2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

TWIN OAKS POWER STATION

COAL COMBUSTION RESIDUALS (CCR) LANDFILL

ROBERTSON COUNTY, TEXAS

January 27, 2023

Prepared By:



1120 NW Stallings Drive Nacogdoches, Texas 75964 TBPG Firm No. 50027

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Michelle K. Transier, P.G. Senior Geologist



Prepared by: Hydrex Environmental Nacogdoches, Texas TBPG Firm No. 50027

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Executive Summary

This 2022 Annual Groundwater Monitoring and Corrective Action Report for the Twin Oaks Power Station Coal Combustion Residuals ("CCR") Landfill ("the "facility") is prepared in accordance with the requirements of the facility's Groundwater Sampling and Analysis Plan ("GWSAP"), the state CCR Rules, 30 TAC Chapter 352, and the federal CCR Rule, 40 CFR Part 257, Subpart D. Groundwater monitoring for calendar year 2022 was performed on a semiannual schedule. This annual report summarizes the groundwater monitoring activities performed through the 2nd 2022 semi-annual detection groundwater sampling event for the facility. Semi-annual monitoring events were performed during April and December 2022. The facility maintained a detection monitoring status and program throughout 2022.

Statistical analysis of groundwater monitoring data collected during the April 2022 semi-annual monitoring event indicated unverified ("initial") intrawell statistical exceedance values for sulfate in monitoring well MW-13 and for boron, calcium, chloride, sulfate, and total dissolved solids ("TDS") in MW-14. Subsequently, verification resampling, utilizing a 1-of-*m* approach, was conducted on May 31, 2022, June 27-28, 2022, and July 14, 2022. Chloride concentrations in MW-14 were not confirmed. However, the results of the verification resampling confirmed the intrawell statistical exceedance values for sulfate concentrations in monitoring well MW-13 and for boron, calcium, sulfate, and TDS in MW-14. An alternate source/error demonstration ("ASD") was prepared to address the intrawell statistical exceedance values in MW-13 and MW-14. The ASD was presented in a report dated October 5, 2022. Based on the results, maintenance of the detection monitoring status and program was recommended.

Results of statistical analyses for the December 2022 monitoring event demonstrate intrawell statistical exceedances for boron, calcium, chloride, sulfate, and TDS concentrations in monitoring well MW-14. Review of data indicated the values are likely the result of natural groundwater variation at the facility; however, additional evaluations are underway and will be reported under separate cover. In accordance with applicable regulation and the GWSAP, an ASD will be submitted 90 days from the date a statistically significant increase ("SSI") was determined. If an ASD cannot be successfully determined, assessment monitoring will be initiated at the next regularly scheduled monitoring event.

It should be noted, this report has been certified by a qualified licensed professional geoscientist and qualified licensed professional engineer in accordance with 30 TAC Chapter 352 and 40 CFR Part 257, Subpart D.

Introduction

The reporting requirements under the CCR Rule, the relevant CCR Rule citations, and the corresponding location of those required contents in this report are listed below:

- Status of the groundwater monitoring program (§ 257.90(e)):Appendix B
- Summary of key actions completed (§ 257.90(e)):p. 1
- Any problems encountered and actions taken to resolve such problems (§ 257.90(e)): p. 2
- Project key activities for the upcoming year (§ 257.90(e)):p. 3
- Map, aerial image, or diagram of CCR Unit and monitoring wells (§ 257.90(e)(1)): . Appendix C

- Summary of groundwater data, wells sampled, date sampled, and whether sample was required under detection or assessment monitoring (§ 257.90(e)(3)): Appendix D and Key Actions Completed and any Problems Encountered section as presented on p.2.
- Narrative discussion of any transition between monitoring programs (§ 257.90(e)(4)):.....p. 2
- Other information as required for inclusion in the annual report (§ 257.90(e)(5)):p. 1-5
- An executive summary overview describing the current program status (§ 257.90(e)(6)):....p. 1

Key Actions Completed and any Problems Encountered

The monitoring network at the Twin Oaks Power Station CCR Landfill includes 8 monitoring wells (upgradient wells MW-7, MW-11, MW-12, and MW-16 and downgradient wells MW-13, MW-14, MW-15, and MW-17). Groundwater monitoring is performed in accordance with the facility's GWSAP, 30 TAC Chapter 352 Subchapter H, and 40 CFR Part 257, Subpart D. Specific sampling events and dates for calendar year 2022 are summarized in the following table:

Summary of Sampling Events

Event Date	Monitoring Wells (MW) Sampled	Event Type
April 18, 2022	MW-7, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17	Semi-Annual Detection Monitoring
May 31, 2022	MW-13 and MW-14	Verification Resampling
June 27-28, 2022	MW-14	Verification Resampling
July 14, 2022	MW-14	Verification Resampling
December 6, 2022	MW-7, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17	Semi-Annual Detection Monitoring

No significant problems were encountered during the sampling event in 2022.

Detection Monitoring

Detection monitoring is conducted at the Twin Oaks Power Station CCR Landfill on a semiannual schedule in accordance with applicable federal and state regulations. Laboratory analysis for detection events include those detection monitoring constituents listed in Table D-1 of the facility's GWSAP. A table of groundwater analytical results for all monitoring wells sampled during 2022 is included in Appendix D of this report.

First Semi-Annual Groundwater Monitoring Event (April 2022)

The first semi-annual detection monitoring event was conducted on April 18, 2022. Groundwater samples were obtained from monitoring wells MW-7, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17 for analysis of detection monitoring constituents. Additionally, a duplicate sample was collected at monitoring well MW-11 and analyzed for all detection monitoring constituents. The duplicate sample provided comparable results for all constituents. Intrawell statistical evaluation of data from the April 2022 event, performed in accordance with the provisions of the GWSAP, 30 TAC §352.941, and 40 CFR § 257.94, indicated unverified ("initial") intrawell statistical exceedances for sulfate in monitoring well MW-13 and for boron, calcium, chloride, sulfate, and total dissolved solids (TDS) in MW-14. Subsequently, verification resampling was conducted on May 31, 2022 for MW-13 and MW-14 and again on June 27-28, 2022 for MW-14, as provided for and in accordance with the GWSAP. The results of verification resampling confirmed the intrawell statistical exceedance values for sulfate in monitoring well MW-13 on June 21, 2022 and for boron, calcium, chloride, sulfate, and total dissolved solids (TDS) in MW-14 on July 8, 2022 and SSIs were determined on July 8, 2022. Statistical evaluation results are included in the 1st 2022 Semi-Annual Groundwater Monitoring and Corrective Action Report (Appendix E) dated July 15, 2022. Review of relevant information for the facility indicated the values are likely the result of natural groundwater variation and not a release from the CCR Landfill. In accordance with the facility's GWSAP, 30 TAC §352.941(c), and 40 CFR 257.94(e)(2), an alternate source demonstration (ASD) was prepared to address the calculated SSIs for MW-13 and MW-14. Notice of the intent to perform an ASD was provided to TCEQ on July 15, 2022.

An ASD was prepared to address the intrawell statistical exceedances. The results of the ASD indicated concentrations responsible for the reported SSIs are attributable to natural groundwater conditions and not a release from the facility. Specifically, the ASD demonstrates groundwater concentrations reported for downgradient monitoring wells MW-13 and MW-14 closely reflect early groundwater data reported for upgradient monitoring well MW-7. Additionally, constituent concentrations responsible for the intrawell SSIs in downgradient wells MW-13 and MW-14 do not exceed the interwell statistical limits determined from the original eight background monitoring events performed for upgradient well MW-7. Based on these results, changes in groundwater concentrations reported for wells MW-13 and MW-14 suggest a natural shift toward upgradient groundwater quality over time and not a release from the landfill. Based on the evaluation, no release from the CCR Landfill is indicated. A copy of the Alternate Source/Error Demonstration report dated October 5, 2022 is included in Appendix E of this report. A summary of the results of statistical evaluation is presented in the table below.

Summary of Statistical Exceedances for the First Semi-Annual Groundwater Monitoring Event (April 2022)

	Constituent	Initial April	Statistical	Verifica Re	tion Res esult (mg	ampling /L)	Intrawell Statistical	Brookstore
vven	Constituent	Event Result (mg/L)	(mg/L)	May Event	June Event	July Event	Exceedance Confirmed?	Resolution
MW-13	sulfate	200	195.2	360	NS	NS	Yes	Alternate Source/Error Demonstration and Maintain Detection Monitoring
MW-14	boron	0.875	0.6019	0.718	1.64	0.762	Yes	Alternate Source/Error Demonstration and Maintain Detection Monitoring

Summary of Statistical Exceedances for the First Semi-Annual Groundwater Monitoring Event (April 2022)

		Initial April	Statistical	Verifica Re	tion Resa sult (mg	ampling /L)	Intrawell Statistical	Produktion
Well	Constituent	Event Result (mg/L)	Limit (mg/L)	May Event	June Event	July Event	Exceedance Confirmed?	Resolution
	calcium	190	141.2	202	211	NS	Yes	Alternate Source/Error Demonstration and Maintain Detection Monitoring
	chloride	457	440.9	464	423	NS	No	Maintain Detection Monitoring
10100-14	sulfate	899	841.2	944	933	NS	Yes	Alternate Source/Error Demonstration and Maintain Detection Monitoring
	TDS	2290	1940 2240 2230 2700		Yes	Alternate Source/Error Demonstration and Maintain Detection Monitoring		
NS – No	t Sampled							

Monitoring wells MW-7, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17 remained in detection monitoring status.

Second Semi-Annual Groundwater Monitoring Event (December 2022)

The second semi-annual detection monitoring event was conducted on December 6, 2022. Groundwater samples were obtained from monitoring wells MW-7, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17 for analysis of detection monitoring constituents. Additionally, a duplicate sample was collected at monitoring well MW-11 and analyzed for all detection monitoring constituents. The duplicate sample provided comparable results for all constituents. Intrawell statistical evaluation of data from the December 2022 event, performed in accordance with the provisions of the GWSAP, 30 TAC §352.941, and 40 CFR § 257.94, indicated unverified ("initial") intrawell statistical exceedances boron, calcium, chloride, sulfate, and TDS in MW-14.

Review of data indicated that the values are likely the result of natural groundwater variation at the facility. In accordance with the facility's GWSAP, notice of intent to perform an ASD was given to TCEQ on January 27, 2023 and an ASD will be submitted 90 days from the date an SSI was determined, on or before April 27, 2023. If an ASD cannot be successfully determined, assessment monitoring will be initiated at the next regularly scheduled monitoring event. A summary of the results of statistical evaluation is presented in the table below.

Well	Constituent	Initial Result (mg/L)	Statistical Limit (mg/L)	Intrawell Statistical Exceedance?	Recommendation
	boron	1.30	0.6019	Yes	Alternate Source/Error Demonstration
	calcium	263	141.2	Yes	Alternate Source/Error Demonstration
MW-14	chloride	470	440.9	Yes	Alternate Source/Error Demonstration
	sulfate	1080	841.2	Yes	Alternate Source/Error Demonstration
	total dissolved solids	2450	1940	Yes	Alternate Source/Error Demonstration

Summary of Statistical Exceedances for the Second Semi-Annual Groundwater Monitoring Event (December 2022)

Monitoring wells MW-7, MW-11, MW-12, MW-13, MW-15, MW-16, and MW-17 remain in detection monitoring status. Monitoring well MW-14 also remain in detection monitoring status pending ASD submittal.

Groundwater Elevation, Flow Rate, and Direction

Water levels were measured in all monitoring wells prior to purging in accordance with the GWSAP. A table summarizing groundwater elevation data collected during the April 2022 detection monitoring event is included in Appendix B. Hydraulic gradient and flow rate calculations, along with a groundwater elevation map showing groundwater flow direction for the December 2022 detection monitoring event, are also included in Appendix C.

Project Key Activities for 2023

Based on the data available at the time of this report, the detection monitoring program currently in place for the Twin Oaks Power Station CCR Landfill meets the requirements of applicable regulations. Therefore, no change to the groundwater monitoring system, monitoring schedule, or monitoring program is proposed. An ASD will be submitted 90 days from the date an SSI was determined. If an ASD cannot be successfully determined, assessment monitoring will be initiated at the next regularly scheduled monitoring event.

Appendix A

CERTIFICATION STATEMENT

COAL COMBUSTION RESIDUALS (CCR) LANDFILL TWIN OAKS POWER STATION ROBERTSON COUNTY, TEXAS

I certify I am a licensed professional engineer in the State of Texas and a *qualified professional engineer* as defined in 40 CFR §257.53. I certify that the groundwater monitoring data and other information presented in the 2022 Annual Groundwater Monitoring and Corrective Action Report, prepared by Hydrex Environmental on behalf of the Twin Oaks Power Station, are appropriate and meet the requirements of 40 CFR Part 257, Subpart D.



John J. Tayntor, P.E. Auckland Consulting, LLC TBPE Firm Registration No. F-16721

January 27, 2023

Date

Appendix B

Monitoring Well Network and Program Summary

	Wall Designation	Aquifor	2022
	wen Designation	Aquiler	Monitoring Status
MW-7	Upgradient	Uppermost	Detection Monitoring
MW-11	Upgradient	Uppermost	Detection Monitoring
MW-12	Upgradient	Uppermost	Detection Monitoring
MW-13	Downgradient	Uppermost	Detection Monitoring
MW-14	Downgradient	Uppermost	Detection Monitoring
MW-15	Downgradient	Uppermost	Detection Monitoring
MW-16	Upgradient	Uppermost	Detection Monitoring
MW-17	Downgradient	Uppermost	Detection Monitoring

Appendix C

Groundwater Elevation Summary Table

Twin Oaks Power Station Coal Combustion Residuals (CCR) Landfill Robertson County, Texas

Well ID	Date	Top of Casing Elevation (ft-amsl)	Depth to Water (ft)	Groundwater Elevation (ft-amsl)
	4/18/2022	411.60	25.15	386.45
10100-7	12/6/2022	411.60	25.81	385.79
M\A/ 11	4/18/2022	406.93	22.40	384.53
	12/6/2022	406.93	23.10	383.83
M/A/ 12	4/18/2022	387.27	5.52	381.75
10100-12	12/6/2022	387.27	6.57	380.70
M\\\/ 13	4/18/2022	398.32	20.81	377.51
10100-13	12/6/2022	398.32	22.41	375.91
M/A/ 1/	4/18/2022	394.68	19.65	375.03
10100-14	12/6/2022	394.68	20.93	373.75
M/A/ 15	4/18/2022	410.47	35.37	375.10
10100-13	12/6/2022	410.47	36.74	373.73
MW/ 16	4/18/2022	422.54	41.09	381.45
10100-10	12/6/2022	422.54	41.90	380.64
M/A/ 17	4/18/2022	405.87	33.10	372.77
10100-17	12/6/2022	405.87	34.82	371.05



Twin Oaks Power Station Coal Combustion Residuals Landfill

Groundwater Flow Rate Calculations

Approximate hydraulic gradients were calculated based on data presented on the individual groundwater gradient map for the December 2022 monitoring event.

Calculation of hydraulic gradient was performed using the following equation:

Where:

 Δh Δh = approximate change in hydraulic head between two known points Where: i =Ad

 Δd = approximate change in distance between two known points along flow paths

Gradient Measurement Line	Δh (feet)	Δd (feet)	i (feet/feet)	Monitoring Event
from well MW-7 to MW-17	14.74	3370	0.0044	December 2022

Estimated Flow Rate Calculations

The estimated groundwater flow rate was calculated for each monitoring event using the following formula:

ki v = ne v = flow rate k = hydraulic conductivity i = hydraulic gradient (above) n_e = effective porosity

Flow Rate Measurement Line	k (cm/sec)	n _e	i (feet/feet)	v (feet/year)	Monitoring Event
from well MW-7 to MW-17	4.85E-03	0.3	0.0044	73.65	December 2022

Note: Hydraulic conductivity (k) and effective porosity (n e) values as derived from slug test results conducted March 2016.

Hydrex Environmental TBPG Firm No. 50027



Appendix D

Groundwater Monitoring Analytical Results Summary Table

Well ID	Sampling Date	Boron (mg/L)	Total Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	(NS) Hd	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Total Antimony (mg/L)	Total Arsenic (mg/L)	Total Barium (mg/L)	Total Beryllium (mg/L)	Total Cadmium (mg/L)	Total Chromium (mg/L)	Total Cobalt (mg/L)	Fluoride (mg/L)	Total Lead (mg/L)	Total Lithium (mg/L)	Total Mercury (mg/L)	Total Molybdenum (mg/L)	Total Selenium (mg/L)	Total Thallium (mg/L)	Radium 226 & 228 (Combined) (pCi/L)
N/\/ 7	04/19/22	0.27	202	277	<0.500	6.5	1010	1040	NIA	NA	NA	NIA	NA	NA	NA	NIA	NA	NA	NIA	NIA	NA	NA	NA
M/M/ 7	12/06/22	0.27	292	200	<0.500	0.5	1010	1940	NA	NA NA	NA	NA	NA	NA NA	NA	ΝA	NA	NA	NA	NA	NA	NA	NA
10100-7	12/00/22	0.271	303	200	<0.500	0.5	1030	1920	11/4	INA	IN/A	110		INA		117	na.	INA	114	11/5	11/4		
MW-11	04/18/22	0.162	130	140	<0.500	6.6	485	988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-11	12/06/22	0.169	129	138	<0.500	6.5	469	913	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	04/18/22	0.025	16.1	75.9	<0.500	6.5	41	266	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	12/06/22	<0.05	20.2	80.2	<0.500	6.3	43.6	262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1	r			r	L				1	r —			1	r	1							
MW-13	04/18/22	0.0483	51.3	101	<0.500	6.3	200	582	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-13	05/31/22	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-13	12/06/22	0.0536	35.1	117	< 0.500	6.2	110	448	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Backgro	ound Limits*	0.1206	59.59	120.1	0.584	4.972-7.724	195.2	631.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M/0/ 14	04/19/22	0.875	100	457	<0.500	6.6	800	2200	NIA	NA	NA	NA	NA	NA	NA	NIA	NA	NA	NIA	NIA	NA	NA	NA
MW/_14	05/31/22	0.073	202	457	<0.300 ΝΔ	0.0 NA	099	2290	NA	NA NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-14	06/28/22	1.64	202	423	NA	NA	033	2240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-14	07/14/22	0.762	NA	NA	NA	NA	NA	2700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-14	12/06/22	1.3	263	470	<0.500	6.5	1080	2450	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Backgro	ound Limits*	0.6019	141.2	440.9	0.682	4.924-7.57	841.2	1940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
																	• 		• 				
MW-15	04/18/22	0.034	27.4	147	<0.500	6.6	44.2	462	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-15	12/06/22	<0.05	27.7	144	<0.500	6.5	39	424	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Backgro	ound Limits*	0.06659	37.94	197.6	0.5	4.322-7.577	49.99	482.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1	I			I						T				I								
MW-16	04/18/22	0.022	69	273	<0.500	6.6	98.9	796	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	12/06/22	<0.05	68	176	<0.500	6.6	130	717	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M\\\/_17	04/19/22	0.0332	130	611	<0.500	5.9	132	1350	NIA	NA	NA	NIA	NA	NA	NA	NIA	NIA	NIA	NIA	NIA	NIA	NA	NA
MW_17	12/06/22	<0.05	73.1	410	<0.500	5.8	53.9	878	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Backord	ound Limits*	0.362	396.5	1728	0.5	3 992-7 76	168	3264	NΔ	NΔ	NA	ΝΔ	NΔ	NΔ	NΔ	NA	NΔ	NΔ	NΔ	NA	NΔ	NΔ	NA
		0.002	000.0		0.0	1.002 1.110		0201	11/3	11/1		11/3	11/1	11/1			11/5	11/5	11/5		11/3	11/7	

*Background limits are intrawell statistcal limits including data collected between June 2016 and June 2021.

Laboratory Report(s)



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Michelle Transier Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964 Generated 1/17/2023 10:32:06 AM Revision 1

JOB DESCRIPTION

Twin Oaks PP

JOB NUMBER

860-38856-1

Eurofins Houston 4145 Greenbriar Dr Stafford TX 77477





Eurofins Houston

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated 1/17/2023 10:32:06 AM Revision 1

Authorized for release by Anita Patel, Project Manager <u>Anita.Patel@et.eurofinsus.com</u> (832)776-2275

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Qualifiers

ML

MPN

MQL NC

ND

NEG POS

PQL

PRES

QC

RER RL

RPD

TEF

TEQ

TNTC

Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Detected at the reporting limit (or MDL or EDL if shown)

Not Calculated

Negative / Absent

Positive / Present

Presumptive

Quality Control

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Qualifiers		3
HPLC/IC		
Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value	5
Ŭ	Indicates the analyte was analyzed for but not detected	
Matala		
Qualifier	Qualifier Description	
	Indicates the analyte was analyzed for but not detected	
General Che	MISTRY Qualifier Description	8
	Guaimer Description	
	Indicates the analyte was analyzed for but not detected	9
0		
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	13
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	

Job ID: 860-38856-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-38856-1

REVISION

The report being provided is a revision of the original report sent on 12/28/2022. The report (revision 1) is being revised due to the original run had an incorrect integration for Fluoride. After correcting this, the result is below RL. The rerun confirms this.

Report revision history

Receipt

The samples were received on 12/8/2022 10:19 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

Receipt Exceptions

Did not receive extra sample containers for MS/MSD.

MW-11 (860-38856-1), Dup (860-38856-2), MW-7 (860-38856-3), MW-12 (860-38856-4), MW-16 (860-38856-5), MW-13 (860-38856-6), MW-14 (860-38856-7), MW-15 (860-38856-8) and MW-17 (860-38856-9)

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for Chloride and Sulfateanalytical batch 860-83439 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Metals

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

General Chemistry

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

Job ID: 860-38856-1

Detection Summary

Client Sample ID: MW-11

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Lab Sample ID: 860-38856-1

Lab Sample ID: 860-38856-2

Lab Sample ID: 860-38856-3

Lab Sample ID: 860-38856-4

Lab Sample ID: 860-38856-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	138		0.500	mg/L	1	_	300.0	Total/NA
Sulfate	469		0.500	mg/L	1		300.0	Total/NA
Boron	0.169		0.0500	mg/L	1		6010B	Total/NA
Calcium	129		10.0	mg/L	50		6010B	Total/NA
Total Dissolved Solids	913		10.0	mg/L	1		SM 2540C	Total/NA
pH	6.5	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	15.7	HF		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Dup

Analyte	Result C	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	138		0.500	mg/L	1	- 3	300.0	Total/NA
Sulfate	468		0.500	mg/L	1	3	300.0	Total/NA
Boron	0.169		0.0500	mg/L	1	6	6010B	Total/NA
Calcium	135		10.0	mg/L	50	6	6010B	Total/NA
Total Dissolved Solids	893		10.0	mg/L	1	5	SM 2540C	Total/NA
рН	6.5 H	ΗF		SU	1	5	SM 4500 H+ B	Total/NA
Temperature	15.2 H	ΗF		Degrees C	1	S	SM 4500 H+ B	Total/NA

Client Sample ID: MW-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	260		0.500	mg/L	1	_	300.0	Total/NA
Sulfate	1030		5.00	mg/L	10		300.0	Total/NA
Boron	0.271		0.0500	mg/L	1		6010B	Total/NA
Calcium	303		10.0	mg/L	50		6010B	Total/NA
Total Dissolved Solids	1920		20.0	mg/L	1		SM 2540C	Total/NA
рН	6.5	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	15.4	HF		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-12

Analyte **Result Qualifier** RL Unit Dil Fac D Method Prep Type Chloride 80.2 0.500 mg/L 300.0 Total/NA 1 Sulfate 43.6 0.500 300.0 Total/NA mg/L 1 20.2 6010B Total/NA Calcium 0.200 mg/L 1 **Total Dissolved Solids** 262 5.00 mg/L 1 SM 2540C Total/NA pН 6.3 HF SU SM 4500 H+ B Total/NA 1 Temperature 16.3 HF Degrees C 1 SM 4500 H+ B Total/NA

Client Sample ID: MW-16

Analyte	Result Qualifier	RL	Unit	Dil Fac D	Method	Prep Type
Chloride	176	0.500	mg/L	1	300.0	Total/NA
Sulfate	130	0.500	mg/L	1	300.0	Total/NA
Calcium	68.0	0.200	mg/L	1	6010B	Total/NA
Total Dissolved Solids	717	10.0	mg/L	1	SM 2540C	Total/NA
рН	6.6 HF		SU	1	SM 4500 H+ B	Total/NA
Temperature	15.0 HF		Degrees C	1	SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client Sample ID: MW-13

Lab Sample ID: 860-38856-6

Analyte	Result (Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	117		0.500	mg/L	1	_	300.0	Total/NA
Sulfate	110		0.500	mg/L	1		300.0	Total/NA
Boron	0.0536		0.0500	mg/L	1		6010B	Total/NA
Calcium	35.1		0.200	mg/L	1		6010B	Total/NA
Total Dissolved Solids	448		10.0	mg/L	1		SM 2540C	Total/NA
pH	6.2 H	łF		SU	1		SM 4500 H+ B	Total/NA
Temperature	14.6 H	łF		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-14

Analyte	Result C	Qualifier	RL	Unit	Dil Fac) Method	Prep Type
Chloride	470		0.500	mg/L	1	300.0	Total/NA
Sulfate	1080		5.00	mg/L	10	300.0	Total/NA
Boron	1.30		0.0500	mg/L	1	6010B	Total/NA
Calcium	263		10.0	mg/L	50	6010B	Total/NA
Total Dissolved Solids	2450		20.0	mg/L	1	SM 2540C	Total/NA
рН	6.5 H	ΗF		SU	1	SM 4500 H+ B	Total/NA
Temperature	13.5 H	ΗF		Degrees C	1	SM 4500 H+ B	Total/NA

Client Sample ID: MW-15

Analyte	Result Q	ualifier RL	Unit	Dil Fac	D Method	Ргер Туре
Chloride	144	0.500	mg/L	1	300.0	Total/NA
Sulfate	39.0	0.500	mg/L	1	300.0	Total/NA
Calcium	27.7	0.200	mg/L	1	6010B	Total/NA
Total Dissolved Solids	424	10.0	mg/L	1	SM 2540C	Total/NA
pН	6.5 H	F	SU	1	SM 4500 H+ B	Total/NA
Temperature	14.1 H	F	Degrees C	1	SM 4500 H+ B	Total/NA

Client Sample ID: MW-17

Lab Sample ID: 860-38856-9

Lab Sample ID: 860-38856-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	410		0.500	mg/L	1	_	300.0	Total/NA
Sulfate	53.9		0.500	mg/L	1		300.0	Total/NA
Calcium	73.1		0.200	mg/L	1		6010B	Total/NA
Total Dissolved Solids	878		10.0	mg/L	1		SM 2540C	Total/NA
рН	5.8	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	13.4	HF		Degrees C	1		SM 4500 H+ B	Total/NA

Lab Sample ID: 860-38856-7

Client Sample ID: MW-11 Date Collected: 12/06/22 09:11 Date Received: 12/08/22 10:19

Lab Sample ID: 860-38856-1 Matrix: Water

Water

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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	138		0.500	mg/L			12/27/22 23:50	1
Fluoride	<0.500	U	0.500	mg/L			12/27/22 23:50	
Sulfate	469		0.500	mg/L			12/27/22 23:50	1
_ Method: SW846 6010B - Metals (
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analvzed	Dil Fac
Boron	0.169		0.0500	mg/L		12/20/22 11:00	12/20/22 23:51	1
Calcium	129		10.0	mg/L		12/20/22 11:00	12/21/22 00:01	50
	Desult	Qualifian	DI.	11 14	_	Duran and	A a la a al	
Analyte	Result	Qualifier				Prepared	Analyzed	DIIFac
Total Dissolved Solids (SM 2540C)	913		10.0	mg/L			12/13/22 19:45	1
pH (SM 4500 H+ B)	6.5	HF		SU			12/14/22 13:37	-
Temperature (SM 4500 H+ B)	15.7	HF		Degrees C			12/14/22 13:37	
Client Sample ID: Dup					L	ab Sample	D: 860-38	856-2
Date Collected: 12/06/22 09:11							Matrix	Wate
Date Received: 12/08/22 10:19								
- Method: MCAWW 300.0 - Anions	. Ion Chr	omatograp	hv					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analvzed	Dil Fac
Chloride	138		0.500	ma/L			12/28/22 00:02	
Eluoride	<0 500	П	0.500	mg/L			12/28/22 00:02	
Sulfato	468	0	0.500	mg/L			12/28/22 00:02	
Analyte Boron	Result 0.169	Qualifier	RL 0.0500 10.0	Unit mg/L mg/l	D	Prepared 12/20/22 11:00 12/20/22 11:00	Analyzed 12/20/22 23:54 12/21/22 00:05	Dil Fac
	100		10.0	ing/E		12/20/22 11:00	12/2 1/22 00.00	00
General Chemistry					_			
Analyte	Result	Qualifier	RL			Prepared	Analyzed	DILFac
Total Dissolved Solids (SM 2540C)	893		10.0	mg/L			12/13/22 19:45	1
pH (SM 4500 H+ B)	6.5	HF		SU			12/14/22 13:41	-
Temperature (SM 4500 H+ B)	15.2	HF		Degrees C			12/14/22 13:41	
Client Sample ID: MW-7					L	ab Sample	D: 860-38	856-3
Date Collected: 12/06/22 10:04							Matrix	Water
Method: MCAWW 300.0 - Anions	, Ion Chr Result	omatograp	hy Bl	Unit	п	Prenared	Analyzod	Dil Fa
Chlorido	200		0.500	<u></u>			12/28/22 0/1.11	
Eluoride		п	0.500	mg/L			12/28/22 04.11	
	~0.000	0	0.000	mg/∟			12/20/22 04.11	
	1030		5.00	mg/∟			12/28/22 04:23	.10
Method: SW846 6010B - Metals ((ICP)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.271		0.0500	mg/L		12/20/22 11:00	12/21/22 00:16	1
Calcium	303		10.0	mg/L		12/20/22 11:00	12/21/22 00:34	50

