 08:07	09/09/20 21:25	1
Cobalt	ND		10	1.2	ug/L		09/09/20 08:07	09/09/20 21:25	1
Iron	15000		100	22	ug/L		09/09/20 08:07	09/09/20 21:25	1
Lead	ND		9.0	2.7	ug/L		09/09/20 08:07	09/09/20 21:25	1
Manganese	3100		10	1.9	ug/L		09/09/20 08:07	09/09/20 21:25	1

Method: 6010C - Metals (ICP)

Client Sample ID: LYMW06R
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**		100	4.4	ug/L		09/09/20 08:07	09/09/20 21:28	1
Cobalt	ND		10	1.2	ug/L		09/09/20 08:07	09/09/20 21:28	1
Iron	**11000**		100	22	ug/L		09/09/20 08:07	09/09/20 21:28	1
Lead	ND		9.0	2.7	ug/L		09/09/20 08:07	09/09/20 21:28	1
Manganese	**1500**		10	1.9	ug/L		09/09/20 08:07	09/09/20 21:28	1

Client Sample ID: LYMW10
Date Collected: 09/02/20 13:20
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**		100	4.4	ug/L		09/09/20 08:07	09/09/20 21:58	1
Cobalt	ND		10	1.2	ug/L		09/09/20 08:07	09/09/20 21:58	1
Iron	**590**		100	22	ug/L		09/09/20 08:07	09/09/20 21:58	1
Lead	ND		9.0	2.7	ug/L		09/09/20 08:07	09/09/20 21:58	1
Manganese	**1000**		10	1.9	ug/L		09/09/20 08:07	09/09/20 21:58	1

Client Sample ID: LYMW04
Date Collected: 09/02/20 14:40
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**		100	4.4	ug/L		09/09/20 08:07	09/09/20 22:02	1
Cobalt	ND		10	1.2	ug/L		09/09/20 08:07	09/09/20 22:02	1
Iron	**3900**		100	22	ug/L		09/09/20 08:07	09/09/20 22:02	1
Lead	**3.3**	**J**	9.0	2.7	ug/L		09/09/20 08:07	09/09/20 22:02	1
Manganese	**420**		10	1.9	ug/L		09/09/20 08:07	09/09/20 22:02	1

Client Sample ID: BD1-20200902
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**		100	4.4	ug/L		09/09/20 08:07	09/09/20 22:05	1
Cobalt	ND		10	1.2	ug/L		09/09/20 08:07	09/09/20 22:05	1
Iron	**3800**		100	22	ug/L		09/09/20 08:07	09/09/20 22:05	1
Lead	ND		9.0	2.7	ug/L		09/09/20 08:07	09/09/20 22:05	1
Manganese	**410**		10	1.9	ug/L		09/09/20 08:07	09/09/20 22:05	1

Client Sample ID: EB1-20200902
Date Collected: 09/02/20 15:15
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**6.3**	**J**	100	4.4	ug/L		09/09/20 08:07	09/09/20 22:08	1
Cobalt	ND		10	1.2	ug/L		09/09/20 08:07	09/09/20 22:08	1
Iron	ND		100	22	ug/L		09/09/20 08:07	09/09/20 22:08	1
Lead	ND		9.0	2.7	ug/L		09/09/20 08:07	09/09/20 22:08	1
Manganese	ND		10	1.9	ug/L		09/09/20 08:07	09/09/20 22:08	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: LYMW11
Date Collected: 09/01/20 16:10
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.46**	**J**	5.0	0.33	ug/L		09/09/20 08:09	09/09/20 19:10	1
Thallium	ND		1.0	0.089	ug/L		09/09/20 08:09	09/09/20 19:10	1

Client Sample ID: LYMW06R
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/09/20 08:09	09/09/20 19:38	1
Thallium	ND		1.0	0.089	ug/L		09/09/20 08:09	09/09/20 19:38	1

Client Sample ID: LYMW10
Date Collected: 09/02/20 13:20
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.1**	**J**	5.0	0.33	ug/L		09/09/20 08:09	09/09/20 19:42	1
Thallium	ND		1.0	0.089	ug/L		09/09/20 08:09	09/09/20 19:42	1

Client Sample ID: LYMW04
Date Collected: 09/02/20 14:40
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.52**	**J**	5.0	0.33	ug/L		09/09/20 08:09	09/09/20 19:45	1
Thallium	ND		1.0	0.089	ug/L		09/09/20 08:09	09/09/20 19:45	1

Client Sample ID: BD1-20200902
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.44**	**J**	5.0	0.33	ug/L		09/09/20 08:09	09/09/20 19:49	1
Thallium	ND		1.0	0.089	ug/L		09/09/20 08:09	09/09/20 19:49	1

Client Sample ID: EB1-20200902
Date Collected: 09/02/20 15:15
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/09/20 08:09	09/09/20 19:52	1
Thallium	ND		1.0	0.089	ug/L		09/09/20 08:09	09/09/20 19:52	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW11
Date Collected: 09/01/20 16:10
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.040**	**J B**	0.20	0.027	ug/L		09/10/20 12:30	09/11/20 14:32	1

Client Sample ID: LYMW06R
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.048**	**J B**	0.20	0.027	ug/L		09/10/20 12:30	09/11/20 14:39	1

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-140173-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW10
Date Collected: 09/02/20 13:20
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.077	J B	0.20	0.027	ug/L		09/10/20 12:30	09/11/20 14:41	1

Client Sample ID: LYMW04
Date Collected: 09/02/20 14:40
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.047	J B	0.20	0.027	ug/L		09/10/20 12:30	09/11/20 14:43	1

Client Sample ID: BD1-20200902
Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050	J B	0.20	0.027	ug/L		09/10/20 12:30	09/11/20 14:46	1

Client Sample ID: EB1-20200902
Date Collected: 09/02/20 15:15
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10	J B	0.20	0.027	ug/L		09/10/20 12:30	09/11/20 14:48	1

Surrogate Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-140173-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(42-120)	(43-120)	(47-120)
280-140173-1	LYMW11	64	62	82
280-140173-2	LYMW06R	66	63	89
280-140173-3	LYMW10	56	21 X	89
280-140173-3 - DL	LYMW10	66 D	78 D	88 D
280-140173-4	LYMW04	65	66	95
280-140173-5	BD1-20200902	70	69	94
280-140173-6	EB1-20200902	73	73	95
LCS 280-508139/2-A	Lab Control Sample	73	73	92
LCSD 280-508139/3-A	Lab Control Sample Dup	69	65	88
MB 280-508139/1-A	Method Blank	88	87	99

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		OTPH	OTCN
Lab Sample ID	Client Sample ID	(50-115)	(26-152)
280-140173-1	LYMW11	80	97
280-140173-2	LYMW06R	75	80
280-140173-3	LYMW10	71	84
280-140173-4	LYMW04	75	80
280-140173-5	BD1-20200902	74	79
280-140173-6	EB1-20200902	71	77
LCS 280-508147/2-A	Lab Control Sample	75	74
LCSD 280-508147/3-A	Lab Control Sample Dup	77	75
MB 280-508147/1-A	Method Blank	77	83

Surrogate Legend

OTPH = o-Terphenyl
OTCN = n-Octacosane

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 280-508139/1-A
Matrix: Water
Analysis Batch: 508662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508139

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/10/20 23:25	1
Dibenz(a,h)anthracene	ND		0.10	0.028	ug/L		09/07/20 12:23	09/10/20 23:25	1
1-Methylnaphthalene	ND		0.10	0.018	ug/L		09/07/20 12:23	09/10/20 23:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*88*		*42 - 120*	*09/07/20 12:23*	*09/10/20 23:25*	*1*
Nitrobenzene-d5	*87*		*43 - 120*	*09/07/20 12:23*	*09/10/20 23:25*	*1*
Terphenyl-d14	*99*		*47 - 120*	*09/07/20 12:23*	*09/10/20 23:25*	*1*

Lab Sample ID: LCS 280-508139/2-A
Matrix: Water
Analysis Batch: 508662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508139

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzo[a]anthracene			0.900	0.680		ug/L		76	42 - 120		
Dibenz(a,h)anthracene			0.900	0.534		ug/L		59	27 - 126		
1-Methylnaphthalene			0.900	0.646		ug/L		72	44 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*73*		*42 - 120*
Nitrobenzene-d5	*73*		*43 - 120*
Terphenyl-d14	*92*		*47 - 120*

Lab Sample ID: LCSD 280-508139/3-A
Matrix: Water
Analysis Batch: 508662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 508139

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene			0.900	0.590		ug/L		66	42 - 120	14	40
Dibenz(a,h)anthracene			0.900	0.469		ug/L		52	27 - 126	13	25
1-Methylnaphthalene			0.900	0.544		ug/L		60	44 - 150	17	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*69*		*42 - 120*
Nitrobenzene-d5	*65*		*43 - 120*
Terphenyl-d14	*88*		*47 - 120*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-508147/1-A
Matrix: Water
Analysis Batch: 508632

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		250	33	ug/L		09/07/20 14:19	09/10/20 16:52	1

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

Lab Sample ID: MB 280-508147/1-A
Matrix: Water
Analysis Batch: 508632

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508147

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 115	09/07/20 14:19	09/10/20 16:52	1
n-Octacosane	83		26 - 152	09/07/20 14:19	09/10/20 16:52	1

Lab Sample ID: LCS 280-508147/2-A
Matrix: Water
Analysis Batch: 508632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	1980	1590		ug/L		80	54 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	75		50 - 115
n-Octacosane	74		26 - 152

Lab Sample ID: LCSD 280-508147/3-A
Matrix: Water
Analysis Batch: 508632

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 508147

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	1980	1740		ug/L		87	54 - 115	9	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	77		50 - 115
n-Octacosane	75		26 - 152

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-508224/1-A
Matrix: Water
Analysis Batch: 508597

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508224

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	4.4	ug/L		09/09/20 08:07	09/09/20 21:18	1
Cobalt	ND		10	1.2	ug/L		09/09/20 08:07	09/09/20 21:18	1
Iron	ND		100	22	ug/L		09/09/20 08:07	09/09/20 21:18	1
Lead	ND		9.0	2.7	ug/L		09/09/20 08:07	09/09/20 21:18	1
Manganese	ND		10	1.9	ug/L		09/09/20 08:07	09/09/20 21:18	1

Lab Sample ID: LCS 280-508224/2-A
Matrix: Water
Analysis Batch: 508597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508224

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	939		ug/L		94	86 - 110
Cobalt	1000	963		ug/L		96	89 - 111
Iron	10000	9870		ug/L		99	89 - 115
Lead	1000	973		ug/L		97	89 - 110

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-508224/2-A
Matrix: Water
Analysis Batch: 508597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508224

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	1000	986		ug/L		99	90 - 110

Lab Sample ID: 280-140173-2 MS
Matrix: Water
Analysis Batch: 508597

Client Sample ID: LYMW06R
Prep Type: Total/NA
Prep Batch: 508224

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1700		1000	2740		ug/L		103	87 - 113
Cobalt	ND		1000	933		ug/L		93	82 - 119
Iron	11000		10000	20600		ug/L		99	52 - 155
Lead	ND		1000	950		ug/L		95	89 - 121
Manganese	1500		1000	2420		ug/L		97	79 - 121

Lab Sample ID: 280-140173-2 MSD
Matrix: Water
Analysis Batch: 508597

Client Sample ID: LYMW06R
Prep Type: Total/NA
Prep Batch: 508224

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1700		1000	2700		ug/L		98	87 - 113	2	20
Cobalt	ND		1000	943		ug/L		94	82 - 119	1	20
Iron	11000		10000	20600		ug/L		99	52 - 155	0	20
Lead	ND		1000	953		ug/L		95	89 - 121	0	20
Manganese	1500		1000	2400		ug/L		95	79 - 121	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-508222/1-A
Matrix: Water
Analysis Batch: 508549

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508222

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/09/20 08:09	09/09/20 19:03	1
Thallium	ND		1.0	0.089	ug/L		09/09/20 08:09	09/09/20 19:03	1

Lab Sample ID: LCS 280-508222/2-A
Matrix: Water
Analysis Batch: 508549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	37.3		ug/L		93	85 - 117
Thallium	40.0	37.7		ug/L		94	85 - 118

Lab Sample ID: 280-140173-1 MS
Matrix: Water
Analysis Batch: 508549

Client Sample ID: LYMW11
Prep Type: Total/NA
Prep Batch: 508222

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.46	J	40.0	38.5		ug/L		95	85 - 117
Thallium	ND		40.0	35.9		ug/L		90	85 - 118

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-140173-1 MSD
Matrix: Water
Analysis Batch: 508549

Client Sample ID: LYMW11
Prep Type: Total/NA
Prep Batch: 508222

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.46	J	40.0	38.6		ug/L		95	85 - 117	0	20
Thallium	ND		40.0	35.8		ug/L		90	85 - 118	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-508585/1-A
Matrix: Water
Analysis Batch: 508935

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508585

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0400	J	0.20	0.027	ug/L		09/10/20 12:30	09/11/20 14:28	1

Lab Sample ID: LCS 280-508585/2-A
Matrix: Water
Analysis Batch: 508935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508585

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.06		ug/L		101	84 - 120

Lab Sample ID: 280-140173-1 MS
Matrix: Water
Analysis Batch: 508935

Client Sample ID: LYMW11
Prep Type: Total/NA
Prep Batch: 508585

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.040	J B	5.00	5.08		ug/L		101	75 - 125

Lab Sample ID: 280-140173-1 MSD
Matrix: Water
Analysis Batch: 508935

Client Sample ID: LYMW11
Prep Type: Total/NA
Prep Batch: 508585

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.040	J B	5.00	5.06		ug/L		100	75 - 125	1	20

GC/MS Semi VOA

Prep Batch: 508139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	3510C	
280-140173-2	LYMW06R	Total/NA	Water	3510C	
280-140173-3	LYMW10	Total/NA	Water	3510C	
280-140173-3 - DL	LYMW10	Total/NA	Water	3510C	
280-140173-4	LYMW04	Total/NA	Water	3510C	
280-140173-5	BD1-20200902	Total/NA	Water	3510C	
280-140173-6	EB1-20200902	Total/NA	Water	3510C	
MB 280-508139/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-508139/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-508139/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 508662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	8270D SIM	508139
280-140173-2	LYMW06R	Total/NA	Water	8270D SIM	508139
280-140173-3	LYMW10	Total/NA	Water	8270D SIM	508139
280-140173-4	LYMW04	Total/NA	Water	8270D SIM	508139
280-140173-5	BD1-20200902	Total/NA	Water	8270D SIM	508139
280-140173-6	EB1-20200902	Total/NA	Water	8270D SIM	508139
MB 280-508139/1-A	Method Blank	Total/NA	Water	8270D SIM	508139
LCS 280-508139/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	508139
LCSD 280-508139/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	508139

Analysis Batch: 509326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-3 - DL	LYMW10	Total/NA	Water	8270D SIM	508139

GC Semi VOA

Prep Batch: 508147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	3510C	
280-140173-2	LYMW06R	Total/NA	Water	3510C	
280-140173-3	LYMW10	Total/NA	Water	3510C	
280-140173-4	LYMW04	Total/NA	Water	3510C	
280-140173-5	BD1-20200902	Total/NA	Water	3510C	
280-140173-6	EB1-20200902	Total/NA	Water	3510C	
MB 280-508147/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-508147/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-508147/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 508632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	8015D	508147
280-140173-2	LYMW06R	Total/NA	Water	8015D	508147
280-140173-3	LYMW10	Total/NA	Water	8015D	508147
280-140173-4	LYMW04	Total/NA	Water	8015D	508147
280-140173-5	BD1-20200902	Total/NA	Water	8015D	508147
280-140173-6	EB1-20200902	Total/NA	Water	8015D	508147
MB 280-508147/1-A	Method Blank	Total/NA	Water	8015D	508147
LCS 280-508147/2-A	Lab Control Sample	Total/NA	Water	8015D	508147

GC Semi VOA (Continued)

Analysis Batch: 508632 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-508147/3-A	Lab Control Sample Dup	Total/NA	Water	8015D	508147

Metals

Prep Batch: 508222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	3020A	
280-140173-2	LYMW06R	Total/NA	Water	3020A	
280-140173-3	LYMW10	Total/NA	Water	3020A	
280-140173-4	LYMW04	Total/NA	Water	3020A	
280-140173-5	BD1-20200902	Total/NA	Water	3020A	
280-140173-6	EB1-20200902	Total/NA	Water	3020A	
MB 280-508222/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-508222/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-140173-1 MS	LYMW11	Total/NA	Water	3020A	
280-140173-1 MSD	LYMW11	Total/NA	Water	3020A	

Prep Batch: 508224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	3010A	
280-140173-2	LYMW06R	Total/NA	Water	3010A	
280-140173-3	LYMW10	Total/NA	Water	3010A	
280-140173-4	LYMW04	Total/NA	Water	3010A	
280-140173-5	BD1-20200902	Total/NA	Water	3010A	
280-140173-6	EB1-20200902	Total/NA	Water	3010A	
MB 280-508224/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-508224/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-140173-2 MS	LYMW06R	Total/NA	Water	3010A	
280-140173-2 MSD	LYMW06R	Total/NA	Water	3010A	

Analysis Batch: 508549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	6020A	508222
280-140173-2	LYMW06R	Total/NA	Water	6020A	508222
280-140173-3	LYMW10	Total/NA	Water	6020A	508222
280-140173-4	LYMW04	Total/NA	Water	6020A	508222
280-140173-5	BD1-20200902	Total/NA	Water	6020A	508222
280-140173-6	EB1-20200902	Total/NA	Water	6020A	508222
MB 280-508222/1-A	Method Blank	Total/NA	Water	6020A	508222
LCS 280-508222/2-A	Lab Control Sample	Total/NA	Water	6020A	508222
280-140173-1 MS	LYMW11	Total/NA	Water	6020A	508222
280-140173-1 MSD	LYMW11	Total/NA	Water	6020A	508222

Prep Batch: 508585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	7470A	
280-140173-2	LYMW06R	Total/NA	Water	7470A	
280-140173-3	LYMW10	Total/NA	Water	7470A	
280-140173-4	LYMW04	Total/NA	Water	7470A	
280-140173-5	BD1-20200902	Total/NA	Water	7470A	
280-140173-6	EB1-20200902	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 508585 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-508585/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-508585/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-140173-1 MS	LYMW11	Total/NA	Water	7470A	
280-140173-1 MSD	LYMW11	Total/NA	Water	7470A	