Client Sample Results

		Client	Sample Re	esults					
Client: Hydrex Environmental Project/Site: Twin Oaks PP							Job ID: 860-3	8856-1	
Client Sample ID: MW-7 Date Collected: 12/06/22 10:04 Date Received: 12/08/22 10:19					L	ab Sample.	e ID: 860-38 Matrix	856-3 Water	
General Chemistry		o			_				E
Analyte	Result	Qualifier	RL			Prepared	Analyzed		J
nul (SM 4500 H+ R)	1920	uc	20.0	SU			12/13/22 19.43	1	6
рн (SM 4500 н+ В) Temperature (SM 4500 H+ В)	0.5 15 A	HE		Degrees C			12/14/22 13:43	1	U
	15.4			Degrees O			12/14/22 10:40		
Client Sample ID: MW-12					L	ab Sample	e ID: 860-38	856-4	
Date Collected: 12/06/22 10:51						-	Matrix	Water	0
Date Received: 12/08/22 10:19									Ō
									0
Method: MCAWW 300.0 - Anion	s, Ion Chr	omatograp	ohy n	11	•	Drenered	Anolymod		3
Chlorido	Result	Quaimer	KL			Prepared	Analyzeu		
Chioride	80.2		0.500	mg/L			12/20/22 00:14	1	
Fluonde	<0.500	0	0.500	mg/∟			12/20/22 00:14	1	
Suirate	43.6		0.500	mg/L			12/28/22 00:14	1	
Method: SW846 6010B - Metals	(ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Boron	< 0.0500	U	0.0500	mg/L		12/20/22 11:00	12/21/22 00:19	1	
Calcium	20.2		0.200	mg/L		12/20/22 11:00	12/21/22 00:19	1	13
				-					
General Chemistry									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids (SM 2540C)	262		5.00	mg/L			12/13/22 19:45	1	
рН (SM 4500 H+ B)	6.3	HF		SU			12/14/22 13:45	1	
Temperature (SM 4500 H+ B)	16.3	HF		Degrees C			12/14/22 13:45	1	
Client Sample ID: MW-16					1	ah Samnle	2 ID· 860-38	856-5	
Date Collected: 12/06/22 11:27							Matrix	Wator	
Date Received: 12/08/22 11:27							Watita	. water	
Method: MCAWW 300.0 - Anion	s, Ion Chr	omatograp	ohy						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	176		0.500	mg/L			12/28/22 01:13	1	
Fluoride	<0.500	U	0.500	mg/L			12/28/22 01:13	1	
Sulfate	130		0.500	mg/L			12/28/22 01:13	1	
Method: SW846 6010B - Metals		Onelliffere	F :	11-24	_	Duener	A		
	Result		KL		<u> </u>	Prepared	Analyzed		
DUIUII	<0.0000	U	0.0500	mg/L		12/20/22 11:00	12/21/22 00:23	T	

Calcium	68.0		0.200	mg/L		12/20/22 11:00	12/21/22 00:23	1
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	717		10.0	mg/L	_		12/13/22 19:45	1
рН (SM 4500 Н+ В)	6.6	HF		SU			12/14/22 13:46	1
Temperature (SM 4500 H+ B)	15.0	HF		Degrees C			12/14/22 13:46	1

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1/17/2023 (Rev. 1)

Job ID: 860-38856-1

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Client Sample ID: MW-13 Date Collected: 12/06/22 11:59 Date Received: 12/08/22 10:19

Fluoride

Sulfate

Lab Sa	ample	ID:	860-38	856-6
	-		Matrix:	Water

Method: MCAWW 300.0 - Anions	s, Ion Chr	omatograp	hy					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	117		0.500	mg/L			12/28/22 01:25	1
Fluoride	<0.500	U	0.500	mg/L			12/28/22 01:25	1
Sulfate	110		0.500	mg/L			12/28/22 01:25	1
	(ICP)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0536		0.0500	mg/L		12/20/22 11:00	12/21/22 00:26	1
Calcium	35.1		0.200	mg/L		12/20/22 11:00	12/21/22 00:26	1
_ General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	448		10.0	mg/L			12/13/22 19:45	1
рН (SM 4500 H+ B)	6.2	HF		SU			12/14/22 13:50	1
Temperature (SM 4500 H+ B)	14. 6	HF		Degrees C			12/14/22 13:50	1
Dilent Sample ID: MW-14 Date Collected: 12/06/22 12:36 Date Received: 12/08/22 10:19					L	ab Sample	Matrix	856-7 Water
Method: MCAWW 300.0 - Anions	s, Ion Chr Result	omatograp	hy Bl	Unit	П	Prepared	Analyzed	Dil Fac
Chloride	470	quamer	0.500				12/28/22 04:35	1
Fluoride	<0 500	U	0.500	mg/l			12/28/22 04:35	1
Sulfate	1080	-	5.00	mg/L			12/28/22 04:47	10
_ Method: SW846 6010B - Metals ((ICP)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.30		0.0500	mg/L		12/20/22 11:00	12/21/22 00:30	1
Calcium	263		10.0	mg/L		12/20/22 11:00	12/21/22 00:48	50
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2450		20.0	mg/L			12/13/22 19:45	1
pH (SM 4500 H+ B)	6.5	HF		SU			12/15/22 16:40	1
Temperature (SM 4500 H+ B)	13.5	HF		Degrees C			12/15/22 16:40	1
Client Sample ID: MW-15					L	ab Sample	D: 860-38	856-8
Date Collected: 12/06/22 13:26 Date Received: 12/08/22 10:19						-	Matrix	: Water
Method: MCAWW 300.0 - Anions	s, Ion Chr	omatograp	hy					
Analyte	Result	Qualifier	RL	Unit	_ D	Prepared	Analyzed	Dil Fac
Chloride	144		0.500	mg/L	_		12/28/22 01:37	1

Method: SW846 6010B - Metal	s (ICP)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	< 0.0500	U	0.0500	mg/L		12/20/22 11:00	12/21/22 00:58	1
Calcium	27.7		0.200	mg/L		12/20/22 11:00	12/21/22 00:58	1

0.500

0.500

mg/L

mg/L

<0.500 U

39.0

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1

12/28/22 01:37

12/28/22 01:37

Client Sample Results

		Client	Sample Re	sults					
Client: Hydrex Environmental Project/Site: Twin Oaks PP							Job ID: 860-3	38856-1	2
Client Sample ID: MW-15 Date Collected: 12/06/22 13:26					L	ab Sample.	e ID: 860-38 Matrix	3856-8 : Water	
Date Received: 12/08/22 10:19									
General Chemistry	Pocult	Qualifier	DI	Unit	Б	Broparad	Applyzod	Dil Eac	5
Total Dissolved Solids (SM 2540C)		Quaimer	10.0			Flepaleu	12/13/22 10:45		
nH (SM 4500 H+ B)	65	HE	10.0	SU			12/15/22 16:42	1	6
Temperature (SM 4500 H+ B)	14.1	HE		Degrees C			12/15/22 16:42	1	U
				9					
Client Sample ID: MW-17					_ L	.ab Sample	ə ID: 860-38	3856-9	
Date Collected: 12/06/22 14:09							Matrix	: Water	8
Date Received. 12/00/22 10.15									
Method: MCAWW 300.0 - Anion	s, Ion Chr	omatograp	ohy						9
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	410		0.500	mg/L			12/28/22 01:49	1	
Fluoride	<0.500	U	0.500	mg/L			12/28/22 01:49	1	
Sulfate	53.9		0.500	mg/L			12/28/22 01:49	1	
Method: SW040 6010B - Metals	(ICP) Bosult	Qualifier	ы	Unit	п	Broparad	Applyzod	Dil Eac	
Boron	<0.0500		0.0500			12/20/22 11:00	12/21/22 01·02		
Calcium	<0.0000 72 4	0	0.0000	mg/L		12/20/22 11:00	12/21/22 01:02	1	13
	73.1		0.200	ing/L		12/20/22 11:00	12/21/2201.02	1	
General Chemistry									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids (SM 2540C)	878		10.0	mg/L			12/13/22 19:45	1	
pH (SM 4500 H+ B)	5.8	HF		SU			12/15/22 16:43	1	
Temperature (SM 4500 H+ B)	13.4	HF		Degrees C			12/15/22 16:43	1	

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Analysis Batch: 83439

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Lab Sample ID: MB 860-83439/3

Method: 300.0 - Anions, Ion Chromatography

MB MB

<0.500 U

<0.500 U

<0.500 U

Result Qualifier

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: MW-12

Prep Type: Total/NA

000

Client Sample ID: Method Blank

Analyzed

12/27/22 13:52

12/27/22 13:52

12/27/22 13:52

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

0/ **D** = =

Client Sample ID: Lab Control Sample

Prepared

D

7

Dil Fac 1 1 1 **Client Sample ID: Method Blank Prep Type: Total/NA**

Lab Sample ID: MB 860-83439/48 Matrix: Water Analysis Batch: 83439

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			12/27/22 23:03	1
Fluoride	<0.500	U	0.500	mg/L			12/27/22 23:03	1
Sulfate	<0.500	U	0.500	mg/L			12/27/22 23:03	1

RL

0.500

0.500

0.500

Unit

mg/L

mg/L

mg/L

Lab Sample ID: LCS 860-83439/49 **Matrix: Water**

Analysis Batch: 83439

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	10.0	9.744		mg/L		97	90 - 110	
Fluoride	10.0	10.36		mg/L		104	90 - 110	
Sulfate	10.0	10.53		mg/L		105	90 - 110	

Lab Sample ID: LCSD 860-83439/50

Matrix: Water

Anal	ysis	Batch:	83439	
	-			

	Бріке	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	10.0	9.709		mg/L		97	90 - 110	0	20
Fluoride	10.0	10.34		mg/L		103	90 - 110	0	20
Sulfate	10.0	10.56		mg/L		106	90 - 110	0	20

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Lab Sample ID: LLCS 860-83439/7

Matrix: Water Analysis Batch: 83439

	Spike	LLCS	LLCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	0.500	0.5447		mg/L		109	50 - 150	
Fluoride	0.500	0.4957	J	mg/L		99	50 - 150	
Sulfate	0.500	0.3044	J	mg/L		61	50 - 150	

Lab Sample ID: 860-38856-4 MS **Matrix: Water**

Analysis Batch: 83439

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Chloride	80.2		10.0	87.95	4	mg/L		77	90 - 110
Fluoride	<0.500	U	10.0	9.234		mg/L		91	90 - 110
Sulfate	43.6		10.0	71.59	4	mg/L		280	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 860-38856-4 I Matrix: Water	MSD									Clie	ent Sampl Prep Ty	e ID: I pe: To	MW-12 otal/NA
Analysis Batch: 83439													
-	Sample	Sam	nple	Spike		MSD	MSD				%Rec		RPD
Analyte	Result	Qua	lifier	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	80.2			10.0		87.91	4	mg/L		77	90 - 110	0	20
Fluoride	<0.500	U		10.0		9.246		mg/L		91	90 - 110	0	20
Sulfate	43.6			10.0		71.81	4	mg/L		282	90 - 110	0	20
Lab Sample ID: MB 860-8599	5/3								Cli	ent San	nple ID: M	ethod	Blank
Matrix: Water											Prep Ty	pe: To	otal/NA
Analysis Batch: 85995													
		MB	MB										
Analyte	Re	sult	Qualifier		RL		Unit		D P	Prepared	Analyz	zed	Dil Fac
Chloride	<0.	.500	U		0.500		mg/L				01/16/23	15:05	1
Fluoride	<0.	.500	U		0.500		mg/L				01/16/23	15:05	1
Sulfate	<0.	.500	U		0.500		mg/L				01/16/23	15:05	1
Lab Sample ID: LCS 860-8599 Matrix: Water	95/4							Clie	ent Sa	mple ID	: Lab Cor Prep Ty	ntrol S pe: To	ample otal/NA
Analysis Batch: 85995												•	
				Spike		LCS	LCS				%Rec		
Analyte				Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride				10.0		9.513		mg/L		95	90 - 110		·
Fluoride				10.0		9.576		mg/L		96	90 - 110		
Sulfate				10.0		9.277		mg/L		93	90 - 110		
Lab Sample ID: LCSD 860-85	995/5						c	lient S	ample	D: Lat	o Control	Samp	le Dup
Matrix: Water											Prep Tv	pe: To	tal/NA
Analysis Batch: 85995													
				Spike		LCSD	LCSD				%Rec		RPD
Analyte				Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride				10.0		9.526		mg/L		95	90 - 110	0	20
Fluoride				10.0		9.590		mg/L		96	90 - 110	0	20
Sulfate				10.0		9.297		mg/L		93	90 - 110	0	20
Lab Sample ID: LLCS 860-859 Matrix: Water	995/7							Clie	ent Sa	mple ID	: Lab Cor Prep Ty	ntrol S	ample
Analysis Batch: 85995													
				Spike		LLCS	LLCS				%Rec		
Analyte				Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride				0,500		0.5080		ma/L		102	50 - 150		·
Fluoride				0.500		0.4530	J	ma/l			50 _ 150		
Sulfate				0.500		0.5403	-	mg/L		108	50 - 150		
Method: 6010B - Metals (I	CP)												
Lab Sample ID: MB 860-8274	0/1-A								Clie	ent San	nple ID: M	ethod	Blank
watrix: water												pe: 10	
Analysis Batch: 82946											Prep E	satch:	o2/40

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0500	U	0.0500	mg/L	_	12/20/22 11:00	12/20/22 22:54	1
Calcium	<0.200	U	0.200	mg/L		12/20/22 11:00	12/20/22 22:54	1

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

Lab Sample ID: LCS 860-8	2740/2-A					CI	ient Sa	mple ID	: Lab Co	ntrol Sa	ample
Matrix: Water									Prep Ty	pe: To	tal/NA
Analysis Batch: 82946									Prep I	Batch:	82740
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Boron			1.00	1.040		mg/L		104	80 - 120		
Calcium			25.0	25.70		mg/L		103	80 - 120		
Lab Sample ID: LCSD 860-	-82740/3-A				(Client S	Sample	D: La	o Control	Sampl	le Dup
Matrix: Water									Prep Ty	pe: To	tal/NA
Analysis Batch: 82946									Prep I	Batch:	82740
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron			1.00	1.040		mg/L		104	80 - 120	0	20
Calcium			25.0	25.90		mg/L		104	80 - 120	1	20
Method: SM 2540C - Sc	olids, Tota	al Disso	olved (TD	S)							
Lab Sample ID: MB 860-81	747/1						Cli	ent San	nple ID: M	lethod	Blank
Matrix: Water									Prep Ty	pe: To	tal/NA
Analysis Batch: 81747											
-		MB MB									
Analyte	Re	esult Qua	lifier	RL	Unit		DF	Prepared	Analy	zed	Dil Fac
Total Dissolved Solids	<	5.00 U		5.00	mg/L	-			12/13/22	19:45	1
Lab Sample ID: LCS 860-8	1747/2					CI	ient Sa	mple ID	: Lab Co	ntrol S	ample
Matrix: Water									Prep Tv	pe: To	tal/NA
Analysis Batch: 81747											
			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1000	985.0		mg/L		99	80 - 120		
- Lah Sample ID: I CSD 860.	817/7/3					Client	Sample		Control	Sampl	
Lab Sample ID. LCSD 660	-01/4//3					Sherit	Sample			Sampi	
Matrix: Water									Prep Ty	pe: To	ial/NA
Analysis Batch: 81747			Calle								000
Awahata			Бріке		LUSD	11		0/ D = =	%Rec		RPD
Analyte Tatal Disasturad Calida			Added	Result	Qualifier		D	%Rec			
			1000	979.0		mg/L		98	80 - 120	1	10
Lab Sample ID: LLCS 860-	81747/4					CI	ient Sa	mple ID	: Lab Cor	ntrol Sa	ample
Matrix: Water									Prep Ty	pe: To	tal/NA
Analysis Batch: 81747										•	
			Spike	LLCS	LLCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids	·		5.00	<5.00	U	mg/L		60	50 - 150		
Lab Sample ID: 860-38856	-2 DU								Client Sar	nple IC): Dup
Matrix: Water									Pren Tu	ne To	tal/NA
Analysis Batch: 81747									перту	PC. 10	
		<u> </u>									חסס
	Sample	Sample		וות	DU						1,
Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	л			RPD	Limit
Analyte Total Dissolved Solids	Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	

Method: SM 4500 H+ B - pH

Lab Sample ID: 860-38856 Matrix: Water Analysis Batch: 81874	-1 DU						Client Sample ID: M Prep Type: Tot	IW-11 tal/NA
-	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
pH	6.5	HF	6.5		SU		0.5	20
Temperature	15.7	HF	15.3		Degrees C		3	20

HPLC/IC

Analysis Batch: 83439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
860-38856-1	MW-11	Total/NA	Water	300.0		
860-38856-2	Dup	Total/NA	Water	300.0		5
860-38856-3	MW-7	Total/NA	Water	300.0		
860-38856-3	MW-7	Total/NA	Water	300.0		
860-38856-4	MW-12	Total/NA	Water	300.0		
860-38856-5	MW-16	Total/NA	Water	300.0		
860-38856-6	MW-13	Total/NA	Water	300.0		
860-38856-7	MW-14	Total/NA	Water	300.0		8
860-38856-7	MW-14	Total/NA	Water	300.0		
860-38856-8	MW-15	Total/NA	Water	300.0		9
860-38856-9	MW-17	Total/NA	Water	300.0		
MB 860-83439/3	Method Blank	Total/NA	Water	300.0		
MB 860-83439/48	Method Blank	Total/NA	Water	300.0		
LCS 860-83439/49	Lab Control Sample	Total/NA	Water	300.0		
LCSD 860-83439/50	Lab Control Sample Dup	Total/NA	Water	300.0		
LLCS 860-83439/7	Lab Control Sample	Total/NA	Water	300.0		
860-38856-4 MS	MW-12	Total/NA	Water	300.0		
860-38856-4 MSD	MW-12	Total/NA	Water	300.0		
Analysis Batch: 859	95					13
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
MB 860-85995/3	Method Blank	Total/NA	Water	300.0		
LCS 860-85995/4	Lab Control Sample	Total/NA	Water	300.0		
LCSD 860-85995/5	Lab Control Sample Dup	Total/NA	Water	300.0		
LLCS 860-85995/7	Lab Control Sample	Total/NA	Water	300.0		

Metals

Prep Batch: 82740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-38856-1	MW-11	Total/NA	Water	3010A	
860-38856-2	Dup	Total/NA	Water	3010A	
860-38856-3	MW-7	Total/NA	Water	3010A	
860-38856-4	MW-12	Total/NA	Water	3010A	
860-38856-5	MW-16	Total/NA	Water	3010A	
860-38856-6	MW-13	Total/NA	Water	3010A	
860-38856-7	MW-14	Total/NA	Water	3010A	
860-38856-8	MW-15	Total/NA	Water	3010A	
860-38856-9	MW-17	Total/NA	Water	3010A	
MB 860-82740/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-82740/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-82740/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Analysis Batch: 82946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-38856-1	MW-11	Total/NA	Water	6010B	82740
860-38856-1	MW-11	Total/NA	Water	6010B	82740
860-38856-2	Dup	Total/NA	Water	6010B	82740
860-38856-2	Dup	Total/NA	Water	6010B	82740
860-38856-3	MW-7	Total/NA	Water	6010B	82740
860-38856-3	MW-7	Total/NA	Water	6010B	82740

Prep Type

Total/NA

Matrix

Water

Method

6010B

Analysis Batch: 82946 (Continued)

Client Sample ID

MW-12

MW-16

MW-13

MW-14

MW-14

MW-15

MW-17

Method Blank

Lab Control Sample

Lab Control Sample Dup

Metals (Continued)

Lab Sample ID

860-38856-4

860-38856-5

860-38856-6

860-38856-7

860-38856-7

860-38856-8

860-38856-9

MB 860-82740/1-A

LCS 860-82740/2-A

LCSD 860-82740/3-A

Job ID: 860-38856-1

Prep Batch

82740

82740

82740

82740

82740

82740

82740

82740

82740

82740

8 9 10

General Chemistry

Analysis Batch: 81747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-38856-1	MW-11	Total/NA	Water	SM 2540C	
860-38856-2	Dup	Total/NA	Water	SM 2540C	
860-38856-3	MW-7	Total/NA	Water	SM 2540C	
860-38856-4	MW-12	Total/NA	Water	SM 2540C	
860-38856-5	MW-16	Total/NA	Water	SM 2540C	
860-38856-6	MW-13	Total/NA	Water	SM 2540C	
860-38856-7	MW-14	Total/NA	Water	SM 2540C	
860-38856-8	MW-15	Total/NA	Water	SM 2540C	
860-38856-9	MW-17	Total/NA	Water	SM 2540C	
MB 860-81747/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-81747/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-81747/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-81747/4	Lab Control Sample	Total/NA	Water	SM 2540C	
860-38856-2 DU	Dup	Total/NA	Water	SM 2540C	

Analysis Batch: 81874

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-38856-1	MW-11	Total/NA	Water	SM 4500 H+ B	
860-38856-2	Dup	Total/NA	Water	SM 4500 H+ B	
860-38856-3	MW-7	Total/NA	Water	SM 4500 H+ B	
860-38856-4	MW-12	Total/NA	Water	SM 4500 H+ B	
860-38856-5	MW-16	Total/NA	Water	SM 4500 H+ B	
860-38856-6	MW-13	Total/NA	Water	SM 4500 H+ B	
860-38856-1 DU	MW-11	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 82140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-38856-7	MW-14	Total/NA	Water	SM 4500 H+ B	
860-38856-8	MW-15	Total/NA	Water	SM 4500 H+ B	
860-38856-9	MW-17	Total/NA	Water	SM 4500 H+ B	
Initial

Amount

50 mL

50 mL

100 mL

Batch

83439

82740

82946

82740

82946

81747

81874

Number

Final

Amount

50 mL

50 mL

200 mL

Dil

1

1

50

1

1

Factor

Run

Client Sample ID: MW-11 Date Collected: 12/06/22 09:11 Date Received: 12/08/22 10:19

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Batch

Туре

Prep

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Batch

300.0

3010A

6010B

3010A

6010B

SM 2540C

SM 4500 H+ B

Method

Lab

EET HOU

Matrix: Water

Lab Sample ID: 860-38856-1 Matrix: Water

Analyst

W1N

Lab Sample ID: 860-38856-2

Prepared

or Analyzed

12/27/22 23:50

12/20/22 11:00 MD

12/20/22 23:51 JDM

12/20/22 11:00 MD

12/21/22 00:01 JDM

12/13/22 19:45 YGG

12/14/22 13:37 TL

11 12 13

Client Sample ID: Dup Date Collected: 12/06/22 09:11

Date Received: 12/08/22 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			83439	12/28/22 00:02	W1N	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		1			82946	12/20/22 23:54	JDM	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		50			82946	12/21/22 00:05	JDM	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	81747	12/13/22 19:45	YGG	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			81874	12/14/22 13:41	TL	EET HOU

Client Sample ID: MW-7

Date Collected: 12/06/22 10:04 Date Received: 12/08/22 10:19

Lab Sample ID: 860-38856-3 Matrix: Water

Lab Sample ID: 860-38856-4

-	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	83439	12/28/22 04:11	W1N	EET HOU
Total/NA	Analysis	300.0		10	0 mL	1.0 mL	83439	12/28/22 04:23	W1N	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		1			82946	12/21/22 00:16	JDM	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		50			82946	12/21/22 00:34	JDM	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	81747	12/13/22 19:45	YGG	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			81874	12/14/22 13:43	TL	EET HOU

Client Sample ID: MW-12 Date Collected: 12/06/22 10:51 Date Received: 12/08/22 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			83439	12/28/22 00:14	W1N	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		1			82946	12/21/22 00:19	JDM	EET HOU
Total/NA	Analysis	SM 2540C		1	200 mL	200 mL	81747	12/13/22 19:45	YGG	EET HOU

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Matrix: Water

Batch

Туре

Analysis

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Batch

Batch

300.0

3010A

6010B

SM 2540C

SM 4500 H+ B

Method

Method

SM 4500 H+ B

Client Sample ID: MW-12

Date Collected: 12/06/22 10:51

Date Received: 12/08/22 10:19

Client Sample ID: MW-16

Date Collected: 12/06/22 11:27

Date Received: 12/08/22 10:19

Client Sample ID: MW-13

Date Collected: 12/06/22 11:59

Date Received: 12/08/22 10:19

Prep Type

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Initial

Amount

Final

Amount

Batch

81874

81874

Number

Dil

1

Dil

1

1

1

1

Factor

Factor

Run

Run

Lab Sample ID: 860-38856-4 Matrix: Water

Analyst

Lab Sample ID: 860-38856-5

watrix: water

Lab

Matrix: Water

EET HOU

EET HOU

Initial Final Batch Prepared Amount Amount Number or Analyzed Analyst Lab 83439 12/28/22 01:13 W1N EET HOU 50 mL 50 mL 82740 12/20/22 11:00 MD EET HOU 82946 12/21/22 00:23 JDM EET HOU 100 mL 200 mL 81747 12/13/22 19:45 YGG EET HOU

Prepared

or Analyzed

12/14/22 13:45 TL

12/14/22 13:46 TL

Lab Sample ID: 860-38856-6 Matrix: Water

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			83439	12/28/22 01:25	W1N	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		1			82946	12/21/22 00:26	JDM	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	81747	12/13/22 19:45	YGG	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			81874	12/14/22 13:50	TL	EET HOU

Client Sample ID: MW-14 Date Collected: 12/06/22 12:36 Date Received: 12/08/22 10:19

Lab Sample ID: 860-38856-7 Matrix: Water

Lab Sample ID: 860-38856-8

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	0 mL	1.0 mL	83439	12/28/22 04:35	W1N	EET HOU
Total/NA	Analysis	300.0		10	0 mL	1.0 mL	83439	12/28/22 04:47	W1N	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		1			82946	12/21/22 00:30	JDM	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		50			82946	12/21/22 00:48	JDM	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	81747	12/13/22 19:45	YGG	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			82140	12/15/22 16:40	TL	EET HOU

Client Sample ID: MW-15 Date Collected: 12/06/22 13:26 Date Received: 12/08/22 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			83439	12/28/22 01:37	W1N	EET HOU

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Matrix: Water

Client Sample ID: MW-15 Date Collected: 12/06/22 13:26 Date Received: 12/08/22 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3010A	_		50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		1			82946	12/21/22 00:58	JDM	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	81747	12/13/22 19:45	YGG	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			82140	12/15/22 16:42	TL	EET HOU

Client Sample ID: MW-17 Date Collected: 12/06/22 14:09 Date Received: 12/08/22 10:19

Matrix: Water

-	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			83439	12/28/22 01:49	W1N	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	82740	12/20/22 11:00	MD	EET HOU
Total/NA	Analysis	6010B		1			82946	12/21/22 01:02	JDM	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	81747	12/13/22 19:45	YGG	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			82140	12/15/22 16:43	TL	EET HOU

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Job ID: 860-38856-1 Lab Sample ID: 860-38856-8 5

Eurofins Houston

Client: Hydrex Environmental Project/Site: Twin Oaks PP Job ID: 860-38856-1

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-04-23
Florida	NELAP	E871002	06-30-23
Louisiana	NELAP	03054	06-30-23
Louisiana (All)	NELAP	03054	06-30-23
Oklahoma	State	1306	08-31-23
Texas	NELAP	T104704215-22-48	06-30-23
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	P330-22-00025	03-02-23