Analysis Batch: 508597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	6010C	508224
280-140173-2	LYMW06R	Total/NA	Water	6010C	508224
280-140173-3	LYMW10	Total/NA	Water	6010C	508224
280-140173-4	LYMW04	Total/NA	Water	6010C	508224
280-140173-5	BD1-20200902	Total/NA	Water	6010C	508224
280-140173-6	EB1-20200902	Total/NA	Water	6010C	508224
MB 280-508224/1-A	Method Blank	Total/NA	Water	6010C	508224
LCS 280-508224/2-A	Lab Control Sample	Total/NA	Water	6010C	508224
280-140173-2 MS	LYMW06R	Total/NA	Water	6010C	508224
280-140173-2 MSD	LYMW06R	Total/NA	Water	6010C	508224

Analysis Batch: 508935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140173-1	LYMW11	Total/NA	Water	7470A	508585
280-140173-2	LYMW06R	Total/NA	Water	7470A	508585
280-140173-3	LYMW10	Total/NA	Water	7470A	508585
280-140173-4	LYMW04	Total/NA	Water	7470A	508585
280-140173-5	BD1-20200902	Total/NA	Water	7470A	508585
280-140173-6	EB1-20200902	Total/NA	Water	7470A	508585
MB 280-508585/1-A	Method Blank	Total/NA	Water	7470A	508585
LCS 280-508585/2-A	Lab Control Sample	Total/NA	Water	7470A	508585
280-140173-1 MS	LYMW11	Total/NA	Water	7470A	508585
280-140173-1 MSD	LYMW11	Total/NA	Water	7470A	508585

Lab Chronicle

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-140173-1

Client Sample ID: LYMW11

Date Collected: 09/01/20 16:10
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			247.7 mL	1 mL	508139	09/07/20 12:23	NMC	TAL DEN
Total/NA	Analysis	8270D SIM		1			508662	09/11/20 02:13	MKW	TAL DEN
Total/NA	Prep	3510C			1031.7 mL	1 mL	508147	09/07/20 14:19	AC	TAL DEN
Total/NA	Analysis	8015D		1			508632	09/10/20 19:45	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	508224	09/09/20 08:07	MAB	TAL DEN
Total/NA	Analysis	6010C		1			508597	09/09/20 21:25	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	508222	09/09/20 08:09	MAB	TAL DEN
Total/NA	Analysis	6020A		1			508549	09/09/20 19:10	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	508585	09/10/20 12:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			508935	09/11/20 14:32	NK	TAL DEN

Client Sample ID: LYMW06R

Date Collected: 09/02/20 11:25
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	508139	09/07/20 12:23	NMC	TAL DEN
Total/NA	Analysis	8270D SIM		1			508662	09/11/20 02:41	MKW	TAL DEN
Total/NA	Prep	3510C			1053.7 mL	1 mL	508147	09/07/20 14:19	AC	TAL DEN
Total/NA	Analysis	8015D		1			508632	09/10/20 20:06	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	508224	09/09/20 08:07	MAB	TAL DEN
Total/NA	Analysis	6010C		1			508597	09/09/20 21:28	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	508222	09/09/20 08:09	MAB	TAL DEN
Total/NA	Analysis	6020A		1			508549	09/09/20 19:38	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	508585	09/10/20 12:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			508935	09/11/20 14:39	NK	TAL DEN

Client Sample ID: LYMW10

Date Collected: 09/02/20 13:20
Date Received: 09/04/20 10:15

Lab Sample ID: 280-140173-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			243.3 mL	1 mL	508139	09/07/20 12:23	NMC	TAL DEN
Total/NA	Analysis	8270D SIM		1			508662	09/11/20 03:09	MKW	TAL DEN
Total/NA	Prep	3510C	DL		243.3 mL	1 mL	508139	09/07/20 12:23	NMC	TAL DEN
Total/NA	Analysis	8270D SIM	DL	4			509326	09/16/20 20:40	MKW	TAL DEN
Total/NA	Prep	3510C			1046.4 mL	1 mL	508147	09/07/20 14:19	AC	TAL DEN
Total/NA	Analysis	8015D		1			508632	09/10/20 20:28	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	508224	09/09/20 08:07	MAB	TAL DEN
Total/NA	Analysis	6010C		1			508597	09/09/20 21:58	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	508222	09/09/20 08:09	MAB	TAL DEN
Total/NA	Analysis	6020A		1			508549	09/09/20 19:42	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	508585	09/10/20 12:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			508935	09/11/20 14:41	NK	TAL DEN

Lab Chronicle

Client: Trihydro Corporation
Job ID: 280-140173-1
Project/Site: Former Laramie Yttrium Plant

Client Sample ID: LYMW04
Lab Sample ID: 280-140173-4
Date Collected: 09/02/20 14:40
Matrix: Water
Date Received: 09/04/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			245.6 mL	1 mL	508139	09/07/20 12:23	NMC	TAL DEN
Total/NA	Analysis	8270D SIM		1			508662	09/11/20 03:37	MKW	TAL DEN
Total/NA	Prep	3510C			1052.1 mL	1 mL	508147	09/07/20 14:19	AC	TAL DEN
Total/NA	Analysis	8015D		1			508632	09/10/20 20:49	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	508224	09/09/20 08:07	MAB	TAL DEN
Total/NA	Analysis	6010C		1			508597	09/09/20 22:02	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	508222	09/09/20 08:09	MAB	TAL DEN
Total/NA	Analysis	6020A		1			508549	09/09/20 19:45	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	508585	09/10/20 12:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			508935	09/11/20 14:43	NK	TAL DEN

Client Sample ID: BD1-20200902
Lab Sample ID: 280-140173-5
Date Collected: 09/02/20 11:25
Matrix: Water
Date Received: 09/04/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250.2 mL	1 mL	508139	09/07/20 12:23	NMC	TAL DEN
Total/NA	Analysis	8270D SIM		1			508662	09/11/20 04:05	MKW	TAL DEN
Total/NA	Prep	3510C			1053.6 mL	1 mL	508147	09/07/20 14:19	AC	TAL DEN
Total/NA	Analysis	8015D		1			508632	09/10/20 21:11	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	508224	09/09/20 08:07	MAB	TAL DEN
Total/NA	Analysis	6010C		1			508597	09/09/20 22:05	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	508222	09/09/20 08:09	MAB	TAL DEN
Total/NA	Analysis	6020A		1			508549	09/09/20 19:49	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	508585	09/10/20 12:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			508935	09/11/20 14:46	NK	TAL DEN

Client Sample ID: EB1-20200902
Lab Sample ID: 280-140173-6
Date Collected: 09/02/20 15:15
Matrix: Water
Date Received: 09/04/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			244.4 mL	1 mL	508139	09/07/20 12:23	NMC	TAL DEN
Total/NA	Analysis	8270D SIM		1			508662	09/11/20 04:33	MKW	TAL DEN
Total/NA	Prep	3510C			1046.7 mL	1 mL	508147	09/07/20 14:19	AC	TAL DEN
Total/NA	Analysis	8015D		1			508632	09/10/20 21:32	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	508224	09/09/20 08:07	MAB	TAL DEN
Total/NA	Analysis	6010C		1			508597	09/09/20 22:08	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	508222	09/09/20 08:09	MAB	TAL DEN
Total/NA	Analysis	6020A		1			508549	09/09/20 19:52	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	508585	09/10/20 12:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			508935	09/11/20 14:48	NK	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Trihydro Corporation
Job ID: 280-140173-1
Project/Site: Former Laramie Yttrium Plant

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-21
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	09-01-21
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	07-31-21
South Carolina	State	72002001	01-08-21
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	08-01-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-21
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-03-21
West Virginia DEP	State	354	11-30-20
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: Taylor Speckmann	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):	COC No: 280-101577-30367.1
Client Contact: Ryan Athey	Phone: 307-745-7474	E-Mail: Donna.Rydberg@Eurofinset.com		Page: Page 1 of 1
Company: Trihydro Corporation				Job #:
Address: 1252 Commerce Drive	Due Date Requested:			
City: Laramie	TAT Requested (days):			
State, Zip: WY, 82070				
Phone: 307-745-7474	PO #: Purchase Order Requested			
Email: rathey@trihydro.com	WO #:			
Project Name: Former Laramie Yttrium Plant	Project #: 28021067			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

280-140173 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM - 8270D Sim 3 analytes	Total Metals - 6010C, 6020A, 7470A	8015D_DRO - TPH-DRO	Total Number of	Special Instructions/Note:
			Preservation Code:				N	D	N		
LYMW11	9-1-2020	1610	G	Water			X	X	X	5	
LYMW06R	9-2-2020	1125	G	Water			X	X	X	5	
LYMW10	9-2-2020	1320	G	Water			X	X	X	5	
LYMW04	9-2-2020	1440	G	Water			X	X	X	5	
BD1-20200902	9-2-2020	—	G	Water			X	X	X	5	
EB1-20200902	9-2-2020	1515	G	Water			X	X	X	5	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Taylor Speckmann	09/03/2020/1330	Trihydro	Justin Hall	9/4/20 1015	ETA Denver
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☒ Yes ☐ No | Custody Seal No.: 1413732, 1413733

Cooler Temperature(s) °C and Other Remarks: 0.3, 2.3C IR#11 CF-0.2

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Trihydro Corporation

Job Number: 280-140173-1

Login Number: 140173
List Number: 1
Creator: Rydberg, Donna R

List Source: Eurofins TestAmerica, Denver

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

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-152811-1
Client Project/Site: Former Laramie Yttrium Plant

For:
Trihydro Corporation
1252 Commerce Drive
Laramie, Wyoming 82070

Attn: Ryan Athey

Authorized for release by:
9/23/2021 10:31:48 AM

Donna Rydberg, Senior Project Manager
(303)736-0192
Donna.Rydberg@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-152811-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-152811-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Trihydro Corporation

Project: Former Laramie Yttrium Plant

Report Number: 280-152811-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 9/10/2021 at 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.5º C and 0.6º C.

Receipt Exceptions

The 1-liter containers received for 8015D state they are unpreserved on the client label. There are sulfuric acid labels on the containers as well. It appears the sulfuric containers were rinsed to be used for unpreserved volume, the containers may still contain sulfuric acid.

The BD1-20210908 sample was received at the laboratory without a sample collection time documented on the chain of custody as it is a blind duplicate sample. If we put in a data of 00:00 our system make it 12AM the day before so it could cause false holding time flags. The client was contacted and directed the lab to log a collection time of 12:35 for this sample. .

The container label for sample LYMW4 (280-152811-1) did not match the information listed on the Chain-of-Custody (COC). Both of the 250 mL amber glass unpreserved container have ID as LYMW04 but COC has ID as LYMW4. Sample was logged in and labeled according to ID on COC, LYMW4 (280-152811-1).

The 8270D SIM samples were subbed the Eurofins Sacramento laboratory for analysis. The following samples were received at the Sacramento laboratory outside the required temperature criteria at 16.9º C: LYMW4 (280-152811-1), LYMW6R (280-152811-2), LYMW10 (280-152811-3), LYMW11 (280-152811-4), BD1-20210908 (280-152811-5) and EB1-20210908 (280-152811-6). The samples were supposed to be delivered by Friday 9/10/21 but were not received at the Sacramento laboratory until 9/13/21 due to FedEx delays. The client was notified on 9/13/21 and directed the lab to proceed with the analyses as they can not re-sample.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)

Samples LYMW4 (280-152811-1), LYMW6R (280-152811-2), LYMW10 (280-152811-3), LYMW11 (280-152811-4), BD1-20210908 (280-152811-5) and EB1-20210908 (280-152811-6) were analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 09/15/2021 and analyzed on 09/16/2021 and 09/17/2021.

Sample LYMW10 (280-152811-3)[5X] required a dilution prior to analysis for 1-Methylnaphthalene to bring the concentration of target analytes within the calibration range. The reporting limits have been adjusted accordingly. The recovery for surrogate Nitrobenzene-d5 failed the surrogate recovery criteria high for LYMW10 (280-152811-3) in both the diluted and undiluted analysis. Evidence of matrix interference is present.

Job ID: 280-152811-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

DIESEL RANGE ORGANICS

Samples LYMW4 (280-152811-1), LYMW6R (280-152811-2), LYMW10 (280-152811-3), LYMW11 (280-152811-4), BD1-20210908 (280-152811-5) and EB1-20210908 (280-152811-6) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015D - DRO. The samples were prepared on 09/13/2021 and analyzed on 09/22/2021.

The following samples LYMW4 (280-152811-1) and LYMW6R (280-152811-2) were yellow/green in color preparation batch 280-549643.

The following sample LYMW11 (280-152811-4) was gray/black in color and contained black sediment. The sample turned yellow/green in color after the spin of the first extraction preparation batch 280-549643.

Diesel Range Organics [C10-C28] was detected in method blank MB 280-549643/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been flagged "B".

The peak profile present in this sample LYMW10 (280-152811-3) associated with preparation batch 280-549643 and analytical batch 280-550679 is atypical of a hydrocarbon pattern and consists of several discrete peaks.

The bracketing continuous calibration verification (CCV) associated with analytical batch 280-550679 recovered above the upper control limits (+/-20%D) for surrogate n-Octacosane. The affected CCVs and associated client samples have n-Octacosane % recoveries within method control limits; therefore, the data have been reported. The following samples are associated: (CCV 280-550679/32), (CCV 280-550679/41) and (CCV 280-550679/52).

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

TOTAL METALS (ICP)

Samples LYMW4 (280-152811-1), LYMW6R (280-152811-2), LYMW10 (280-152811-3), LYMW11 (280-152811-4), BD1-20210908 (280-152811-5) and EB1-20210908 (280-152811-6) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 09/13/2021 and analyzed on 09/14/2021.

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

TOTAL METALS (ICPMS)

Samples LYMW4 (280-152811-1), LYMW6R (280-152811-2), LYMW10 (280-152811-3), LYMW11 (280-152811-4), BD1-20210908 (280-152811-5) and EB1-20210908 (280-152811-6) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared and analyzed on 09/13/2021.

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

TOTAL MERCURY

Samples LYMW4 (280-152811-1), LYMW6R (280-152811-2), LYMW10 (280-152811-3), LYMW11 (280-152811-4), BD1-20210908 (280-152811-5) and EB1-20210908 (280-152811-6) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 09/11/2021.

Mercury was detected in method blank MB 280-549556/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been flagged "B".

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

Detection Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-152811-1

Client Sample ID: LYMW4 — Lab Sample ID: 280-152811-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	4.9		0.047	0.0086	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	1000	B	240	31	ug/L	1		8015D	Total/NA
Boron	1600		100	4.4	ug/L	1		6010C	Total/NA
Iron	4400		100	22	ug/L	1		6010C	Total/NA
Lead	2.9	J	9.0	2.7	ug/L	1		6010C	Total/NA
Manganese	480		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	0.81	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.084	J	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: LYMW6R — Lab Sample ID: 280-152811-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	710	B	240	31	ug/L	1		8015D	Total/NA
Boron	1700		100	4.4	ug/L	1		6010C	Total/NA
Iron	13000		100	22	ug/L	1		6010C	Total/NA
Lead	3.2	J	9.0	2.7	ug/L	1		6010C	Total/NA
Manganese	1400		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	1.3	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.038	J	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: LYMW10 — Lab Sample ID: 280-152811-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.072		0.047	0.011	ug/L	1		8270D SIM	Total/NA
Dibenz(a,h)anthracene	0.028	J	0.047	0.011	ug/L	1		8270D SIM	Total/NA
1-Methylnaphthalene - DL	28		0.23	0.043	ug/L	5		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	4300	B	240	31	ug/L	1		8015D	Total/NA
Boron	1300		100	4.4	ug/L	1		6010C	Total/NA
Iron	150		100	22	ug/L	1		6010C	Total/NA
Manganese	800		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	1.3	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.049	J	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: LYMW11 — Lab Sample ID: 280-152811-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	2.0		0.046	0.0085	ug/L	1		8270D SIM	Total/NA
Benzo[a]anthracene	0.040	J	0.046	0.011	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	2700	B	240	31	ug/L	1		8015D	Total/NA
Boron	1700		100	4.4	ug/L	1		6010C	Total/NA
Iron	13000		100	22	ug/L	1		6010C	Total/NA
Manganese	2700		10	1.9	ug/L	1		6010C	Total/NA
Arsenic	0.59	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.081	J	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: BD1-20210908 — Lab Sample ID: 280-152811-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	4.8		0.048	0.0089	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	830	B	240	31	ug/L	1		8015D	Total/NA
Boron	1600		100	4.4	ug/L	1		6010C	Total/NA
Iron	3800		100	22	ug/L	1		6010C	Total/NA
Manganese	460		10	1.9	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BD1-20210908 (Continued)
Lab Sample ID: 280-152811-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.44	J	5.0	0.33	ug/L	1		6020A	Total/NA
Mercury	0.046	J	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: EB1-20210908
Lab Sample ID: 280-152811-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	37	J B	240	31	ug/L	1		8015D	Total/NA
Boron	5.0	J	100	4.4	ug/L	1		6010C	Total/NA
Mercury	0.035	J	0.20	0.027	ug/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-152811-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SAC
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SAC
7470A	Preparation, Mercury	SW846	TAL DEN

Protocol References:

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

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Sample Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-152811-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-152811-1	LYMW4	Water	09/08/21 12:20	09/10/21 09:45
280-152811-2	LYMW6R	Water	09/08/21 16:15	09/10/21 09:45
280-152811-3	LYMW10	Water	09/08/21 14:50	09/10/21 09:45
280-152811-4	LYMW11	Water	09/08/21 13:45	09/10/21 09:45
280-152811-5	BD1-20210908	Water	09/08/21 12:35	09/10/21 09:45
280-152811-6	EB1-20210908	Water	09/08/21 16:35	09/10/21 09:45

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: LYMW4
Date Collected: 09/08/21 12:20
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**4.9**		0.047	0.0086	ug/L		09/15/21 08:44	09/16/21 17:27	1
Benzo[a]anthracene	ND		0.047	0.011	ug/L		09/15/21 08:44	09/16/21 17:27	1
Dibenz(a,h)anthracene	ND		0.047	0.011	ug/L		09/15/21 08:44	09/16/21 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*78*		*31 - 107*	*09/15/21 08:44*	*09/16/21 17:27*	*1*
Nitrobenzene-d5	*97*		*20 - 123*	*09/15/21 08:44*	*09/16/21 17:27*	*1*
Terphenyl-d14	*93*		*46 - 137*	*09/15/21 08:44*	*09/16/21 17:27*	*1*
2-methylnaphthalene-d10	*84*		*50 - 150*	*09/15/21 08:44*	*09/16/21 17:27*	*1*
Fluoranthene-d10 (Surr)	*93*		*50 - 150*	*09/15/21 08:44*	*09/16/21 17:27*	*1*

Client Sample ID: LYMW6R
Date Collected: 09/08/21 16:15
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.049	0.0089	ug/L		09/15/21 08:44	09/16/21 17:57	1
Benzo[a]anthracene	ND		0.049	0.012	ug/L		09/15/21 08:44	09/16/21 17:57	1
Dibenz(a,h)anthracene	ND		0.049	0.012	ug/L		09/15/21 08:44	09/16/21 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*31 - 107*	*09/15/21 08:44*	*09/16/21 17:57*	*1*
Nitrobenzene-d5	*88*		*20 - 123*	*09/15/21 08:44*	*09/16/21 17:57*	*1*
Terphenyl-d14	*101*		*46 - 137*	*09/15/21 08:44*	*09/16/21 17:57*	*1*
2-methylnaphthalene-d10	*87*		*50 - 150*	*09/15/21 08:44*	*09/16/21 17:57*	*1*
Fluoranthene-d10 (Surr)	*96*		*50 - 150*	*09/15/21 08:44*	*09/16/21 17:57*	*1*

Client Sample ID: LYMW10
Date Collected: 09/08/21 14:50
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.072**		0.047	0.011	ug/L		09/15/21 08:44	09/16/21 18:26	1
Dibenz(a,h)anthracene	**0.028**	**J**	0.047	0.011	ug/L		09/15/21 08:44	09/16/21 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*31 - 107*	*09/15/21 08:44*	*09/16/21 18:26*	*1*
Nitrobenzene-d5	*141*	*S1+*	*20 - 123*	*09/15/21 08:44*	*09/16/21 18:26*	*1*
Terphenyl-d14	*97*		*46 - 137*	*09/15/21 08:44*	*09/16/21 18:26*	*1*
2-methylnaphthalene-d10	*88*		*50 - 150*	*09/15/21 08:44*	*09/16/21 18:26*	*1*
Fluoranthene-d10 (Surr)	*92*		*50 - 150*	*09/15/21 08:44*	*09/16/21 18:26*	*1*

Client Sample ID: LYMW11
Date Collected: 09/08/21 13:45
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**2.0**		0.046	0.0085	ug/L		09/15/21 08:44	09/17/21 11:42	1
Benzo[a]anthracene	**0.040**	**J**	0.046	0.011	ug/L		09/15/21 08:44	09/17/21 11:42	1
Dibenz(a,h)anthracene	ND		0.046	0.011	ug/L		09/15/21 08:44	09/17/21 11:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*31 - 107*	*09/15/21 08:44*	*09/17/21 11:42*	*1*
Nitrobenzene-d5	*89*		*20 - 123*	*09/15/21 08:44*	*09/17/21 11:42*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: LYMW11
Date Collected: 09/08/21 13:45
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-4
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*102*		*46 - 137*	*09/15/21 08:44*	*09/17/21 11:42*	*1*
2-methylnaphthalene-d10	*93*		*50 - 150*	*09/15/21 08:44*	*09/17/21 11:42*	*1*
Fluoranthene-d10 (Surr)	*98*		*50 - 150*	*09/15/21 08:44*	*09/17/21 11:42*	*1*

Client Sample ID: BD1-20210908
Date Collected: 09/08/21 12:35
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**4.8**		0.048	0.0089	ug/L		09/15/21 08:44	09/16/21 19:26	1
Benzo[a]anthracene	ND		0.048	0.012	ug/L		09/15/21 08:44	09/16/21 19:26	1
Dibenz(a,h)anthracene	ND		0.048	0.012	ug/L		09/15/21 08:44	09/16/21 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*84*		*31 - 107*	*09/15/21 08:44*	*09/16/21 19:26*	*1*
Nitrobenzene-d5	*94*		*20 - 123*	*09/15/21 08:44*	*09/16/21 19:26*	*1*
Terphenyl-d14	*98*		*46 - 137*	*09/15/21 08:44*	*09/16/21 19:26*	*1*
2-methylnaphthalene-d10	*90*		*50 - 150*	*09/15/21 08:44*	*09/16/21 19:26*	*1*
Fluoranthene-d10 (Surr)	*95*		*50 - 150*	*09/15/21 08:44*	*09/16/21 19:26*	*1*

Client Sample ID: EB1-20210908
Date Collected: 09/08/21 16:35
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.047	0.0086	ug/L		09/15/21 08:44	09/16/21 19:55	1
Benzo[a]anthracene	ND		0.047	0.011	ug/L		09/15/21 08:44	09/16/21 19:55	1
Dibenz(a,h)anthracene	ND		0.047	0.011	ug/L		09/15/21 08:44	09/16/21 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*31 - 107*	*09/15/21 08:44*	*09/16/21 19:55*	*1*
Nitrobenzene-d5	*83*		*20 - 123*	*09/15/21 08:44*	*09/16/21 19:55*	*1*
Terphenyl-d14	*92*		*46 - 137*	*09/15/21 08:44*	*09/16/21 19:55*	*1*
2-methylnaphthalene-d10	*78*		*50 - 150*	*09/15/21 08:44*	*09/16/21 19:55*	*1*
Fluoranthene-d10 (Surr)	*83*		*50 - 150*	*09/15/21 08:44*	*09/16/21 19:55*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Client Sample ID: LYMW10
Date Collected: 09/08/21 14:50
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**28**		0.23	0.043	ug/L		09/15/21 08:44	09/17/21 11:12	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*31 - 107*	*09/15/21 08:44*	*09/17/21 11:12*	*5*
Nitrobenzene-d5	*142*	*S1+*	*20 - 123*	*09/15/21 08:44*	*09/17/21 11:12*	*5*
Terphenyl-d14	*94*		*46 - 137*	*09/15/21 08:44*	*09/17/21 11:12*	*5*
2-methylnaphthalene-d10	*94*		*50 - 150*	*09/15/21 08:44*	*09/17/21 11:12*	*5*
Fluoranthene-d10 (Surr)	*94*		*50 - 150*	*09/15/21 08:44*	*09/17/21 11:12*	*5*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: LYMW4
Date Collected: 09/08/21 12:20
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1000	B	240	31	ug/L		09/13/21 11:35	09/22/21 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 115*	*09/13/21 11:35*	*09/22/21 17:51*	*1*
n-Octacosane	*117*		*26 - 152*	*09/13/21 11:35*	*09/22/21 17:51*	*1*

Client Sample ID: LYMW6R
Date Collected: 09/08/21 16:15
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	710	B	240	31	ug/L		09/13/21 11:35	09/22/21 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 115*	*09/13/21 11:35*	*09/22/21 18:14*	*1*
n-Octacosane	*117*		*26 - 152*	*09/13/21 11:35*	*09/22/21 18:14*	*1*

Client Sample ID: LYMW10
Date Collected: 09/08/21 14:50
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4300	B	240	31	ug/L		09/13/21 11:35	09/22/21 18:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 115*	*09/13/21 11:35*	*09/22/21 18:37*	*1*
n-Octacosane	*120*		*26 - 152*	*09/13/21 11:35*	*09/22/21 18:37*	*1*

Client Sample ID: LYMW11
Date Collected: 09/08/21 13:45
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2700	B	240	31	ug/L		09/13/21 11:35	09/22/21 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 115*	*09/13/21 11:35*	*09/22/21 19:00*	*1*
n-Octacosane	*129*		*26 - 152*	*09/13/21 11:35*	*09/22/21 19:00*	*1*

Client Sample ID: BD1-20210908
Date Collected: 09/08/21 12:35
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	830	B	240	31	ug/L		09/13/21 11:35	09/22/21 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 115*	*09/13/21 11:35*	*09/22/21 19:23*	*1*
n-Octacosane	*116*		*26 - 152*	*09/13/21 11:35*	*09/22/21 19:23*	*1*

Client Sample ID: EB1-20210908
Date Collected: 09/08/21 16:35
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	37	J B	240	31	ug/L		09/13/21 11:35	09/22/21 19:46	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*87*		*50 - 115*	*09/13/21 11:35*	*09/22/21 19:46*	*1*
n-Octacosane	*128*		*26 - 152*	*09/13/21 11:35*	*09/22/21 19:46*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: LYMW4
Date Collected: 09/08/21 12:20
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1600**		100	4.4	ug/L		09/13/21 08:04	09/14/21 03:30	1
Cobalt	ND		10	1.2	ug/L		09/13/21 08:04	09/14/21 03:30	1
Iron	**4400**		100	22	ug/L		09/13/21 08:04	09/14/21 03:30	1
Lead	**2.9**	**J**	9.0	2.7	ug/L		09/13/21 08:04	09/14/21 03:30	1
Manganese	**480**		10	1.9	ug/L		09/13/21 08:04	09/14/21 03:30	1

Client Sample ID: LYMW6R
Date Collected: 09/08/21 16:15
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**		100	4.4	ug/L		09/13/21 08:04	09/14/21 03:58	1
Cobalt	ND		10	1.2	ug/L		09/13/21 08:04	09/14/21 03:58	1
Iron	**13000**		100	22	ug/L		09/13/21 08:04	09/14/21 03:58	1
Lead	**3.2**	**J**	9.0	2.7	ug/L		09/13/21 08:04	09/14/21 03:58	1
Manganese	**1400**		10	1.9	ug/L		09/13/21 08:04	09/14/21 03:58	1

Client Sample ID: LYMW10
Date Collected: 09/08/21 14:50
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1300**		100	4.4	ug/L		09/13/21 08:04	09/14/21 04:02	1
Cobalt	ND		10	1.2	ug/L		09/13/21 08:04	09/14/21 04:02	1
Iron	**150**		100	22	ug/L		09/13/21 08:04	09/14/21 04:02	1
Lead	ND		9.0	2.7	ug/L		09/13/21 08:04	09/14/21 04:02	1
Manganese	**800**		10	1.9	ug/L		09/13/21 08:04	09/14/21 04:02	1

Client Sample ID: LYMW11
Date Collected: 09/08/21 13:45
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**		100	4.4	ug/L		09/13/21 08:04	09/14/21 04:06	1
Cobalt	ND		10	1.2	ug/L		09/13/21 08:04	09/14/21 04:06	1
Iron	**13000**		100	22	ug/L		09/13/21 08:04	09/14/21 04:06	1
Lead	ND		9.0	2.7	ug/L		09/13/21 08:04	09/14/21 04:06	1
Manganese	**2700**		10	1.9	ug/L		09/13/21 08:04	09/14/21 04:06	1

Client Sample ID: BD1-20210908
Date Collected: 09/08/21 12:35
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1600**		100	4.4	ug/L		09/13/21 08:04	09/14/21 04:09	1
Cobalt	ND		10	1.2	ug/L		09/13/21 08:04	09/14/21 04:09	1
Iron	**3800**		100	22	ug/L		09/13/21 08:04	09/14/21 04:09	1
Lead	ND		9.0	2.7	ug/L		09/13/21 08:04	09/14/21 04:09	1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: BD1-20210908
Date Collected: 09/08/21 12:35
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**460**		10	1.9	ug/L		09/13/21 08:04	09/14/21 04:09	1

Client Sample ID: EB1-20210908
Date Collected: 09/08/21 16:35
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**5.0**	**J**	100	4.4	ug/L		09/13/21 08:04	09/14/21 04:13	1
Cobalt	ND		10	1.2	ug/L		09/13/21 08:04	09/14/21 04:13	1
Iron	ND		100	22	ug/L		09/13/21 08:04	09/14/21 04:13	1
Lead	ND		9.0	2.7	ug/L		09/13/21 08:04	09/14/21 04:13	1
Manganese	ND		10	1.9	ug/L		09/13/21 08:04	09/14/21 04:13	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: LYMW4
Date Collected: 09/08/21 12:20
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.81**	**J**	5.0	0.33	ug/L		09/13/21 08:04	09/13/21 22:37	1
Thallium	ND		1.0	0.089	ug/L		09/13/21 08:04	09/13/21 22:37	1

Client Sample ID: LYMW6R
Date Collected: 09/08/21 16:15
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.3**	**J**	5.0	0.33	ug/L		09/13/21 08:04	09/13/21 22:40	1
Thallium	ND		1.0	0.089	ug/L		09/13/21 08:04	09/13/21 22:40	1

Client Sample ID: LYMW10
Date Collected: 09/08/21 14:50
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.3**	**J**	5.0	0.33	ug/L		09/13/21 08:04	09/13/21 23:08	1
Thallium	ND		1.0	0.089	ug/L		09/13/21 08:04	09/13/21 23:08	1

Client Sample ID: LYMW11
Date Collected: 09/08/21 13:45
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.59**	**J**	5.0	0.33	ug/L		09/13/21 08:04	09/13/21 23:37	1
Thallium	ND		1.0	0.089	ug/L		09/13/21 08:04	09/13/21 23:37	1

Client Sample ID: BD1-20210908
Date Collected: 09/08/21 12:35
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.44**	**J**	5.0	0.33	ug/L		09/13/21 08:04	09/13/21 23:30	1
Thallium	ND		1.0	0.089	ug/L		09/13/21 08:04	09/13/21 23:30	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: EB1-20210908
Date Collected: 09/08/21 16:35
Date Received: 09/10/21 09:45
Lab Sample ID: 280-152811-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/13/21 08:04	09/13/21 23:34	1
Thallium	ND		1.0	0.089	ug/L		09/13/21 08:04	09/13/21 23:34	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW4
Date Collected: 09/08/21 12:20
Date Received: 09/10/21 09:45
Lab Sample ID: 280-152811-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.084**	**J**	0.20	0.027	ug/L		09/11/21 16:15	09/11/21 21:36	1

Client Sample ID: LYMW6R
Date Collected: 09/08/21 16:15
Date Received: 09/10/21 09:45
Lab Sample ID: 280-152811-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.038**	**J**	0.20	0.027	ug/L		09/11/21 16:15	09/11/21 21:38	1

Client Sample ID: LYMW10
Date Collected: 09/08/21 14:50
Date Received: 09/10/21 09:45
Lab Sample ID: 280-152811-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.049**	**J**	0.20	0.027	ug/L		09/11/21 16:15	09/11/21 21:41	1

Client Sample ID: LYMW11
Date Collected: 09/08/21 13:45
Date Received: 09/10/21 09:45
Lab Sample ID: 280-152811-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.081**	**J**	0.20	0.027	ug/L		09/11/21 16:15	09/11/21 21:44	1

Client Sample ID: BD1-20210908
Date Collected: 09/08/21 12:35
Date Received: 09/10/21 09:45
Lab Sample ID: 280-152811-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.046**	**J**	0.20	0.027	ug/L		09/11/21 16:15	09/11/21 21:46	1

Client Sample ID: EB1-20210908
Date Collected: 09/08/21 16:35
Date Received: 09/10/21 09:45
Lab Sample ID: 280-152811-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.035**	**J**	0.20	0.027	ug/L		09/11/21 16:15	09/11/21 21:49	1

Surrogate Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-152811-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		FBP	NBZ	TPHL	2MN	FLN10
Lab Sample ID	Client Sample ID	(31-107)	(20-123)	(46-137)	(50-150)	(50-150)
280-152811-1	LYMW4	78	97	93	84	93
280-152811-2	LYMW6R	80	88	101	87	96
280-152811-3	LYMW10	73	141 S1+	97	88	92
280-152811-3 - DL	LYMW10	76	142 S1+	94	94	94
280-152811-4	LYMW11	73	89	102	93	98
280-152811-5	BD1-20210908	84	94	98	90	95
280-152811-6	EB1-20210908	77	83	92	78	83
LCS 320-525161/2-A	Lab Control Sample	79	80	97	78	83
LCSD 320-525161/3-A	Lab Control Sample Dup	76	78	94	75	85
MB 320-525161/1-A	Method Blank	65	71	91	63	80

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14
2MN = 2-methylnaphthalene-d10
FLN10 = Fluoranthene-d10 (Surr)

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		OTPH	OTCN
Lab Sample ID	Client Sample ID	(50-115)	(26-152)
280-152811-1	LYMW4	90	117
280-152811-2	LYMW6R	88	117
280-152811-3	LYMW10	92	120
280-152811-4	LYMW11	88	129
280-152811-5	BD1-20210908	86	116
280-152811-6	EB1-20210908	87	128
LCS 280-549643/2-A	Lab Control Sample	91	111
LCSD 280-549643/3-A	Lab Control Sample Dup	91	115
MB 280-549643/1-A	Method Blank	86	118

Surrogate Legend

OTPH = o-Terphenyl
OTCN = n-Octacosane

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 320-525161/1-A
Matrix: Water
Analysis Batch: 525662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525161

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.050	0.0092	ug/L		09/15/21 08:44	09/16/21 15:59	1
Benzo[a]anthracene	ND		0.050	0.012	ug/L		09/15/21 08:44	09/16/21 15:59	1
Dibenz(a,h)anthracene	ND		0.050	0.012	ug/L		09/15/21 08:44	09/16/21 15:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*65*		*31 - 107*	*09/15/21 08:44*	*09/16/21 15:59*	*1*
Nitrobenzene-d5	*71*		*20 - 123*	*09/15/21 08:44*	*09/16/21 15:59*	*1*
Terphenyl-d14	*91*		*46 - 137*	*09/15/21 08:44*	*09/16/21 15:59*	*1*
2-methylnaphthalene-d10	*63*		*50 - 150*	*09/15/21 08:44*	*09/16/21 15:59*	*1*
Fluoranthene-d10 (Surr)	*80*		*50 - 150*	*09/15/21 08:44*	*09/16/21 15:59*	*1*

Lab Sample ID: LCS 320-525161/2-A
Matrix: Water
Analysis Batch: 525662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525161

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1-Methylnaphthalene			0.500	0.330		ug/L		66	38 - 107		
Benzo[a]anthracene			0.500	0.409		ug/L		82	54 - 117		
Dibenz(a,h)anthracene			0.500	0.377		ug/L		75	38 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*79*		*31 - 107*
Nitrobenzene-d5	*80*		*20 - 123*
Terphenyl-d14	*97*		*46 - 137*
2-methylnaphthalene-d10	*78*		*50 - 150*
Fluoranthene-d10 (Surr)	*83*		*50 - 150*

Lab Sample ID: LCSD 320-525161/3-A
Matrix: Water
Analysis Batch: 525662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 525161

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene			0.500	0.345		ug/L		69	38 - 107	4	30
Benzo[a]anthracene			0.500	0.435		ug/L		87	54 - 117	6	30
Dibenz(a,h)anthracene			0.500	0.430		ug/L		86	38 - 123	13	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*76*		*31 - 107*
Nitrobenzene-d5	*78*		*20 - 123*
Terphenyl-d14	*94*		*46 - 137*
2-methylnaphthalene-d10	*75*		*50 - 150*
Fluoranthene-d10 (Surr)	*85*		*50 - 150*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-549643/1-A
Matrix: Water
Analysis Batch: 550679

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549643

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	35.6	J	250	33	ug/L		09/13/21 11:35	09/22/21 15:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 115*	*09/13/21 11:35*	*09/22/21 15:55*	*1*
n-Octacosane	*118*		*26 - 152*	*09/13/21 11:35*	*09/22/21 15:55*	*1*