Eurofins Houston

Method Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET HOU
6010B	Metals (ICP)	SW846	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 4500 H+ B	рН	SM	EET HOU
3010A	Preparation, Total Metals	SW846	EET HOU

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Eurofins Houston

Sample Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Job ID:	860-38856-1
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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-38856-1	MW-11	Water	12/06/22 09:11	12/08/22 10:19
860-38856-2	Dup	Water	12/06/22 09:11	12/08/22 10:19
860-38856-3	MW-7	Water	12/06/22 10:04	12/08/22 10:19
860-38856-4	MW-12	Water	12/06/22 10:51	12/08/22 10:19
860-38856-5	MW-16	Water	12/06/22 11:27	12/08/22 10:19
860-38856-6	MW-13	Water	12/06/22 11:59	12/08/22 10:19
860-38856-7	MW-14	Water	12/06/22 12:36	12/08/22 10:19
860-38856-8	MW-15	Water	12/06/22 13:26	12/08/22 10:19
860-38856-9	MW-17	Water	12/06/22 14:09	12/08/22 10:19

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1 Use the 'Print' button on this page to print your label to your laser or Inkjet printer

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide available on fedex.com FedEx will not be responsible for any claim in excess of \$100 per package whether the result of loss damage delay non-delivery,misdelivery,or misinformation unless you declare a higher value pay an additional charge document your actual loss and file a timely claim Limitations found in the current FedEx Service Guide apply Your right to recover from FedEx for any loss including intrinsic value of the package loss of sales, income interest, profit, attorney's fees, costs and other forms of damage whether direct, incidental consequential or special is limited to the greater of \$100 or the authorized declared value Recovery cannot exceed actual documented loss Maximum for items of extraordinary value is \$1,000, e.g. jewelry precious metals negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide

Client: Hydrex Environmental

Login Number: 38856 List Number: 1 Creator: Torres, Sandra

Question	Answer	Comment
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	2.0
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	Refer to Job Narrative for details.
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Job Number: 860-38856-1

List Source: Eurofins Houston

December 2022 Event Results of Statistical Calculations **Control Charts and Prediction Limits**

Shewhart-Cusum Control Chart / Rank Sum

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	Twin Oaks Power Station	CCR LF	Client: Ma	jor Oak P	ower	Data: Twin Oaks	Printed 1/17/2023, 1	1:47 AM
<u>Constituent</u>	Well	<u>Sig.</u>	<u>h</u>	<u>SCL</u>	N	<u>%NDs</u>	<u>Transform</u>	Method
Calcium (mg/L)	MW-13	No	59.59	59.59	16	0	No	Param Intra
Chloride (mg/L)	MW-13	No	120.1	120.1	15	0	No	Param Intra
Fluoride (mg/L)	MW-13	No	PL=	n/a	16	81.25	No	NP Intra PL (NDs)
pH (SU)	MW-13	No	7.7	7.7	16	0	No	Param Intra
Sulfate (mg/L)	MW-13	No	195.2	195.2	16	6.25	No	Param Intra
Total Dissolved Solids (mg/L)	MW-13	No	631.9	631.9	16	0	No	Param Intra
Calcium (mg/L)	MW-14	Yes	141.2	141.2	14	0	No	Param Intra
Chloride (mg/L)	MW-14	Yes	440.9	440.9	15	0	No	Param Intra
Fluoride (mg/L)	MW-14	No	PL=	n/a	16	75	No	NP Intra PL (NDs)
pH (SU)	MW-14	No	7.5	7.5	16	0	x^4	Param Intra
Sulfate (mg/L)	MW-14	Yes	841.2	841.2	15	0	sqrt(x)	Param Intra
Total Dissolved Solids (mg/L)	MW-14	Yes	1940	1940	15	0	No	Param Intra
Calcium (mg/L)	MW-15	No	37.94	37.94	16	0	sqrt(x)	Param Intra
Chloride (mg/L)	MW-15	No	197.6	197.6	16	0	No	Param Intra
Fluoride (mg/L)	MW-15	No	PL=0.5	n/a	16	87.5	No	NP Intra PL (NDs)
pH (SU)	MW-15	No	7.5	7.5	16	0	x^4	Param Intra
Sulfate (mg/L)	MW-15	No	49.99	49.99	16	0	No	Param Intra
Total Dissolved Solids (mg/L)	MW-15	No	482.6	482.6	16	0	No	Param Intra
Calcium (mg/L)	MW-17	No	396.5	396.5	16	0	No	Param Intra
Chloride (mg/L)	MW-17	No	1728	1728	16	0	No	Param Intra
Fluoride (mg/L)	MW-17	No	PL=0.5	n/a	16	87.5	No	NP Intra PL (NDs)
pH (SU)	MW-17	No	7.7	7.7	16	0	No	Param Intra
Sulfate (mg/L)	MW-17	No	168	168	16	6.25	No	Param Intra
Total Dissolved Solids (mg/L)	MW-17	No	3264	3264	16	0	No	Param Intra



Background Data Summary: Mean=26.18, Std. Dev.=6.682, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8874, critical = 0.887. Report alpha = 0.000138. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=80.96, Std. Dev.=12.04, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8921, critical = 0.874. Report alpha = 0.00017. Dates ending 4/28/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on square root transformation): Mean=4.61, Std. Dev.=0.3099, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8969, critical = 0.887. Report alpha = 0.000102. Dates ending 6/23/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=107.8, Std. Dev.=57.75, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9499, critical = 0.887. Report alpha = 0.000102. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=98.18, Std. Dev.=4.38, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9494, critical = 0.881. Report alpha = 0.00011. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=347.4, Std. Dev.=18.7, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9535, critical = 0.881. Report alpha = 0.00011. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=114, Std. Dev.=16.72, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9096, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=549, Std. Dev.=235.7, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9592, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.

Within Limit

Prediction Limit





Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 16 background values. 81.25% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Seasonality was not detected with 95% confidence.

Within Limit

Prediction Limit





Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 16 background values. 75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Seasonality was not detected with 95% confidence.

Within Limit

Prediction Limit



Intrawell Non-parametric

Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 16 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Seasonality was not detected with 95% confidence.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 16 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Seasonality was not detected with 95% confidence.



Background Data Summary: Mean=6.348, Std. Dev.=0.2752, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9107, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on x⁴ transformation): Mean=1936, Std. Dev.=269.6, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8958, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on x⁴ transformation): Mean=1823, Std. Dev.=294.8, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8946, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=5.876, Std. Dev.=0.3768, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9721, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=55.67, Std. Dev.=27.91, n=16, 6.25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.969, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on square root transformation): Mean=15.29, Std. Dev.=2.743, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9051, critical = 0.881. Report alpha = 0.000148. Dates ending 11/23/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=29.78, Std. Dev.=4.042, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9351, critical = 0.887. Report alpha = 0.000104. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=49.99, Std. Dev.=23.6, n=16, 6.25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9512, critical = 0.887. Report alpha = 0.000104. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=387, Std. Dev.=48.98, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9431, critical = 0.887. Report alpha = 0.000104. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=1194, Std. Dev.=149.2, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8979, critical = 0.881. Report alpha = 0.00013. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=370.9, Std. Dev.=22.34, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9549, critical = 0.887. Report alpha = 0.00012. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=1173, Std. Dev.=418.2, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9847, critical = 0.887. Report alpha = 0.00012. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.
Prediction Limit

Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks Printed 1/17/2023, 11:48 AM

<u>Constituent</u>	Well	Upper Lim.	<u>Date</u>	Observ.	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	Std. Dev.	<u>%NDs</u>	Transform	<u>Alpha</u>	Method
Boron (mg/L)	MW-13	0.1206	12/6/2022	0.0536	No	16	0.2406	0.03654	0	sqrt(x)	0.000	Param Intra 1 of 2
Boron (mg/L)	MW-14	0.6019	12/6/2022	1.3	Yes	15	0.1857	0.1387	0	No	0.000	Param Intra 1 of 2
Boron (mg/L)	MW-15	0.06659	12/6/2022	0.05ND	No	16	0.04909	0.005995	0	No	0.000	Param Intra 1 of 2
Boron (mg/L)	MW-17	0.362	12/6/2022	0.05ND	No	15	n/a	n/a	0	n/a	0.007533	3 NP Intra (normality)

Within Limit

Prediction Limit



Background Data Summary (based on square root transformation): Mean=0.2406, Std. Dev.=0.03654, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8931, critical = 0.844. Kappa = 2.919 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

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Exceeds Limit

Prediction Limit



Background Data Summary: Mean=0.1857, Std. Dev.=0.1387, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8773, critical = 0.835. Kappa = 3 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

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Within Limit

Prediction Limit





Background Data Summary: Mean=0.04909, Std. Dev.=0.005995, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9456, critical = 0.844. Kappa = 2.919 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

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Within Limit

Prediction Limit





Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 15 background values. Well-constituent pair annual alpha = 0.01501. Individual comparison alpha = 0.007533 (1 of 2). Seasonality was not detected with 95% confidence.

Appendix E

1st 2022 Semi-Annual Groundwater Monitoring and Corrective Action Report

1st 2022 SEMI-ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

TWIN OAKS POWER STATION

COAL COMBUSTION RESIDUALS (CCR) LANDFILL

ROBERTSON COUNTY, TEXAS

July 15, 2022

Prepared By:



1120 NW Stallings Drive Nacogdoches, Texas 75964 TBPG Firm No. 50027

1st 2022 SEMI-ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

TWIN OAKS POWER STATION

COAL COMBUSTION RESIDUALS (CCR) LANDFILL

ROBERTSON COUNTY, TEXAS

July 15, 2022

Michelle K. Transier, P.G. Senior Geologist



Prepared by: Hydrex Environmental Nacogdoches, Texas TBPG Firm No. 50027

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Key Actions Completed and any Problems Encountered	.1
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Appendices

Appendix A – Signed and Sealed Report Certification by Professional Engineer
Certification Statement
Appendix B – Groundwater Monitoring Program Summary Tables and Forms
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Appendix C – Groundwater Elevation Data, Flow Rate Calculations, and Maps
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Groundwater Elevation Map
Groundwater Flow Rate Calculations
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Groundwater Monitoring Analytical Results Summary Table
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May 2022 Event – Results of Statistical Calculation
June 2022 Event – Results of Statistical Calculation

Introduction

This 1st 2022 Semi-Annual Groundwater Monitoring and Corrective Action Report for the Twin Oaks Power Station Coal Combustion Residuals ("CCR") Landfill ("the "facility") is prepared in accordance with the requirements of the facility's Groundwater Sampling and Analysis Plan ("GWSAP"), the state CCR Rules, 30 TAC Chapter 352, and the federal CCR Rule, 40 CFR Part 257, Subpart D. This semi-annual report summarizes the groundwater monitoring activities performed through the 1st 2022 semi-annual detection groundwater sampling event for the facility. The reporting requirements under the CCR Rule, the relevant CCR Rule citations, and the corresponding location of those required contents in this report are listed below:

- Status of the groundwater monitoring program (§ 257.90(e)):Appendix B
- Summary of key actions completed (§ 257.90(e)):p. 1
- Any problems encountered and actions taken to resolve such problems (§ 257.90(e)): p. 2
- Project key activities for the upcoming year (§ 257.90(e)):p. 3
- Map, aerial image, or diagram of CCR Unit and monitoring wells (§ 257.90(e)(1)): . Appendix C
- Summary of groundwater data, wells sampled, date sampled, and whether sample was required under detection or assessment monitoring (§ 257.90(e)(3)): Appendix D
- Narrative discussion of any transition between monitoring programs (§ 257.90(e)(4)):.....p. 2

•Upon completion of the 2nd 2022 groundwater sampling event, an annual groundwater monitoring report for 2022 will be prepared by January 31, 2023.

Key Actions Completed and any Problems Encountered

The monitoring network at the Twin Oaks Power Station CCR Landfill includes 8 monitoring wells (upgradient wells MW-7, MW-11, MW-12, and MW-16 and downgradient wells MW-13, MW-14, MW-15, and MW-17). Groundwater monitoring is performed in accordance with the facility's GWSAP, 30 TAC Chapter 352 Subchapter H, and 40 CFR Part 257, Subpart D. Specific sampling events and dates for calendar year 2022 are summarized in the following table:

Summary of Sampling Events

Event Date	Monitoring Wells (MW) Sampled	Event Type
April 18, 2022	MW-7, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17	Semi-Annual Detection Monitoring
May 31, 2022	MW-13 and MW-14	Verification Resampling
June 27-28, 2022	MW-14	Verification Resampling

No significant problems were encountered during the sampling event in 2022.

Detection Monitoring

Detection monitoring is conducted at the Twin Oaks Power Station CCR Landfill on a semiannual schedule in accordance with applicable federal and state regulations. Laboratory analysis for detection events include those detection monitoring constituents listed in Table D-1 of the facility's GWSAP. A table of groundwater analytical results for all monitoring wells sampled during 2022 is included in Appendix D of this report.

First Semi-Annual Groundwater Monitoring Event (April 2022)

The first semi-annual detection monitoring event was conducted on April 18, 2022. Groundwater samples were obtained from monitoring wells MW-7, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17 for analysis of detection monitoring constituents. Additionally, a duplicate sample was collected at monitoring well MW-11 and analyzed for all detection monitoring constituents. The duplicate sample provided comparable results for all constituents. Intrawell statistical evaluation of data from the April 2022 event, performed in accordance with the provisions of the GWSAP, 30 TAC §352.941, and 40 CFR § 257.94, indicated unverified ("initial") intrawell statistical exceedances for sulfate in monitoring well MW-13 and for boron, calcium, chloride, sulfate, and total dissolved solids (TDS) in MW-14. Subsequently, verification resampling was conducted on May 31, 2022 for MW-13 and MW-14 and again on June 27-28, 2022 for MW-14, as provided for and in accordance with the GWSAP.

The results of verification resampling confirmed the intrawell statistical exceedance values for sulfate in monitoring well MW-13 on June 21, 2022 and for boron, calcium, chloride, sulfate, and total dissolved solids (TDS) in MW-14 on July 8, 2022 and SSIs were determined on July 8, 2022. Review of data indicated that the values are likely the result of natural groundwater variation at the facility. In accordance with the facility's GWSAP, notice of intent to perform an alternate source/error demonstration (ASD) was given to TCEQ on July 15, 2022 and ASD will be submitted 90 days from the date an SSI was determined, on or before October 8th, 2022. If an ASD cannot be successfully determined, assessment monitoring will be initiated at the next regularly scheduled monitoring event.

A summary of the results of statistical evaluation is presented in the table below.

Well	Constituent	Initial Result (mg/L)	Statistical Limit (mg/L)	Verification Resampling Result (mg/L)	Intrawell Statistical Exceedance Confirmed?	Recommendation			
MW-13	sulfate	200	195.2	360	Yes	Alternate Source/Error Demonstration			
	boron	0.875	0.6019	0.718 / 1.64*	Yes	Alternate Source/Error Demonstration			
	calcium	190	141.2	202 / 211*	Yes	Alternate Source/Error Demonstration			
MW-14	chloride	457	440.9	464 / 423*	No	Maintain Detection Monitoring			
	sulfate	899	841.2	944 / 933*	Yes	Alternate Source/Error Demonstration			
	total dissolved solids	2290	1940	2240 / 2340*	Yes	Alternate Source/Error Demonstration			
*Verification	Verification resampling event performed in June.								

Summary of Statistical Exceedances for the Second Semi-Annual Groundwater Monitoring Event (April 2022)

Monitoring wells MW-7, MW-11, MW-12, MW-13, MW-16, and MW-17 remain in detection monitoring status. Monitoring wells MW13 and MW-14 also remain in detection monitoring status pending ASD submittal.

Groundwater Elevation, Flow Rate, and Direction

Water levels were measured in all monitoring wells prior to purging in accordance with the GWSAP. A table summarizing groundwater elevation data collected during the April 2022 detection monitoring event is included in Appendix B. Hydraulic gradient and flow rate calculations, along with a groundwater elevation map showing groundwater flow direction for the April 2022 detection monitoring event, are also included in Appendix C.

Project Key Activities for 2022

Based on the data available at the time of this report, the detection monitoring program currently in place for the Twin Oaks Power Station CCR Landfill meets the requirements of applicable regulations. Therefore, no change to the groundwater monitoring system, monitoring schedule, or monitoring program is proposed. An ASD will be submitted 90 days from the date an SSI was determined. If an ASD cannot be successfully determined, assessment monitoring will be initiated at the next regularly scheduled monitoring event.

Appendix A

CERTIFICATION STATEMENT

COAL COMBUSTION RESIDUALS (CCR) LANDFILL TWIN OAKS POWER STATION ROBERTSON COUNTY, TEXAS

I certify I am a licensed professional engineer in the State of Texas and a *qualified professional engineer* as defined in 40 CFR §257.53. I certify that the groundwater monitoring data and other information presented in the 1st 2022 Semi-Annual Groundwater Monitoring and Corrective Action Report, prepared by Hydrex Environmental on behalf of the Twin Oaks Power Station, are appropriate and meet the requirements of 40 CFR Part 257, Subpart D.



John J. Tayntor, P.E. Auckland Consulting, LLC TBPE Firm Registration No. F-16721

07/15/2022

Date

Appendix B

Monitoring Well Network and Program Summary

	Wall Designation	Aquifor	2022				
	wen Designation	Aquiler	Monitoring Status				
MW-7	Upgradient	Uppermost	Detection Monitoring				
MW-11	Upgradient	Uppermost	Detection Monitoring				
MW-12	Upgradient	Uppermost	Detection Monitoring				
MW-13	Downgradient	Uppermost	Detection Monitoring				
MW-14	Downgradient	Uppermost	Detection Monitoring				
MW-15	Downgradient	Uppermost	Detection Monitoring				
MW-16	Upgradient	Uppermost	Detection Monitoring				
MW-17	Downgradient	Uppermost	Detection Monitoring				

Appendix C

Groundwater Elevation Summary Table

Twin Oaks Power Station Coal Combustion Residuals (CCR) Landfill Robertson County, Texas

Well ID	Date	Top of Casing Elevation (ft-amsl)	Depth to Water (ft)	Groundwater Elevation (ft-amsl)
MW-7	4/18/2022	411.60	25.15	386.45
MW-11	4/18/2022	406.93	22.40	384.53
MW-12	4/18/2022	387.27	5.52	381.75
MW-13	4/18/2022	398.32	20.81	377.51
MW-14	4/18/2022	394.68	19.65	375.03
MW-15	4/18/2022	410.47	35.37	375.10
MW-16	4/18/2022	422.54	41.09	381.45
MW-17	4/18/2022	405.87	33.10	372.77



Twin Oaks Power Station Coal Combustion Residuals Landfill

Groundwater Flow Rate Calculations

Approximate hydraulic gradients were calculated based on data presented on the individual groundwater gradient map for the April 2022 monitoring event.

Calculation of hydraulic gradient was performed using the following equation:

Where:

 Δh = approximate change in hydraulic head between two known points Where: Δh i = Δd

 Δd = approximate change in distance between two known points along flow paths

Gradient Measurement Line	Δh (feet)	Δd (feet)	i (feet/feet)	Monitoring Event
from well MW-7 to MW-17	13.68	3370	0.0041	April 2022

Estimated Flow Rate Calculations

The estimated groundwater flow rate was calculated for each monitoring event using the following formula:

ki v = n v = flow rate k = hydraulic conductivity i = hydraulic gradient (above) n_e = effective porosity

Flow Rate Measurement Line	k (cm/sec)	n _e	i (feet/feet)	v (feet/year)	Monitoring Event
from well MW-7 to MW-17	4.85E-03	0.3	0.0041	68.63	April 2022

Note: Hydraulic conductivity (k) and effective porosity (n e) values as derived from slug test results conducted March 2016.

Hydrex Environmental TBPG Firm No. 50027



Appendix D

Groundwater Monitoring Analytical Results Summary Table

	Sampling	ron (mg/L)	tal Calcium (mg/L)	lloride (mg/L)	uoride (mg/L)	(ns)	llfate (mg/L)	tal Dissolved Solids (mg/L)	tal Antimony (mg/L)	tal Arsenic (mg/L)	tal Barium (mg/L)	tal Beryllium (mg/L)	tal Cadmium (mg/L)	tal Chromium (mg/L)	tal Cobalt (mg/L)	uoride (mg/L)	tal Lead (mg/L)	tal Lithium (mg/L)	tal Mercury (mg/L)	tal Molybdenum (mg/L)	tal Selenium (mg/L)	tal Thallium (mg/L)	idium 226 & 228 (Combined) Ci/L)
Well ID	Date	ă	Ĕ	Ċ	Ē	d d	งี	Ĕ	Ĕ	L ₽	⊢ ř	L ₽	⊢ ř	L ₽	۴.	Ē	⊢ ř	Ĕ	Ĕ	Ĕ	⊢ ř	⊢ ř	<u>5</u> 9
N04/ 7	0.4/4.0/00	0.07	000	077	10 500	0.5	4040	4040	N14	NIA	N14	NIA			NIA	N14	NIA	N 1A	N1.0	N1.0	NIA	N1 0	
IVIVV-7	04/16/22	0.27	292	211	<0.500	0.0	1010	1940	NA	INA	NA	NA	NA	NA	INA	NA	NA	NA	NA	INA	INA	INA	INA
MW-11	04/18/22	0.162	130	140	< 0.500	6.6	485	988	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/10/22								10.0	1.0.1	101	1.0.0	101	1.0.1	1.0.1	1.0.1	101	107	1474	1.0.1	10/	10/3	1.0.1
MW-12	04/18/22	0.025	16.1	75.9	< 0.500	6.5	41	266	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	•																						
MW-13	04/18/22	0.0483	51.3	101	<0.500	6.3	200	582	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-13	05/31/22	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Backgro	ound Limits*	0.1206	59.59	120.1	0.584	4.972-7.724	195.2	631.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1	1	1	1	1	1		r		1	1	1	T	1	1	r	1	r		r	1	1	T
MW-14	04/18/22	0.875	190	457	<0.500	6.6	899	2290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-14	05/31/22	0.718	202	464	NA	NA	944	2240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-14	06/28/22	1.64	211	423	NA	NA	933	2340	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Backgro	ound Limits*	0.6019	141.2	440.9	0.682	4.924-7.57	841.2	1940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N04/ 45		0.004	07.4	4.47	-0.500	0.0	44.0	400		·	·		I	L	·	·	·			·	·	·	I
NIV-15	04/18/22	0.034	27.4	147	<0.500	0.0	44.2	462	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Баскую	Duna Limits	0.06659	37.94	197.6	0.5	4.322-7.577	49.99	482.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW/ 16	04/19/22	0.022	60	273	<0.500	6.6	08.0	706	ΝA	ΝΔ	ΝΔ	ΝΔ	ΝΑ	ΝΔ	ΝΔ	ΝΔ	ΝΔ	ΝΔ	ΝΔ	ΝΔ	ΝΔ	ΝA	ΝΔ
10100-10	04/10/22	0.022		213	-0.500	0.0	30.9	7.90	11/4								11/4	11/4	11/4	11/4	- 11/4	11/4	1 104
MW-17	04/18/22	0.0332	130	611	< 0.500	5.9	132	1350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Backgro	ound Limits*	0.362	396.5	1728	0.5	3.992-7.76	168	3264	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
_																							

*Background limits are intrawell statistcal limits including data collected between June 2016 and June 2021.

Laboratory Reports

🛟 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Houston 4145 Greenbriar Dr Stafford, TX 77477 Tel: (281)240-4200

Laboratory Job ID: 860-24786-1

Client Project/Site: Twin Oaks PP

For:

Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964

Attn: Michelle Transier

had a. Beettober

Authorized for release by: 5/5/2022 9:20:12 AM Chad Bechtold, Project Manager (813)690-3563 Chad.Bechtold@et.eurofinsus.com

.....Links **Review your project** results through **Total** Access Have a Question? Ask-The Expert Visit us at: www.eurofinsus.com/Env

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

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

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Chain of Custody	30
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Definitions/Glossary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Qualifiers

HPLC/IC		
Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	
	applicable.	5
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
U	Indicates the analyte was analyzed for but not detected.	
Metals		
Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	
	applicable.	
E	Result exceeded calibration range.	8 N
U	Indicates the analyte was analyzed for but not detected.	
General Che	mistry	9
Qualifier	Qualifier Description	
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	1
U	Indicates the analyte was analyzed for but not detected.	
Glossary		_
Abbreviation	These commonly used abbreviations may or may not be present in this report.	12
¤	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

 MQL
 Method Quantitation

 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

Appendix A	
Laboratory Data Package Cover Page - Page 1 of 4	
This data package is for Eurofins Houston job number 860-24786-1 and consists of:	
☑ R1 - Field chain-of-custody documentation;	4
 R2 - Sample identification cross-reference; R3 - Test reports (analytical data sheets) for each environmental sample that includes: Itema consistent with NELAC Chapter 5. 	5
b. dilution factors,	
c. preparation methods, d. cleanup methods, and	
e. if required for the project, tentatively identified compounds (TICs).	8
a. Calculated recovery (%R), and	9
b. The laboratory's surrogate QC limits. ☑ R5 - Test reports/summary forms for blank samples;	
R6 - Test reports/summary forms for laboratory control samples (LCSs) including: a. LCS spiking amounts.	
b. Calculated %R for each analyte, and	
☑ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:	13
 a. Samples associated with the MS/MSD clearly identified, b. MS/MSD spiking amounts, 	
 c. Concentration of each MS/MSD analyte measured in the parent and spiked samples, d. Calculated %Rs and relative percent differences (RPDs), and 	

- e. The laboratory's MS/MSD QC limits
- ☑ R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- \blacksquare R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Chad Bechtold Name (printed)

Chad a. Butter Signature

5/5/2022 Date

Project Manager Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Lab	orato	y Name:	Eurofins Houston	LRC Date:	5/5/2022						
Proj	ect N	ame:	Twin Oaks PP	Laboratory Job Number:	860-24786-1						
Rev	iewer	Name:	Chad Bechtold		•						
			•	-							
# ¹	A ²		Description			Yes	No	NA ³	NR ⁴	ER#⁵	
R1	01	Chain-of-c	ustody (C-O-C)								
		Did sample	es meet the laboratory's standard conditions of sample a	acceptability upon receipt?			X			R01A	
		Were all de	epartures from standard conditions described in an exce	eption report?		Х					
R2	OI	Sample an	d quality control (QC) identification								2
		Are all field	I sample ID numbers cross-referenced to the laboratory	ID numbers?		Х					
		Are all labo	pratory ID numbers cross-referenced to the corresponding	ng QC data?		Х					
R3	01	Test repor	ts								
		Were all sa	amples prepared and analyzed within holding times?			Х					
		Other than	those results < MQL, were all other raw values bracket	ed by calibration standards?		Х					
		Were calcu	Ilations checked by a peer or supervisor?			Х					
		Were all ar	nalyte identifications checked by a peer or supervisor?			Х					5
		Were sam	ble detection limits reported for all analytes not detected	1?		Х					
		Were all re	sults for soil and sediment samples reported on a dry w	veight basis?				Х			
		Were % m	oisture (or solids) reported for all soil and sediment sam	nples?				Х			
		Were bulk	soils/solids samples for volatile analysis extracted with	methanol per SW846 Metho	d 5035?			Х			
		If required	for the project, are TICs reported?					Х			
R4	0	Surrogate	recovery data								
		Were surro	gates added prior to extraction?					Х			
		Were surro	gate percent recoveries in all samples within the labora	atory QC limits?				Х			
R5	OI	Test repor	ts/summary forms for blank samples								
		Were appr	opriate type(s) of blanks analyzed?			Х					
		Were blank	s analyzed at the appropriate frequency?			Х					
		Were meth	od blanks taken through the entire analytical process, i	applicable, cleanup							
		procedures	?			Х					
		Were blank	concentrations < MQL?		Х	1					