Lab Sample ID: LCS 280-549643/2-A
Matrix: Water
Analysis Batch: 550679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549643

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			1980	1570		ug/L		79	54 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*91*		*50 - 115*
n-Octacosane	*111*		*26 - 152*

Lab Sample ID: LCSD 280-549643/3-A
Matrix: Water
Analysis Batch: 550679

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549643

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			1980	1460		ug/L		74	54 - 115	7	31

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*91*		*50 - 115*
n-Octacosane	*115*		*26 - 152*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-549585/1-A
Matrix: Water
Analysis Batch: 549748

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549585

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	4.4	ug/L		09/13/21 08:04	09/14/21 03:23	1
Cobalt	ND		10	1.2	ug/L		09/13/21 08:04	09/14/21 03:23	1
Iron	ND		100	22	ug/L		09/13/21 08:04	09/14/21 03:23	1
Lead	ND		9.0	2.7	ug/L		09/13/21 08:04	09/14/21 03:23	1
Manganese	ND		10	1.9	ug/L		09/13/21 08:04	09/14/21 03:23	1

Lab Sample ID: LCS 280-549585/2-A
Matrix: Water
Analysis Batch: 549748

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549585

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Boron			1000	950		ug/L		95	86 - 110		

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-549585/2-A
Matrix: Water
Analysis Batch: 549748

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549585

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	1000	958		ug/L		96	89 - 111
Iron	10000	9740		ug/L		97	89 - 115
Lead	1000	952		ug/L		95	89 - 110
Manganese	1000	968		ug/L		97	90 - 110

Lab Sample ID: 280-152811-1 MS
Matrix: Water
Analysis Batch: 549748

Client Sample ID: LYMW4
Prep Type: Total/NA
Prep Batch: 549585

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1600		1000	2540		ug/L		98	87 - 113
Cobalt	ND		1000	945		ug/L		95	82 - 119
Iron	4400		10000	14000		ug/L		96	52 - 155
Lead	2.9	J	1000	939		ug/L		94	89 - 121
Manganese	480		1000	1410		ug/L		94	79 - 121

Lab Sample ID: 280-152811-1 MSD
Matrix: Water
Analysis Batch: 549748

Client Sample ID: LYMW4
Prep Type: Total/NA
Prep Batch: 549585

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1600		1000	2560		ug/L		100	87 - 113	1	20
Cobalt	ND		1000	948		ug/L		95	82 - 119	0	20
Iron	4400		10000	14200		ug/L		97	52 - 155	1	20
Lead	2.9	J	1000	943		ug/L		94	89 - 121	0	20
Manganese	480		1000	1420		ug/L		95	79 - 121	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-549586/1-A
Matrix: Water
Analysis Batch: 549718

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549586

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/13/21 08:04	09/13/21 22:30	1
Thallium	ND		1.0	0.089	ug/L		09/13/21 08:04	09/13/21 22:30	1

Lab Sample ID: LCS 280-549586/2-A
Matrix: Water
Analysis Batch: 549718

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	36.6		ug/L		91	85 - 117
Thallium	40.0	37.9		ug/L		95	85 - 118

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-152811-2 MS
Matrix: Water
Analysis Batch: 549718

Client Sample ID: LYMW6R
Prep Type: Total/NA
Prep Batch: 549586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.3	J	40.0	36.5		ug/L		88	85 - 117
Thallium	ND		40.0	35.2		ug/L		88	85 - 118

Lab Sample ID: 280-152811-2 MSD
Matrix: Water
Analysis Batch: 549718

Client Sample ID: LYMW6R
Prep Type: Total/NA
Prep Batch: 549586

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.3	J	40.0	38.0		ug/L		92	85 - 117	4	20
Thallium	ND		40.0	37.9		ug/L		95	85 - 118	7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-549556/1-A
Matrix: Water
Analysis Batch: 549564

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 549556

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0340	J	0.20	0.027	ug/L		09/11/21 16:15	09/11/21 20:45	1

Lab Sample ID: LCS 280-549556/2-A
Matrix: Water
Analysis Batch: 549564

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 549556

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.76		ug/L		95	84 - 120

Lab Sample ID: LCSD 280-549556/3-A
Matrix: Water
Analysis Batch: 549564

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 549556

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	5.00	4.74		ug/L		95	84 - 120	0	15

GC/MS Semi VOA

Prep Batch: 525161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	3510C	
280-152811-2	LYMW6R	Total/NA	Water	3510C	
280-152811-3	LYMW10	Total/NA	Water	3510C	
280-152811-3 - DL	LYMW10	Total/NA	Water	3510C	
280-152811-4	LYMW11	Total/NA	Water	3510C	
280-152811-5	BD1-20210908	Total/NA	Water	3510C	
280-152811-6	EB1-20210908	Total/NA	Water	3510C	
MB 320-525161/1-A	Method Blank	Total/NA	Water	3510C	
LCS 320-525161/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 320-525161/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 525662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	8270D SIM	525161
280-152811-2	LYMW6R	Total/NA	Water	8270D SIM	525161
280-152811-3	LYMW10	Total/NA	Water	8270D SIM	525161
280-152811-5	BD1-20210908	Total/NA	Water	8270D SIM	525161
280-152811-6	EB1-20210908	Total/NA	Water	8270D SIM	525161
MB 320-525161/1-A	Method Blank	Total/NA	Water	8270D SIM	525161
LCS 320-525161/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	525161
LCSD 320-525161/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	525161

Analysis Batch: 525883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-3 - DL	LYMW10	Total/NA	Water	8270D SIM	525161
280-152811-4	LYMW11	Total/NA	Water	8270D SIM	525161

GC Semi VOA

Prep Batch: 549643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	3510C	
280-152811-2	LYMW6R	Total/NA	Water	3510C	
280-152811-3	LYMW10	Total/NA	Water	3510C	
280-152811-4	LYMW11	Total/NA	Water	3510C	
280-152811-5	BD1-20210908	Total/NA	Water	3510C	
280-152811-6	EB1-20210908	Total/NA	Water	3510C	
MB 280-549643/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-549643/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-549643/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 550679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	8015D	549643
280-152811-2	LYMW6R	Total/NA	Water	8015D	549643
280-152811-3	LYMW10	Total/NA	Water	8015D	549643
280-152811-4	LYMW11	Total/NA	Water	8015D	549643
280-152811-5	BD1-20210908	Total/NA	Water	8015D	549643
280-152811-6	EB1-20210908	Total/NA	Water	8015D	549643
MB 280-549643/1-A	Method Blank	Total/NA	Water	8015D	549643
LCS 280-549643/2-A	Lab Control Sample	Total/NA	Water	8015D	549643

GC Semi VOA (Continued)

Analysis Batch: 550679 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-549643/3-A	Lab Control Sample Dup	Total/NA	Water	8015D	549643

Metals

Prep Batch: 549556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	7470A	
280-152811-2	LYMW6R	Total/NA	Water	7470A	
280-152811-3	LYMW10	Total/NA	Water	7470A	
280-152811-4	LYMW11	Total/NA	Water	7470A	
280-152811-5	BD1-20210908	Total/NA	Water	7470A	
280-152811-6	EB1-20210908	Total/NA	Water	7470A	
MB 280-549556/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-549556/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-549556/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Analysis Batch: 549564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	7470A	549556
280-152811-2	LYMW6R	Total/NA	Water	7470A	549556
280-152811-3	LYMW10	Total/NA	Water	7470A	549556
280-152811-4	LYMW11	Total/NA	Water	7470A	549556
280-152811-5	BD1-20210908	Total/NA	Water	7470A	549556
280-152811-6	EB1-20210908	Total/NA	Water	7470A	549556
MB 280-549556/1-A	Method Blank	Total/NA	Water	7470A	549556
LCS 280-549556/2-A	Lab Control Sample	Total/NA	Water	7470A	549556
LCSD 280-549556/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	549556

Prep Batch: 549585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	3010A	
280-152811-2	LYMW6R	Total/NA	Water	3010A	
280-152811-3	LYMW10	Total/NA	Water	3010A	
280-152811-4	LYMW11	Total/NA	Water	3010A	
280-152811-5	BD1-20210908	Total/NA	Water	3010A	
280-152811-6	EB1-20210908	Total/NA	Water	3010A	
MB 280-549585/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-549585/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-152811-1 MS	LYMW4	Total/NA	Water	3010A	
280-152811-1 MSD	LYMW4	Total/NA	Water	3010A	

Prep Batch: 549586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	3020A	
280-152811-2	LYMW6R	Total/NA	Water	3020A	
280-152811-3	LYMW10	Total/NA	Water	3020A	
280-152811-4	LYMW11	Total/NA	Water	3020A	
280-152811-5	BD1-20210908	Total/NA	Water	3020A	
280-152811-6	EB1-20210908	Total/NA	Water	3020A	
MB 280-549586/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-549586/2-A	Lab Control Sample	Total/NA	Water	3020A	

Metals (Continued)

Prep Batch: 549586 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-2 MS	LYMW6R	Total/NA	Water	3020A	
280-152811-2 MSD	LYMW6R	Total/NA	Water	3020A	

Analysis Batch: 549718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	6020A	549586
280-152811-2	LYMW6R	Total/NA	Water	6020A	549586
280-152811-3	LYMW10	Total/NA	Water	6020A	549586
280-152811-4	LYMW11	Total/NA	Water	6020A	549586
280-152811-5	BD1-20210908	Total/NA	Water	6020A	549586
280-152811-6	EB1-20210908	Total/NA	Water	6020A	549586
MB 280-549586/1-A	Method Blank	Total/NA	Water	6020A	549586
LCS 280-549586/2-A	Lab Control Sample	Total/NA	Water	6020A	549586
280-152811-2 MS	LYMW6R	Total/NA	Water	6020A	549586
280-152811-2 MSD	LYMW6R	Total/NA	Water	6020A	549586

Analysis Batch: 549748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-152811-1	LYMW4	Total/NA	Water	6010C	549585
280-152811-2	LYMW6R	Total/NA	Water	6010C	549585
280-152811-3	LYMW10	Total/NA	Water	6010C	549585
280-152811-4	LYMW11	Total/NA	Water	6010C	549585
280-152811-5	BD1-20210908	Total/NA	Water	6010C	549585
280-152811-6	EB1-20210908	Total/NA	Water	6010C	549585
MB 280-549585/1-A	Method Blank	Total/NA	Water	6010C	549585
LCS 280-549585/2-A	Lab Control Sample	Total/NA	Water	6010C	549585
280-152811-1 MS	LYMW4	Total/NA	Water	6010C	549585
280-152811-1 MSD	LYMW4	Total/NA	Water	6010C	549585

Lab Chronicle

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant

Job ID: 280-152811-1

Client Sample ID: LYMW4

Date Collected: 09/08/21 12:20
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			266.2 mL	1 mL	525161	09/15/21 08:44	AWK	TAL SAC
Total/NA	Analysis	8270D SIM		1			525662	09/16/21 17:27	Y1S	TAL SAC
Total/NA	Prep	3510C			1038.5 mL	1 mL	549643	09/13/21 11:35	SKS	TAL DEN
Total/NA	Analysis	8015D		1			550679	09/22/21 17:51	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	549585	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6010C		1			549748	09/14/21 03:30	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	549586	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6020A		1			549718	09/13/21 22:37	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	549556	09/11/21 16:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			549564	09/11/21 21:36	NK	TAL DEN

Client Sample ID: LYMW6R

Date Collected: 09/08/21 16:15
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			257.3 mL	1 mL	525161	09/15/21 08:44	AWK	TAL SAC
Total/NA	Analysis	8270D SIM		1			525662	09/16/21 17:57	Y1S	TAL SAC
Total/NA	Prep	3510C			1046.1 mL	1 mL	549643	09/13/21 11:35	SKS	TAL DEN
Total/NA	Analysis	8015D		1			550679	09/22/21 18:14	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	549585	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6010C		1			549748	09/14/21 03:58	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	549586	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6020A		1			549718	09/13/21 22:40	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	549556	09/11/21 16:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			549564	09/11/21 21:38	NK	TAL DEN

Client Sample ID: LYMW10

Date Collected: 09/08/21 14:50
Date Received: 09/10/21 09:45

Lab Sample ID: 280-152811-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			267.8 mL	1 mL	525161	09/15/21 08:44	AWK	TAL SAC
Total/NA	Analysis	8270D SIM		1			525662	09/16/21 18:26	Y1S	TAL SAC
Total/NA	Prep	3510C	DL		267.8 mL	1 mL	525161	09/15/21 08:44	AWK	TAL SAC
Total/NA	Analysis	8270D SIM	DL	5			525883	09/17/21 11:12	Y1S	TAL SAC
Total/NA	Prep	3510C			1036.9 mL	1 mL	549643	09/13/21 11:35	SKS	TAL DEN
Total/NA	Analysis	8015D		1			550679	09/22/21 18:37	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	549585	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6010C		1			549748	09/14/21 04:02	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	549586	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6020A		1			549718	09/13/21 23:08	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	549556	09/11/21 16:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			549564	09/11/21 21:41	NK	TAL DEN

Lab Chronicle

Client: Trihydro Corporation
Job ID: 280-152811-1
Project/Site: Former Laramie Yttrium Plant

Client Sample ID: LYMW11
Lab Sample ID: 280-152811-4
Date Collected: 09/08/21 13:45
Matrix: Water
Date Received: 09/10/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			269.5 mL	1 mL	525161	09/15/21 08:44	AWK	TAL SAC
Total/NA	Analysis	8270D SIM		1			525883	09/17/21 11:42	Y1S	TAL SAC
Total/NA	Prep	3510C			1044.3 mL	1 mL	549643	09/13/21 11:35	SKS	TAL DEN
Total/NA	Analysis	8015D		1			550679	09/22/21 19:00	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	549585	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6010C		1			549748	09/14/21 04:06	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	549586	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6020A		1			549718	09/13/21 23:37	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	549556	09/11/21 16:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			549564	09/11/21 21:44	NK	TAL DEN

Client Sample ID: BD1-20210908
Lab Sample ID: 280-152811-5
Date Collected: 09/08/21 12:35
Matrix: Water
Date Received: 09/10/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			259.5 mL	1 mL	525161	09/15/21 08:44	AWK	TAL SAC
Total/NA	Analysis	8270D SIM		1			525662	09/16/21 19:26	Y1S	TAL SAC
Total/NA	Prep	3510C			1040.1 mL	1 mL	549643	09/13/21 11:35	SKS	TAL DEN
Total/NA	Analysis	8015D		1			550679	09/22/21 19:23	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	549585	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6010C		1			549748	09/14/21 04:09	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	549586	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6020A		1			549718	09/13/21 23:30	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	549556	09/11/21 16:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			549564	09/11/21 21:46	NK	TAL DEN

Client Sample ID: EB1-20210908
Lab Sample ID: 280-152811-6
Date Collected: 09/08/21 16:35
Matrix: Water
Date Received: 09/10/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			266.7 mL	1 mL	525161	09/15/21 08:44	AWK	TAL SAC
Total/NA	Analysis	8270D SIM		1			525662	09/16/21 19:55	Y1S	TAL SAC
Total/NA	Prep	3510C			1038.8 mL	1 mL	549643	09/13/21 11:35	SKS	TAL DEN
Total/NA	Analysis	8015D		1			550679	09/22/21 19:46	MAM	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	549585	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6010C		1			549748	09/14/21 04:13	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	549586	09/13/21 08:04	PNS	TAL DEN
Total/NA	Analysis	6020A		1			549718	09/13/21 23:34	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	549556	09/11/21 16:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			549564	09/11/21 21:49	NK	TAL DEN

Lab Chronicle

Client: Trihydro Corporation
Job ID: 280-152811-1
Project/Site: Former Laramie Yttrium Plant

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Trihydro Corporation
Job ID: 280-152811-1
Project/Site: Former Laramie Yttrium Plant

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	11-02-21
A2LA	ISO/IEC 17025	2907.01	11-02-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-28-22
Arizona	State	AZ0713	12-21-21
Arkansas DEQ	State	19-047-0	06-01-21 *
California	State	2513	01-08-22
Connecticut	State	PH-0686	09-30-22
Florida	NELAP	E87667-57	06-30-22
Georgia	State	4025-011	01-08-22
Illinois	NELAP	2000172019-1	04-30-22
Iowa	State	IA#370	12-02-22
Kansas	NELAP	E-10166	04-30-22
Kentucky (WW)	State	KY98047	12-31-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-22
Minnesota	NELAP	1788752	12-31-21
Nevada	State	CO000262020-1	07-31-22
New Hampshire	NELAP	205319	04-29-22
New Jersey	NELAP	190002	07-01-22
New York	NELAP	59923	04-01-22
North Carolina (WW/SW)	State	358	12-31-21
North Dakota	State	R-034	01-08-22
Oklahoma	State	2018-006	09-01-21 *
Oregon	NELAP	4025-011	01-08-22
Pennsylvania	NELAP	013	07-31-22
South Carolina	State	72002001	01-08-22
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-20-18	09-30-21
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-21 *
Virginia	NELAP	10490	06-14-22
Washington	State	C583-19	08-03-22
West Virginia DEP	State	354	11-30-21
Wisconsin	State	999615430	08-31-22
Wyoming (UST)	A2LA	2907.01	10-31-21

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-22
Arkansas DEQ	State	88-0691	06-17-21 *
California	State	2897	01-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Trihydro Corporation
Job ID: 280-152811-1
Project/Site: Former Laramie Yttrium Plant

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Colorado	State	CA0004	08-31-21 *
Florida	NELAP	E87570	06-30-22
Georgia	State	4040	01-29-22
Hawaii	State	<cert No.>	01-29-22
Illinois	NELAP	200060	03-18-22
Kansas	NELAP	E-10375	10-31-21
Louisiana	NELAP	01944	06-30-22
Maine	State	CA00004	04-14-22
Michigan	State	9947	01-29-22
Nevada	State	CA00044	08-31-22
New Hampshire	NELAP	2997	04-18-22
New Jersey	NELAP	CA005	06-30-22
New York	NELAP	11666	04-01-22
Ohio	State	41252	01-29-22
Oregon	NELAP	4040	01-30-23
Texas	NELAP	T104704399-19-13	05-31-22
US Fish & Wildlife	US Federal Programs	58448	07-31-22
Utah	NELAP	CA000442021-12	03-01-22
Virginia	NELAP	460278	03-14-22
Washington	State	C581	05-05-22
West Virginia (DW)	State	9930C	12-31-21
Wisconsin	State	998204680	08-31-22
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada CO 80002
Phone (303) 736-0100 Phone (303) 431 7171