	ł	5		
	()		
			5	

			~			
		Were all analyte identifications checked by a peer or supervisor?	X			
		Were sample detection limits reported for all analytes not detected?	X			
		Were all results for soil and sediment samples reported on a dry weight basis?			X	
		Were % moisture (or solids) reported for all soil and sediment samples?			X	
		Were hulk spills called the spills of the spill and spills extracted with methanol per SW846 Method 50352			X	
		We built solid so the project and TCP separately				
		in required for the project, are incs reported?			<u> </u>	
R4	0	Surrogate recovery data				
		Were surrogates added prior to extraction?			Х	
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			Х	
R5	01	Test reports/summary forms for blank samples				
	_	Were appropriate type(s) of blanks analyzed?	X			
		Were blanks analyzed at the appropriate frequency?	X			
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup				
		procedures?	x			
		Were black concentrations < MOL2	X			
DA		abortany control samples (ICS):				
		Ware all COCe included in the LCO.		<u> </u>		
		Were an COCS included in the CCS?	\uparrow	<u> </u>		
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?				
		Were LCSs analyzed at the required frequency?	X			
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X			
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used				
		to calculate the SDLs?	Х			
		Was the LCSD RPD within QC limits?	Х			
R7	01	Matrix spike (MS) and matrix spike duplicate (MSD) data				
		Were the project/method specified analytes included in the MS and MSD?	X			
		Were MS/MSD analyzed at the appropriate frequency?	X			
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		Х		R07C
		Were MS/MSD RPDs within laboratory QC limits?	X			
R8	0	Analytical duplicate data				
<u> </u>	<u> </u>	Were appropriate analytical duplicates analyzed for each matrix?	X			
		Work appropriate analytical approaches analyzed of control fragmance/2				
		Were Bhayuda udpincates analyzed at the appropriate nequency :	$+\hat{\mathbf{\nabla}}$			
		Welle for Dis of relative statistical deviations within the laboratory QC infinits :	<u> </u>			
R9	01	Method quantitation limits (MQLs):				
		Are the MQLs for each method analyte included in the laboratory data package?	X			
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X			
		Are unadjusted MQLs and DCSs included in the laboratory data package?	Х			
R10	0	Other problems/anomalies				
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X			
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the				
		sample results?	X			
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes matrices				
		and methods associated with this laboratory data package?	x			
<u> </u>	1	Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required rend	$\frac{1}{1}$	tems		
	1.	identified by the lefter "S" should be related and made available upon request for the approximate relation or side		Como		
	2	autimou by the lotter of should be retained and made available upon request to the appropriate reterillion period.				
1	∠.	 organic analyses, i = morganic analyses (and general chemistry, when applicable); 				
	<u>^</u>					
	3.	NA = Not applicable;				

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review checklist: Supporting Data - Page 3 of 4

abo	rator	y Name:	Eurofins Houston	LRC Date:	5/5/202	2				
oje	ct N	ame:	Twin Oaks PP	Laboratory Job Num	per: 860-247	786-1				
evie	ewer	Name:	Chad Bechtold							
<u>1</u>	A 2	1		Description						FD # ⁵
#	A	luitiel eeli		Description		Y	es N		NR	ER#
	01		oration (ICAL)	store for each analyte within OO limite	<u></u>		_	_		
		vvere resp	onse factors and/or relative response fa	ctors for each analyte within QC limits	<i>!</i>			_	+	
		vvere perco	ent RSDs or correlation coefficient criter	ia met?			X			
		was the hi	Imper of standards recommended in the	e method used for all analytes?	0		X	_		
		were all po	onis generated between the lowest and	nignest standard used to calculate the	e curve?		<u>}</u>		+ +	
		Are ICAL d		an appropriate accord course stands	-d0		<u>}</u>			
	1		ual calibration curve been vermed using	an appropriate second source standa			^	_		
。		Initial and	continuing collibration varification (I	CV and CCV/) and continuing calibra	tion blank (CCI	Б).				
2	101	Wee the C	Continuing calibration vernication (in			<u> </u>	-			
		Was the C	Cv allaryzed at the method-required ne	quericy?			<u>}</u>	_		
		Was the IC	AL curve verified for each analyte?				\rightarrow			
		Was the of	solute value of the analyte concentration	on in the inorganic $CCB < MDI 2$					+	
2		Mass ence					<u> </u>		+	
5	0	Was the ar	propriate compound for the method us	ed for tuning?				- v		
		Were ion o	bundance data within the method-roqui	red OC limits?				$+\hat{\mathbf{v}}$	+	
4	0	Internal et	andards (IS)					$+^{\sim}$	+	
-	<u> </u>	Wore IS or	ea counts and retention times within the	method-required OC limits?			_	- v		
5		Raw data	(NELAC Section 5 5 10)					^		
5		Were the r	aw data (for example, chromatograms	spectral data) reviewed by an analyst?			x			
		Were data	associated with manual integrations fla	aged on the raw data?			x			
6	0	Dual colur	n confirmation				<u>`</u>			
•	<u> </u>	Did dual co	lump confirmation results meet the me	bod-required OC?				- x		
7	0	Tentativel	v identified compounds (TICs)					+		
<u>.</u>	<u> </u>	If TICs wer	e requested were the mass spectra an	d TIC data subject to appropriate chec	ks?			X		
8	lı –	Interferen	ce Check Sample (ICS) results						+ +	
<u> </u>	Ľ	Were perc	ent recoveries within method QC limits?	1			x			
9	1	Serial dilu	tions, post digestion spikes, and me	thod of standard additions			<u>`</u>			
-		Were perce	ent differences, recoveries, and the line	arity within the QC limits specified in th	e method?		x			
10	0	Method de	etection limit (MDL) studies				-			
		Was a MD	study performed for each reported and	alvte?			x			
		Is the MDL	either adjusted or supported by the ana	alvsis of DCSs?			x			
11	0	Proficienc	v test reports							
		Was the la	boratory's performance acceptable on t	he applicable proficiency tests or evalu	ation studies?		x			
12	01	Standards	documentation							
		Are all star	dards used in the analyses NIST-trace	able or obtained from other appropriate	sources?		x			
13	01	Compoun	d/analyte identification procedures							
		Are the pro	cedures for compound/analyte identific	ation documented?			x			
14	01	Demonstr	ation of analyst competency (DOC)							
		Was DOC	conducted consistent with NELAC Chap	oter 5?			x			
		Is docume	ntation of the analyst's competency up-	o-date and on file?			X			
15	01	Verificatio	n/validation documentation for meth	ods (NELAC Chapter 5)						
		Are all the	methods used to generate the data doc	umented, verified, and validated, wher	e applicable?		x			
16	01	Laborator	y standard operating procedures (SO	Ps)						
	•	Are laborat	ory SOPs current and on file for each m	nethod performed?			x			
	1.	Items ident	ified by the letter "R" must be included	n the laboratory data package submitt	ed in the TRRP-	-required report(s	s). Iter	าร		
		identified b	y the letter "S" should be retained and r	nade available upon request for the ap	propriate retenti	ion period.				
	2.	O = organi	c analyses; I = inorganic analyses (and	general chemistry, when applicable):						
	3.	NA = Not a	pplicable;							
			• • •							

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laborator	ry Name:	Eurofins Houston	LRC Date:	5/5/2022	2
Project N	ame:	Twin Oaks PP	Laboratory Job Number:	860-24786-1	
Reviewer	Name:	Chad Bechtold			3
ER # ¹			Description		
R01A	The laborat	tory received the sample Duplicate (860 s.	-24786-9) which was not listed on the Chain	n-of-Custody. The laboratory analyzed this sample for	all 4
	Method 300 were oustic	0.0: The Matrix Spike (MS) [860-24786- de control limits due to abundance of Ch	2 MS] and Matrix Spike Duplicate (MSD) [8 Noride and Sulfate present in the native san	60-24786-2 MSD] recoveries for Chloride and Sulfate aple 860-24786-2.	
R07C	Method 60 [.] analytical b criteria.	10B: Due to the high concentration of ca batch 860-51521 could not be evaluated	alcium, the matrix spike / matrix spike duplic for accuracy and precision. The associate	ate (MS/MSD) for preparation batch 860-50159 and d laboratory control sample (LCS) met acceptance	7
					8
					9
1.	Items ident	tified by the letter "R" must be included i	n the laboratory data package submitted in	the TRRP-required report(s). Items	10
2	identified b	y the letter "S" should be retained and n	nade available upon request for the appropr	iate retention period.	11
2.	NA = Not a	o anaryses, i – morganio anaryses (and) inplicable:	general chemistry, when applicable),		
4.	NR = Not r	eviewed:			12
5.	ER# = Exc	eption Report identification number (an	Exception Report should be completed for a	an item if "NR" or "No" is checked).	

Job ID: 860-24786-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-24786-1

Case Narrative

Receipt

The samples were received on 4/20/2022 11:09 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.6°C

Receipt Exceptions

The laboratory received the sample Duplicate (860-24786-9) which was not listed on the Chain-of-Custody. The laboratory analyzed this sample for all parameters.

HPLC/IC

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

Metals

Method 6010B: Due to the high concentration of calcium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 860-50159 and analytical batch 860-51521 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

General Chemistry

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

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Client Sample ID: MW-7

Analyte	Result Qualifie	er RL	Unit	Dil Fac	D Method	Prep Type
Chloride - DL	277	5.00	mg/L	10	300.0	Total/NA
Sulfate - DL	1010	5.00	mg/L	10	300.0	Total/NA
Calcium	292	10.0	mg/L	50	6010B	Total/NA
Boron	0.270	0.0100	mg/L	1	6020A	Total/NA
Total Dissolved Solids	1940	20.0	mg/L	1	SM 2540C	Total/NA
pH	6.5 HF		SU	1	SM 4500 H+ B	Total/NA
Temperature	11.9 HF		Degrees C	1	SM 4500 H+ B	Total/NA

Client Sample ID: MW-11

 Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	140		0.500	mg/L	1	_	300.0	Total/NA
Sulfate	485		0.500	mg/L	1		300.0	Total/NA
Calcium	130		10.0	mg/L	50		6010B	Total/NA
Boron	0.162		0.0100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	988		10.0	mg/L	1		SM 2540C	Total/NA
pH	6.6	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	13.0	HF		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	75.9		0.500	mg/L	1	_	300.0	Total/NA
Sulfate	41.0		0.500	mg/L	1		300.0	Total/NA
Calcium	16.1		0.200	mg/L	1		6010B	Total/NA
Boron	0.0250		0.0100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	266		5.00	mg/L	1		SM 2540C	Total/NA
pH	6.5	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	11.9	HF		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-16

Analyte Result Qualifier RL Unit Dil Fac D Method Prep Type Chloride 273 0.500 300.0 Total/NA mg/L 1 Sulfate 98.9 0.500 mg/L 1 300.0 Total/NA Calcium 69.0 0.200 6010B Total/NA mg/L 1 0.0220 6020A Boron 0.0100 mg/L 1 Total/NA SM 2540C Total Dissolved Solids 796 10.0 mg/L 1 Total/NA pН 6.6 HF SU 1 SM 4500 H+ B Total/NA Temperature 11.5 HF Degrees C 1 SM 4500 H+ B Total/NA

Client Sample ID: MW-13

Analyte	Result Quali	lifier RL	Unit	Dil Fac	D Method	Prep Type
Chloride	101	0.500	mg/L	1	300.0	Total/NA
Sulfate	200	0.500	mg/L	1	300.0	Total/NA
Calcium	51.3	0.200	mg/L	1	6010B	Total/NA
Boron	0.0483	0.0100	mg/L	1	6020A	Total/NA
Total Dissolved Solids	582	10.0	mg/L	1	SM 2540C	Total/NA
pH	6.3 HF		SU	1	SM 4500 H+ B	Total/NA
Temperature	11.8 HF		Degrees C	1	SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins	Houston

Lab Sample ID: 860-24786-1

Lab Sample ID: 860-24786-2

Lab Sample ID: 860-24786-3

Lab Sample ID: 860-24786-4

Lab Sample ID: 860-24786-5

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Client Sample ID: MW-15

Lab Sample ID: 860-24786-6

Lab Sample ID: 860-24786-7

Lab Sample ID: 860-24786-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	147		0.500	mg/L	1	_	300.0	Total/NA
Sulfate	44.2		0.500	mg/L	1		300.0	Total/NA
Calcium	27.4		0.200	mg/L	1		6010B	Total/NA
Boron	0.0340		0.0100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	462		10.0	mg/L	1		SM 2540C	Total/NA
pH	6.6	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	12.3	HF		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-14

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D Method	Prep Type
Chloride - DL	457		5.00	mg/L	10	300.0	Total/NA
Sulfate - DL	899		5.00	mg/L	10	300.0	Total/NA
Calcium	190		10.0	mg/L	50	6010B	Total/NA
Boron	0.875		0.0100	mg/L	1	6020A	Total/NA
Total Dissolved Solids	2290		20.0	mg/L	1	SM 2540C	Total/NA
рН	6.6	HF		SU	1	SM 4500 H+ B	Total/NA
Temperature	13.5	HF		Degrees C	1	SM 4500 H+ B	Total/NA

Client Sample ID: MW-17

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	611		5.00	mg/L	10	_	300.0	Total/NA
Sulfate - DL	132		5.00	mg/L	10		300.0	Total/NA
Calcium	130		10.0	mg/L	50		6010B	Total/NA
Boron	0.0332		0.0100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1350		20.0	mg/L	1		SM 2540C	Total/NA
pH	5.9	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	13.3	HF		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Duplicate

Lab Sample ID: 860-24786-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	142		0.500	mg/L	1	- :	300.0	Total/NA
Sulfate	486		0.500	mg/L	1	:	300.0	Total/NA
Calcium	127		1.00	mg/L	5		6010B	Total/NA
Boron	0.167		0.0100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	1070		10.0	mg/L	1	:	SM 2540C	Total/NA
рН	6.5	HF		SU	1	:	SM 4500 H+ B	Total/NA
Temperature	12.5	HF		Degrees C	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Job ID: 860-24786-1

Client: Hydrex Environmental
Project/Site: Twin Oaks PP

Client Sample ID: MW-7

Lab Sample ID: 860-24786-1 Matrix: Water

Date Collected: 04/18/22 13:46 Date Received: 04/20/22 11:09

Method: 300.0 - Anions, Ion Chromat	tography							
Analyte	Result	Qualifier	RL	Unit	_ <u>D</u>	Prepared	Analyzed	Dil Fac
Fluoride	<0.500	U	0.500	mg/L			04/29/22 18:26	1
Method: 300.0 - Anions, Ion Chromat	tography -	DL						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	277		5.00	mg/L			04/28/22 08:46	10
Sulfate	1010		5.00	mg/L			04/28/22 08:46	10
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	292		10.0	mg/L		04/22/22 09:00	04/28/22 02:47	50
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.270		0.0100	mg/L		04/21/22 08:30	04/25/22 17:37	1
General Chemistry								
Analyte	Result	Qualifier	RI	Unit	п	Prenared	Analyzed	Dil Fac
Total Dissolved Solids	1940		20.0	enit		Topulou	04/25/22 14:35	1
nH	6.5	HE		SU			04/29/22 12:15	1
Temperature	11.9	HE		Degrees C			04/29/22 12:15	1
								4700.0
Client Sample ID: MW-11						Lab Sam	ple ID: 860-2	4786-2
Date Collected: 04/18/22 14:24							Matrix	k: Water
Date Received: 04/20/22 11:09								
Method: 300.0 - Anions, Ion Chromat	tography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		0.500	mg/L			04/28/22 09:00	1
Fluoride	< 0.500	U	0.500	mg/L			04/28/22 09:00	1
Sulfate	485		0.500	mg/L			04/28/22 09:00	1
				Ū				
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	130		10.0	mg/L		04/22/22 09:00	04/28/22 02:50	50
Method: 6020A - Metals (ICP/MS)	Decult	Qualifian	ы	l lmit		Dueneued	A notive d	
Boron	0.162	Quaimer	0.0100	mg/L		04/21/22 08:30	04/25/22 17:40	1
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	988		10.0	mg/L			04/25/22 14:35	1
рН	6.6	HF		SU			04/29/22 12:16	1
Temperature	13.0	HF		Degrees C			04/29/22 12:16	1
Client Sample ID: MW-12						Lab Sam	ple ID: 860-2	4786-3
Date Collected: 04/18/22 15:01							Matrix	k: Water
Date Received: 04/20/22 11:09								
Method: 300.0 - Anions. Ion Chromat	tography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Eurofins Houston

04/28/22 09:41

0.500

mg/L

75.9

1

Client Sample ID: MW-12 Date Collected: 04/18/22 15:01 Date Received: 04/20/22 11:09

Lab Sample ID: 860-24786-3 Matrix: Water

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Fluoride	<0.500	U	0.500	ma/L			04/28/22 09:41	
Sulfate	41.0		0.500	mg/L			04/28/22 09:41	
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Calcium	16.1		0.200	mg/L		04/22/22 09:00	04/22/22 22:28	
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Boron	0.0250		0.0100	mg/L		04/21/22 08:30	04/25/22 17:43	
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	266		5.00	mg/L			04/25/22 14:35	
рН	6.5	HF		SU			04/29/22 12:18	
Temperature	11.9	HF		Degrees C			04/29/22 12:18	
Client Sample ID: MW-16						Lab Sam	ple ID: 860-2	4786-4
Date Collected: 04/18/22 15:39							Matrix	c: Wate
Date Received: 04/20/22 11:09								
Method: 300.0 - Anions, Ion Chroma	atography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	273		0.500	mg/L			04/28/22 09:55	
Fluoride	<0.500	U	0.500	mg/L			04/28/22 09:55	
Sulfate	98.9		0.500	mg/L			04/28/22 09:55	
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Calcium	69.0		0.200	mg/L		04/22/22 09:00	04/22/22 22:31	
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Boron	0.0220		0.0100	mg/L		04/21/22 08:30	04/25/22 17:46	
- General Chemistry								
Sonoral Ononinou y						Drowersd	Analyzad	Dil Fa
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzeu	
Analyte	Result 796	Qualifier	RL 10.0	<mark>Unit</mark> mg/L	_ <u>D</u>	Prepared	04/25/22 14:35	
Analyte Total Dissolved Solids pH	Result 796 6.6	Qualifier	RL 10.0	Unit mg/L SU	<u>D</u>	Prepared	04/25/22 14:35 04/29/22 12:19	
Analyte Total Dissolved Solids pH Temperature	Result 796 6.6 11.5	Qualifier HF HF	RL	Unit mg/L SU Degrees C	_ <u>D</u>		04/25/22 14:35 04/29/22 12:19 04/29/22 12:19	
Analyte Total Dissolved Solids pH Temperature Client Sample ID: MW-13	Result 796 6.6 11.5	Qualifier HF HF	RL	Unit mg/L SU Degrees C	_ <u>D</u>	Lab Sam	04/25/22 14:35 04/29/22 12:19 04/29/22 12:19 ple ID: 860-2	4786-
Analyte Total Dissolved Solids pH Temperature Client Sample ID: MW-13 Date Collected: 04/18/22 16:07	Result 796 6.6 11.5	Qualifier HF HF	RL	Unit mg/L SU Degrees C	_ <u>D</u>	Lab Sam	04/25/22 14:35 04/29/22 12:19 04/29/22 12:19 04/29/22 12:19 ple ID: 860-2 Matrix	4786-{ <: Wate
Analyte Total Dissolved Solids pH Temperature Client Sample ID: MW-13 Date Collected: 04/18/22 16:07 Date Received: 04/20/22 11:09	Result 796 6.6 11.5	Qualifier HF HF	<u>RL</u> 10.0	Unit mg/L SU Degrees C	<u>D</u>	Lab Sam	04/25/22 14:35 04/29/22 12:19 04/29/22 12:19 ple ID: 860-2 Matrix	4786-{ <: Wate
Analyte Total Dissolved Solids pH Temperature Client Sample ID: MW-13 Date Collected: 04/18/22 16:07 Date Received: 04/20/22 11:09 Method: 300.0 - Anions, Ion Chroma	Result 796 6.6 11.5	Qualifier HF HF	<u></u> 10.0	Unit mg/L SU Degrees C	<u>D</u>	Lab Sam	04/25/22 14:35 04/29/22 12:19 04/29/22 12:19 ple ID: 860-2 Matrix	4786-{ <: Wate
Analyte Total Dissolved Solids pH Temperature Client Sample ID: MW-13 Date Collected: 04/18/22 16:07 Date Received: 04/20/22 11:09 Method: 300.0 - Anions, Ion Chroma Analyte	Result 796 6.6 11.5 atography Result	Qualifier HF HF Qualifier	RL	Unit mg/L SU Degrees C	D	Lab Sam	04/25/22 14:35 04/29/22 12:19 04/29/22 12:19 ple ID: 860-2 Matrix	4786-{ c: Wate Dil Fa
Analyte Total Dissolved Solids pH Temperature Client Sample ID: MW-13 Date Collected: 04/18/22 16:07 Date Received: 04/20/22 11:09 Method: 300.0 - Anions, Ion Chroma Analyte Chloride	Result 796 6.6 11.5 atography Result 101	Qualifier HF HF Qualifier	RL	Unit mg/L SU Degrees C Unit mg/L	D	Lab Sam	Analyzed 04/25/22 14:35 04/29/22 12:19 04/29/22 12:19 ple ID: 860-2. Matrix	4786-4 c: Wate
Analyte Total Dissolved Solids pH Temperature Client Sample ID: MW-13 Date Collected: 04/18/22 16:07 Date Received: 04/20/22 11:09 Method: 300.0 - Anions, Ion Chroma Analyte Chloride Fluoride	Result 796 6.6 11.5 atography Result 101 <0.500	Qualifier HF HF Qualifier	RL 10.0 	Unit mg/L SU Degrees C Unit mg/L mg/L mg/L	D	Prepared Lab Sam	Analyzed 04/25/22 14:35 04/29/22 12:19 04/29/22 12:19 ple ID: 860-2. Matrix 04/28/22 10:37 04/28/22 10:37 04/28/22 10:37	4786-4 c: Wate

Eurofins Houston
Client Sample Results

RL

Unit

D

Prepared

Result Qualifier

Job ID: 860-24786-1

Client: Hydrex Environmental
Project/Site: Twin Oaks PP

Client Sample ID: MW-13 Date Collected: 04/18/22 16:07 Date Received: 04/20/22 11:09

Method: 6010B - Metals (ICP)

Analyte

Calcium

Lab Sample ID: 860-24786-5 Matrix: Water

Analyzed

5 7

Dil Fac

1

1	_
1	
786-6 Water	
Dil Fac	13
1 1	
1	
Dil Fac 1	

Calcium	51.3		0.200	mg/L		04/22/22 09:00	04/22/22 22:35	1
Method: 6020A - Metals (ICP/MS)	Popult	Qualifier	Ы	Unit	п	Propared	Analyzod	Dil Eac
Boron	0 0483	Quaimer	0.0100			04/21/22 08:30	04/25/22 17:50	1
	0.0400		0.0100	ing/L		04/21/22 00:00	04/20/22 11:00	
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	582		10.0	mg/L			04/25/22 14:35	1
рН	6.3	HF		SU			04/29/22 12:21	1
Temperature	11.8	HF		Degrees C			04/29/22 12:21	1
Client Sample ID: MW-15						Lab Sam	ple ID: 860-2	4786-6
Date Collected: 04/18/22 16:44							Matrix	x: Water
Date Received: 04/20/22 11:09								
 _								
Method: 300.0 - Anions, Ion Chroma	atography							
Analyte	Result	Qualifier	RL	Unit	_ <u>D</u>	Prepared	Analyzed	Dil Fac
Chloride	147		0.500	mg/L			04/28/22 10:51	1
Fluoride	<0.500	U	0.500	mg/L			04/28/22 10:51	1
Sulfate	44.2		0.500	mg/L			04/28/22 10:51	1
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analvzed	Dil Fac
Calcium	27.4		0.200	mg/L		04/22/22 09:00	04/22/22 22:46	1
<u>—</u> Г								
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	_ <u>D</u>	Prepared	Analyzed	Dil Fac
Boron	0.0340		0.0100	mg/L		04/21/22 08:30	04/25/22 17:53	1
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	462		10.0	mg/L			04/25/22 14:35	1
рН	6.6	HF		SU			04/29/22 12:23	1
Temperature	12.3	HF		Degrees C			04/29/22 12:23	1
Client Sample ID: MW 14						Lab Sam	DIA ID: 860 2	1796 7
Dete Collected: 04/19/22 17:42						Lab Sam	pie iD. 000-2	4700-7
Date Collected: 04/18/22 17:12							Matro	c: water
Method: 300.0 - Anions, Ion Chroma	atography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.500	U	0.500	mg/L			04/29/22 18:40	1
Method: 300.0 - Anions Ion Chrome	atography -	וח						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analvzed	Dil Fac
Chloride	457		5.00	mg/L			04/28/22 11:05	10
Sulfate	899		5.00	mg/L			04/28/22 11:05	10
				-				
Method: 6010B - Metals (ICP)								
Analyte	Rosult	Qualifier	RI	Unit	п	Prenared	Analyzod	Dil Fac

Eurofins Houston

04/28/22 02:54

10.0

190

mg/L

04/22/22 09:00

50

Client Sample Results

Client: Hydrex Environmental

Job ID: 860-24786-1

Project/Site: Twin Oaks PP								
Client Sample ID: MW-14						Lab Sam	ple ID: 860-2	4786-7
Date Collected: 04/18/22 17:12							Matrix	k: Water
Date Received: 04/20/22 11:09								
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.875		0.0100	mg/L		04/21/22 08:30	04/25/22 17:56	1
				-				
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2290		20.0	mg/L			04/25/22 14:35	1
рН	6.6	HF		SU			04/29/22 12:24	1
Temperature	13.5	HF		Degrees C			04/29/22 12:24	1
Client Sample ID: MW-17						Lab Sam	ple ID: 860-2	4786-8
Date Collected: 04/18/22 17:45							Matrix	: Water
Date Received: 04/20/22 11:09								
Mothod: 300.0 - Anions, Jon Chroma	tography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.500	U	0.500	0//L			04/29/22 18:54	1
		-						
Method: 300.0 - Anions, Ion Chroma	tography -	DL						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	611		5.00	mg/L			04/28/22 11:18	10
Sulfate	132		5.00	mg/L			04/28/22 11:18	10
Method: 6010B - Metals (ICP)	Decult	Qualifian	ы	11		Dramanad	Analyzad	
Calaium	420	Quaimer				04/22/22 00:00	04/28/22 03:05	50
	150		10.0	iiig/L		04/22/22 03:00	04/20/22 03.03	50
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0332		0.0100	mg/L		04/21/22 08:30	04/25/22 17:59	1
General Chemistry								
Analyte	Result	Qualifier	RI	Unit	р	Prenared	Analyzed	Dil Fac
Total Dissolved Solids	1350		20.0				04/25/22 14:35	1
nH	5 9	HE	20.0	SU			04/29/22 12:27	1
Temperature	13.3	HE		Degrees C			04/29/22 12:27	1
				0				
Client Sample ID: Duplicate						Lab Sam	ple ID: 860-2	4786-9
Date Collected: 04/18/22 00:00							Matrix	k: Water
Date Received: 04/20/22 11:09								
Method: 300.0 - Anions, Ion Chroma	tography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	142		0.500	mg/L			04/28/22 11:32	1
Fluoride	<0.500	U	0.500	mg/L			04/28/22 11:32	1
Sulfate	486		0.500	mg/L			04/28/22 11:32	1
Method: 6010B - Metals (ICP)	B	Qualifier	-	11+14	~	Dueu	A mak	D2 5-
	Result	Quaimer	KL					
	127		1.00	mg/∟		04/23/22 08:30	05/04/22 05:29	5
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.167		0.0100	mg/L		04/24/22 10:30	04/28/22 19:05	1
<u> </u>								

Client: Hydrex Environmental

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Project/Site: Twin Oaks PP **Client Sample ID: Duplicate** Lab Sample ID: 860-24786-9 Date Collected: 04/18/22 00:00 Matrix: Water Date Received: 04/20/22 11:09 **General Chemistry** Analyte Result Qualifier RL Unit Dil Fac D Prepared Analyzed Total Dissolved Solids 10.0 mg/L 04/25/22 14:35 1070 1 SU 04/29/22 12:29 рΗ 6.5 HF 1 Temperature 12.5 HF Degrees C 04/29/22 12:29 1