Chain of Custody Record

280-152811 Chain of Custody

eurofins Environment Testing America

Client Information	Sampler: 307-745-7474	Lab PM: Rydberg, Donna R	COC No: 80-111297-32095.1
Client Contact: Ryan Athey	Phone: Taylor Speckman	E-Mail: Donna.Rydberg@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Trihydro Corporation	PWSID:	Analysis Requested	Job #:
Address: 1252 Commerce Drive	Due Date Requested:		
City: Laramie	TAT Requested (days):		
State, Zip: WY 82070	Compliance Project: Δ Yes Δ No		
Phone:	PO #: TBD		
Email: rathey@trihydro.com	WO #:		
Project Name: Former Laramie Yttrium Plant	Project #: 28022360		
Site: Laramie, WY	SSOW#:		

Preservation Codes:

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO TPH-DRO	6010C, 6020A, 7470A	8270D_SIM 8270D SIM (3 cmpds) ETA Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N		
LY MW4	9-8-21	1220	G	Water			X	X	X	3	8270D SIM direct shipped to Sacramento.
LY MW6R	9 8 21	1615	G	Water			X	X	X	3	
LY MW 10	9.8 21	1450	G	Water			X	X	X	3	
LY MW 11	9-8 21	1345	G	Water			X	X	X	3	
BD1-20210908	9 8 21	—	G	Water			X	X	X	3	
EB1-20210908	9 8 21	1635	G	Water			X	X	X	3	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Taylor Speckman	9 9 21 1000				
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: -0.4, -0.5 CF +1.0 IR 11

Ver: 01/16/2019

9/23/2021

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada CO 80002
Phone (303) 736-0100 Phone (303) 431 7171

Chain of Custody Record

280-152811 Chain of Custody

eurofins Environment Testing America

Client Information	Sampler: 307-745-7474 Taylor Speckman	Lab PM: Rydberg, Donna R	QC No: 80-111297-32095.1
Client Contact: Ryan Athey	Phone:	E-Mail: Donna.Rydberg@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Trihydro Corporation	PWSID:	Analysis Requested	Job #:
Address: 1252 Commerce Drive	Due Date Requested:		
City: Laramie	TAT Requested (days):		
State, Zip: WY 82070	Compliance Project: Δ Yes Δ No		
Phone:	PO #: TBD		
Email: rathey@trihydro.com	WO #:		
Project Name: Former Laramie Yttrium Plant	Project #: 28022360		
Site: Laramie, WY	SSOW#:		

Preservation Codes:

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO TPH-DRO	6010C, 6020A, 7470A	8270D_SIM 8270D SIM (3 cmpds) ETA Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N		
LY MW4	9-8-21	1220	G	Water			X	X	X	3	8270D SIM direct shipped to Sacramento.
LY MW6R	9 8 21	1615	G	Water			X	X	X	3	
LY MW 10	9.8 21	1450	G	Water			X	X	X	3	
LY MW 11	9-8 21	1345	G	Water			X	X	X	3	
BD1-20210908	9 8 21	—	G	Water			X	X	X	3	
EB1-20210908	9 8 21	1635	G	Water			X	X	X	3	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Taylor Speckman	9 9 21 1000			09/10/2021 0945	ETA DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.

Cooler Temperature(s) °C and Other Remarks: -0.4, -0.5 CF +1.0 IR 11

Ver: 01/16/2019

9/23/2021

eurofins | Environment Testing TestAmerica

ORIGIN ID PHDA (307) 745-7474
RYAN ATHEY
TRIHYDRO CORPORATION
1252 COMMERCE DRIVE

LARAMIE WY 82070
UNITED STATES US

SHIP DATE 10AUG21
ACTWGT 10.00 LB MAN
CAD 0574282/CAFE3408

TO
EUROFINS TESTAMERICA DENVER
4955 YARROW STREET

ARVADA CO 800024517
(303) 736-0100
REF. S200-111297

FedEx Express

E

TRK#

FedEx.
TRK# 0221 5117 0014 6862

FRI - 10 SEP AA
PRIORITY OVERNIGHT

SAT

80002
CO-US
DEN

72 LAAA

637985 09Sep2021 FTCA 560G3/169A/1823

eurofins | Environment Testing TestAmerica

1576117

Custody Seal

SIGNATURE

DATE 9.9.21

280-152811 Waybill

Ref S280-111297 Date 10Aug21 SHIPPING 0 00
Dep Wgt 10 00 LBS SPECIAL 0 00
HANDLING 0 00
DV 0 00 TOTAL 0 00

Svcs: PRIORITY OVERNIGHT Master 5117 0014 6862
TRCK 5117 0014 6873

eurofins | Environment Testing TestAmerica

ORIGIN ID PHDA (307) 745-7474
RYAN ATHEY
TRIHYDRO CORPORATION
1252 COMMERCE DRIVE

LARAMIE, WY 82070
UNITED STATES US

SHIP DATE 10AUG21
ACTWGT 10 00 LB MAN
CAD 0574282/CAFE3408

TO
EUROFINS TESTAMERICA DENVER
4955 YARROW STREET

ARVADA CO 800024517
(303) 736 0100
REF. S280 – 111297
RMA

FedEx Express E

FedEx
TRK# 0221 5117 0014 6873

FRI – 10 SEP AA
PRIORITY OVERNIGHT

72 LAAA

80002
CO-US
DEN

637905 09Sep2021 FTCA 56DG3/169A/1B23

eurofins | Environment Testing TestAmerica
1576116
Custody Seal 9.9.21

eurofins | Environment Testing TestAmerica

Part # 156870-434 RIT2 EXP 04/18

ORIGIN ID PHDA (307) 745-7474
RYAN ATHEY
TRIHYDRO CORPORATION
1252 COMMERCE DRIVE

LARAMIE WY 82070
UNITED STATES US

SHIP DATE 10AUG21
ACTWGT 10.00 LB MAN
CAD 0574282/CAFE3408

TO

EUROFINS TESTAMERICA DENVER
4955 YARROW STREET

ARVADA CO 800024517
(303) 736-0100
REF. S200-111297

FedEx Express

E

RETURNS MON-SAT
TRK#

FedEx.
TRK# 0221 5117 0014 6862

FRI - 10 SEP AA
PRIORITY OVERNIGHT

80002
CO-US
DEN

72 LAAA

637905 09Sep2021 FTCA 56DG3/169A/1823

eurofins | Environment Testing TestAmerica

1576117

Custody Seal

SIGNATURE

DATE 9.9.21

280-152811 Waybill

Ref S280-111297 Date 10Aug21 SHIPPING 0 00
Dep Wgt 10 00 LBS SPECIAL 0 00
HANDLING 0 00
DV 0 00 TOTAL 0 00

Svcs: PRIORITY OVERNIGHT Master 5117 0014 6862
TRCK 5117 0014 6873

eurofins | Environment Testing TestAmerica

ORIGIN ID PHDA (307) 745-7474
RYAN ATHEY
TRIHYDRO CORPORATION
1252 COMMERCE DRIVE

LARAMIE, WY 82070
UNITED STATES US

SHIP DATE 10AUG21
ACTWGT 10 00 LB MAN
CAD 0574282/CAFE3409

TO

EUROFINS TESTAMERICA DENVER
4955 YARROW STREET

ARVADA CO 800024517
(303) 736 0100
REF. S280 – 111297

RMA

FedEx Express

FedEx.
TRK# 0221 5117 0014 6873

FRI - 10 SEP AA
PRIORITY OVERNIGHT

72 LAAA

80002
CO-US
DEN

637905 09Sep2021 FTCA 56DG3/169A/1B23

eurofins | Environment Testing TestAmerica

1576116

ly Seal 9.9.21

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Phone (916) 372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Taylor Speckman	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):	COC No: 280-111303-32096.1
Client Contact: Ryan Athey	Phone: 307-745-7474	E-Mail: Donna.Rydberg@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Trihydro Corporation	PWSID:			Job #:

Address: 1252 Commerce Drive	Due Date Requested:
City: Laramie	TAT Requested (days):
State, Zip: WY, 82070	Compliance Project: Δ Yes Δ No
Phone:	PO #: TBD
Email: rathey@trihydro.com	WO #:
Project Name: Former Laramie Yttrium Plant	Project #: 28022360
Site: Laramie, WY	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO - TPH-DRO	6010C, 6020A, 7470A	8270D_SIM - 8270D SIM (3 cmpds) ETA Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N		
LYMW4	9.8.21	1220	G	Water	N		X	X	X	2	Please email COC to Denver for login number. Metals & DRO direct shipped to Denver.
LYMW6R	9.8.21	1615	G	Water	N		X	X	X	2	
LYMW10	9.8.21	1450	G	Water	N		X	X	X	2	
LYMW11	9.8.21	1345	G	Water	N		X	X	X	2	
BD1-20210908	9.8.21	—	G	Water	N		X	X	X	2	
EB1-20210908	9.8.21	1635	G	Water	N		X	X	X	2	

280-152811 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: **Email COC to Denver for login number.**

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Taylor Speckman	Date/Time: 9-9-21 1000	Company	Received by:	Date/Time: 9/13/21 1000	Company ETAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☒ Yes Δ No	Custody Seal No.: 1736595	Cooler Temperature(s) °C and Other Remarks: 16.9 ∝

Ver: 01/16/2019

• ID: 04 NO + 4 So 9/14/21

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Phone (916) 372-1059

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Taylor Speckman	Lab PM: Rydberg, Donna R	Carrier Tracking No(s):	COC No: 280-111303-32096.1
Client Contact: Ryan Athey	Phone: 307-745-7474	E-Mail: Donna.Rydberg@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Trihydro Corporation	PWSID:			Job #:

Address: 1252 Commerce Drive	Due Date Requested:
City: Laramie	TAT Requested (days):
State, Zip: WY, 82070	Compliance Project: Δ Yes Δ No
Phone:	PO #: TBD
Email: rathey@trihydro.com	WO #:
Project Name: Former Laramie Yttrium Plant	Project #: 28022360
Site: Laramie, WY	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO - TPH-DRO	6010C, 6020A, 7470A	8270D_SIM - 8270D SIM (3 cmpds) ETA Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N		
LYMW4	9.8.21	1220	G	Water	N		X	X	X	2	Please email COC to Denver for login number. Metals & DRO direct shipped to Denver.
LYMW6R	9.8.21	1615	G	Water	N		X	X	X	2	
LYMW10	9.8.21	1450	G	Water	N		X	X	X	2	
LYMW11	9.8.21	1345	G	Water	N		X	X	X	2	
BD1-20210908	9.8.21	—	G	Water	N		X	X	X	2	
EB1-20210908	9.8.21	1635	G	Water	N		X	X	X	2	

280-152811 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: **Email COC to Denver for login number.**

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Taylor Speckman	9-9-21 1000			9/13/21 1000	ETAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☒ Yes Δ No | Custody Seal No.: 1736595 | Cooler Temperature(s) °C and Other Remarks: 16.9°C

Ver: 01/16/2019

• ID: 04 NO + 4 So 9/14/21

Login Sample Receipt Checklist

Client: Trihydro Corporation

Job Number: 280-152811-1

Login Number: 152811

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Rystrom, Joshua R

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

Login Sample Receipt Checklist

Client: Trihydro Corporation

Job Number: 280-152811-1

Login Number: 152811
List Number: 2
Creator: Oropeza, Salvador

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/14/21 01:57 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1736595
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento
Sample Receiving Notes

280-152811 Field Sheet

Job: _____

Tracking # : 5174-1263-5770

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: T01 Corr. Factor: (+ / -) 0 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 173 6595

Cooler ID: —

Temp Observed: 16.9 °C Corrected: 16.9 °C

From: Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☐	☒	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: MM Date: 9/13/21

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Sample containers have legible labels?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Containers are not broken or leaking?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Samples w/o discrepancies?	☐	☒	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: SO Date: 9/14/21

Notes:

Sept 10 (Friday delivery)

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
Samples received within hold time?	☒	☐	☐
NCM Filed?	☒	☐	☐
Log Release checked in TALS?	☒ SO 9/14/21	☐	☐

Initials: SO Date: 9/14/21

WL6A

eurofins | Environment Testing TestAmerica

Part # 156070-434 RTR2 EXP 10/21

ORIGIN ID:PHDA (307) 745-7474
RYAN ATHEY
TRIHYDRO CORPORATION
1252 COMMERCE DRIVE

LARAMIE, WY 82070
UNITED STATES US

SHIP DATE: 10AUG21
ACTWGT: 10.00 LB MAN
CAD: 0562071/CAFE3504

TO

EUROFINS TESTAMERICA SACRAMENTO
880 RIVERSIDE PARKWAY

WEST SACRAMENTO CA 956051500
(916) 373 - 5600
REF: 8200 - 111393

FedEx Express

E

RETURNS MON-SAT

FedEx

TRK# 0221 5174 1263 5770

FRI - 10 SEP AA

PRIORITY OVERNIGHT

NH BLUA

95605
CA-US
SMF

637905 09Sep2021 FTCA 560G3/169A/1823

eurofins | Environment Testing TestAmerica

1736595

Seal 9.9.21

Custody Seal

DATE

SIGNATURE

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1736595

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Sacramento
Sample Receiving Notes

280-152811 Field Sheet

Job: _____

Tracking # : 5174-1263-5770

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID: E01 Corr. Factor: (+ / -) 0 °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 173 6595

Cooler ID: —

Temp Observed: 16.9 °C Corrected: 16.9 °C

From: Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☐	☒	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: MM Date: 9/13/21

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Sample containers have legible labels?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Containers are not broken or leaking?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Samples w/o discrepancies?	☐	☒	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: SO Date: 9/14/21

Notes:

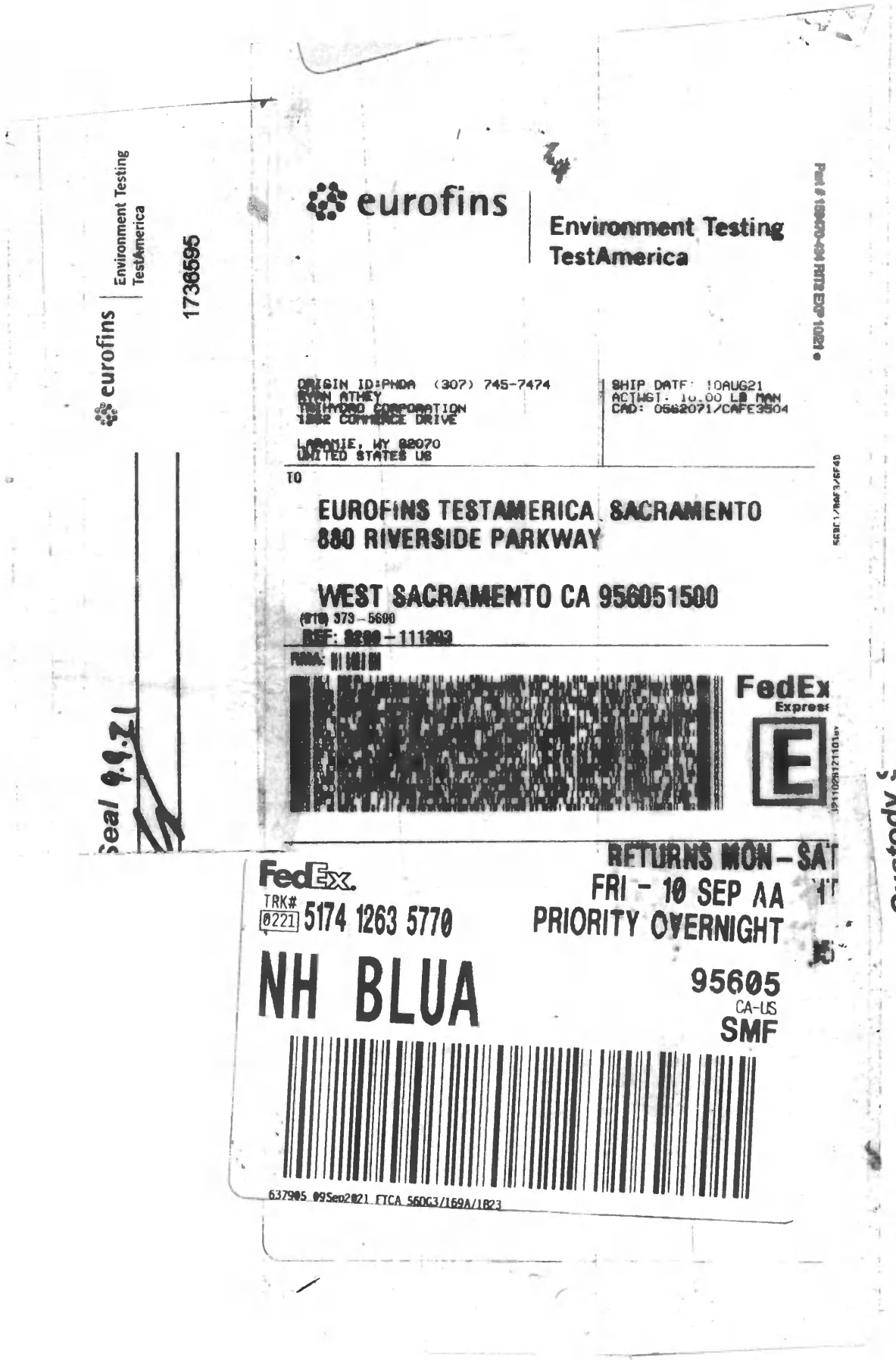
Sept 10 (Friday delivery)

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
Samples received within hold time?	☒	☐	☐
NCM Filed?	☒	☐	☐
Log Release checked in TALS?	☒ SO 9/14/21	☐	☐

Initials: SO Date: 9/14/21

WL6A


eurofins
Environment Testing
TestAmerica
1736595
Part # 158000-494 REV EXP 10/21
ORIGIN ID:PHDA (307) 745-7474
SHIP DATE: 10AUG21
CAD: 0562071/CAFE3504
TO
EUROFINS TESTAMERICA, SACRAMENTO
880 RIVERSIDE PARKWAY
WEST SACRAMENTO CA 956051500
FedEx
Express
RETURNS MON-SAT
FRI - 10 SEP AA
PRIORITY OVERNIGHT
FedEx.
TRK# 0221 5174 1263 5770
NH BLUA
95605
CA-US
SMF
637905 09Sep2021 FTCA 560G3/169A/1823
Custody
DATE
SIGNATURE
1736595
eurofins
Environment Testing
TestAmerica

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-166106-1
Client Project/Site: Former Laramie Yttrium Plant 2022

For:
Trihydro Corporation
1252 Commerce Drive
Laramie, Wyoming 82070

Attn: Ryan Athey

Authorized for release by:
9/26/2022 7:39:48 PM
Patrick McEntee, Client Service Manager
(303)736-0107
Patrick.McEntee@et.eurofinsus.com

Designee for

Janice Winn-Shilling, Senior Project Manager
(303)736-0100
Janice.Winn-Shilling@ET.eurofinsUS.com

Table of Contents

Definitions/Glossary

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-166106-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: Trihydro Corporation

Project: Former Laramie Yttrium Plant 2022

Report Number: 280-166106-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 9/2/2022 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.3º C and 2.5º C.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)

Samples LYMW04 (280-166106-1), LYMW06R (280-166106-2), LYMW10 (280-166106-3), LYMW11 (280-166106-4), BD1-20220831 (280-166106-5) and EB-20220830 (280-166106-6) were analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 09/06/2022 and 09/08/2022 and analyzed on 09/12/2022 and 09/23/2022.

Surrogate recovery for the following sample was outside control limits: LYMW10 (280-166106-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Instead of the standard 250 mL denoted for LVI, 500 mL of the aqueous sample was received in a 500 mL amber bottle. The original bottle was spiked with twice the amount of surrogate at 500 uL, and a 250 mL aliquot was taken to be extracted. These samples are associated with method 8270D_SIM aqueous in preparation batch 320-614513. LYMW10 (280-166106-3), LYMW11 (280-166106-4), BD1-20220831 (280-166106-5) and EB-20220830 (280-166106-6)

The following samples formed emulsions during the extraction procedure: LYMW11 (280-166106-4) and BD1-20220831 (280-166106-5). The emulsions were broken up using sodium sulfate. These samples are associated with method 8270D_SIM aqueous in preparation batch 320-614513.

The following samples LYMW04 (280-166106-1) and LYMW06R (280-166106-2) were received in 500mL amber glass bottles instead of 250mL bottles. Therefore the samples were spiked with twice the LVI surrogate amount, shaken and a 250mL aliquot was taken out. The 250 mL aliquot was used for extraction. The sample(s) are associated with method 8270D_SIM aqueous in preparation batch 320-615122.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8270C_SIM/ 8270D_SIM aqueous in preparation batch 320-615122.

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

DIESEL RANGE ORGANICS

Job ID: 280-166106-1 (Continued)

Laboratory: Eurofins Denver (Continued)

Samples LYMW04 (280-166106-1), LYMW06R (280-166106-2), LYMW10 (280-166106-3), LYMW11 (280-166106-4), BD1-20220831 (280-166106-5) and EB-20220830 (280-166106-6) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015D - DRO. The samples were prepared on 09/06/2022 and analyzed on 09/13/2022.

The following samples LYMW04 (280-166106-1), LYMW06R (280-166106-2), LYMW10 (280-166106-3), LYMW11 (280-166106-4) and BD1-20220831 (280-166106-5) were yellow in color, preparation batch 280-586001, method 8015D_DRO.

The following samples LYMW04 (280-166106-1), LYMW06R (280-166106-2), LYMW10 (280-166106-3), LYMW11 (280-166106-4) and BD1-20220831 (280-166106-5) contained sediment, preparation batch 280-586001, method 8015D_DRO.

Due to the matrix, the initial volume used for the following sample LYMW11 (280-166106-4) deviated from the standard procedure: preparation batch 280-586001, method 8015D_DRO. The reporting limits (RLs) have been adjusted proportionately.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-586001, method 8015D_DRO.

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

TOTAL METALS (ICP)

Samples LYMW04 (280-166106-1), LYMW06R (280-166106-2), LYMW10 (280-166106-3), LYMW11 (280-166106-4), BD1-20220831 (280-166106-5) and EB-20220830 (280-166106-6) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 09/07/2022 and 09/08/2022 and analyzed on 09/08/2022 and 09/09/2022.

Iron and Manganese were detected in method blank MB 280-585974/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

TOTAL METALS (ICPMS)

Samples LYMW04 (280-166106-1), LYMW06R (280-166106-2), LYMW10 (280-166106-3), LYMW11 (280-166106-4), BD1-20220831 (280-166106-5) and EB-20220830 (280-166106-6) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 09/07/2022 and 09/12/2022 and analyzed on 09/07/2022 and 09/13/2022.

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

TOTAL MERCURY

Samples LYMW04 (280-166106-1), LYMW06R (280-166106-2), LYMW10 (280-166106-3), LYMW11 (280-166106-4), BD1-20220831 (280-166106-5) and EB-20220830 (280-166106-6) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 09/09/2022.

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

Detection Summary

Client: Trihydro Corporation
Project/Site: Former Laramie Yttrium Plant 2022

Job ID: 280-166106-1

Client Sample ID: LYMW04 — Lab Sample ID: 280-166106-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	3.6		0.050	0.0092	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	1100		260	33	ug/L	1		8015D	Total/NA
Boron	1700		100	1.5	ug/L	1		6010C	Total/NA
Iron	6000	B	100	9.1	ug/L	1		6010C	Total/NA
Manganese	570	B	10	0.45	ug/L	1		6010C	Total/NA
Arsenic	0.41	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: LYMW06R — Lab Sample ID: 280-166106-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	720		250	32	ug/L	1		8015D	Total/NA
Boron	1700		100	1.5	ug/L	1		6010C	Total/NA
Iron	12000	B	100	9.1	ug/L	1		6010C	Total/NA
Manganese	1300	B	10	0.45	ug/L	1		6010C	Total/NA
Arsenic	0.64	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: LYMW10 — Lab Sample ID: 280-166106-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	15		0.050	0.0092	ug/L	1		8270D SIM	Total/NA
Benzo[a]anthracene	0.28		0.050	0.012	ug/L	1		8270D SIM	Total/NA
Dibenz(a,h)anthracene	0.17		0.050	0.012	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	3900		240	31	ug/L	1		8015D	Total/NA
Boron	2100		100	1.5	ug/L	1		6010C	Total/NA
Cobalt	0.58	J	10	0.56	ug/L	1		6010C	Total/NA
Iron	2800		100	9.1	ug/L	1		6010C	Total/NA
Manganese	1200		10	0.45	ug/L	1		6010C	Total/NA
Arsenic	1.5	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: LYMW11 — Lab Sample ID: 280-166106-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	11		0.050	0.0092	ug/L	1		8270D SIM	Total/NA
Benzo[a]anthracene	0.19		0.050	0.012	ug/L	1		8270D SIM	Total/NA
Dibenz(a,h)anthracene	0.079		0.050	0.012	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	4800		2500	330	ug/L	1		8015D	Total/NA
Boron	630		100	1.5	ug/L	1		6010C	Total/NA
Iron	4500	B	100	9.1	ug/L	1		6010C	Total/NA
Lead	6.9	J	9.0	2.7	ug/L	1		6010C	Total/NA
Manganese	920	B	10	0.45	ug/L	1		6010C	Total/NA
Arsenic	1.9	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: BD1-20220831 — Lab Sample ID: 280-166106-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	8.2		0.050	0.0092	ug/L	1		8270D SIM	Total/NA
Benzo[a]anthracene	0.22		0.050	0.012	ug/L	1		8270D SIM	Total/NA
Dibenz(a,h)anthracene	0.094		0.050	0.012	ug/L	1		8270D SIM	Total/NA
Diesel Range Organics [C10-C28]	5100		260	33	ug/L	1		8015D	Total/NA
Boron	630		100	1.5	ug/L	1		6010C	Total/NA
Iron	5100	B	100	9.1	ug/L	1		6010C	Total/NA
Lead	7.9	J	9.0	2.7	ug/L	1		6010C	Total/NA
Manganese	920	B	10	0.45	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Denver

Client Sample ID: BD1-20220831 (Continued)
Lab Sample ID: 280-166106-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1	J	5.0	0.33	ug/L	1		6020A	Total/NA

Client Sample ID: EB-20220830
Lab Sample ID: 280-166106-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	52	J	240	32	ug/L	1		8015D	Total/NA
Boron	4.1	J	100	1.5	ug/L	1		6010C	Total/NA
Iron	11	J B	100	9.1	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	EET SAC
8015D	Diesel Range Organics (DRO) (GC)	SW846	EET DEN
6010C	Metals (ICP)	SW846	EET DEN
6020A	Metals (ICP/MS)	SW846	EET DEN
7470A	Mercury (CVAA)	SW846	EET DEN
3010A	Preparation, Total Metals	SW846	EET DEN
3020A	Preparation, Total Metals	SW846	EET DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SAC
7470A	Preparation, Mercury	SW846	EET DEN

Protocol References:

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

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Sample Summary

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-166106-1	LYMW04	Water	09/01/22 10:25	09/02/22 09:20
280-166106-2	LYMW06R	Water	09/01/22 08:50	09/02/22 09:20
280-166106-3	LYMW10	Water	08/30/22 13:50	09/02/22 09:20
280-166106-4	LYMW11	Water	08/31/22 14:55	09/02/22 09:20
280-166106-5	BD1-20220831	Water	08/31/22 00:00	09/02/22 09:20
280-166106-6	EB-20220830	Water	08/30/22 15:30	09/02/22 09:20

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: LYMW04
Date Collected: 09/01/22 10:25
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**3.6**		0.050	0.0092	ug/L		09/08/22 09:18	09/23/22 13:58	1
Benzo[a]anthracene	ND		0.050	0.012	ug/L		09/08/22 09:18	09/23/22 13:58	1
Dibenz(a,h)anthracene	ND		0.050	0.012	ug/L		09/08/22 09:18	09/23/22 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*61*		*31 - 107*	*09/08/22 09:18*	*09/23/22 13:58*	*1*
Nitrobenzene-d5	*67*		*20 - 123*	*09/08/22 09:18*	*09/23/22 13:58*	*1*
Terphenyl-d14	*74*		*46 - 137*	*09/08/22 09:18*	*09/23/22 13:58*	*1*
2-methylnaphthalene-d10	*59*		*50 - 150*	*09/08/22 09:18*	*09/23/22 13:58*	*1*
Fluoranthene-d10 (Surr)	*83*		*50 - 150*	*09/08/22 09:18*	*09/23/22 13:58*	*1*

Client Sample ID: LYMW06R
Date Collected: 09/01/22 08:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.050	0.0092	ug/L		09/08/22 09:18	09/23/22 14:27	1
Benzo[a]anthracene	ND		0.050	0.012	ug/L		09/08/22 09:18	09/23/22 14:27	1
Dibenz(a,h)anthracene	ND		0.050	0.012	ug/L		09/08/22 09:18	09/23/22 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*78*		*31 - 107*	*09/08/22 09:18*	*09/23/22 14:27*	*1*
Nitrobenzene-d5	*83*		*20 - 123*	*09/08/22 09:18*	*09/23/22 14:27*	*1*
Terphenyl-d14	*85*		*46 - 137*	*09/08/22 09:18*	*09/23/22 14:27*	*1*
2-methylnaphthalene-d10	*81*		*50 - 150*	*09/08/22 09:18*	*09/23/22 14:27*	*1*
Fluoranthene-d10 (Surr)	*89*		*50 - 150*	*09/08/22 09:18*	*09/23/22 14:27*	*1*

Client Sample ID: LYMW10
Date Collected: 08/30/22 13:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**15**		0.050	0.0092	ug/L		09/06/22 07:10	09/12/22 15:41	1
Benzo[a]anthracene	**0.28**		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 15:41	1
Dibenz(a,h)anthracene	**0.17**		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*56*		*31 - 107*	*09/06/22 07:10*	*09/12/22 15:41*	*1*
Nitrobenzene-d5	*137*	*S1+*	*20 - 123*	*09/06/22 07:10*	*09/12/22 15:41*	*1*
Terphenyl-d14	*75*		*46 - 137*	*09/06/22 07:10*	*09/12/22 15:41*	*1*
2-methylnaphthalene-d10	*69*		*50 - 150*	*09/06/22 07:10*	*09/12/22 15:41*	*1*
Fluoranthene-d10 (Surr)	*65*		*50 - 150*	*09/06/22 07:10*	*09/12/22 15:41*	*1*

Client Sample ID: LYMW11
Date Collected: 08/31/22 14:55
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**11**		0.050	0.0092	ug/L		09/06/22 07:10	09/12/22 16:10	1
Benzo[a]anthracene	**0.19**		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 16:10	1
Dibenz(a,h)anthracene	**0.079**		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*65*		*31 - 107*	*09/06/22 07:10*	*09/12/22 16:10*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: LYMW11
Date Collected: 08/31/22 14:55
Date Received: 09/02/22 09:20

Lab Sample ID: 280-166106-4
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*86*		*20 - 123*	*09/06/22 07:10*	*09/12/22 16:10*	*1*
Terphenyl-d14	*80*		*46 - 137*	*09/06/22 07:10*	*09/12/22 16:10*	*1*
2-methylnaphthalene-d10	*84*		*50 - 150*	*09/06/22 07:10*	*09/12/22 16:10*	*1*
Fluoranthene-d10 (Surr)	*75*		*50 - 150*	*09/06/22 07:10*	*09/12/22 16:10*	*1*

Client Sample ID: BD1-20220831
Date Collected: 08/31/22 00:00
Date Received: 09/02/22 09:20

Lab Sample ID: 280-166106-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	**8.2**		0.050	0.0092	ug/L		09/06/22 07:10	09/12/22 16:39	1
Benzo[a]anthracene	**0.22**		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 16:39	1
Dibenz(a,h)anthracene	**0.094**		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*57*		*31 - 107*	*09/06/22 07:10*	*09/12/22 16:39*	*1*
Nitrobenzene-d5	*76*		*20 - 123*	*09/06/22 07:10*	*09/12/22 16:39*	*1*
Terphenyl-d14	*79*		*46 - 137*	*09/06/22 07:10*	*09/12/22 16:39*	*1*
2-methylnaphthalene-d10	*80*		*50 - 150*	*09/06/22 07:10*	*09/12/22 16:39*	*1*
Fluoranthene-d10 (Surr)	*79*		*50 - 150*	*09/06/22 07:10*	*09/12/22 16:39*	*1*

Client Sample ID: EB-20220830
Date Collected: 08/30/22 15:30
Date Received: 09/02/22 09:20

Lab Sample ID: 280-166106-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.050	0.0092	ug/L		09/06/22 07:10	09/12/22 17:07	1
Benzo[a]anthracene	ND		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 17:07	1
Dibenz(a,h)anthracene	ND		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*66*		*31 - 107*	*09/06/22 07:10*	*09/12/22 17:07*	*1*
Nitrobenzene-d5	*72*		*20 - 123*	*09/06/22 07:10*	*09/12/22 17:07*	*1*
Terphenyl-d14	*77*		*46 - 137*	*09/06/22 07:10*	*09/12/22 17:07*	*1*
2-methylnaphthalene-d10	*70*		*50 - 150*	*09/06/22 07:10*	*09/12/22 17:07*	*1*
Fluoranthene-d10 (Surr)	*77*		*50 - 150*	*09/06/22 07:10*	*09/12/22 17:07*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: LYMW04
Date Collected: 09/01/22 10:25
Date Received: 09/02/22 09:20

Lab Sample ID: 280-166106-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1100**		260	33	ug/L		09/06/22 12:26	09/13/22 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 115*	*09/06/22 12:26*	*09/13/22 01:37*	*1*
n-Octacosane	*117*		*26 - 152*	*09/06/22 12:26*	*09/13/22 01:37*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: LYMW06R
Date Collected: 09/01/22 08:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	720		250	32	ug/L		09/06/22 12:26	09/13/22 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 115*	*09/06/22 12:26*	*09/13/22 02:00*	*1*
n-Octacosane	*103*		*26 - 152*	*09/06/22 12:26*	*09/13/22 02:00*	*1*

Client Sample ID: LYMW10
Date Collected: 08/30/22 13:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3900		240	31	ug/L		09/06/22 12:26	09/13/22 02:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 115*	*09/06/22 12:26*	*09/13/22 02:23*	*1*
n-Octacosane	*119*		*26 - 152*	*09/06/22 12:26*	*09/13/22 02:23*	*1*

Client Sample ID: LYMW11
Date Collected: 08/31/22 14:55
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4800		2500	330	ug/L		09/06/22 12:26	09/13/22 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 115*	*09/06/22 12:26*	*09/13/22 02:46*	*1*
n-Octacosane	*114*		*26 - 152*	*09/06/22 12:26*	*09/13/22 02:46*	*1*

Client Sample ID: BD1-20220831
Date Collected: 08/31/22 00:00
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5100		260	33	ug/L		09/06/22 12:26	09/13/22 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 115*	*09/06/22 12:26*	*09/13/22 03:09*	*1*
n-Octacosane	*119*		*26 - 152*	*09/06/22 12:26*	*09/13/22 03:09*	*1*

Client Sample ID: EB-20220830
Date Collected: 08/30/22 15:30
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	52	J	240	32	ug/L		09/06/22 12:26	09/13/22 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 115*	*09/06/22 12:26*	*09/13/22 03:32*	*1*
n-Octacosane	*129*		*26 - 152*	*09/06/22 12:26*	*09/13/22 03:32*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: LYMW04
Date Collected: 09/01/22 10:25
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1700		100	1.5	ug/L		09/07/22 08:55	09/08/22 01:12	1
Cobalt	ND		10	0.56	ug/L		09/07/22 08:55	09/08/22 01:12	1
Iron	6000	B	100	9.1	ug/L		09/07/22 08:55	09/08/22 01:12	1
Lead	ND		9.0	2.7	ug/L		09/07/22 08:55	09/08/22 01:12	1
Manganese	570	B	10	0.45	ug/L		09/07/22 08:55	09/08/22 01:12	1

Client Sample ID: LYMW06R
Date Collected: 09/01/22 08:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1700		100	1.5	ug/L		09/07/22 08:55	09/08/22 01:16	1
Cobalt	ND		10	0.56	ug/L		09/07/22 08:55	09/08/22 01:16	1
Iron	12000	B	100	9.1	ug/L		09/07/22 08:55	09/08/22 01:16	1
Lead	ND		9.0	2.7	ug/L		09/07/22 08:55	09/08/22 01:16	1
Manganese	1300	B	10	0.45	ug/L		09/07/22 08:55	09/08/22 01:16	1

Client Sample ID: LYMW10
Date Collected: 08/30/22 13:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2100		100	1.5	ug/L		09/08/22 23:20	09/09/22 16:30	1
Cobalt	0.58	J	10	0.56	ug/L		09/08/22 23:20	09/09/22 16:30	1
Iron	2800		100	9.1	ug/L		09/08/22 23:20	09/09/22 16:30	1
Lead	ND		9.0	2.7	ug/L		09/08/22 23:20	09/09/22 16:30	1
Manganese	1200		10	0.45	ug/L		09/08/22 23:20	09/09/22 16:30	1

Client Sample ID: LYMW11
Date Collected: 08/31/22 14:55
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	630		100	1.5	ug/L		09/07/22 08:55	09/08/22 01:20	1
Cobalt	ND		10	0.56	ug/L		09/07/22 08:55	09/08/22 01:20	1
Iron	4500	B	100	9.1	ug/L		09/07/22 08:55	09/08/22 01:20	1
Lead	6.9	J	9.0	2.7	ug/L		09/07/22 08:55	09/08/22 01:20	1
Manganese	920	B	10	0.45	ug/L		09/07/22 08:55	09/08/22 01:20	1