Matrix: Water

Analyte Chloride Fluoride Sulfate

Lab Sample ID: MB 860-50533/13

Method: 300.0 - Anions, Ion Chromatography

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

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Analysis Batch: 50533													
-		ΜВ	MB										
Analyte	R	esult	Qualifier		RL		Unit		D	Prepared	l Analyz	ed	Dil Fac
Chloride	<(.500	U		0.500		mg/L				04/27/22	17:00	1
Fluoride	<(.500	U		0.500		mg/L				04/27/22	17:00	1
Sulfate	<(.500	U		0.500		mg/L				04/27/22	17:00	1
Lab Sample ID: MB 860-50533/77										Client	t Sample ID: I	Method	l Blank
Matrix: Water											Prep T	vpe: To	otal/NA
Analysis Batch: 50533												,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		мв	МВ										
Analyte	R	esult	Qualifier		RL		Unit		D	Prepared	I Analyz	ed	Dil Fac
Chloride	<(0.500	U		0.500		mg/L			•	04/28/22 (1
Fluoride	<(.500	U		0.500		mg/L				04/28/22 (07:50	1
Sulfate	<(.500	U		0.500		mg/L				04/28/22 (07:50	1
_										_			
Lab Sample ID: LCS 860-50533/78									Clie	ent Samp	ole ID: Lab Co	ontrol S	Sample
Matrix: Water											Prep T	ype: To	otal/NA
Analysis Batch: 50533													
				Spike		LCS	LCS				%Rec		
Analyte				Added		Result	Qualifier	Unit		D %Rec	Limits		
Chloride				10.0		9.650		mg/L		96	90 - 110		
Fluoride				10.0		10.40		mg/L		104	90 - 110		
Sulfate				10.0		9.686		mg/L		97	90 - 110		
Lab Sample ID: LCSD 860-50533/7	9							С	lient Sa	ample ID	: Lab Contro	I Samp	le Dup
Matrix: Water											Prep T	· vpe: To	otal/NA
Analysis Batch: 50533													
				Spike		LCSD	LCSD				%Rec		RPD
Analyte				Added		Result	Qualifier	Unit	I	D %Rec	: Limits	RPD	Limit
Chloride				10.0		9.991		mg/L		100	90 - 110	3	20
Fluoride				10.0		10.47		mg/L		105	5 90 <u>-</u> 110	1	20
Sulfate				10.0		9.743		mg/L		97	90 - 110	1	20
ah Sample ID: CS 860-50533/1/	5								Clie	nt Samr	olo ID: Lah Co	ontrol S	Samplo
Matrix: Water	•								one	in oun	Pron T	ivne: To	otal/NA
Analysis Batch: 50533											Trop I	ype. it	
Analysis Batch. 00000				Snike			LLCS				%Rec		
Analyte				bobba		Result	Qualifier	Unit					
Chloride				0.500		0.4025		ma/l			50 150		
Fluoride				0.500		0.4544	J	mg/L		01	50 150		
Sulfate				0.500		0.4558	J	mg/L		01	50 - 150		
				0.000		0.4550	5	mg/∟		51	50 - 150		
Lab Sample ID: 860-24786-2 MS											Client Sam	ple ID:	MW-11
Matrix: Water											Prep T	ype: To	otal/NA
Analysis Batch: 50533													
	Sample	Sam	ple	Spike		MS	MS				%Rec		
Analyte	Result	Qua	lifier	Added		Result	Qualifier	Unit	I	D%Rec	Limits		
Chloride	140			10.0		149.0	4	mg/L		89	90 - 110		
Fluoride	<0.500	U		10.0		10.30		mg/L		103	90 - 110		

32

90 - 110

488.4 4

mg/L

10.0

485

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 860-24786-2 MSD												Client Sam	ple ID: I	MW-11
Matrix: Water												Prep T	ype: To	otal/NA
Analysis Batch: 50533														
	Sample	Sam	ple	Spike		MSD	MSD					%Rec		RPD
Analyte	Result	Qua	lifier	Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride	140			10.0		148.6	4	mg/L			85	90 - 110	0	20
Fluoride	<0.500	U		10.0		10.30		mg/L			103	90 - 110	0	20
Sulfate	485			10.0		487.6	4	mg/L			24	90 - 110	0	20
Lab Sample ID: MB 860-50784/25											Client S	Sample ID:	Method	Blank
Matrix: Water												Prep T	ype: To	otal/NA
Analysis Batch: 50784														
		MB	MB											
Analyte	R	esult	Qualifier		RL		Uni	t		Р	repared	Analyz	ed	Dil Fac
Chloride	<(0.500	U		0.500		mg/	L				04/29/22	01:32	1
Fluoride	<(0.500	U		0.500		mg/	L				04/29/22	01:32	1
Sulfate	<(0.500	U		0.500		mg/	L				04/29/22	01:32	1
Lab Sample ID: MB 860-50784/58											Client S	Sample ID:	Method	Blank
Matrix: Water												Prep T	ype: To	tal/NA
Analysis Batch: 50784														
		МΒ	MB											
Analyte	R	esult	Qualifier		RL		Uni	t		Р	repared	Analyz	ed	Dil Fac
Chloride	<(0.500	U		0.500		mg/	L				04/29/22	09:10	1
Fluoride	<(0.500	U		0.500		mg/	L				04/29/22	09:10	1
Sulfate	<(0.500	U		0.500		mg/	L				04/29/22	09:10	1
Lab Sample ID: LCS 860-50784/59									Cli	ent	Sample	D: Lab Co	ontrol S	ample
Matrix: Water												Prep T	ype: To	tal/NA
Analysis Batch: 50784														
				Spike		LCS	LCS					%Rec		
Analyte				Added		Result	Qualifier	Unit		D	%Rec	Limits		
Chloride				10.0		9.785		mg/L			98	90 - 110		
Fluoride				10.0		10.55		mg/L			106	90 _ 110		
Sulfate				10.0		9.751		mg/L			98	90 - 110		
- Lab Sample ID: LCSD 860-50784/60								с	lient S	Sam	ple ID:	Lab Contro	l Samp	le Dup
Matrix: Water												Prep 1	vpe: To	tal/NA
Analysis Batch: 50784														
-				Spike		LCSD	LCSD					%Rec		RPD
Analyte				Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride				10.0		9.619		mg/L		_	96	90 - 110	2	20
Fluoride				10.0		10.47		mg/L			105	90 _ 110	1	20
Sulfate				10.0		9.657		mg/L			97	90 - 110	1	20
- Lab Sample ID: LLCS 860-50784/5									Cli	ent	Sample	D: Lab Co	ontrol S	ample
Matrix: Water												Prep T	vpe: To	tal/NA
Analysis Batch: 50784														
-				Spike		LLCS	LLCS					%Rec		
Analyte				Added		Result	Qualifier	Unit		D	%Rec	Limits		
Chloride				0.500		0.4937	J	mg/L		_	99	50 - 150		
Fluoride				0.500		0.4570	J	mg/L			91	50 - 150		
Sulfata				0 500		0 1 1 0 6	1	ma/l			90	50 150		

Method: 6010B - Metals (ICP)

Job ID: 860-24786-1
ple ID: Method Blank Pren Type: Total/NA

Lab Sample ID: MB 860-49920/ Matrix: Water	1-A									Client Sa	mple ID: I Pren T	Method	Blank
Analysis Batch: 50227											Prep	Batch:	49920
· ······, ···· ·······················	M	з мв											
Analyte	Resu	t Qualifier		RL		Unit		D	Р	repared	Analyz	ed	Dil Fac
Calcium	<0.20	D U		0.200		mg/L		_	04/2	2/22 09:00	04/22/22 2	21:26	1
Lab Sample ID: LCS 860-49920)/2-A							С	lient	Sample	ID: Lab Co	ontrol S	ample
Matrix: Water											Prep T	ype: To	otal/NA
Analysis Batch: 50227											Prep	Batch:	49920
			Spike	L	.cs	LCS					%Rec		
Analyte			Added	Re	sult	Qualifier	Unit		D	%Rec	Limits		
Calcium			25.0	24	.09		mg/L			96	80 - 120		
Lab Sample ID: LCSD 860-4992	20/3-A						Cli	ent	Sam	ple ID: L	ab Contro	I Samp	le Dup
Matrix: Water											Prep T	ype: To	otal/NA
Analysis Batch: 50227											Prep	Batch:	49920
			Spike	LC	SD	LCSD					%Rec		RPD
Analyte			Added	Re	sult	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Calcium			25.0	24	.08		mg/L			96	80 - 120	0	20
Lab Sample ID: MB 860-50159/	1-A									Client Sa	mple ID: I	Nethod	Blank
Matrix: Water											Prep T	ype: To	otal/NA
Analysis Batch: 51521											Prep	Batch:	50159
	M	з мв											
Analyte	Resu	t Qualifier		RL		Unit		D	Р	repared	Analyz	ed	Dil Fac
Calcium	<0.20	υ		0.200		mg/L		_	04/2	5/22 08:30	05/04/22 0	05:04	1
—													
Lab Sample ID: LCS 860-50159)/ 2-A							С	lient	Sample	ID: Lab Co	ontrol S	ample
Matrix: Water											Prep T	ype: To	otal/NA
Analysis Batch: 51521			• •		~~						Prep	Batch:	50159
Arraha			Spike	L 	.05	LUS	11		-	0/ D	%Rec		
			Added	Re:	SUIT	Qualifier				%Rec			
			25.0	20	0.70		mg/L			107	00 - 120		
Lab Sample ID: LCSD 860-5015	59/3-A						Cli	ent	Sam	ple ID: L	ab Contro	I Samp	le Dup
Matrix: Water											Prep T	ype: To	otal/NA
Analysis Batch: 51521											Prep	Batch:	50159
			Spike	LC	SD	LCSD					%Rec		RPD
Analyte			Added	Re	sult	Qualifier	Unit		<u> </u>	%Rec	Limits	RPD	Limit
Calcium			25.0	26	5.87		mg/L			107	80 - 120	0	20
Lab Sample ID: 860-24786-9 M	SD									Clie	nt Sample	ID: Du	plicate
Matrix: Water											Prep T	ype: To	otal/NA
Analysis Batch: 51521											Prep	Batch:	50159
	Sample Sa	mple	Spike	N	ISD	MSD					%Rec		RPD
Analyte	Result Qu	alifier	Added	Re	sult	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Calcium	126 E		25.0	14	9.4	E 4	mg/L			93	75 - 125	1	20

Job ID: 860-24786-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 860-49725/1-A									Client Sa	ample ID:	Method	Blank
Matrix: Water										Prep 1	Type: To	tal/NA
Analysis Batch: 50390										Prep	Batch:	49725
	MB	MB										
Analyte	Result	Qualifier		RL	Unit		D	P	repared	Analyz	ed	Dil Fac
Boron	<0.0100	U	0	.0100	mg/L		_	04/2	1/22 08:30	04/25/22	17:11	1
Lab Sample ID: LCS 860-49725/2-A							С	lient	Sample	ID: Lab Co	ontrol S	ample
Matrix: Water										Prep 1	Type: To	tal/NA
Analysis Batch: 50390										Prep	Batch:	49725
			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Boron			0.100	0.09318		mg/L		_	93	80 - 120		
						CI	ient	Sam	ple ID: L	ab Contro	I Samp	le Dup
Matrix: Water										Prep 1	Type: To	tal/NA
Analysis Batch: 50390										Prep	Batch:	49725
-			Spike	LCSD	LCSD					%Rec		RPD
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Boron			0.100	0.09226		mg/L		_	92	80 - 120	1	20
Lab Sample ID: MB 860-50129/1-A									Client S	ample ID:	Method	Blank
Matrix: Water										Prep 1	vpe: To	tal/NA
Analysis Batch: 50842										Prep	Batch:	50129
· ······	МВ	МВ										
Analyte	Result	Qualifier		RL	Unit		D	P	repared	Analyz	ed	Dil Fac
Boron	<0.0100	U	0	.0100	mg/L			04/2	4/22 10:30	04/28/22	18:40	1
Lab Sample ID: LCS 860-50129/2-A							С	lient	Sample	ID: Lab Co	ontrol S	ample
Matrix: Water										Prep 1	Type: To	tal/NA
Analysis Batch: 50842										Prep	Batch:	50129
			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Boron			0.100	0.1076		mg/L		_	108	80 - 120		
 Lab Sample ID: LCSD 860-50129/3-A						CI	ient	Sam	ple ID: L	ab Contro	I Samp	le Dup
Matrix: Water									•	Prep 1	· Vpe: To	tal/NA
Analysis Batch: 50842										Pren	Batch:	50129
····			Spike	LCSD	LCSD					%Rec		RPD
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Boron			0.100	0.1061		mg/L		_	106	80 - 120	1	20
Method: SM 2540C - Solids, Total	Dissol	ved (TD	S)									

Lab Sample ID: MB 860-50259/1 Matrix: Water						Client Sa	ample ID: Metho Prep Type: 1	d Blank fotal/NA
Analysis Batch: 50259								
	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<5.00	U	5.00	mg/L			04/25/22 14:35	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 860-50259/2 Matrix: Water Analysis Batch: 50259					C	lient	: Sample	e ID: Lab Co Prep 1	ontrol Sa ype: To	ample tal/NA
· · · · · · · · · · · · · · · · · · ·		Spike	LCS	LCS				%Rec		
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids		1000	982.0		mg/L		98	80 - 120		
Lab Sample ID: LCSD 860-50259/3					Client	Sam	ple ID:	Lab Contro	l Sampl	e Dup
Matrix: Water								Prep 1	ype: To	tal/NA
Analysis Batch: 50259										
		Spike	LCSD	LCSD				%Rec		RPD
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Dissolved Solids		1000	1048		mg/L		105	80 - 120	7	10
Lab Sample ID: 860-24786-1 DU								Client San	nple ID:	MW-7
Matrix: Water								Prep 1	ype: To	tal/NA
Analysis Batch: 50259										
Sample	Sample		DU	DU						RPD
Analyte Result	Qualifier		Result	Qualifier	Unit	D			RPD	Limit
Total Dissolved Solids 1940			1812		mg/L				7	10
Method: SM 4500 H+ B - pH										
Lab Sample ID: 860-24786-9 DU							Cli	ient Sample	ID: Dup	olicate
Matrix: Water								Prep 1	ype: To	tal/NA
Analysis Batch: 50962										
Sample	Sample		DU	DU						RPD
Analyte Result	Qualifier		Result	Qualifier	Unit	D			RPD	Limit
pH 6.5	HF		6.5		SU				0.2	20
Temperature 12.5	HF		12.6		Degrees C				0.8	20

2 3 4 5 6 7 8 8 9

Analysis Batch: 50533

HPLC/IC

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-24786-1 - DL	MW-7	Total/NA	Water	300.0	
860-24786-2	MW-11	Total/NA	Water	300.0	
860-24786-3	MW-12	Total/NA	Water	300.0	
860-24786-4	MW-16	Total/NA	Water	300.0	
860-24786-5	MW-13	Total/NA	Water	300.0	
860-24786-6	MW-15	Total/NA	Water	300.0	
860-24786-7 - DL	MW-14	Total/NA	Water	300.0	
860-24786-8 - DL	MW-17	Total/NA	Water	300.0	
860-24786-9	Duplicate	Total/NA	Water	300.0	
MB 860-50533/13	Method Blank	Total/NA	Water	300.0	
MB 860-50533/77	Method Blank	Total/NA	Water	300.0	
LCS 860-50533/78	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-50533/79	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-50533/15	Lab Control Sample	Total/NA	Water	300.0	
860-24786-2 MS	MW-11	Total/NA	Water	300.0	
860-24786-2 MSD	MW-11	Total/NA	Water	300.0	

Analysis Batch: 50784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-24786-1		Total/NA	Water	300.0	
860-24786-7	MW-14	Total/NA	Water	300.0	
860-24786-8	MW-17	Total/NA	Water	300.0	
MB 860-50784/25	Method Blank	Total/NA	Water	300.0	
MB 860-50784/58	Method Blank	Total/NA	Water	300.0	
LCS 860-50784/59	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-50784/60	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-50784/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 49725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-24786-1	MW-7	Total/NA	Water	3010A	
860-24786-2	MW-11	Total/NA	Water	3010A	
860-24786-3	MW-12	Total/NA	Water	3010A	
860-24786-4	MW-16	Total/NA	Water	3010A	
860-24786-5	MW-13	Total/NA	Water	3010A	
860-24786-6	MW-15	Total/NA	Water	3010A	
860-24786-7	MW-14	Total/NA	Water	3010A	
860-24786-8	MW-17	Total/NA	Water	3010A	
MB 860-49725/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-49725/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-49725/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Prep Batch: 49920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-24786-1	MW-7	Total/NA	Water	3010A	
860-24786-2	MW-11	Total/NA	Water	3010A	
860-24786-3	MW-12	Total/NA	Water	3010A	
860-24786-4	MW-16	Total/NA	Water	3010A	
860-24786-5	MW-13	Total/NA	Water	3010A	

Prep Type

Matrix

Method

Metals (Continued)

Lab Sample ID

Prep Batch: 49920 (Continued)

Client Sample ID

Prep Batch

860-24786-6	MW-15	Total/NA	Water	3010A	
860-24786-7	MW-14	Total/NA	Water	3010A	
860-24786-8	MW-17	Total/NA	Water	3010A	
MB 860-49920/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-49920/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-49920/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
Prep Batch: 50129					
_ Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-24786-9	Duplicate	Total/NA	Water	3010A	
MB 860-50129/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-50129/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-50129/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
Prep Batch: 50159					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-24786-9	Duplicate	Total/NA	Water	3010A	
MB 860-50159/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-50159/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-50159/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
860-24786-9 MSD	Duplicate	Total/NA	Water	3010A	
Analysis Batch: 50227 	Client Sample ID	Prop Typo	Matrix	Mathad	Bron Batch
860-24786-3	MW-12	Total/NA	Water	6010B	
860-24786-4	MW-16	Total/NA	Water	6010B	49920
860-24786-5	MW-13	Total/NA	Water	6010B	49920
860-24786-6	MW-15	Total/NA	Water	6010B	49920
MB 860-49920/1-4	Method Blank	Total/NA	Water	6010B	49920
LCS 860-49920/2-A	Lab Control Sample	Total/NA	Water	6010B	49920
LCSD 860-49920/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	49920
- Analysis Batch: 50390					
– Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-24786-1	MW-7	Total/NA	Water	6020A	49725
860-24786-2	MW-11	Total/NA	Water	6020A	49725
860-24786-3	MW-12	Total/NA	Water	6020A	49725
860-24786-4	MW-16	Total/NA	Water	6020A	49725
860-24786-5	MW-13	Total/NA	Water	6020A	49725
860-24786-6	MW-15	Total/NA	Water	6020A	49725
860-24786-7	MW-14	Total/NA	Water	6020A	49725
860-24786-8	MW-17	Total/NA	Water	6020A	49725
MB 860-49725/1-A	Method Blank	Total/NA	Water	6020A	49725
LCS 860-49725/2-A	Lab Control Sample	Total/NA	Water	6020A	49725
LCSD 860-49725/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	49725
- Analysis Batch: 50766					

Lab Sample ID	Client Sample ID	Prep Type	Matrix Water	Method 6010B	Prep Batch
860-24786-2	MW-11	Total/NA	Water	6010B	49920
860-24786-7	MW-14	Total/NA	Water	6010B	49920

Metals (Continued)

3 4 5 6 7 8

9

Analysis	Batch:	50766	(Continued)
,	Batom		(Continuou)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-24786-8	MW-17	Total/NA	Water	6010B	49920
Analysis Batch: 50842					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-24786-9	Duplicate	Total/NA	Water	6020A	50129
MB 860-50129/1-A	Method Blank	Total/NA	Water	6020A	50129
LCS 860-50129/2-A	Lab Control Sample	Total/NA	Water	6020A	50129
LCSD 860-50129/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	50129
Analysis Batch: 51521					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-24786-9	Duplicate	Total/NA	Water	6010B	50159
MB 860-50159/1-A	Method Blank	Total/NA	Water	6010B	50159
LCS 860-50159/2-A	Lab Control Sample	Total/NA	Water	6010B	50159
LCSD 860-50159/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	50159
860-24786-9 MSD	Duplicate	Total/NA	Water	6010B	50159
General Chemistry	,				
Analysis Batch: 50259					

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-24786-1	MW-7	Total/NA	Water	SM 2540C	
860-24786-2	MW-11	Total/NA	Water	SM 2540C	
860-24786-3	MW-12	Total/NA	Water	SM 2540C	
860-24786-4	MW-16	Total/NA	Water	SM 2540C	
860-24786-5	MW-13	Total/NA	Water	SM 2540C	
860-24786-6	MW-15	Total/NA	Water	SM 2540C	
860-24786-7	MW-14	Total/NA	Water	SM 2540C	
860-24786-8	MW-17	Total/NA	Water	SM 2540C	
860-24786-9	Duplicate	Total/NA	Water	SM 2540C	
MB 860-50259/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-50259/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-50259/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
860-24786-1 DU	MW-7	Total/NA	Water	SM 2540C	

Analysis Batch: 50962

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-24786-1	MW-7	Total/NA	Water	SM 4500 H+ B	
860-24786-2	MW-11	Total/NA	Water	SM 4500 H+ B	
860-24786-3	MW-12	Total/NA	Water	SM 4500 H+ B	
860-24786-4	MW-16	Total/NA	Water	SM 4500 H+ B	
860-24786-5	MW-13	Total/NA	Water	SM 4500 H+ B	
860-24786-6	MW-15	Total/NA	Water	SM 4500 H+ B	
860-24786-7	MW-14	Total/NA	Water	SM 4500 H+ B	
860-24786-8	MW-17	Total/NA	Water	SM 4500 H+ B	
860-24786-9	Duplicate	Total/NA	Water	SM 4500 H+ B	
860-24786-9 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Initial

Amount

50 mL

50 mL

50 mL

Final

Amount

50 mL

50 mL

200 mL

Batch

50533

50784

49920

50766

49725

50390

50259

50962

Number

Dil

10

1

50

1

1

1

Factor

Run

DL

Client Sample ID: MW-7 Date Collected: 04/18/22 13:46 Date Received: 04/20/22 11:09

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Batch

Туре

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Prep

Prep

Batch

Method

300.0

300.0

3010A

6010B

3010A

6020A

SM 2540C

SM 4500 H+ B

Lab

XEN STF

Matrix: Water

Matrix: Water

Lab Sample ID: 860-24786-1 Matrix: Water

Analyst

ANP

WP

MD

AV

MD

SHZ

MCA

Lab Sample ID: 860-24786-2

Lab Sample ID: 860-24786-3

Lab Sample ID: 860-24786-4

TL

Prepared

or Analyzed

04/28/22 08:46

04/29/22 18:26

04/22/22 09:00

04/28/22 02:47

04/21/22 08:30

04/25/22 17:37

04/25/22 14:35

04/29/22 12:15

Client Sample ID: MW-11

Date Collected: 04/18/22 14:24 Date Received: 04/20/22 11:09

- -	Batch	Batch	Dura	Dil	Initial	Final	Batch	Prepared	A	Lab
Ргер Туре	Туре	wethod	Kun	Factor	Amount	Amount	Number	or Analyzed	Analyst	
Total/NA	Analysis	300.0		1			50533	04/28/22 09:00	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49920	04/22/22 09:00	MD	XEN STF
Total/NA	Analysis	6010B		50			50766	04/28/22 02:50	AV	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49725	04/21/22 08:30	MD	XEN STF
Total/NA	Analysis	6020A		1			50390	04/25/22 17:40	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	50259	04/25/22 14:35	MCA	XEN STF
Total/NA	Analysis	SM 4500 H+ B		1			50962	04/29/22 12:16	TL	XEN STF

Client Sample ID: MW-12

Date Collected: 04/18/22 15:01 Date Received: 04/20/22 11:09

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			50533	04/28/22 09:41	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49920	04/22/22 09:00	MD	XEN STF
Total/NA	Analysis	6010B		1			50227	04/22/22 22:28	AV	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49725	04/21/22 08:30	MD	XEN STF
Total/NA	Analysis	6020A		1			50390	04/25/22 17:43	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	200 mL	200 mL	50259	04/25/22 14:35	MCA	XEN STF
Total/NA	Analysis	SM 4500 H+ B		1			50962	04/29/22 12:18	TL	XEN STF

Client Sample ID: MW-16 Date Collected: 04/18/22 15:39 Date Received: 04/20/22 11:09

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			50533	04/28/22 09:55	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49920	04/22/22 09:00	MD	XEN STF
Total/NA	Analysis	6010B		1			50227	04/22/22 22:31	AV	XEN STF

Eurofins Houston

Matrix: Water

Client Sample ID: MW-16 Date Collected: 04/18/22 15:39 Date Received: 04/20/22 11:09

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	49725	04/21/22 08:30	MD	XEN STF
Total/NA	Analysis	6020A		1			50390	04/25/22 17:46	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	50259	04/25/22 14:35	MCA	XEN STF
Total/NA	Analysis	SM 4500 H+ B		1			50962	04/29/22 12:19	TL	XEN STF

Client Sample ID: MW-13 Date Collected: 04/18/22 16:07 Date Received: 04/20/22 11:09

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			50533	04/28/22 10:37	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49920	04/22/22 09:00	MD	XEN STF
Total/NA	Analysis	6010B		1			50227	04/22/22 22:35	AV	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49725	04/21/22 08:30	MD	XEN STF
Total/NA	Analysis	6020A		1			50390	04/25/22 17:50	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	50259	04/25/22 14:35	MCA	XEN STF
Total/NA	Analysis	SM 4500 H+ B		1			50962	04/29/22 12:21	TL	XEN STF

Client Sample ID: MW-15 Date Collected: 04/18/22 16:44 Date Received: 04/20/22 11:09

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			50533	04/28/22 10:51	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49920	04/22/22 09:00	MD	XEN STF
Total/NA	Analysis	6010B		1			50227	04/22/22 22:46	AV	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49725	04/21/22 08:30	MD	XEN STF
Total/NA	Analysis	6020A		1			50390	04/25/22 17:53	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	50259	04/25/22 14:35	MCA	XEN STF
Total/NA	Analysis	SM 4500 H+ B		1			50962	04/29/22 12:23	TL	XEN STF

Client Sample ID: MW-14 Date Collected: 04/18/22 17:12 Date Received: 04/20/22 11:09

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0	DL	10			50533	04/28/22 11:05	ANP	XEN STF
Total/NA	Analysis	300.0		1			50784	04/29/22 18:40	WP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49920	04/22/22 09:00	MD	XEN STF
Total/NA	Analysis	6010B		50			50766	04/28/22 02:54	AV	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	49725	04/21/22 08:30	MD	XEN STF
Total/NA	Analysis	6020A		1			50390	04/25/22 17:56	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	50259	04/25/22 14:35	MCA	XEN STF
Total/NA	Analysis	SM 4500 H+ B		1			50962	04/29/22 12:24	TL	XEN STF

Eurofins Houston

Lab Sample ID: 860-24786-4 Matrix: Water

Lab Sample ID: 860-24786-5

Lab Sample ID: 860-24786-6

Lab Sample ID: 860-24786-7

Matrix: Water

Matrix: Water

Matrix: Water

5/5/2022

Initial

Amount

50 mL

50 mL

50 mL

Final

Amount

50 mL

50 mL

200 mL

Batch

50533

50784

49920

50766

49725

50390

50259

50962

Number

Dil

10

1

50

1

1

1

Factor

Run

DL

Client Sample ID: MW-17 Date Collected: 04/18/22 17:45 Date Received: 04/20/22 11:09

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Batch

Туре

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Prep

Prep

Batch

Method

300.0

300.0

3010A

6010B

3010A

6020A

SM 2540C

SM 4500 H+ B

Lab

XEN STF

Matrix: Water

Lab Sample ID: 860-24786-8 Matrix: Water

Analyst

ANP

WP

MD

AV

MD

SHZ

MCA

ΤL

Lab Sample ID: 860-24786-9

Prepared

or Analyzed

04/28/22 11:18

04/29/22 18:54

04/22/22 09:00

04/28/22 03:05

04/21/22 08:30

04/25/22 17:59

04/25/22 14:35

04/29/22 12:27

10

Client Sample ID: Duplicate

Date Collected: 04/18/22 00:00 Date Received: 04/20/22 11:09

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			50533	04/28/22 11:32	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	50159	04/25/22 08:30	MD	XEN STF
Total/NA	Analysis	6010B		5			51521	05/04/22 05:29	AV	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	50129	04/24/22 10:30	MD	XEN STF
Total/NA	Analysis	6020A		1			50842	04/28/22 19:05	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	50259	04/25/22 14:35	MCA	XEN STF
Total/NA	Analysis	SM 4500 H+ B		1			50962	04/29/22 12:29	TL	XEN STF

Laboratory References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP Job ID: 860-24786-1

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	21-038-0	08-04-22
Florida	NELAP	E871002	06-30-22
Louisiana	NELAP	03054	06-30-22
Oklahoma	State	2021-168	08-31-22
Texas	NELAP	T104704215-21-44	06-30-22
Texas	TCEQ Water Supply	T104704215	06-30-22
USDA	US Federal Programs	P330-22-00025	03-02-23

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XEN STF
6010B	Metals (ICP)	SW846	XEN STF
6020A	Metals (ICP/MS)	SW846	XEN STF
SM 2540C	Solids, Total Dissolved (TDS)	SM	XEN STF
SM 4500 H+ B	pH	SM	XEN STF
3010A	Preparation, Total Metals	SW846	XEN STF

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-24786-1	MW-7	Water	04/18/22 13:46	04/20/22 11:09
860-24786-2	MW-11	Water	04/18/22 14:24	04/20/22 11:09
860-24786-3	MW-12	Water	04/18/22 15:01	04/20/22 11:09
860-24786-4	MW-16	Water	04/18/22 15:39	04/20/22 11:09
860-24786-5	MW-13	Water	04/18/22 16:07	04/20/22 11:09
860-24786-6	MW-15	Water	04/18/22 16:44	04/20/22 11:09
860-24786-7	MW-14	Water	04/18/22 17:12	04/20/22 11:09
860-24786-8	MW-17	Water	04/18/22 17:45	04/20/22 11:09
860-24786-9	Duplicate	Water	04/18/22 00:00	04/20/22 11:09