Client Sample ID: BD1-20220831
Date Collected: 08/31/22 00:00
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	630		100	1.5	ug/L		09/07/22 08:55	09/08/22 01:24	1
Cobalt	ND		10	0.56	ug/L		09/07/22 08:55	09/08/22 01:24	1
Iron	5100	B	100	9.1	ug/L		09/07/22 08:55	09/08/22 01:24	1
Lead	7.9	J	9.0	2.7	ug/L		09/07/22 08:55	09/08/22 01:24	1
Manganese	920	B	10	0.45	ug/L		09/07/22 08:55	09/08/22 01:24	1

Client Sample ID: EB-20220830
Date Collected: 08/30/22 15:30
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.1	J	100	1.5	ug/L		09/07/22 08:55	09/08/22 01:29	1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: EB-20220830
Date Collected: 08/30/22 15:30
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		10	0.56	ug/L		09/07/22 08:55	09/08/22 01:29	1
Iron	**11**	**J B**	100	9.1	ug/L		09/07/22 08:55	09/08/22 01:29	1
Lead	ND		9.0	2.7	ug/L		09/07/22 08:55	09/08/22 01:29	1
Manganese	ND		10	0.45	ug/L		09/07/22 08:55	09/08/22 01:29	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: LYMW04
Date Collected: 09/01/22 10:25
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.41**	**J**	5.0	0.33	ug/L		09/07/22 08:55	09/07/22 19:49	1
Thallium	ND		1.0	0.089	ug/L		09/07/22 08:55	09/07/22 19:49	1

Client Sample ID: LYMW06R
Date Collected: 09/01/22 08:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.64**	**J**	5.0	0.33	ug/L		09/07/22 08:55	09/07/22 20:08	1
Thallium	ND		1.0	0.089	ug/L		09/07/22 08:55	09/07/22 20:08	1

Client Sample ID: LYMW10
Date Collected: 08/30/22 13:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.5**	**J**	5.0	0.33	ug/L		09/12/22 15:03	09/13/22 13:29	1
Thallium	ND		1.0	0.089	ug/L		09/12/22 15:03	09/13/22 13:29	1

Client Sample ID: LYMW11
Date Collected: 08/31/22 14:55
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.9**	**J**	5.0	0.33	ug/L		09/07/22 08:55	09/07/22 20:12	1
Thallium	ND		1.0	0.089	ug/L		09/07/22 08:55	09/07/22 20:12	1

Client Sample ID: BD1-20220831
Date Collected: 08/31/22 00:00
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.1**	**J**	5.0	0.33	ug/L		09/07/22 08:55	09/07/22 20:27	1
Thallium	ND		1.0	0.089	ug/L		09/07/22 08:55	09/07/22 20:27	1

Client Sample ID: EB-20220830
Date Collected: 08/30/22 15:30
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/07/22 08:55	09/07/22 20:30	1
Thallium	ND		1.0	0.089	ug/L		09/07/22 08:55	09/07/22 20:30	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: LYMW04
Date Collected: 09/01/22 10:25
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		09/09/22 14:48	09/09/22 21:29	1

Client Sample ID: LYMW06R
Date Collected: 09/01/22 08:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		09/09/22 14:48	09/09/22 21:31	1

Client Sample ID: LYMW10
Date Collected: 08/30/22 13:50
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		09/09/22 14:48	09/09/22 21:39	1

Client Sample ID: LYMW11
Date Collected: 08/31/22 14:55
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		09/09/22 14:48	09/09/22 21:41	1

Client Sample ID: BD1-20220831
Date Collected: 08/31/22 00:00
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		09/09/22 14:48	09/09/22 21:44	1

Client Sample ID: EB-20220830
Date Collected: 08/30/22 15:30
Date Received: 09/02/22 09:20
Lab Sample ID: 280-166106-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		09/09/22 14:48	09/09/22 21:46	1

Surrogate Summary

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		FBP	NBZ	TPHL	2MN	FLN10
Lab Sample ID	Client Sample ID	(31-107)	(20-123)	(46-137)	(50-150)	(50-150)
280-166106-1	LYMW04	61	67	74	59	83
280-166106-2	LYMW06R	78	83	85	81	89
280-166106-3	LYMW10	56	137 S1+	75	69	65
280-166106-4	LYMW11	65	86	80	84	75
280-166106-5	BD1-20220831	57	76	79	80	79
280-166106-6	EB-20220830	66	72	77	70	77
LCS 320-614513/2-A	Lab Control Sample	51	55	79	54	74
LCS 320-615122/2-A	Lab Control Sample	73	70	82	69	82
LCSD 320-614513/3-A	Lab Control Sample Dup	67	73	81	72	79
LCSD 320-615122/3-A	Lab Control Sample Dup	63	62	82	61	78
MB 320-614513/1-A	Method Blank	72	81	90	76	87
MB 320-615122/1-A	Method Blank	76	82	86	72	82

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14
2MN = 2-methylnaphthalene-d10
FLN10 = Fluoranthene-d10 (Surr)

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		OTPH	OTCN
Lab Sample ID	Client Sample ID	(50-115)	(26-152)
280-166106-1	LYMW04	91	117
280-166106-2	LYMW06R	78	103
280-166106-3	LYMW10	87	119
280-166106-4	LYMW11	86	114
280-166106-5	BD1-20220831	86	119
280-166106-6	EB-20220830	92	129
LCS 280-586001/2-A	Lab Control Sample	91	98
LCSD 280-586001/3-A	Lab Control Sample Dup	97	105
MB 280-586001/1-A	Method Blank	80	90

Surrogate Legend

OTPH = o-Terphenyl
OTCN = n-Octacosane

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 320-614513/1-A
Matrix: Water
Analysis Batch: 615920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614513

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.050	0.0092	ug/L		09/06/22 07:10	09/12/22 13:17	1
Benzo[a]anthracene	ND		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 13:17	1
Dibenz(a,h)anthracene	ND		0.050	0.012	ug/L		09/06/22 07:10	09/12/22 13:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*72*		*31 - 107*	*09/06/22 07:10*	*09/12/22 13:17*	*1*
Nitrobenzene-d5	*81*		*20 - 123*	*09/06/22 07:10*	*09/12/22 13:17*	*1*
Terphenyl-d14	*90*		*46 - 137*	*09/06/22 07:10*	*09/12/22 13:17*	*1*
2-methylnaphthalene-d10	*76*		*50 - 150*	*09/06/22 07:10*	*09/12/22 13:17*	*1*
Fluoranthene-d10 (Surr)	*87*		*50 - 150*	*09/06/22 07:10*	*09/12/22 13:17*	*1*

Lab Sample ID: LCS 320-614513/2-A
Matrix: Water
Analysis Batch: 615920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614513

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			0.500	0.243		ug/L		49	38 - 107		
Benzo[a]anthracene			0.500	0.354		ug/L		71	54 - 117		
Dibenz(a,h)anthracene			0.500	0.317		ug/L		63	38 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*51*		*31 - 107*
Nitrobenzene-d5	*55*		*20 - 123*
Terphenyl-d14	*79*		*46 - 137*
2-methylnaphthalene-d10	*54*		*50 - 150*
Fluoranthene-d10 (Surr)	*74*		*50 - 150*

Lab Sample ID: LCSD 320-614513/3-A
Matrix: Water
Analysis Batch: 615920

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 614513

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene			0.500	0.321		ug/L		64	38 - 107	28	30
Benzo[a]anthracene			0.500	0.350		ug/L		70	54 - 117	1	30
Dibenz(a,h)anthracene			0.500	0.323		ug/L		65	38 - 123	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*67*		*31 - 107*
Nitrobenzene-d5	*73*		*20 - 123*
Terphenyl-d14	*81*		*46 - 137*
2-methylnaphthalene-d10	*72*		*50 - 150*
Fluoranthene-d10 (Surr)	*79*		*50 - 150*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 320-615122/1-A
Matrix: Water
Analysis Batch: 619336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.050	0.0092	ug/L		09/08/22 09:18	09/23/22 12:03	1
Benzo[a]anthracene	ND		0.050	0.012	ug/L		09/08/22 09:18	09/23/22 12:03	1
Dibenz(a,h)anthracene	ND		0.050	0.012	ug/L		09/08/22 09:18	09/23/22 12:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*31 - 107*	*09/08/22 09:18*	*09/23/22 12:03*	*1*
Nitrobenzene-d5	*82*		*20 - 123*	*09/08/22 09:18*	*09/23/22 12:03*	*1*
Terphenyl-d14	*86*		*46 - 137*	*09/08/22 09:18*	*09/23/22 12:03*	*1*
2-methylnaphthalene-d10	*72*		*50 - 150*	*09/08/22 09:18*	*09/23/22 12:03*	*1*
Fluoranthene-d10 (Surr)	*82*		*50 - 150*	*09/08/22 09:18*	*09/23/22 12:03*	*1*

Lab Sample ID: LCS 320-615122/2-A
Matrix: Water
Analysis Batch: 619336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 615122

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			0.500	0.345		ug/L		69	38 - 107		
Benzo[a]anthracene			0.500	0.416		ug/L		83	54 - 117		
Dibenz(a,h)anthracene			0.500	0.255		ug/L		51	38 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*73*		*31 - 107*
Nitrobenzene-d5	*70*		*20 - 123*
Terphenyl-d14	*82*		*46 - 137*
2-methylnaphthalene-d10	*69*		*50 - 150*
Fluoranthene-d10 (Surr)	*82*		*50 - 150*

Lab Sample ID: LCSD 320-615122/3-A
Matrix: Water
Analysis Batch: 619336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 615122

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene			0.500	0.291		ug/L		58	38 - 107	17	30
Benzo[a]anthracene			0.500	0.407		ug/L		81	54 - 117	2	30
Dibenz(a,h)anthracene			0.500	0.261		ug/L		52	38 - 123	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*63*		*31 - 107*
Nitrobenzene-d5	*62*		*20 - 123*
Terphenyl-d14	*82*		*46 - 137*
2-methylnaphthalene-d10	*61*		*50 - 150*
Fluoranthene-d10 (Surr)	*78*		*50 - 150*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-586001/1-A
Matrix: Water
Analysis Batch: 586506

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586001

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		250	33	ug/L		09/06/22 12:26	09/12/22 17:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*50 - 115*	*09/06/22 12:26*	*09/12/22 17:54*	*1*
n-Octacosane	*90*		*26 - 152*	*09/06/22 12:26*	*09/12/22 17:54*	*1*

Lab Sample ID: LCS 280-586001/2-A
Matrix: Water
Analysis Batch: 586506

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	2000	1750		ug/L		87	54 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*91*		*50 - 115*
n-Octacosane	*98*		*26 - 152*

Lab Sample ID: LCSD 280-586001/3-A
Matrix: Water
Analysis Batch: 586506

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 586001

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	2000	1930		ug/L		96	54 - 115	10	31

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*97*		*50 - 115*
n-Octacosane	*105*		*26 - 152*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-585974/1-A
Matrix: Water
Analysis Batch: 586193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 585974

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	1.5	ug/L		09/07/22 08:55	09/08/22 00:08	1
Cobalt	ND		10	0.56	ug/L		09/07/22 08:55	09/08/22 00:08	1
Iron	11.1	J	100	9.1	ug/L		09/07/22 08:55	09/08/22 00:08	1
Lead	ND		9.0	2.7	ug/L		09/07/22 08:55	09/08/22 00:08	1
Manganese	0.490	J	10	0.45	ug/L		09/07/22 08:55	09/08/22 00:08	1

Lab Sample ID: LCS 280-585974/2-A
Matrix: Water
Analysis Batch: 586193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 585974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2000	1940		ug/L		97	86 - 110

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-585974/2-A
Matrix: Water
Analysis Batch: 586193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 585974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	1000	970		ug/L		97	89 - 111
Iron	10000	10000		ug/L		100	89 - 115
Lead	1000	1000		ug/L		100	89 - 110
Manganese	1000	1010		ug/L		101	90 - 110

Lab Sample ID: LCSD 280-585974/3-A
Matrix: Water
Analysis Batch: 586193

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 585974

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	2000	1920		ug/L		96	86 - 110	1	20
Cobalt	1000	964		ug/L		96	89 - 111	1	20
Iron	10000	9960		ug/L		100	89 - 115	1	20
Lead	1000	998		ug/L		100	89 - 110	0	20
Manganese	1000	997		ug/L		100	90 - 110	1	20

Lab Sample ID: MB 280-586240/1-A
Matrix: Water
Analysis Batch: 586465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586240

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	1.5	ug/L		09/08/22 23:20	09/09/22 15:37	1
Cobalt	ND		10	0.56	ug/L		09/08/22 23:20	09/09/22 15:37	1
Iron	ND		100	9.1	ug/L		09/08/22 23:20	09/09/22 15:37	1
Lead	ND		9.0	2.7	ug/L		09/08/22 23:20	09/09/22 15:37	1
Manganese	ND		10	0.45	ug/L		09/08/22 23:20	09/09/22 15:37	1

Lab Sample ID: LCS 280-586240/2-A
Matrix: Water
Analysis Batch: 586465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586240

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2000	2090		ug/L		105	86 - 110
Cobalt	1000	1010		ug/L		101	89 - 111
Iron	10000	10400		ug/L		104	89 - 115
Lead	1000	1040		ug/L		104	89 - 110
Manganese	1000	1050		ug/L		105	90 - 110

Lab Sample ID: 280-166106-3 MS
Matrix: Water
Analysis Batch: 586465

Client Sample ID: LYMW10
Prep Type: Total/NA
Prep Batch: 586240

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2100		2000	4320		ug/L		111	87 - 113
Cobalt	0.58	J	1000	973		ug/L		97	82 - 119
Iron	2800		10000	13200		ug/L		105	52 - 155
Lead	ND		1000	1010		ug/L		101	89 - 121
Manganese	1200		1000	2260		ug/L		104	79 - 121

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-166106-3 MSD
Matrix: Water
Analysis Batch: 586465

Client Sample ID: LYMW10
Prep Type: Total/NA
Prep Batch: 586240

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	2100		2000	4350		ug/L		112	87 - 113	1	20
Cobalt	0.58	J	1000	982		ug/L		98	82 - 119	1	20
Iron	2800		10000	13300		ug/L		106	52 - 155	1	20
Lead	ND		1000	1020		ug/L		102	89 - 121	1	20
Manganese	1200		1000	2280		ug/L		105	79 - 121	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-586064/1-A
Matrix: Water
Analysis Batch: 586194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586064

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/07/22 08:55	09/07/22 19:42	1
Thallium	ND		1.0	0.089	ug/L		09/07/22 08:55	09/07/22 19:42	1

Lab Sample ID: LCS 280-586064/2-A
Matrix: Water
Analysis Batch: 586194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586064

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	41.5		ug/L		104	85 - 117
Thallium	40.0	40.7		ug/L		102	85 - 118

Lab Sample ID: 280-166106-1 MS
Matrix: Water
Analysis Batch: 586194

Client Sample ID: LYMW04
Prep Type: Total/NA
Prep Batch: 586064

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.41	J	40.0	43.7		ug/L		108	85 - 117
Thallium	ND		40.0	40.9		ug/L		102	85 - 118

Lab Sample ID: 280-166106-1 MSD
Matrix: Water
Analysis Batch: 586194

Client Sample ID: LYMW04
Prep Type: Total/NA
Prep Batch: 586064

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.41	J	40.0	43.2		ug/L		107	85 - 117	1	20
Thallium	ND		40.0	40.8		ug/L		102	85 - 118	0	20

Lab Sample ID: MB 280-586487/1-A
Matrix: Water
Analysis Batch: 586712

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586487

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		09/12/22 15:03	09/13/22 15:24	1
Thallium	ND		1.0	0.089	ug/L		09/12/22 15:03	09/13/22 15:24	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-586487/2-A
Matrix: Water
Analysis Batch: 586712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586487

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	40.4		ug/L		101	85 - 117
Thallium	40.0	41.1		ug/L		103	85 - 118

Lab Sample ID: LCSD 280-586487/3-A
Matrix: Water
Analysis Batch: 586712

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 586487

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	40.0	39.9		ug/L		100	85 - 117	1	20
Thallium	40.0	40.7		ug/L		102	85 - 118	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-586277/1-A
Matrix: Water
Analysis Batch: 586444

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586277

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		09/09/22 14:48	09/09/22 21:08	1

Lab Sample ID: LCS 280-586277/2-A
Matrix: Water
Analysis Batch: 586444

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586277

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.05		ug/L		101	84 - 120

QC Association Summary

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

GC/MS Semi VOA

Prep Batch: 614513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-3	LYMW10	Total/NA	Water	3510C	
280-166106-4	LYMW11	Total/NA	Water	3510C	
280-166106-5	BD1-20220831	Total/NA	Water	3510C	
280-166106-6	EB-20220830	Total/NA	Water	3510C	
MB 320-614513/1-A	Method Blank	Total/NA	Water	3510C	
LCS 320-614513/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 320-614513/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 615122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	3510C	
280-166106-2	LYMW06R	Total/NA	Water	3510C	
MB 320-615122/1-A	Method Blank	Total/NA	Water	3510C	
LCS 320-615122/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 320-615122/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 615920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-3	LYMW10	Total/NA	Water	8270D SIM	614513
280-166106-4	LYMW11	Total/NA	Water	8270D SIM	614513
280-166106-5	BD1-20220831	Total/NA	Water	8270D SIM	614513
280-166106-6	EB-20220830	Total/NA	Water	8270D SIM	614513
MB 320-614513/1-A	Method Blank	Total/NA	Water	8270D SIM	614513
LCS 320-614513/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	614513
LCSD 320-614513/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	614513

Analysis Batch: 619336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	8270D SIM	615122
280-166106-2	LYMW06R	Total/NA	Water	8270D SIM	615122
MB 320-615122/1-A	Method Blank	Total/NA	Water	8270D SIM	615122
LCS 320-615122/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	615122
LCSD 320-615122/3-A	Lab Control Sample Dup	Total/NA	Water	8270D SIM	615122

GC Semi VOA

Prep Batch: 586001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	3510C	
280-166106-2	LYMW06R	Total/NA	Water	3510C	
280-166106-3	LYMW10	Total/NA	Water	3510C	
280-166106-4	LYMW11	Total/NA	Water	3510C	
280-166106-5	BD1-20220831	Total/NA	Water	3510C	
280-166106-6	EB-20220830	Total/NA	Water	3510C	
MB 280-586001/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-586001/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-586001/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 586506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	8015D	586001

GC Semi VOA (Continued)