Chain of Custody Record

ို့စ် eurofins Environment Testing America

Let the COO Market Territor Territor Market	Bechtold, Chad Bechtold, Chad	E-Mail: Page: Chad.bechtold@eurofinset.com Page 1 of 1	Analysis Requested	Preservation Codes:	A HOL M Hexare B NAOCH N None C NAOCH N None	T I I I I I I I I I I I I I I I I I I I			Image: State State	001 001 001 001 000 000	SeatoCaled T SeatoCaled T SeatoCaled T SeatoCaled T SeatoCaled T SeatoCaled T Total Number SeatoCaled T SeatoCaled T Se									V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Corrected Temp / Correc	Council Nerves! (A fax may to secreted if counciles are retained farmer than 4 month)	Sample Usposa (A ree may be assessed in samples are retained ronger unan 1 montar) Return To Client Disposal By Lab Archive For Months	Special Instructions/QC Requirements:	Time: Method of Stipment	Mrav Recorded by P Company Company Company Company	Received by Received by Arth Date Arth 1:09 Company	VILLA Received by Received by Bachine A 1:09 Company
	ULES Smith Beer	hone: E-Mai Chac	OISMd	Due Date Requested:	AT Requested (days):	tompliance Project 🗴 Yas 🛆 No	0# -14-1007	WO#: -14-1007	7nject # 36000207	SSOW#:	Sample Matrix Type (wwahr, Type (C=comp. owented. Sample Date Time G=crab) BTTINAAAAAA	Preservation Code:	4-8-29 lisue G W	M D neni cesi-h	N1 9 1951 60-81-10	4-8-32 1537 G W	4-(8-32) 1607 R W	11-RAD HUUL C W	WIS CITI CORN	W S ITUS G W			n B 🛄 Unknown 🛄 Radiological		Date:	Winding UNU Ct. 6-01-01	Jate/Time: Company	Jate/Time: Company Date/Time: Company
Phone: 281-240-4200	Client Information	Cient Contact Michelle Transier	Company. Hydrex Erwironmental	Address: 1120 NW Stallinos Drive	City: Nacogdoches	State, Zip: TX, 75964	Phone:	Email: mtransier@hydrex-inc.com	Project Name: Twin Oaks PP	Sille:	Sample Identification		LMW	M.W.	El NW	Al MM	MIN 13	MIN 15	MIN 14	i-1 MM		Presible Henned Identification	Cossine nazara idenuricauon	Deliverable Requested: I II, III IV Other (specify)	Empty Kit Relinquished by		Relinquished by:	Relinquished by:

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5/5/2022

Client: Hydrex Environmental

Login Number: 24786 List Number: 1 Creator: Milone, Jeancarlo

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

Job Number: 860-24786-1

List Source: Eurofins Houston

🛟 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Houston 4145 Greenbriar Dr Stafford, TX 77477 Tel: (281)240-4200

Laboratory Job ID: 860-27143-1

Client Project/Site: Twin Oaks PP

For:

Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964

Attn: Michelle Transier

had a. Beithold

Authorized for release by: 6/21/2022 4:20:09 PM

Chad Bechtold, Project Manager (813)690-3563 Chad.Bechtold@et.eurofinsus.com



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

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

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3

Qualifiers	
HPLC/IC	Qualifier Description
Qualifier	Qualifier Description
U	indicates the analyte was analyzed for but not detected.
Metals	
Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.
General Che	mistry
Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
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)

MDLMethod Detection LimitMLMinimum 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)

RERRelative Error Ratio (Radiochemistry)RLReporting 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

Appendix A	
Laboratory Data Package Cover Page - Page 1 of 4	
This data package is for Eurofins Houston job number 860-27143-1 and consists of:	
☑ R1 - Field chain-of-custody documentation;	4
 R2 - Sample identification cross-reference; R3 - Test reports (analytical data sheets) for each environmental sample that includes: a. Items consistent with NELAC Chapter 5. 	5
b. dilution factors,	
c. preparation methods, d. cleanup methods, and	
e. if required for the project, tentatively identified compounds (TICs).	8
a. Calculated recovery (%R), and	9
 D. The laboratory's surrogate QC limits. ☑ R5 - Test reports/summary forms for blank samples; 	
☑ R6 - Test reports/summary forms for laboratory control samples (LCSs) including: a. LCS spiking amounts,	
b. Calculated %R for each analyte, and c. The laboratory's LCS OC limits	
☑ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:	13
a. Samples associated with the MS/MSD clearly identified, b. MS/MSD spiking amounts,	
 c. Concentration of each MS/MSD analyte measured in the parent and spiked samples, d. Calculated %Rs and relative percent differences (RPDs), and 	

- e. The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- \blacksquare R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Chad Bechtold Name (printed)

Chad a. Bestela Signature

6/21/2022 Date

Project Manager Official Title (printed)

Page 4 of 21

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Lab	orato	ry Name:	Eurofins Houston	LRC Date:	6/21/2022					
Proj	ect N	ame:	Twin Oaks PP	Laboratory Job Number:	860-27143-1					
Rev	iewer	·Name:	Chad Bechtold		-					•
# ¹	A ²		Description			Yes	No	NA ³	NR^4	ER#⁵
R1	01	Chain-of-o	ustody (C-O-C)							
		Did sample	s meet the laboratory's standard conditions of sample ad	cceptability upon receipt?		Х				
		Were all de	partures from standard conditions described in an excep	otion report?		Х				
R2	01	Sample ar	d quality control (QC) identification							
		Are all field	sample ID numbers cross-referenced to the laboratory I	D numbers?		Х				
		Are all labo	ratory ID numbers cross-referenced to the corresponding	g QC data?		Х				
R3	01	Test repor	ts							
		Were all sa	mples prepared and analyzed within holding times?		Х					
		Other than	those results < MQL, were all other raw values bracketer		Х					
		Were calcu		Х						
		Were all ar	alyte identifications checked by a peer or supervisor?			Х				
		Were sam	ole detection limits reported for all analytes not detected?			Х				
		Were all re	sults for soil and sediment samples reported on a dry we	eight basis?				Х		
		Were % m	pisture (or solids) reported for all soil and sediment samp	bles?				Х		
		Were bulk	soils/solids samples for volatile analysis extracted with m	nethanol per SW846 Metho	d 5035?			Х		
		If required	for the project, are TICs reported?					Х		
R4	0	Surrogate	recovery data							
		Were surro	gates added prior to extraction?					Х		
		Were surro	gate percent recoveries in all samples within the laborate				Х			
R5	01	Test repor	ts/summary forms for blank samples							
		Were appr	opriate type(s) of blanks analyzed?			Х				
		Were blan	s analyzed at the appropriate frequency?		X					
		Were meth	od blanks taken through the entire analytical process, in	cluding preparation and, if a	applicable, cleanup					
		procedures	?			Х				
		Were blan	concentrations < MQL?			Х				
R6	0	Laborator	/ control samples (LCS):							

R6	01	Laboratory control samples (LCS):				
		Were all COCs included in the LCS?	Х			
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	Х			
		Were LCSs analyzed at the required frequency?	Х			
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	Х			
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used				
		to calculate the SDLs?	Х			
		Was the LCSD RPD within QC limits?	Х			
R7	01	Matrix spike (MS) and matrix spike duplicate (MSD) data				
	-	Were the project/method specified analytes included in the MS and MSD?	Х			
		Were MS/MSD analyzed at the appropriate frequency?	Х			
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	Х			
		Were MS/MSD RPDs within laboratory QC limits?	Х			
R8	01	Analytical duplicate data				
		Were appropriate analytical duplicates analyzed for each matrix?			Х	
		Were analytical duplicates analyzed at the appropriate frequency?			Х	
		Were RPDs or relative standard deviations within the laboratory QC limits?			Х	
R9	OI	Method quantitation limits (MQLs):				
		Are the MQLs for each method analyte included in the laboratory data package?	Х			
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	Х			
		Are unadjusted MQLs and DCSs included in the laboratory data package?	Х			
R10	01	Other problems/anomalies				
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	Х			
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the				
		sample results?	X			
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices				
		and methods associated with this laboratory data package?	X			
	1.	Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required rep	ort(s). I	tems	;	
		identified by the letter "S" should be retained and made available upon request for the appropriate retention period.				
	2.	O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);				
	3.	NA = Not applicable;				
	4	NR = Not reviewed				

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review checklist: Supporting Data - Page 3 of 4

abc	rator	y Name:	Eurofins Houston	LRC Date:	6/	21/2022					
oje	ect N	ame:	Twin Oaks PP	Laboratory Job Nu	mber: 86	60-27143-1					
evi	ewer	Name:	Chad Bechtold		-						
#1	A2			Description			Vaa	Na		ND ⁴	ED# ⁵
#	A	Initial cali	exetion (ICAL)	Description			res	NO	NA	NK	ER#
		More reen	oracioni (ICAL)	eters for each analyte within OC lim	ita?						
		Were resp	onse lactors and/or relative response la	ria met?	115 ?		-				
		Were perco	in the second se	a mathad used for all analytes?			-				
		Was the fit	pints generated between the lowest and	bighost standard used to calculate	the curve?		$-\hat{\mathbf{v}}$				
			late queilable for all instruments used?	I nighest standard used to calculate			$-\hat{\mathbf{\nabla}}$				
		Has the ini	tial calibration curve been verified using	an appropriate second source stan	dard2		$-\hat{\mathbf{x}}$				
	1			an appropriate second source star	uaru		-				
2		Initial and	continuing calibration verification (I								
2	101	Was the C	CV analyzed at the method-required fre								
		Was the C	ev analyzed at the method-required he	he method-required OC limits?							
		Was the IC	AL curve verified for each analyte?					+		\vdash	
		Was the at	solute value of the analyte concentration	on in the inorganic CCR < MDL2				+		\vdash	
3	0	Mase enor	tral tuning				+	-		\vdash	
5	0	Was the ar	propriate compound for the method us	ed for tuning?					x		
		Were ion a	bundance data within the method-requi	red OC limits?				-	x		
4	0	Internal et		1		\vdash					
-	U	Were IS ar			x						
5		Raw data									
<u> </u>	101	Were the r	aw data (for example, chromatograms	spectral data) reviewed by an analy	st?		×				
		Were data	associated with manual integrations fla	inded on the raw data?	51.						
6	0	Dual colur	nn confirmation								
<u> </u>	U	Did dual co	hump confirmation results meet the me	thod-required OC?					x		
7	0	Tentativel	videntified compounds (TICs)								
	<u> </u>	If TICs wer	e requested were the mass spectra an	d TIC data subject to appropriate ch	ecks?				x		
8	1	Interferen	ce Check Sample (ICS) results				_				
	<u>l'</u>	Were perce	ent recoveries within method OC limits?)			×				
9	li –	Sorial dilu	tions nost digestion snikes and me	thod of standard additions							
5	<u>l'</u>	Were perce	ent differences recoveries and the line	arity within the OC limits specified in	the method	2	×				
10		Method de	etection limit (MDI) studies		r the method	•					
10	101	Was a MD	study performed for each reported an	alvte?			X				
		Is the MDI	either adjusted or supported by the an	alysis of DCSs?							
11		Proficienc	v test reports								
	101	Was the la	boratory's performance acceptable on t	he applicable proficiency tests or ev	aluation stur	lies?	x	1		\vdash	
12	0	Standards	documentation					1			
	<u> </u>	Are all star	ndards used in the analyses NIST-trace	able or obtained from other appropri	ate sources?)	x	1		\vdash	
13	0	Compoun	d/analyte identification procedures					1		\vdash	
	<u> </u>	Are the pro	cedures for compound/analyte identific	ation documented?			x	1			
14	0	Demonstr	ation of analyst competency (DOC)					1			
<u>··</u>	<u>.</u>	Was DOC	conducted consistent with NELAC Cha	pter 5?			X				
		Is docume	ntation of the analyst's competency up-	to-date and on file?			X				
15	Ю	Verificatio	n/validation documentation for meth	ods (NELAC Chapter 5)							
	0.	Voliniouno					<u> </u>				
		Are all the	methods used to generate the data doc	umented verified and validated w	ere annlicat	le?	x				
16	0	Laborator	v standard operating procedures (SC	(Ps)	applicat		+	1		\vdash	
	101	Are laborat	ory SOPs current and on file for each n		x	-		┝──╂			
	1	Items ident	tified by the letter "R" must be included	in the laboratory data package subn	nitted in the T	RRP-required r	enort(s)	Items	L		
		identified b	v the letter "S" should be retained and r	retention period							
	2	$\Omega = 0$	c analyses: I = inorganic analyses (and	deneral chemistry when applicable	oppiopilate	eternion periou.					
	∠. 3	$N\Delta = Not c$	o analyses, i – morganic analyses (and innlicable:	general enemistry, when applicable	,						
		11/1 - 11/1 9	יייייייייייייייייייייייייייייייייייייי								

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked). 5.

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laborato	ry Name:	Eurofins Houston	LRC Date:	6/21/2022					
Project N	lame:	Twin Oaks PP	Laboratory Job Number:	860-27143-1					
Reviewe	r Name:	Chad Bechtold							
ER # ¹			Description		٦.				
			•						
1.	 Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 								
2.	O = organ	ic analyses; I = inorganic analyses (and general cher	nistry, when applicable);						
3.	3. NA = Not applicable;								
4.	NR = Not	reviewed;							
5.	ER# = Exc	ception Report identification number (an Exception Re	eport should be completed for a	n item if "NR" or "No" is checked).					

Case Narrative

Job ID: 860-27143-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-27143-1

Receipt

The samples were received on 6/1/2022 10:36 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

HPLC/IC

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

Metals

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

General Chemistry

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

Detection Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP Job ID: 860-27143-1

Lab Sample ID: 860-27143-1

Client Sample ID: MW-13

Analyte Sulfate	Result 360	Qualifier	RL 0.500	Unit mg/L	Dil Fac	D	Method 300.0	Prep Type Total/NA
Client Sample ID: MW-14					Lab S	a	mple ID: 8	60-27143-2
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	464		0.500	mg/L	1	_	300.0	Total/NA
Sulfate - DL	944		5.00	mg/L	10		300.0	Total/NA
Calcium	202		10.0	mg/L	50		6010B	Total/NA
Boron	0.718		0.0100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	2240		20.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Hydrex Environmental Project/Site: Twin Oaks PP			-				Job ID: 860-2	27143-1
Client Sample ID: MW-13 Date Collected: 05/31/22 12:05 Date Received: 06/01/22 10:36					L	ab Sample	e ID: 860-27 Matrix	'143-1 : Water
Method: 300.0 - Anions, Ion Chro	matogra	aphy						
Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Sulfate	360		0.500	mg/L			06/04/22 01:30	1
Client Sample ID: MW-14 Date Collected: 05/31/22 11:21 Date Received: 06/01/22 10:36					L	ab Sample.	e ID: 860-27 Matrix	'143-2 : Water
Method: 300.0 - Anions, Ion Chro	matogra	aphy	DI.	11		Duran and	Amelyned	
	Result	Quaimer	RL			Prepared		
Method: 300.0 - Anions, Ion Chro Analyte Sulfate	matogra Result 944	aphy - DL Qualifier	RL 5.00	Unit mg/L	D	Prepared	Analyzed 06/04/22 01:56	Dil Fac 10
Method: 6010B - Metals (ICP) Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	202		10.0	mg/L		06/14/22 10:00	06/18/22 12:25	50
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.718		0.0100	mg/L		06/10/22 10:23	06/10/22 17:46	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2240		20.0	mg/L			06/06/22 13:40	1

Method: 300.0 - Anions, Ion Chromatography

5

Lab Sample ID: MB 860-55642/3 Matrix: Water								Clie	ent Sam	ple ID: M Prep Ty	ethod pe: To	Blank tal/NA
Analysis Batch: 55642												
	MB	MB										
Analyte	Result	Qualifier		RL		Unit		D P	repared	Analyz	zed	Dil Fac
Chloride	<0.500	U		0.500		mg/L				06/03/22	19:42	1
Sulfate	<0.500	U		0.500		mg/L				06/03/22	19:42	1
— Г												
Lab Sample ID: LCS 860-55642/6							Clie	nt Sa	mple ID:	Lab Cor	ntrol Sa	ample
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 55642												
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			10.0		9.615		mg/L		96	90 - 110		
Sulfate			10.0		9.635		mg/L		96	90 - 110		
Γ												_
Lab Sample ID: LCSD 860-55642/7						C	Client Sa	mple	ID: Lab	Control	Sampl	e Dup
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 55642												
			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			10.0		9.539		mg/L		95	90 - 110	1	20
Sulfate			10.0		9.611		mg/L		96	90 - 110	0	20
Lab Sample ID: LLCS 860-55642/5							Clie	nt Sa	mple ID:	Lab Cor	ntrol Sa	ample
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 55642												
			Spike		LLCS	LLCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			0.500		0.5387		mg/L		108	50 - 150		
Sulfate			0.500		0.5033		mg/L		101	50 - 150		
Method: 6010B - Metals (ICP)												
Г												
Lab Sample ID: MB 860-56819/1-A								Clie	ent Sam	ple ID: M	ethod	Blank
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 57486										Prep E	Batch:	56819
	MB	MB										
Analyte	Result	Qualifier		RL		Unit) P	repared	Analyz	zed	Dil Fac
Calcium	<0.200	U		0.200		mg/L		06/1	4/22 10:00	06/17/22	12:04	1
Lab Sample ID: LCS 860-56819/2-A	L I						Clie	nt Sa	mple ID:	Lab Cor	ntrol Sa	ample
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 57486										Prep E	Batch:	56819
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Calcium			25.0		26.90		mg/L		108	80 - 120		
Lab Sample ID: LCSD 860-56819/3	-A					C	Client Sa	mple	ID: Lab	Control	Sampl	e Dup
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 57486										Prep E	Batch:	56819
			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added	_	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium			25.0		27.02		mg/L		108	80 - 120	0	20

QC Sample Results

Job ID: 860-27143-1

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

Lab Sample ID: 860-27143-2	2 MS										Clier	nt Samp	le ID: I	MW-14
Matrix: Water												Prep Ty	pe: To	tal/NA
Analysis Batch: 57486												Prep I	Batch:	56819
-	Sample	San	nple	Spike		MS	MS					%Rec		
Analyte	Result	Qua	alifier	Added	Re	sult	Qualifier	Unit		D	%Rec	Limits		
Calcium	191	Е		25.0	21	13.6	E 4	mg/L			93	75 - 125		
Lab Sample ID: 860-27143-2											Clier	nt Samn	ו יחו מו	MW_1/
Matrix: Water											Oller	Pron Ty		tal/NA
Analysis Batch: 57486												Pron	Batch	56819
Analysis Daten. 57400	Sample	San	nnle	Snike	N	ISD	MSD					%Rec	Jaten.	RPD
Analvte	Result	Qua	alifier	Added	Re	sult	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Calcium	191	E		25.0	2	13.6	E 4	mg/L			92	75 - 125	0	20
Mothod: 6020A Motolo		<u> </u>												
Method. 6020A - Metals)												
Lab Sample ID: MB 860-564	18/1-A									Clie	ent Samp	ole ID: N	lethod	Blank
Matrix: Water												Prep Ty	pe: To	otal/NA
Analysis Batch: 56535												Prep I	Batch:	56418
		MB	MB											
Analyte	Re	sult	Qualifier		RL		Unit		D	Ρ	repared	Analy	zed	Dil Fac
Boron	<0.0	0100	U	(0.0100		mg/L		_	06/1	0/22 10:22	06/10/22	17:13	1
Γ														
Lab Sample ID: LCS 860-56	418/2-A							CI	ient	Sai	nple ID:	Lab Co	ntrol S	ample
Matrix: Water												Prep Ty	pe: To	otal/NA
Analysis Batch: 56535												Prep I	Batch:	56418
				Spike	-	LCS	LCS			_		%Rec		
Analyte				Added	Re	sult	Qualifier	Unit		<u>D</u>	<u>%Rec</u>	Limits		
Вогоп				0.100	0.09	017		mg/∟			90	00 - 120		
Lab Sample ID: LCSD 860-5	6418/3-A						C	lient S	Sam	ple	ID: Lab	Control	Samp	le Dup
Matrix: Water												Prep Ty	pe: İc	tal/NA
Analysis Batch: 56535												Prep I	Batch:	56418
-				Spike	LC	SD	LCSD					%Rec		RPD
Analyte				Added	Re	sult	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Boron				0.100	0.1	036		mg/L			104	80 - 120	7	20
Method: SM 2540C - Sol	ids. Tota	D I	issolve	d (TD	S)									
					-,									
Lab Sample ID: MB 860-557	69/1									Clie	ent Samp	ole ID: N	lethod	Blank
Matrix: Water												Prep Ty	pe: To	otal/NA
Analysis Batch: 55769														
		MB	MB											
Analyte	Re	sult	Qualifier		RL		Unit		D	P	repared	Analy	zed	Dil Fac
Total Dissolved Solids	<	5.00	U		5.00		mg/L					06/06/22	13:40	1
Lab Sample ID: LCS 860-55	769/2							Cli	ient	Sai	nple ID [.]	Lab Co	ntrol S	ample
Matrix: Water										-ui		Pren Tv	pe: To	tal/NA
Analysis Batch: 55769														
				Spike	L	_cs	LCS					%Rec		
Analyte				Added	Re	sult	Qualifier	Unit		D	%Rec	Limits		
Total Dissolved Solids				1000	1	033		mg/L			103	80 - 120		·

5

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCSD 860-55769/3 Matrix: Water Analysis Batch: 55769			C	Client Sa	Imple	ID: Lab	Control S Prep Ty	Sample pe: Tot	e Dup al/NA
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Dissolved Solids	1000	966.0		mg/L		97	80 - 120	7	10
Lab Sample ID: LLCS 860-55769/4				Clie	nt Sai	nple ID	: Lab Con	trol Sa	mple
Matrix: Water							Prep Ty	pe: Tot	al/NA
Analysis Batch: 55769									
	Spike	LLCS	LLCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids	5.00	5.000		mg/L		100	50 - 150		

Prep Type

Matrix

Method

Client Sample ID

Analysis Batch: 55642

HPLC/IC

Lab Sample ID

Prep Batch

9

860-27143-1	MW-13	Iotal/NA	Water	300.0	
860-27143-2	MW-14	Total/NA	Water	300.0	
860-27143-2 - DL	MW-14	Total/NA	Water	300.0	
MB 860-55642/3	Method Blank	Total/NA	Water	300.0	
LCS 860-55642/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-55642/7	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-55642/5	Lab Control Sample	Total/NA	Water	300.0	
Metals					
Prep Batch: 56418					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	3010A	
MB 860-56418/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-56418/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-56418/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
Analysis Batch: 565	35				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2		Total/NA	Water	6020A	56418
MB 860-56418/1-A	Method Blank	Total/NA	Water	6020A	56418
LCS 860-56418/2-A	Lab Control Sample	Total/NA	Water	6020A	56418
LCSD 860-56418/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	56418
Prep Batch: 56819					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	3010A	
MB 860-56819/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-56819/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-56819/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
860-27143-2 MS	MW-14	Total/NA	Water	3010A	
860-27143-2 MSD	MW-14	Total/NA	Water	3010A	
Analysis Batch: 574	86				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-56819/1-A	Method Blank	Total/NA	Water	6010B	56819
LCS 860-56819/2-A	Lab Control Sample	Total/NA	Water	6010B	56819
LCSD 860-56819/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	56819
860-27143-2 MS	MW-14	Total/NA	Water	6010B	56819
860-27143-2 MSD	MW-14	Total/NA	Water	6010B	56819
Analysis Batch: 576	61				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	6010B	56819
General Chemist	ry				
Analysis Batch: 557	69				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	SM 2540C	
		- · · · · ·	141 1	<u></u>	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	SM 2540C	
MB 860-55769/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-55769/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Job ID: 860-27143-1

General Chemistry (Continued)

Analysis Batch: 55769 (Continued)

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
LCSD 860-55769/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-55769/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Client Sample ID: MW-13

Date Collected: 05/31/22 12:05

Date Received: 06/01/22 10:36

Lab Sample ID: 860-27143-1 **Matrix: Water**

Lab Sample ID: 860-27143-2

Matrix: Water

Batch Batch Dil Initial Final Batch Prepared Method Factor or Analyzed Prep Type Туре Run Amount Amount Number Analyst Lab Total/NA Analysis 300.0 55642 06/04/22 01:30 ANP XEN STF 1

Client Sample ID: MW-14 Date Collected: 05/31/22 11:21 Date Received: 06/01/22 10:36

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			55642	06/04/22 01:43	ANP	XEN STF
Total/NA	Analysis	300.0	DL	10			55642	06/04/22 01:56	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	56819	06/14/22 10:00	MD	XEN STF
Total/NA	Analysis	6010B		50			57661	06/18/22 12:25	AV	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	56418	06/10/22 10:23	PB	XEN STF
Total/NA	Analysis	6020A		1			56535	06/10/22 17:46	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	55769	06/06/22 13:40	JM	XEN STF

Laboratory References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Client: Hydrex Environmental Project/Site: Twin Oaks PP Job ID: 860-27143-1

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	21-038-0	08-04-22
Florida	NELAP	E871002	06-30-22
Louisiana	NELAP	03054	06-30-22
Oklahoma	State	2021-168	08-31-22
Texas	NELAP	T104704215-21-44	06-30-22
Texas	TCEQ Water Supply	T104704215	06-30-22
USDA	US Federal Programs	P330-22-00025	03-02-23
Method Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XEN STF
6010B	Metals (ICP)	SW846	XEN STF
6020A	Metals (ICP/MS)	SW846	XEN STF
SM 2540C	Solids, Total Dissolved (TDS)	SM	XEN STF
3010A	Preparation, Total Metals	SW846	XEN STF

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-27143-1	MW-13	Water	05/31/22 12:05	06/01/22 10:36
860-27143-2	MW-14	Water	05/31/22 11:21	06/01/22 10:36

Eurofins Houston 4145 Greenbriar Dr Staffrod, TX 77477	Chain of	Custody R	ecord		င့်နဲ့ eurofins Environment Testi	Po
Phone: 281-240-4200	Complex			Provine Transien Na At-		Г
Client Information	annue Orbes Shith	Becht	n told, Chad	Carrier Fracking two(s).	860-10541-3665.1	
Client Contact Michelie Transier	Phone:	E-Mait Chad	.Bechtold@et eurofinsus.com	State of Origin:	Page: Page 1 of 1	
Company: Hydrex Environmental	Md		Analysis Re	quested	+++ qop	<u> </u>
Address 1120 NVV Stallings Drive	Due Date Requested;				Preservation Codes: M Hexane	
City: Nacogdoches	TAT Requested (days):				B NaOH N None B NaOH O AsNaO2 C Zh Acetate D Acoust	
State, Zp: TX, 75964	Compliance Project: Δ Yes Δ No				E Nation R Nazoos	-
Phone: 936-568-9451 (Tel)	PO#: -14-1007				F MACUH S H2SO4 G Amchlor S H2SO4 H Ascentic Acid T TSP Dodecahydrat	
Emait: Intransier@hydrex-inc.com	W0 #: -14-1007		or No Sulta In		1 Ice U Acetone J Di Water V MCAA	
Project Name. Twin Oaks PP	Project #: 86000207		e (Yes oride (oride (oride (L EDA Y Trizma EDA Z other (specify)	
	SSOW#:		D2 0103 0103 0103 0103 010 010 010 010 010		of Other of Other	
	Sample Sample	Umple Matrix Type Secold, -Comp, Conversion,	6400-0516-0516-0516-0516-0516-0516-0516-05		otal Number	·
		Plau Jernau Artin				
MINT 13	531-205/ 1905	3				<u> </u>
H NW	5-31-20 11.21 (N N C	XXX			{
	·					
					Temn 7 J IR ID HOU-323	
						
					Corrected Temp: 1.0	
Possible Hazard Identification	ison BRadi	ological	Sample Disposal (A fee may be	assessed if samples are ret Disposal Bv Lab	tained fonger than 1 month) Archive For Months	
Deliverable Requested: II III, IV Other (specify)			Special Instructions/QC Requirement	ents:		
Empty Kit Relinquished by	Date:		Time:	Melhod of Shipment:		1
Relinquished by: M.R. I	Date Times 1.34	15 Company	x Received by 13	SUS Paterness 21-	22 Company	
	Date/Time:	Company	Received by:	CC Detertmer	Z 10.36 Company E	
Relinquished by:	Dale/Time:	Company	Received by:	Date of Tame.	Company	
Custody Seals Intact: Custody Seal No. A Yes A No			Cooler Temperature(s) °C and Other R	temarks:		[]
		1	11 12 13 14	7 8 9 10	2 3 4 5 6	1
			1 2 3			