Analysis Batch: 586506 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-2	LYMW06R	Total/NA	Water	8015D	586001
280-166106-3	LYMW10	Total/NA	Water	8015D	586001
280-166106-4	LYMW11	Total/NA	Water	8015D	586001
280-166106-5	BD1-20220831	Total/NA	Water	8015D	586001
280-166106-6	EB-20220830	Total/NA	Water	8015D	586001
MB 280-586001/1-A	Method Blank	Total/NA	Water	8015D	586001
LCS 280-586001/2-A	Lab Control Sample	Total/NA	Water	8015D	586001
LCSD 280-586001/3-A	Lab Control Sample Dup	Total/NA	Water	8015D	586001

Metals

Prep Batch: 585974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	3010A	
280-166106-2	LYMW06R	Total/NA	Water	3010A	
280-166106-4	LYMW11	Total/NA	Water	3010A	
280-166106-5	BD1-20220831	Total/NA	Water	3010A	
280-166106-6	EB-20220830	Total/NA	Water	3010A	
MB 280-585974/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-585974/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-585974/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Prep Batch: 586064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	3020A	
280-166106-2	LYMW06R	Total/NA	Water	3020A	
280-166106-4	LYMW11	Total/NA	Water	3020A	
280-166106-5	BD1-20220831	Total/NA	Water	3020A	
280-166106-6	EB-20220830	Total/NA	Water	3020A	
MB 280-586064/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-586064/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-166106-1 MS	LYMW04	Total/NA	Water	3020A	
280-166106-1 MSD	LYMW04	Total/NA	Water	3020A	

Analysis Batch: 586193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	6010C	585974
280-166106-2	LYMW06R	Total/NA	Water	6010C	585974
280-166106-4	LYMW11	Total/NA	Water	6010C	585974
280-166106-5	BD1-20220831	Total/NA	Water	6010C	585974
280-166106-6	EB-20220830	Total/NA	Water	6010C	585974
MB 280-585974/1-A	Method Blank	Total/NA	Water	6010C	585974
LCS 280-585974/2-A	Lab Control Sample	Total/NA	Water	6010C	585974
LCSD 280-585974/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	585974

Analysis Batch: 586194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	6020A	586064
280-166106-2	LYMW06R	Total/NA	Water	6020A	586064
280-166106-4	LYMW11	Total/NA	Water	6020A	586064
280-166106-5	BD1-20220831	Total/NA	Water	6020A	586064

Metals (Continued)

Analysis Batch: 586194 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-6	EB-20220830	Total/NA	Water	6020A	586064
MB 280-586064/1-A	Method Blank	Total/NA	Water	6020A	586064
LCS 280-586064/2-A	Lab Control Sample	Total/NA	Water	6020A	586064
280-166106-1 MS	LYMW04	Total/NA	Water	6020A	586064
280-166106-1 MSD	LYMW04	Total/NA	Water	6020A	586064

Prep Batch: 586240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-3	LYMW10	Total/NA	Water	3010A	
MB 280-586240/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-586240/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-166106-3 MS	LYMW10	Total/NA	Water	3010A	
280-166106-3 MSD	LYMW10	Total/NA	Water	3010A	

Prep Batch: 586277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	7470A	
280-166106-2	LYMW06R	Total/NA	Water	7470A	
280-166106-3	LYMW10	Total/NA	Water	7470A	
280-166106-4	LYMW11	Total/NA	Water	7470A	
280-166106-5	BD1-20220831	Total/NA	Water	7470A	
280-166106-6	EB-20220830	Total/NA	Water	7470A	
MB 280-586277/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-586277/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 586444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-1	LYMW04	Total/NA	Water	7470A	586277
280-166106-2	LYMW06R	Total/NA	Water	7470A	586277
280-166106-3	LYMW10	Total/NA	Water	7470A	586277
280-166106-4	LYMW11	Total/NA	Water	7470A	586277
280-166106-5	BD1-20220831	Total/NA	Water	7470A	586277
280-166106-6	EB-20220830	Total/NA	Water	7470A	586277
MB 280-586277/1-A	Method Blank	Total/NA	Water	7470A	586277
LCS 280-586277/2-A	Lab Control Sample	Total/NA	Water	7470A	586277

Analysis Batch: 586465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-3	LYMW10	Total/NA	Water	6010C	586240
MB 280-586240/1-A	Method Blank	Total/NA	Water	6010C	586240
LCS 280-586240/2-A	Lab Control Sample	Total/NA	Water	6010C	586240
280-166106-3 MS	LYMW10	Total/NA	Water	6010C	586240
280-166106-3 MSD	LYMW10	Total/NA	Water	6010C	586240

Prep Batch: 586487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-3	LYMW10	Total/NA	Water	3020A	
MB 280-586487/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-586487/2-A	Lab Control Sample	Total/NA	Water	3020A	
LCSD 280-586487/3-A	Lab Control Sample Dup	Total/NA	Water	3020A	

QC Association Summary

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Metals

Analysis Batch: 586712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-166106-3	LYMW10	Total/NA	Water	6020A	586487
MB 280-586487/1-A	Method Blank	Total/NA	Water	6020A	586487
LCS 280-586487/2-A	Lab Control Sample	Total/NA	Water	6020A	586487
LCSD 280-586487/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	586487

Lab Chronicle

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Client Sample ID: LYMW04
Lab Sample ID: 280-166106-1
Date Collected: 09/01/22 10:25
Matrix: Water
Date Received: 09/02/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	615122	09/08/22 09:18	AS	EET SAC
Total/NA	Analysis	8270D SIM		1	1 mL	1 mL	619336	09/23/22 13:58	Y1S	EET SAC
Total/NA	Prep	3510C			979.7 mL	1 mL	586001	09/06/22 12:26	KAS	EET DEN
Total/NA	Analysis	8015D		1			586506	09/13/22 01:37	ECM	EET DEN
Total/NA	Prep	3010A			50 mL	50 mL	585974	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6010C		1			586193	09/08/22 01:12	MAB	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	586064	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6020A		1			586194	09/07/22 19:49	LMT	EET DEN
Total/NA	Prep	7470A			30 mL	50 mL	586277	09/09/22 14:48	CEH	EET DEN
Total/NA	Analysis	7470A		1			586444	09/09/22 21:29	CEH	EET DEN

Client Sample ID: LYMW06R
Lab Sample ID: 280-166106-2
Date Collected: 09/01/22 08:50
Matrix: Water
Date Received: 09/02/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	615122	09/08/22 09:18	AS	EET SAC
Total/NA	Analysis	8270D SIM		1	1 mL	1 mL	619336	09/23/22 14:27	Y1S	EET SAC
Total/NA	Prep	3510C			1008.3 mL	1 mL	586001	09/06/22 12:26	KAS	EET DEN
Total/NA	Analysis	8015D		1			586506	09/13/22 02:00	ECM	EET DEN
Total/NA	Prep	3010A			50 mL	50 mL	585974	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6010C		1			586193	09/08/22 01:16	MAB	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	586064	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6020A		1			586194	09/07/22 20:08	LMT	EET DEN
Total/NA	Prep	7470A			30 mL	50 mL	586277	09/09/22 14:48	CEH	EET DEN
Total/NA	Analysis	7470A		1			586444	09/09/22 21:31	CEH	EET DEN

Client Sample ID: LYMW10
Lab Sample ID: 280-166106-3
Date Collected: 08/30/22 13:50
Matrix: Water
Date Received: 09/02/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	614513	09/06/22 07:10	JFA	EET SAC
Total/NA	Analysis	8270D SIM		1	1 mL	1 mL	615920	09/12/22 15:41	Y1S	EET SAC
Total/NA	Prep	3510C			1047 mL	1 mL	586001	09/06/22 12:26	KAS	EET DEN
Total/NA	Analysis	8015D		1			586506	09/13/22 02:23	ECM	EET DEN
Total/NA	Prep	3010A			50 mL	50 mL	586240	09/08/22 23:20	MCR	EET DEN
Total/NA	Analysis	6010C		1			586465	09/09/22 16:30	MAB	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	586487	09/12/22 15:03	MCR	EET DEN
Total/NA	Analysis	6020A		1			586712	09/13/22 13:29	LMT	EET DEN
Total/NA	Prep	7470A			30 mL	50 mL	586277	09/09/22 14:48	CEH	EET DEN
Total/NA	Analysis	7470A		1			586444	09/09/22 21:39	CEH	EET DEN

Client Sample ID: LYMW11
Lab Sample ID: 280-166106-4

Date Collected: 08/31/22 14:55
Matrix: Water
Date Received: 09/02/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	614513	09/06/22 07:10	JFA	EET SAC
Total/NA	Analysis	8270D SIM		1	1 mL	1 mL	615920	09/12/22 16:10	Y1S	EET SAC
Total/NA	Prep	3510C			100 mL	1 mL	586001	09/06/22 12:26	KAS	EET DEN
Total/NA	Analysis	8015D		1			586506	09/13/22 02:46	ECM	EET DEN
Total/NA	Prep	3010A			50 mL	50 mL	585974	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6010C		1			586193	09/08/22 01:20	MAB	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	586064	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6020A		1			586194	09/07/22 20:12	LMT	EET DEN
Total/NA	Prep	7470A			30 mL	50 mL	586277	09/09/22 14:48	CEH	EET DEN
Total/NA	Analysis	7470A		1			586444	09/09/22 21:41	CEH	EET DEN

Client Sample ID: BD1-20220831
Lab Sample ID: 280-166106-5

Date Collected: 08/31/22 00:00
Matrix: Water
Date Received: 09/02/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	614513	09/06/22 07:10	JFA	EET SAC
Total/NA	Analysis	8270D SIM		1	1 mL	1 mL	615920	09/12/22 16:39	Y1S	EET SAC
Total/NA	Prep	3510C			973.2 mL	1 mL	586001	09/06/22 12:26	KAS	EET DEN
Total/NA	Analysis	8015D		1			586506	09/13/22 03:09	ECM	EET DEN
Total/NA	Prep	3010A			50 mL	50 mL	585974	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6010C		1			586193	09/08/22 01:24	MAB	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	586064	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6020A		1			586194	09/07/22 20:27	LMT	EET DEN
Total/NA	Prep	7470A			30 mL	50 mL	586277	09/09/22 14:48	CEH	EET DEN
Total/NA	Analysis	7470A		1			586444	09/09/22 21:44	CEH	EET DEN

Client Sample ID: EB-20220830
Lab Sample ID: 280-166106-6

Date Collected: 08/30/22 15:30
Matrix: Water
Date Received: 09/02/22 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	614513	09/06/22 07:10	JFA	EET SAC
Total/NA	Analysis	8270D SIM		1	1 mL	1 mL	615920	09/12/22 17:07	Y1S	EET SAC
Total/NA	Prep	3510C			1025.8 mL	1 mL	586001	09/06/22 12:26	KAS	EET DEN
Total/NA	Analysis	8015D		1			586506	09/13/22 03:32	ECM	EET DEN
Total/NA	Prep	3010A			50 mL	50 mL	585974	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6010C		1			586193	09/08/22 01:29	MAB	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	586064	09/07/22 08:55	KMS	EET DEN
Total/NA	Analysis	6020A		1			586194	09/07/22 20:30	LMT	EET DEN
Total/NA	Prep	7470A			30 mL	50 mL	586277	09/09/22 14:48	CEH	EET DEN
Total/NA	Analysis	7470A		1			586444	09/09/22 21:46	CEH	EET DEN

Lab Chronicle

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arizona	State	AZ0713	12-20-22
Arkansas DEQ	State	19-047-0	06-01-22 *
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	12-02-22
Kansas	NELAP	E-10166	04-30-23
Kentucky (WW)	State	KY98047	12-31-22
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Minnesota	NELAP	1788752	12-31-22
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Carolina (WW/SW)	State	358	12-31-22
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	10-01-22
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
West Virginia DEP	State	354	11-30-22
Wisconsin	State	999615430	08-31-23
Wyoming (UST)	A2LA	2907.01	10-31-22

Laboratory: Eurofins Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-23
Arkansas DEQ	State	88-0691	06-17-22 *
California	State	2897	01-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Trihydro Corporation
Job ID: 280-166106-1
Project/Site: Former Laramie Yttrium Plant 2022

Laboratory: Eurofins Sacramento (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Colorado	State	CA0004	08-31-23
Florida	NELAP	E87570	06-30-23
Georgia	State	4040	01-30-23
Hawaii	State	<cert No.>	01-29-23
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-22
Louisiana	NELAP	01944	06-30-23
Louisiana (All)	NELAP	01944	06-30-23
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-23
Nevada	State	CA00044	07-31-23
New Hampshire	NELAP	2997	04-18-23
New Jersey	NELAP	CA005	06-30-23
New York	NELAP	11666	04-01-23
Ohio	State	41252	01-29-23
Oregon	NELAP	4040	01-29-23
Texas	NELAP	T104704399-19-13	05-31-23
US Fish & Wildlife	US Federal Programs	58448	04-30-23
USDA	US Federal Programs	P330-18-00239	01-23-23
Utah	NELAP	CA000442021-12	02-28-23
Virginia	NELAP	460278	03-14-23
Washington	State	C581	05-05-23
West Virginia (DW)	State	9930C	12-31-22
Wisconsin	State	998204680	08-31-23
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins

Client Information	Sampler: Tanner Smith	Lab PM: Winn-Shilling, Janice R.	Carrier Tracking No(s):	COC No:
Client Contact: Ryan Athey	Phone: 307-745-7474	E-Mail: Janice.Winn-Shilling@ET.eurofinsUS.com	State of Origin:	Page: Page 1 of 1
Company: Trihydro Corporation	PWSID:			Job#: 17R-001-008

Address: 1252 Commerce Drive	Due Date Requested:
City: Laramie	TAT Requested (days):
State, Zip: WY, 82070	Compliance Project: Δ Yes Δ No
Phone:	PO #: 2022966
Email: rathey@trihydro.com	WO #:
Project Name: Former Laramie Yttrium Plant	Project #: 28023668
Site: Laramie, WY	SSOW#:

Analysis Requested

280-166106 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO - TPH-DRO	6010C, 6020A, 7470A	8270D_SIM - 8270D SIM (3 cmpds) ETA Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N		
LYMW04	9/1/22	1025	G	Water	N	N	X	X	X	3	8270D SIM direct shipped to Sacramento.
LYMW06R	9/1/22	0850	G	Water	N	N	X	X	X	3	
LYMW10	8/30/22	1350	G	Water	N	N	X	X	X	3	
LYMW11	8/31/22	1455	G	Water	N	N	X	X	X	3	
BD1- 20220831	8/31/22	—	G	Water	N	N	X	X	X	3	
EB- 20220830	8/30/22	1530	G	Water	N	N	X	X	X	2	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/1/22 @ 1400	Trihydro	Delivered to FedEx	9/1/22 @ 1400	
Relinquished by: FedEx	Date/Time:	Company	Received by:	Date/Time: 9/2/22 0920	Company ETADEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.3, 2.5 CF0.0 IR12

Ver: 01/16/2019

ID:CYSA

SHIP DATE: 01SEP22
ACTWGT: 40.60 LB
CAD: /SSF02322
DIMS: 24x14x15 IN

To SAMPLE RECIEVING
EUROFINS TEST AMERICA
4955 YARROW ST

ARVADA CO 80002 (US)
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx
Express

E

J223022081202uv

TRK# 0667 8172 4870 0420

FRI - 02 SEP 10:30A
PRIORITY OVERNIGHT

72 LAAA

80002
CO-US DEN

ORIGIN ID:CYSA

SHIP DATE: 01SEP22
ACTWGT: 50.60 LB
CAD: /SSF02322
DIMS: 24x14x15 IN

SAMPLE RECIEVING
EUROFINS TESTAMERICA
4955 YARROW ST

ARVADA CO 80002 (US)
(303) 736-0100 REF:
INV:
PO: DEPT:

FedEx
Express

E

J223022081202uv

TRK# 0667 8172 4870 0419

FRI - 02 SEP 10:30A
PRIORITY OVERNIGHT

72 LAAA

80002
CO-US DEN

280-166106 Waybill

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Phone (916) 372-1059

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Tanner Smith	Lab PM: Winn-Shilling, Janice R.	Carrier Tracking No(s):	COC No:
Client Contact: Ryan Athey	Phone: 307-745-7474	E-Mail: Janice.Winn-Shilling@ET.eurofinsUS.com	State of Origin:	Page: Page 1 of 1
Company: Trihydro Corporation	PWSID:			Job #: 17R-001-008

Address: 1252 Commerce Drive	Due Date Requested:
City: Laramie	TAT Requested (days):
State, Zip: WY, 82070	Compliance Project: Δ Yes Δ No
Phone: 307-745-7474	PO #: 2022966
Email: rathey@trihydro.com	WO #:
Project Name: Former Laramie Yttrium Plant	Project #: 28023668
Site: Laramie, WY	SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015D_DRO - TPH-DRO	6010C, 6020A, 7470A	8270D_SIM - 8270D SIM (3 cmpds) ETA Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N		
LYMW04	9/1/22	1025	G	Water	N	N	X	X	X	2	Please email COC to Denver for login number. Metals & DRO direct shipped to Denver.
LYMW06R	9/1/22	0850	G	Water	N	N	X	X	X	2	
LYMW10	8/30/22	1350	G	Water	N	N	X	X	X	2	
LYMW11	8/31/22	1455	G	Water	N	N	X	X	X	2	
BD1-20220831	8/31/22	—	G	Water	N	N	X	X	X	2	
EB-20220830	8/30/22	1530	G	Water	N	N	X	X	X	2	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

280-166106 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: **Email COC to Denver for login number.**

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/1/22 @ 1400	Trihydro	Delivered to FedEx	9/1/22 @ 1400	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 9.2.22 1060	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: 1922623	Cooler Temperature(s) °C and Other Remarks: 2.9c

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Trihydro Corporation

Job Number: 280-166106-1

Login Number: 166106
List Number: 1
Creator: Winn-Shilling, Janice R

List Source: Eurofins Denver

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

Login Sample Receipt Checklist

Client: Trihydro Corporation

Job Number: 280-166106-1

Login Number: 166106
List Number: 2
Creator: Oropeza, Salvador

List Source: Eurofins Sacramento
List Creation: 09/02/22 09:08 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1972623
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

Sacramento
Sample Receiving Notes

280-166106 Field Sheet

Job:___

Tracking # : 773325031538

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: L-02 Corr. Factor: (+ / -) — °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal: 1972623

Cooler ID: _____

Temp Observed: 2.9 °C Corrected: 2.9 °C

From: Temp Blank ☐ Sample ☐

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials: KS Date: 9.2.22

Unpacking/Labeling The Samples	Yes	No	NA
COC is complete w/o discrepancies?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
Containers are not broken or leaking?	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☑	☐	☐
Samples require splitting/compositing?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: SD Date: 9-2-22

Notes:_____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
Samples received within hold time?	☑	☐	☐
NCM Filed?	☐	☐	☑
Log Release checked in TALS?	☑	☐	☐

Initials: SD Date: 9.2.22