Login Sample Receipt Checklist

Client: Hydrex Environmental

Login Number: 27143 List Number: 1 Creator: Rubio, Yuri

Question	Answer	Comment
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Job Number: 860-27143-1

List Source: Eurofins Houston

🛟 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Houston 4145 Greenbriar Dr Stafford, TX 77477 Tel: (281)240-4200

Laboratory Job ID: 860-28742-1

Client Project/Site: Twin Oaks PP

For:

..... Links

Review your project results through

EOL

Have a Question?

www.eurofinsus.com/Env

Visit us at:

Ask— The Expert Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964

Attn: Michelle Transier

had a. Beithold

Authorized for release by: 7/8/2022 12:56:46 PM

Chad Bechtold, Project Manager (813)690-3563 Chad.Bechtold@et.eurofinsus.com

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

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

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Sample Summary	18
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Client: Hydrex Environmental Project/Site: Twin Oaks PP

Qualifiers		3
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Metals		5
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
General Cher	nistry	
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		8
Abbreviation	These commonly used abbreviations may or may not be present in this report.	9
¤	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)	12
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	
PU5		
PQL		
PRES		
KEK	Relative Error Ratio (Radiochemistry)	
KL	Reporting Limit or Requested Limit (Radiochemistry)	
KPD	Relative Percent Difference, a measure of the relative difference between two points	

TEQToxicity Equivalent Quotient (Dioxin)TNTCToo Numerous To Count

Toxicity Equivalent Factor (Dioxin)

TEF

Appendix A	
Laboratory Data Package Cover Page - Page 1 of 4	
This data package is for Eurofins Houston job number 860-28742-1 and consists of:	
☑ R1 - Field chain-of-custody documentation;	4
R2 - Sample identification cross-reference; R3 - Test reports (analytical data sheets) for each environmental sample that includes: a. Items consistent with NELAC Chapter 5. 	5
b. dilution factors,	
c. preparation methods, d. cleanup methods, and	
e. if required for the project, tentatively identified compounds (TICs).	8
L R4 - Surrogate recovery data including: a. Calculated recovery (%R), and	9
b. The laboratory's surrogate QC limits. ☑ R5 - Test reports/summary forms for blank samples;	10
 R6 - Test reports/summary forms for laboratory control samples (LCSs) including: a. LCS spiking amounts, 	
b. Calculated %R for each analyte, and c. The laboratory's LCS QC limits.	
□ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:	13
 a. Samples associated with the MS/MSD clearly identified, b. MS/MSD spiking amounts, 	
c. Concentration of each MS/MSD analyte measured in the parent and spiked samples, d. Calculated %Rs and relative percent differences (RPDs), and	

- e. The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

☑ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

> Chad Bechtold Name (printed)

Chad a. Butter

Signature

7/8/2022 Date

Project Manager Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

abora	tory	Name: Eurofins Houston	LRC Date:	7/8/2022					
Project	Na	me: Twin Oaks PP I	_aboratory Job Number:	860-28742-1					
Review	/er l	Name: Chad Bechtold		•					
# ¹	A ²	Description			Yes	No	NA ³	NR⁴	ER#
11 C	Л	Chain-of-custody (C-O-C)							
		Did samples meet the laboratory's standard conditions of sample ac	ceptability upon receipt?		X				
		Nere all departures from standard conditions described in an excep	tion report?		Х				
2 C)I	Sample and quality control (QC) identification							
		Are all field sample ID numbers cross-referenced to the laboratory I	D numbers?		Х				
		Are all laboratory ID numbers cross-referenced to the corresponding	QC data?		Х				
3 C	ונ	Test reports							
	ľ	Nere all samples prepared and analyzed within holding times?			Х				
		Other than those results < MQL, were all other raw values bracketed	by calibration standards?		Х				
		Nere calculations checked by a peer or supervisor?			X				
		Nere all analyte identifications checked by a peer or supervisor?			Х				
	ſ	Nere sample detection limits reported for all analytes not detected?			Х				
		Nere all results for soil and sediment samples reported on a dry we	ght basis?				Х		
		Nere % moisture (or solids) reported for all soil and sediment samp	es?				Х		
		Nere bulk soils/solids samples for volatile analysis extracted with m	ethanol per SW846 Metho	d 5035?			Х		
	- F	f required for the project, are TICs reported?					Х		
24 C)	Surrogate recovery data							
		Were surrogates added prior to extraction?					Х		
		Nere surrogate percent recoveries in all samples within the laborato	ry QC limits?				Х		
₹5 C	ונ	Test reports/summary forms for blank samples							
	ľ	Nere appropriate type(s) of blanks analyzed?			Х				
		Nere blanks analyzed at the appropriate frequency?			X				
	- [Were method blanks taken through the entire analytical process, inc	luding preparation and, if a	ipplicable, cleanup					
		procedures?			X				
		Were blank concentrations < MQL?			Х				
6 C	Л	Laboratory control samples (LCS):							
	ľ	Nere all COCs included in the LCS?			Х				
		Nas each LCS taken through the entire analytical procedure, includi	ing prep and cleanup steps	?	X				
		Nere LCSs analyzed at the required frequency?			Х				
		Nere LCS (and LCSD, if applicable) %Rs within the laboratory QC li	mits?		Х				
	ſ	Does the detectability check sample data document the laboratory's	capability to detect the CC	Cs at the MDL used					
	Ŀ	o calculate the SDLs?			X				
		Was the LCSD RPD within QC limits?			Х				
7 C	Л	Matrix spike (MS) and matrix spike duplicate (MSD) data							
		Nere the project/method specified analytes included in the MS and	MSD?				Х		
		Nere MS/MSD analyzed at the appropriate frequency?					Х		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC lim	its?				Х		
		Nere MS/MSD RPDs within laboratory QC limits?					Х		
8 C	DI .	Analytical duplicate data							
		Nere appropriate analytical duplicates analyzed for each matrix?					Х		
	ſ	Nere analytical duplicates analyzed at the appropriate frequency?					Х		
		Nere RPDs or relative standard deviations within the laboratory QC	limits?				Х		
2 9 C	Л	Method quantitation limits (MQLs):							
		Are the MQLs for each method analyte included in the laboratory da	ta package?		Х				
	ſ	Do the MQLs correspond to the concentration of the lowest non-zero	calibration standard?		Х				
	ļ,	Are unadjusted MQLs and DCSs included in the laboratory data pac	kage?		X				
10 C		Other problems/anomalies							

R10B

Х

х

х

Are all known problems/anomalies/special conditions noted in this LRC and ER?

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

and methods associated with this laboratory data package?

sample results?

NA = Not applicable;
 NR = Not reviewed;

Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the

Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices

identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review checklist: Supporting Data - Page 3 of 4

abo	ratoi	y Name:	Eurofins Houston	LRC Date:	7/8/2022					
roje	ect N	ame:	Twin Oaks PP	Laboratory Job Number	: 860-28742-1					
evie	ewer	Name:	Chad Bechtold							
<u>1</u>	1 . 2	1		Description		- No -	1.1.	N 1 A 3		FD#5
#	A	Initial cali	hration (ICAL)	Description		Yes	NO	NA	NR	ER#
1	0		oration (ICAL)	stars for an above within OO limite?						
		vvere resp	onse factors and/or relative response fa	ctors for each analyte within QC limits?		×				
		were perc	ent RSDs or correlation coefficient criter	la met?		×				
		was the hi	umber of standards recommended in the	e method used for all analytes?		×	_			
		were all po	billis generated between the lowest and	nighest standard used to calculate the ci		^				
		Hee the ini	tial available for all instruments used?	an appropriate accord course standard?	,					
	1		tial calibration curve been vermed using	an appropriate second source standard?		^	-			
2		Initial and	continuing calibration varification (I	CV and CCV) and continuing calibratio	n blank (CCB):					
2	0	Was the C	CV analyzed at the method required fre	guonev?	II DIAIIK (CCD).	v				
		Was the C	ont differences for each analyte within the	quericy?		-	+			
		Was the IC	AL curve verified for each analyte?				+		\vdash	
		Was the at	solute value of the analyte concentration	on in the inorganic CCB < MDL2			+		\vdash	
3	0	Mass enco	tral funing				+			
5	<u> </u>	Was the ar	phonoriate compound for the method use	ed for tuning?			+	x		
		Were ion a	bundance data within the method-requi	red QC limits?			+	X		
4	0	Internal et	andards (IS)				+		\vdash	
-	<u> </u>	Were IS an	rea counts and retention times within the	method-required OC limits?				X		
5		Raw data	(NELAC Section 5 5 10)				-			
<u> </u>		Were the r	aw data (for example, chromatograms	spectral data) reviewed by an analyst?		×	-			
		Were data	associated with manual integrations flag	nged on the raw data?			-			
6	0	Dual colur	nn confirmation				+			
•	Ŭ	Did dual co	hump confirmation results meet the met	bod-required OC?			+	x		
7	0	Tentativel	v identified compounds (TICs)				-			
<u> </u>	Ŭ	If TICs wer	re requested were the mass spectra and	d TIC data subject to appropriate checks	7		-	x		
8	li	Interferen	ce Check Sample (ICS) results		•		-			
-	I.	Were perc	ent recoveries within method OC limits?			×	-			
9	li	Serial dilu	tions, post digestion spikes, and met	thod of standard additions			+			
-	1.	Were perce	ent differences, recoveries, and the line	arity within the QC limits specified in the	method?		-	x		
10	0	Method de	etection limit (MDL) studies							
		Was a MD	L study performed for each reported and	alvte?		X				
		Is the MDL	either adjusted or supported by the ana	alysis of DCSs?		X				
11	01	Proficienc	v test reports	,						
	-	Was the la	boratory's performance acceptable on t	he applicable proficiency tests or evaluati	on studies?	X				
12	01	Standards	documentation							
		Are all star	ndards used in the analyses NIST-trace	able or obtained from other appropriate s	ources?	Х				
13	01	Compoun	d/analyte identification procedures	··· ·						
		Are the pro	ocedures for compound/analyte identific	ation documented?		Х				
14	01	Demonstra	ation of analyst competency (DOC)							
		Was DOC	conducted consistent with NELAC Chap	oter 5?		Х				
		Is docume	ntation of the analyst's competency up-	o-date and on file?		X				
15	01	Verificatio	n/validation documentation for meth	ods (NELAC Chapter 5)						
		Are all the	methods used to generate the data doc	umented, verified, and validated, where a	pplicable?	X	1			
16	01	Laborator	y standard operating procedures (SO	Ps)						
		Are laborat	tory SOPs current and on file for each m	nethod performed?		X				
	1.	Items ident	tified by the letter "R" must be included i	n the laboratory data package submitted	in the TRRP-require	ed report(s).	Items	;		
		identified b	y the letter "S" should be retained and r	nade available upon request for the appro	opriate retention per	iod.				
	2.	O = organi	c analyses; I = inorganic analyses (and	general chemistry, when applicable);						
	3.	NA = Not a	applicable;							
			aviawad:							

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laborato	oratory Name: Eurofins Houston LRC Date: 7/8/2022								
Project Name: Twin Oaks PP Laboratory Job Number: 860-28742-		860-28742-1							
Reviewer	·Name:	Chad Bechtold		•					
ER#			Description						
R10B	Method 60 Elevated r	020A: The following sample was diluted reporting limits (RLs) are provided.	I to bring the concentration of target analytes	within the calibration range: MW-14 (860-28742-1).					
1.	Items iden identified I	ntified by the letter "R" must be included by the letter "S" should be retained and	I in the laboratory data package submitted in made available upon request for the appropri	the TRRP-required report(s). Items iate retention period.					
2.	O = organ	ic analyses; I = inorganic analyses (an	d general chemistry, when applicable);						
3.	3. NA = Not applicable;								
4.	NR = Not	reviewed;							
5.	5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).								

5

Job ID: 860-28742-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-28742-1

Receipt

The sample was received on 6/29/2022 10:19 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C

HPLC/IC

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

Metals

Method 6020A: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-14 (860-28742-1). Elevated reporting limits (RLs) are provided.

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

General Chemistry

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

Client Sample ID: MW-14

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	423	<u></u>	5.00	mg/L	10	_	300.0	Total/NA
Sulfate	933	Ę	5.00	mg/L	10		300.0	Total/NA
Calcium	211		10.0	mg/L	50		6010B	Total/NA
Boron	1.64	0.	100	mg/L	10		6020A	Total/NA
Total Dissolved Solids	2340	2	20.0	mg/L	1		SM 2540C	Total/NA

Eurofins Houston

Lab Sample ID: 860-28742-1

Job ID: 860-28742-1

Client Sample Results

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Job ID: 860-28742-1

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-1 La ter

Client Sample ID: MW-14 Date Collected: 06/28/22 07:45 Date Received: 06/29/22 10:19

ab	Sample	ID:	860-28742
			Matrix: Wa

Method: 300.0 - Anions, Ion Chroma	tography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	423		5.00	mg/L			07/02/22 14:46	10
Sulfate	933		5.00	mg/L			07/02/22 14:46	10
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	211		10.0	mg/L		07/01/22 10:00	07/07/22 13:15	50
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.64		0.100	mg/L		07/02/22 10:45	07/07/22 00:30	10
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2340		20.0	mg/L			07/03/22 16:03	1

Job ID: 860-28742-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-59487/3 Matrix: Water										Client Sa	ample ID: M Prep Tv	ethod	Blank tal/NA
Analysis Batch: 59487											i icp iy	pc. 10	
Analysis Batch. 33407	MB	MB											
Analyte	Result	Qualifier		RL		Unit		D	P	repared	Analyze	d	Dil Fac
Chloride	<0.500			0.500		<u>ma/l</u>				opulou	07/01/22 15	<u>-</u>	1
Sulfate	<0.000			0.500		mg/L					07/01/22 15	5.11	1
	-0.000	0		0.000		mg/∟					01/01/22 10		
Lab Sample ID: MB 860-59487/76										Client Sa	ample ID: M	ethod	Blank
Matrix: Water											Prep Tv	pe: To	tal/NA
Analysis Batch: 59487													
· · · · · · · · · · · · · · · · · · ·	МВ	МВ											
Analyte	Result	Qualifier		RL		Unit		D	P	repared	Analyze	d	Dil Fac
Chloride	<0.500	U		0.500		ma/L					07/02/22 07	/:26	1
Sulfate	<0.500	U		0.500		ma/L					07/02/22 07	2:26	1
						5							
Lab Sample ID: LCS 860-59487/77								CI	ient	Sample	ID: Lab Cor	ntrol Sa	ample
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 59487													
			Spike		LCS	LCS					%Rec		
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits		
Chloride			10.0		9.342		mg/L		_	93	90 - 110		
Sulfate			10.0		9.329		mg/L			93	90 - 110		
Lab Sample ID: LCSD 860-59487/78							С	lient \$	Sam	ple ID: L	ab Control	Sampl	e Dup
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 59487													
			Spike		LCSD	LCSD					%Rec		RPD
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride			10.0		9.401		mg/L			94	90 - 110	1	20
Sulfate			10.0		9.364		mg/L			94	90 _ 110	0	20
Lab Sample ID: LLCS 860-59487/5								CI	ient	Sample	ID: Lab Cor	ntrol Sa	ample
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 59487													
			Spike		LLCS	LLCS					%Rec		
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits		
Chloride			0.500		0.5897		mg/L			118	50 - 150		
Sulfate			0.500		0.5061		mg/L			101	50 - 150		
Method: 6010B - Metals (ICP)													
Lab Sample ID: MR 860-59428/1-A										Client S	amnle ID: M	ethod	Blank
Matrix: Water										onent of	Prop Ty		
Analysis Batch: 59884											Bron	pe. 10 Ratch:	59/28
Analysis Datch. 33004	MB	MB									Fiehr	Jaten.	JJ420
Analyte	Rocult	Qualifier		RI		l Init		п	P	renared	∆nalvzo	Ч	Dil Fac
Calcium	<0.200	U		0.200		01111 ma/L			07/0	1/22 10:00	07/05/22 19):34	1
	5.200	-				.							·
Lab Sample ID: LCS 860-59428/2-A								CI	ient	Sample	ID: Lab Cor	ntrol Sa	ample
Matrix: Water										-	Prep Ty	pe: To	tal/NA
Analysis Batch: 59884											Prep E	Batch:	5942 8
			Spike		LCS	LCS					%Rec		
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits		
Calcium			25.0		24.72		ma/L		_	99	80 - 120		

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

Lab Sample ID: LCSD 860-59428/3-A		Client Sample ID: Lab Control Sample Dup							
Matrix: Water Prep					ype: To	tal/NA			
Analysis Batch: 59884							Prep	Batch:	5942 8
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium	25.0	24.78		mg/L		99	80 - 120	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 860-59583/1-A Matrix: Water Analysis Batch: 60082	MB	MB						Client Sa	ample ID: Me Prep Typ Prep Ba	thod Blank e: Total/NA atch: 59583
Analyte	Result	Qualifier		RL	Unit		D P	repared	Analyzed	Dil Fac
Boron	<0.0100	U	0.0	0100	mg/L		07/0)2/22 10:45	07/07/22 00:1	3 1
Lab Sample ID: LCS 860-59583/2-A Matrix: Water Analysis Batch: 60082							Client	t Sample	ID: Lab Cont Prep Typ Prep Ba	rol Sample e: Total/NA atch: 59583
A			Spike	LCS	LCS	11 14	_	0/ D	%Rec	
Boron			0.100	0.08663	Qualifier	mg/L	<u> </u>	87 -	80 - 120	
Lab Sample ID: LCSD 860-59583/3-A Matrix: Water Analysis Batch: 60082						Cli	ent San	nple ID: L	ab Control S Prep Typ Prep Ba	ample Dup e: Total/NA atch: 59583
			Spike	LCSD	LCSD				%Rec	RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD Limit
Boron			0.100	0.09161		mg/L		92	80 - 120	6 20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-59635/1 Matrix: Water Analysis Batch: 59635									Client S	Sample ID: Prep 1	Method ype: To	Blank tal/NA
· · · · · · · · · · · · · · · · · · ·	МВ	МВ										
Analyte	Result	Qualifier		RL		Unit		DI	Prepared	Analyz	ed	Dil Fac
Total Dissolved Solids	<5.00	U		5.00		mg/L				07/03/22	16:03	1
Lab Sample ID: LCS 860-59635/2								Clien	t Sample	D: Lab Co	ontrol S	ample
Matrix: Water										Prep 1	ype: To	tal/NA
Analysis Batch: 59635												
-			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1000		1027		mg/L		103	80 - 120		
Lab Sample ID: LCSD 860-59635/3							С	lient Sar	nple ID:	Lab Contro	I Samp	le Dup
Matrix: Water									· · · ·	Prep 1	· vpe: To	tal/NA
Analysis Batch: 59635												
-			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Dissolved Solids			1000		1051		mg/L		105	80 - 120	2	10

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

	Client Sample ID: Lab Control Sample Prep Type: Total/NA
	%Rec
_ Unit ma/l	D %Rec Limits
_	Unit mg/L

QC Association Summary

HPLC/IC

Analysis Batch: 59487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-28742-1	MW-14	Total/NA	Water	300.0	
MB 860-59487/3	Method Blank	Total/NA	Water	300.0	
MB 860-59487/76	Method Blank	Total/NA	Water	300.0	
LCS 860-59487/77	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-59487/78	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-59487/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 59428

Lab Sample ID 860-28742-1	Client Sample ID MW-14	Prep Type Total/NA	Matrix Water	Method 3010A	Prep Batch
MB 860-59428/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-59428/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-59428/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Prep Batch: 59583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
860-28742-1	MW-14	Total/NA	Water	3010A
MB 860-59583/1-A	Method Blank	Total/NA	Water	3010A
LCS 860-59583/2-A	Lab Control Sample	Total/NA	Water	3010A
LCSD 860-59583/3-A	Lab Control Sample Dup	Total/NA	Water	3010A

Analysis Batch: 59884

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 860-59428/1-A	Method Blank	Total/NA	Water	6010B	59428
LCS 860-59428/2-A	Lab Control Sample	Total/NA	Water	6010B	59428
LCSD 860-59428/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	59428

Analysis Batch: 60082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-28742-1	MW-14	Total/NA	Water	6020A	59583
MB 860-59583/1-A	Method Blank	Total/NA	Water	6020A	59583
LCS 860-59583/2-A	Lab Control Sample	Total/NA	Water	6020A	59583
LCSD 860-59583/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	59583
LCSD 860-59583/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	
⊢ Analysis Batch: 60122					

Lab Sample IDClient Sample IDPrep TypeMatrixMethodPrep Batch860-28742-1MW-14Total/NAWater6010B59428

General Chemistry

Analysis Batch: 59635

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-28742-1	MW-14	Total/NA	Water	SM 2540C	
MB 860-59635/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-59635/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-59635/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-59635/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Client Sample ID: MW-14 Date Collected: 06/28/22 07:45 Date Received: 06/29/22 10:19

Lab Sample ID: 860-28742-1 Matrix: Water

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_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	0 mL	1.0 mL	59487	07/02/22 14:46	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	59428	07/01/22 10:00	MD	XEN STF
Total/NA	Analysis	6010B		50			60122	07/07/22 13:15	DP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	59583	07/02/22 10:45	MD	XEN STF
Total/NA	Analysis	6020A		10			60082	07/07/22 00:30	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	59635	07/03/22 16:03	ADL	XEN STF

Laboratory References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	21-038-0	08-04-22
Florida	NELAP	E871002	06-30-23
Louisiana	NELAP	03054	06-30-23
Oklahoma	State	2021-168	08-31-22
Texas	NELAP	T104704215-22-46	06-30-23
Texas	TCEQ Water Supply	T104704215	12-31-22
USDA	US Federal Programs	P330-22-00025	03-02-23

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method

300.0

6010B

6020A

3010A

SM 2540C

s, Ion Chromatography	MCAWW	XEN STF	- <u>A</u>
s (ICP)	SW846	XEN STF	
s (ICP/MS)	SW846	XEN STF	5
, Total Dissolved (TDS)	SM	XEN STF	5
ration, Total Metals	SW846	XEN STF	
	; (ICP) ; (ICP/MS) , Total Dissolved (TDS) ration, Total Metals	(ICP) SW846 (ICP/MS) SW846 , Total Dissolved (TDS) SM ration, Total Metals SW846	(ICP)SW846XEN STF\$ (ICP/MS)SW846XEN STF, Total Dissolved (TDS)SMXEN STFration, Total MetalsSW846XEN STF

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

Protocol References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

l ah Samplo ID	Client Sample ID	Matrix	Collected	Pacaivad
		Wallix	Conecteu	Received
860-28742-1	MW-14	Water	06/28/22 07:45	06/29/22 10:19

∆ Yes ∆ No	Custody Seals Intact: Custody Seal No.	Relinquished by:	X JPEL		Empty Ait Relinquished by		Deliverable Requested II III IV Other (specify)	Possible Hazard Identification						MW-14		Sample Identification	Sile	Project Name: Twin Oaks PP	Email: mtransier@hydrex-inc.com	Phone: 936-568-9451(Tel)	State, 20: TX, 75964	City Nacogdoches	Address: 1120 NW Stallings Drive	Company: Hydrex Environmental	Client Contact Michelle Transier	Client Information	Eurofins Xenco, Stafford 4147 Greenbriar Dr Stafford, TX 77477 Phone (281) 240-4200 Corrected Temp: O. (
		Date/Time: Compan		H 2111 COSP 9	Uate	5	roison b Unknown Radiological							v s Shilo e8/84/99	Preservation C	Sample Mat Type (www Sample (C=comp, cows Sample Date Time G=grab) gr-Tase	SSOW#:	Project#: 86000207	W0 # -14-1007	PO # 1-14-1007	Compliance Project: A Yes A No	TAT Requested (days): RUSH 5 DAYS	Due Date Requested:	PWSID:	Phone: 936-568-9451	Isampler (1)05 Smith	Chain of Custod
	Cooler Temperature(s) °C and Other Remarks:	y Received by:	Treceivery	ydrx FedEx			Special Instructions/OC Requirements	Sample Disposal (A fee may be assessed if s								Etild Elitered Be corro Mell Chloride Sulfate Boron Calcium TDS	Şâinp Arte: ?		5 5 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					Analysis Requested	E-Mai chad.bechtold@eurofinset.com	Lab PM:	y Record
Ver 01/16/2019		Date/Time: Company	1019 Eurofin	Land the second			ab Archive For Month's	amples are retained longer than 1 month)								To Special Instructions/Note:	O Con	L EDA Z other (specify)	1 DIWater V MCAA	G Amotion S H2SO4 H Ascorbic Acid T TSP Dodecahydrate	E NAHOA Q NAZSOS	B NaOH N None	A HCL M Hexane	· · · ·	age: /age 1 of 1		Curofins Environment Testing

Client: Hydrex Environmental

Login Number: 28742 List Number: 1 Creator: Torres, Sandra

Question	Answer	Comment
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	0.6
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Job Number: 860-28742-1

List Source: Eurofins Houston

April 2022 Event Results of Statistical Calculations **Control Charts and Prediction Limits**

List of Statistical Acronyms and Abbreviations

Acronym	Description
%ND	Percent Non-Detect
Bg	Background
CUSUM	Cumulative Sum
Deseas	Deseasonalized
h	Control Limit to which the Cumulative Sum Values are compared
Intra	Intrawell
Ν	Number (Number of Background Measurements)
n	Number (Number of Background Measurements)
NP	Non-Parametric
Observ.	Observed
Param	Parametric
PL	Prediction Limit
SCL	Shewhart Control Limit
Sig.	Significant
Std. Dev.	Standard Deviation
Upper Lim.	Upper Limit

Shewhart-Cusum Control Chart / Rank Sum

	Twin Oaks Power Station	CCR LF	Client: M	ajor Oak P	ower	Data: Twin Oaks	Printed 7/8/2022, 11	:54 AM
<u>Constituent</u>	Well	<u>Sig.</u>	<u>h</u>	<u>SCL</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	Method
Calcium (mg/L)	MW-13	No	59.59	59.59	16	0	No	Param Intra
Chloride (mg/L)	MW-13	No	120.1	120.1	15	0	No	Param Intra
Fluoride (mg/L)	MW-13	No	PL=	n/a	16	81.25	No	NP Intra PL (NDs) Deseas
pH (SU)	MW-13	No	7.7	7.7	16	0	No	Param Intra
Sulfate (mg/L)	MW-13	Yes	195.2	195.2	16	6.25	No	Param Intra
Total Dissolved Solids (mg/L)	MW-13	No	631.9	631.9	16	0	No	Param Intra
Calcium (mg/L)	MW-14	Yes	141.2	141.2	14	0	No	Param Intra
Chloride (mg/L)	MW-14	Yes	440.9	440.9	15	0	No	Param Intra
Fluoride (mg/L)	MW-14	No	PL=	n/a	16	75	No	NP Intra PL (NDs) Deseas
pH (SU)	MW-14	No	7.5	7.5	16	0	x^4	Param Intra
Sulfate (mg/L)	MW-14	Yes	841.2	841.2	15	0	sqrt(x)	Param Intra
Total Dissolved Solids (mg/L)	MW-14	Yes	1940	1940	15	0	No	Param Intra
Calcium (mg/L)	MW-15	No	37.94	37.94	16	0	sqrt(x)	Param Intra
Chloride (mg/L)	MW-15	No	197.6	197.6	16	0	No	Param Intra
Fluoride (mg/L)	MW-15	No	PL=	n/a	16	87.5	No	NP Intra PL (NDs) Deseas
pH (SU)	MW-15	No	7.5	7.5	16	0	x^4	Param Intra
Sulfate (mg/L)	MW-15	No	49.99	49.99	16	0	No	Param Intra
Total Dissolved Solids (mg/L)	MW-15	No	482.6	482.6	16	0	No	Param Intra
Calcium (mg/L)	MW-17	No	396.5	396.5	16	0	No	Param Intra
Chloride (mg/L)	MW-17	No	1728	1728	16	0	No	Param Intra
Fluoride (mg/L)	MW-17	No	PL=	n/a	16	87.5	No	NP Intra PL (NDs) Deseas
pH (SU)	MW-17	No	7.7	7.7	16	0	No	Param Intra
Sulfate (mg/L)	MW-17	No	168	168	16	6.25	No	Param Intra
Total Dissolved Solids (mg/L)	MW-17	No	3264	3264	16	0	No	Param Intra



Background Data Summary: Mean=26.18, Std. Dev.=6.682, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8874, critical = 0.887. Report alpha = 0.000102. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=80.96, Std. Dev.=12.04, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8921, critical = 0.874. Report alpha = 0.000172. Dates ending 4/28/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on square root transformation): Mean=4.61, Std. Dev.=0.3099, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8969, critical = 0.887. Report alpha = 0.000104. Dates ending 6/23/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=107.8, Std. Dev.=57.75, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9499, critical = 0.887. Report alpha = 0.000104. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=98.18, Std. Dev.=4.38, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9494, critical = 0.881. Report alpha = 0.000154. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=347.4, Std. Dev.=18.7, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9535, critical = 0.881. Report alpha = 0.000154. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=114, Std. Dev.=16.72, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9096, critical = 0.887. Report alpha = 0.000116. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=549, Std. Dev.=235.7, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9592, critical = 0.887. Report alpha = 0.000116. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 16 background values. 81.25% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Data were deseasonalized. Data were deseasonalized.

Within Limit

Prediction Limit



Intrawell Non-parametric

Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 16 background values. 75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Data were deseasonalized. Data were deseasonalized.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 16 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Data were deseasonalized. Data were deseasonalized.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 16 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Data were deseasonalized. Data were deseasonalized.



Background Data Summary: Mean=6.348, Std. Dev.=0.2752, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9107, critical = 0.887. Report alpha = 0.000116. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on x⁴ transformation): Mean=1936, Std. Dev.=269.6, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8958, critical = 0.887. Report alpha = 0.000116. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on x⁴ transformation): Mean=1823, Std. Dev.=294.8, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8946, critical = 0.887. Report alpha = 0.000116. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=5.876, Std. Dev.=0.3768, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9721, critical = 0.887. Report alpha = 0.000116. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=55.67, Std. Dev.=27.91, n=16, 6.25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.969, critical = 0.887. Report alpha = 0.000116. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on square root transformation): Mean=15.29, Std. Dev.=2.743, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9051, critical = 0.881. Report alpha = 0.000126. Dates ending 11/23/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=29.78, Std. Dev.=4.042, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9351, critical = 0.887. Report alpha = 0.000104. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=49.99, Std. Dev.=23.6, n=16, 6.25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9512, critical = 0.887. Report alpha = 0.000104. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=387, Std. Dev.=48.98, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9431, critical = 0.887. Report alpha = 0.000104. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=1194, Std. Dev.=149.2, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8979, critical = 0.881. Report alpha = 0.000162. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=370.9, Std. Dev.=22.34, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9549, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=1173, Std. Dev.=418.2, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9847, critical = 0.887. Report alpha = 0.000106. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.

Prediction Limit

	T	Twin Oaks Power Station CCR LF			Client: Major Oak Power			Data: Twin Oaks Printed 7/8/2022, 12:02 PM					
<u>Constituent</u>	Well	Upper Lim.	Date	Observ.	<u>Sig.</u>	<u>Bg N</u>	Bg Wells	<u>Bg Mean</u>	Std. Dev.	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	Method
Boron (mg/L)	MW-13	0.1206	4/18/2022	0.0483	No	16	n/a	0.2406	0.03654	0	sqrt(x)	0.000	Param Intra 1 of 2
Boron (mg/L)	MW-14	0.6019	4/18/2022	0.875	Yes	15	n/a	0.1857	0.1387	0	No	0.000	Param Intra 1 of 2
Boron (mg/L)	MW-15	0.06659	4/18/2022	0.034	No	16	n/a	0.04909	0.005995	0	No	0.000	Param Intra 1 of 2
Boron (mg/L)	MW-17	0.362	4/18/2022	0.0332	No	15	n/a	n/a	n/a	0	n/a	0.00753	33NP Intra (normality)

Within Limit

Prediction Limit



Background Data Summary (based on square root transformation): Mean=0.2406, Std. Dev.=0.03654, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8931, critical = 0.844. Kappa = 2.919 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

Exceeds Limit

Prediction Limit



Background Data Summary: Mean=0.1857, Std. Dev.=0.1387, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8773, critical = 0.835. Kappa = 3 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

Within Limit

Prediction Limit



Background Data Summary: Mean=0.04909, Std. Dev.=0.005995, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9456, critical = 0.844. Kappa = 2.919 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

Within Limit

Prediction Limit





Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 15 background values. Well-constituent pair annual alpha = 0.01501. Individual comparison alpha = 0.007533 (1 of 2). Seasonality was not detected with 95% confidence.

May 2022 Event

Results of Statistical Calculations

Control Charts and Prediction Limits

Shewhart-Cusum Control Chart / Rank Sum

	Twin Oaks Power Station	Client: M	ajor Oak P	ower	Data: Twin Oaks	Printed 7/8/2	022, 12:04 PM	
Constituent	Well	<u>Sig.</u>	<u>h</u>	<u>SCL</u>	N	<u>%NDs</u>	Transform	Method
Sulfate (mg/L)	MW-13	Yes	195.2	195.2	16	6.25	No	Param Intra
Calcium (mg/L)	MW-14	Yes	141.2	141.2	14	0	No	Param Intra
Chloride (mg/L)	MW-14	Yes	440.9	440.9	15	0	No	Param Intra
Sulfate (mg/L)	MW-14	Yes	841.2	841.2	15	0	sqrt(x)	Param Intra
Total Dissolved Solids (mg/L)	MW-14	Yes	1940	1940	15	0	No	Param Intra



Background Data Summary: Mean=80.96, Std. Dev.=12.04, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8921, critical = 0.874. Report alpha = 0.000212. Dates ending 4/28/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=347.4, Std. Dev.=18.7, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9535, critical = 0.881. Report alpha = 0.000138. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=55.67, Std. Dev.=27.91, n=16, 6.25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.969, critical = 0.887. Report alpha = 0.0001. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.



Background Data Summary (based on square root transformation): Mean=15.29, Std. Dev.=2.743, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9051, critical = 0.881. Report alpha = 0.000132. Dates ending 11/23/2020 used for control stats. Standardized h=5, SCL=5.



Background Data Summary: Mean=1194, Std. Dev.=149.2, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8979, critical = 0.881. Report alpha = 0.000132. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.

Prediction Limit

	Т	win Oaks Pow	er Station C	CRLF	Client:	Major	Oak Power	Data: Twin	Oaks Pi	rinted 7/8	/2022, 12:02 PM		
<u>Constituent</u>	Well	Upper Lim.	Date	Observ.	<u>Sig.</u>	<u>Bg N</u>	Bg Wells	<u>Bg Mean</u>	Std. Dev.	<u>%NDs</u>	Transform	<u>Alpha</u>	Method
Boron (mg/L)	MW-14	0.6019	5/31/2022	0.718	Yes	15	n/a	0.1857	0.1387	0	No	0.000	Param Intra 1 of 2

Exceeds Limit

Prediction Limit



Background Data Summary: Mean=0.1857, Std. Dev.=0.1387, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8773, critical = 0.835. Kappa = 3 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

June 2022 Event

Results of Statistical Calculations

Control Charts and Prediction Limits

Shewhart-Cusum Control Chart / Rank Sum

	Twin Oaks Power Statio	Client: Major Oak Power			Data: Twin Oaks	Printed 7/8/2022, 1:43 PM		
<u>Constituent</u>	Well	<u>Sig.</u>	<u>h</u>	<u>SCL</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	Method
Calcium (mg/L)	MW-14	Yes	141.2	141.2	14	0	No	Param Intra
Chloride (mg/L)	MW-14	No	440.9	440.9	15	0	No	Param Intra
Sulfate (mg/L)	MW-14	Yes	841.2	841.2	15	0	sqrt(x)	Param Intra
Total Dissolved Solids (mg/L)	MW-14	Yes	1940	1940	15	0	No	Param Intra



Background Data Summary: Mean=80.96, Std. Dev.=12.04, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8921, critical = 0.874. Report alpha = 0.000204. Dates ending 4/28/2020 used for control stats. Standardized h=5, SCL=5.

Constituent: Calcium Analysis Run 7/8/2022 1:42 PM View: CC VRS MW-14 Only Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Background Data Summary: Mean=347.4, Std. Dev.=18.7, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9535, critical = 0.881. Report alpha = 0.000124. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.

Constituent: Chloride Analysis Run 7/8/2022 1:42 PM View: CC VRS MW-14 Only Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks


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Background Data Summary (based on square root transformation): Mean=15.29, Std. Dev.=2.743, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9051, critical = 0.881. Report alpha = 0.000124. Dates ending 11/23/2020 used for control stats. Standardized h=5, SCL=5.

Constituent: Sulfate Analysis Run 7/8/2022 1:42 PM View: CC VRS MW-14 Only Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



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Background Data Summary: Mean=1194, Std. Dev.=149.2, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8979, critical = 0.881. Report alpha = 0.000124. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.

Constituent: Total Dissolved Solids Analysis Run 7/8/2022 1:42 PM View: CC VRS MW-14 Only Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks

Prediction Limit

	T	win Oaks Pov	ver Station (CCR LF	Client:	Majo	r Oak Power	Data: Twin	Oaks P	rinted 7/8	3/2022, 1:44 PM		
Constituent	Well	Upper Lim.	Date	Observ.	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Wells</u>	<u>Bg Mean</u>	Std. Dev.	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	Method
Boron (mg/L)	MW-14	0.6019	6/28/2022	1.64	Yes	15	n/a	0.1857	0.1387	0	No	0.000	Param Intra 1 of 2

Sanitas™ v.9.6.31 For the statistical analysis of ground water by Hydrex Environmental, Inc. only. UG

0.4

0

6/14/16

8/29/17



11/13/18

Background Data Summary: Mean=0.1857, Std. Dev.=0.1387, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8773, critical = 0.835. Kappa = 3 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

1/28/20

4/13/21

6/28/22

Constituent: Boron Analysis Run 7/8/2022 1:44 PM View: PL VRS Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks October 5, 2022

Alternate Source/Error Demonstration

October 5, 2022



MC-130 Industrial and Hazardous Waste Permits Section Coal Combustion Residuals Program Waste Permits Division Texas Commission on Environmental Quality P. O. Box 13087 Austin, Texas 78711-3087

Re: Alternate Source/Error Demonstration Twin Oaks Power Station Coal Combustion Residuals Landfill 13065 Plant Road, Bremond (Robertson County), Texas CCR Registration No. CCR112 TCEQ SWR No. 37677; EPA ID No. TXD987997988 Customer No. CN604670034; Regulated Entity No. RN100226570

To Whom It May Concern:

Hydrex Environmental is pleased to submit the accompanying Alternate Source/Error Demonstration report for the above-referenced project. As required by 30 TAC §352 Subchapter K, please be advised that the accompanying report is being placed in the operating record and sent via electronic submission to <u>ihwper@tceq.texas.gov</u> for the above-referenced facility. Should you have any questions, please contact me at (936) 568-9451.

Sincerely, Hydrex Environmental TBPG Firm No. 50027

Michelle K. Transier, P.G. Senior Geologist

Distribution:

(Original + Disc)	MC-130 Industrial and Hazardous Waste Permits Coal Combustion Residuals Program Waste Permits Division Texas Commission on Environmental Quality P. O. Box 13087 Austin, Texas 78711-3087
(1)	Mr. Eddy Young Environmental Manager Twin Oaks Power Station 13065 Plant Road Bremond, Texas 76629 (E-copy)
(1)	Mr. John J. Tayntor, P.E. Auckland Consulting, LLC P.O. Box 8155 Jacksonville, Texas 75766 (E-copy)
(1)	Hydrex Environmental (E-copy)

ALTERNATE SOURCE/ERROR DEMONSTRATION

TWIN OAKS POWER STATION COAL COMBUSTION RESIDUALS (CCR) LANDFILL ROBERTSON COUNTY, TEXAS

October 5, 2022

Prepared By:



1120 NW Stallings Drive Nacogdoches, Texas 75964 TBPG Firm No. 50027

ALTERNATE SOURCE/ERROR DEMONSTRATION

TWIN OAKS POWER STATION

COAL COMBUSTION RESIDUALS (CCR) LANDFILL

ROBERTSON COUNTY, TEXAS

October 5, 2022

annun.

Michelle K. Transièr, P.G. Senior Geologist

Leonell N. Scarborough, P.G. Senior Hydrogeologist



Prepared by: Hydrex Environmental Nacogdoches, Texas TBPG Firm No. 50027

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Appendices

Appendix A – Signed and Sealed Report Certification by Professional Engineer

Certification Statement

Appendix B – Figures

Figure 1 – Site Map

Figure 2 – Geology Map

Figure 3 – Groundwater Contour Map – September 2022

Appendix C – Laboratory Data Packages

May 2022 Analytical Report

June 2022 Analytical Report

July 2022 Analytical Report

September 2022 Analytical Reports

Appendix D – Statistical Evaluation Data

Stiff Plot Comparisons

Intrawell Shewhart-Cusum Control Chart / Rank Sum

Intrawell Prediction Limit

Interwell Shewhart-Cusum Control Chart / Rank Sum

Interwell Prediction Limit

Trend Test

Appendix E – Monitoring Well Installation Documentation

Monitoring Well Boring Logs

State of Texas Well Reports

Executive Summary

This Alternate Source/Error Demonstration ("ASD") report for the Twin Oaks Power Station Coal Combustion Residuals ("CCR") Landfill (the "facility") is prepared in accordance with the requirements of the facility's Groundwater Sampling and Analysis Plan ("GWSAP"), Texas state CCR Rules, 30 TAC Chapter 352, and the federal CCR Rule, 40 CFR Part 257, Subpart D. In addition, this report summarizes groundwater monitoring activities, verification resampling, and other evaluations associated with statistically significant increases ("SSIs") determined for monitoring wells MW-13 and MW-14 during the 1st semi-annual monitoring event of 2022.

The results of this ASD indicate concentrations responsible for the reported SSIs are attributable to natural groundwater conditions and not a release from the facility. Specifically, this ASD shows how groundwater concentrations reported for downgradient monitoring wells MW-13 and MW-14 closely reflect early groundwater data reported for upgradient monitoring well MW-7. Additionally, this ASD demonstrates constituent concentrations responsible for the intrawell SSIs in downgradient wells MW-13 and MW-14 do not exceed the interwell statistical limits determined from the original eight background monitoring events performed for upgradient well MW-7. Based on these results, changes in groundwater concentrations reported for wells MW-13 and MW-14 suggest a natural shift toward upgradient groundwater flow direction and rate, it is expected that groundwater conditions reported for downgradient wells MW-13 and MW-14 will continue to move toward those historically reported for well MW-7.

This ASD has been certified by a qualified licensed professional geoscientist and qualified licensed professional engineer within 90 days (October 8, 2022) of determining the SSIs in accordance with 30 TAC §352.941(c)(2), 40 CFR §257.93(h)(2), and 40 CFR §257.94(e)(2). SSIs for monitoring wells MW-13 and MW-14 were determined on July 8, 2022, based on statistical evaluations included with the 1st 2022 semi-annual sampling event. Notice of the intent to perform this ASD was provided to TCEQ on July 15, 2022. The calculated SSIs and the timeline for completion of an ASD were documented in the 1st 2022 Semi-Annual Groundwater Monitoring and Corrective Action Report dated July 15, 2022.

Introduction

Statistical evaluation of data from the April 2022 event indicated unverified ("initial") intrawell statistical exceedance values for sulfate in monitoring well MW-13 and for boron, calcium, chloride, sulfate, and total dissolved solids ("TDS") in MW-14. Subsequently, verification resampling, utilizing a 1-of-*m* approach, was conducted on May 31, 2022, June 27-28, 2022, and July 14, 2022 as provided for and in accordance with the GWSAP. Sample results discussed herein were unfiltered results per 40 CFR §257.93. A summary of the verification resampling results is presented below.

10 /211	Constituent	Initial April	Statistical	Verifica Re	tion Res sult (mg	ampling /L)	Intrawell Statistical	Decommon de di Action
vven	Constituent	Event Result (mg/L)	(mg/L)	May Event	June Event	July Event	Exceedance Confirmed?	Recommended Action
MW-13	sulfate	200	195.2	360	NS	NS	Yes	Alternate Source/Error Demonstration
	boron	0.875	0.6019	0.718	1.64	0.762	Yes	Alternate Source/Error Demonstration
	calcium	190	141.2	202	211	NS	Yes	Alternate Source/Error Demonstration
MW-14	chloride	457	440.9	464	423	NS	No	Maintain Detection Monitoring
	sulfate	899	841.2	944	933	NS	Yes	Alternate Source/Error Demonstration
	TDS	2290	1940	2240	2230	2700	Yes	Alternate Source/Error Demonstration
NS – No	ot Sampled							

Statistical reevaluation was performed in accordance with the GWSAP, 30 TAC §352.931, 40 CFR §257.93(h)(1), and EPA Unified Guidance methodologies. The results of the verification resampling confirmed the intrawell statistical exceedance values for sulfate concentrations in monitoring well MW-13 and for boron, calcium, sulfate, and TDS in MW-14. A review of relevant information for the facility indicates the values are likely the result of natural shift in groundwater quality and not a release from the CCR Landfill. In accordance with the facility's GWSAP, 30 TAC §352.941(c), and 40 CFR §257.94(e)(2), this ASD has been prepared to address the calculated SSIs for MW-13 and MW-14 and is included herein.

Alternate Source/Error Demonstration

Evaluation of data performed as part of this ASD indicates the values responsible for the reported SSIs are most likely the result of natural groundwater variation and not a release from the facility. Specifically, the groundwater data collected from monitoring wells MW-13 and MW-14 show changes over time that reflect the geochemical characteristics and concentrations reported for upgradient well MW-7. This correlation in groundwater quality indicates groundwater passing through MW-7 has a direct influence on the groundwater quality reported for wells MW-13 and MW-14. Based on this evaluation, the intrawell SSIs reported were further evaluated as described herein.

Site Geology

Twin Oaks Power Station CCR Landfill site lies within the outcrop area of the Simsboro Sand and Calvert Bluff Member (Appendix B - Figure 2). The Simsboro Sand and Calvert Bluff Formations are both Units within the Rockdale Formation subdivision of the Wilcox Group. The Rockdale Formation is composed of non-marine strata of the Wilcox Group. The Calvert Bluff member is a series of clay and lignite beds, is composed of gray sand, dense lignitic beds ranging from 1 to 9 feet thick, and dark gray carbonaceous clays found typically in beds or lentils (Sellards 2012). The Simsboro Sand is approximately a 3-mile-wide outcrop ranging from 250 to 300 feet thick and is composed of a gray sand, lentils of blue-gray clay, and lignite (Sellards 2012). Lignite is a defining characteristic of the Rockdale formation. Lignites of the Rockdale Formation are found in thicker seams and more widespread than in any other geologic formation in Texas (Sellards 2012). Occurring in layers and lenses, lignite within the study area is black and compact. Sulfate and organic materials coupled with a low-oxygen and low energy environment provides for deposition conducive to sulfate reduction. Consequently, metal sulfides and metal sulfide complexes are concentrated in these sediments. Summarized data from the U.S. Department of the Interior. Bureau of Mines shows that the Wilcox Group contains a suite of detectable metals in a wide range of concentrations (Ward 1982).

Boring logs indicate subsurface soils at the facility consist predominantly of clay, sandy clay, and silty sand. Based on available facility data and as seen in previously submitted cross-sections included with the GWSAP, the subsurface geology at the site has been divided into three distinct units, Unit III (a lower confining clay unit), Unit II (an uppermost groundwater-bearing unit), and Unit I (an upper confining clay unit). Data collected for the facility indicate Unit III is present beneath the entire facility at varying depths and acts as a lower confining unit for Unit II. As such, the elevation of the top of Unit III is variable across the site and is coincident with the bottom of Unit II. Overlying Unit III is the uppermost groundwater-bearing unit (Unit II). Consisting of predominantly finegrained quartz sand and silt with lesser amounts of clay, the large sand bodies within Unit II appear to be hydraulically interconnected based on groundwater data. More clayrich zones of Unit II, present in laterally discontinuous lenses, have been further subdivided into Unit IIA. Borings indicate the elevation of the top of Unit II varies across the site tending to deepen toward the east and southeast. The thickness of Unit II ranges from 5 – 32 feet. Unit I overlies Unit II and is present across the facility. Unit I occurs from the surface to variable depths of up to approximately 20 feet below ground surface ("bgs"). Unit I consists of clay and minor amount of sand and silt. Reduced permeability for Unit I commonly results in locally confined conditions as Unit II deepens toward the east and southeast. Additionally, the low permeability Unit I materials present in at the surface and in the shallow subsurface act to impede potential migration of surface contaminants downward toward the uppermost groundwater bearing unit.

Supplemental Sampling and Drilling Activities

Five monitoring wells (MW-18, MW-19, MW-20, MW-21, and MW-22) were installed for groundwater quality evaluations. It should be noted these wells were installed for investigation purposes and are not part of the CCR Landfill monitoring system as currently permitted. Drilling and sampling activities took place between September 6 and 8, 2022. All drilling activities were performed by a Texas-licensed driller. All drilling operations were performed by a Texas-licensed driller. Soils encountered during the completion of the drilling activities were continuously sampled. Upon collection, each soil sample was logged by a geologist familiar with the geology of the area. Soils were field classified in general conformance with the Unified Soil Classification System ("USCS"). Geological services were performed under the supervision of a Professional Geoscientist licensed in Texas. Copies of monitoring well boring logs and State of Texas Well Reports are provided in Appendix E. A map showing the locations, data collected from these wells can be used to more thoroughly evaluate upgradient groundwater quality and natural variability in groundwater concentrations.

Following installation, each well was developed prior to groundwater sampling. Well development activities consisted of removal of naturally occurring fines by surge block, hand bailing, and over pumping techniques. The development activities continued until the water extracted from each well was approximately 20 NTUs or less. Each monitoring well was sampled immediately following completion of development. The groundwater samples were preserved in accordance with the requirements of the analytical methodology and hand delivered to the testing laboratory for analysis. Analytical results from the sampling of these wells are included in Appendix C. Review of results indicate varying concentrations of boron, calcium, chloride, sulfate, and TDS, further demonstrating the naturally variability in upgradient groundwater conditions.

Statistical Reevaluation

Intrawell statistical exceedances reported for sulfate concentrations in monitoring well MW-13 and for boron, calcium, sulfate, and TDS concentration in MW-14 were reevaluated based on the observed upgradient groundwater conditions. TDS is further discussed below. Statistical reevaluation of the reported concentrations included use of interwell statistical procedures employing previously collected background data from upgradient well MW-7. Monitoring well MW-7 is located upgradient of the CCR landfill and is considered unaffected by CCR waste disposal activities. Monitoring well MW-7 was chosen for use in the statistical reevaluation based on its upgradient location with respect to monitoring wells MW-13 and MW-14 and the groundwater flow direction observed for the facility (Appendix B – Figure 3).

Interwell prediction limit and control chart evaluations utilized the original eight background data points collected for boron, calcium, and sulfate data from upgradient monitoring well MW-7. Data from the original eight background monitoring events performed for upgradient well MW-7 were used as they more closely reflect expected current groundwater conditions in downgradient monitoring wells MW-13 and MW-14 based on known groundwater flow direction and rate. More specifically, groundwater flow rate and direction data indicate groundwater passing through upgradient well MW-7

flows toward downgradient wells MW-13 and MW-14 at rates ranging from approximately 55 to 77 feet per year. Based on these data, historical groundwater data collected from MW-7 is expected to be most representative of expected current groundwater conditions at wells MW-13 and MW-14.

Confirmation of this connected groundwater quality relationship is most easily observable through evaluation of a series stiff plots created using historical data from each well. Stiff plots can be used to develop a fingerprint of groundwater quality at each well. As presented on the stiff plots included in Appendix D, groundwater quality present at MW-14 has changed over time to more closely match historical conditions found at MW-7. The stiff plot "fingerprint" for MW-14 clearly depicts a steady change in groundwater quality toward those concentrations reported for MW-7. Based on the flow direction at the site, it is expected that downgradient monitoring well MW-14 would have groundwater quality similar to historical conditions at MW-7. Based on these considerations it is reasonable to statistically compare historical data from MW-7 to groundwater data collected for wells MW-13 and MW-14.

The results of the interwell statistical reevaluation indicate recent sulfate concentrations reported for well MW-13 and boron, calcium, and sulfate concentrations reported for MW-14 fall within the statistically determined background concentrations developed from historical data collected from upgradient monitoring well MW-7. Sulfate concentration data from MW-13 and boron, calcium, and sulfate concentration data from MW-14 were further evaluated for statistically significant increasing trends. Concentrations reported for the last 7 events (April 2019 – April 2022) demonstrate no statistically significant increasing trends for sulfate data in MW-13 and boron, calcium, and sulfate data in MW-14. A summary of the interwell statistical analyses performed is presented below. The results of statistical evaluations are included in Appendix D of this ASD.

Well	Constituent	Initial April Event Result (mg/L)	Final Verification Resampling Result (mg/L)	Intrawell Statistical Limit (mg/L)	Interwell Statistical Limit (mg/L)	Site-wide Data Range (mg/L)	Statistical Exceedance Confirmed?	Recommended Action
MW-13	sulfate	200	360	195.2	1107	24.3 - 1550	No	Maintain Detection Monitoring
	boron	0.875	0.762	0.6019	0.7844	0.0195 – 0.762	No	Maintain Detection Monitoring
MW-14	calcium	190	211	141.2	338.8	15.4 - 326	No	Maintain Detection Monitoring
	sulfate	899	933	841.2	1107	24.3 - 1550	No	Maintain Detection Monitoring

Summary of Interwell Statistical Results

Based on the results of statistical reevaluation, changes in groundwater concentrations reported for sulfate in well MW-13 and for boron, calcium, and sulfate in well MW-14 suggest a natural shift toward upgradient groundwater quality over time and not a release from the landfill. Furthermore, based on groundwater flow direction and rate, it is expected that groundwater conditions reported for downgradient wells MW-13 and MW-14 will continue to move toward those historically reported for MW-7.

Evaluation of Total Dissolved Solids in MW-14

Results of the April 2022 groundwater monitoring event also indicated an intrawell statistical exceedance for TDS concentrations in MW-14. Verification monitoring events

performed for MW-14 confirmed the originally reported TDS concentration and therefore, the SSI in MW-14. Further evaluation of TDS data from MW-14 shows no indication that TDS values are the result of a release from the facility. Instead, the reported TDS concentrations are most likely derived from the natural shift of groundwater quality determined to be the source for the other SSIs reported in MW-14 for the April 2022 event.

TDS is a cumulative constituent, representing the sum of all chemicals (organic and inorganic) dissolved within the groundwater sample. When the component values that make up TDS concentrations increase, the TDS concentrations should also increase. As groundwater in MW-14 shifts to more closely reflect groundwater conditions in upgradient MW-7, concentrations of reported constituents in MW-14 have been shown to increase. As these component concentrations increase in MW-14, so should the cumulative TDS concentrations. This scenario is corroborated in the data reported for MW-14. The TDS increases noted for MW-14 are directly related to the TDS component concentrations increases and therefore, to the natural source for the TDS component increases. Additionally, TDS values reported for MW-14 fall within the ranges historically reported for the wells around the site. TDS data range from values less than 250 mg/L reported in wells MW-22 and MW-12 to over 2800 mg/L historically reported for well MW-11.

TDS concentrations reported for MW-14 result from cumulative constituent concentrations that are directly related to a natural shift in groundwater quality and fall within the ranges of TDS data collected for the facility. Therefore, TDS concentrations reported for MW-14 are considered to have resulted from this natural source and not a release from the landfill.

Recommendations

Data provided within this ASD have shown for sulfate in monitoring well MW-13 and for boron, calcium, chloride, sulfate, and TDS in MW-14 result from a shift toward upgradient groundwater conditions occurring within the uppermost groundwater-bearing unit. Based on this evaluation, no release from the CCR Landfill is indicated. Therefore, no change to the detection monitoring status of monitoring wells MW-13 and MW-14 is recommended and the site requests to maintain a detection monitoring status.

References

Barnes, V.E., 1981 Geologic Atlas of Texas, Austin Sheet, Bureau of Economic Geology, The University of Texas at Austin.

Barnes, V.E., 1979 Geologic Atlas of Texas, Waco Sheet, Bureau of Economic Geology, The University of Texas at Austin.

Gibbons, R. D., 1994, Statistical Methods for Groundwater Monitoring.

Sellards, E.H., Adkins, W.S., and Plummer, F.B., 1912, The Geology of Texas Volume 1 Stratigraphy, Bureau of Economic Geology Bulletin No. 3232, The University of Texas at Austin.

U.S. Environmental Protection Agency, March 2009, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance.

Ward, A.E., 1982 Evaluation of Lignite Resources at Proposed Black Cypress and Marshall Reservoir Sites, Cass, Marion, Harrison, Gregg and Upshur Counties, Texas, United Sates Department of the Interior, Bureau of Mines.

Appendix A

Signed and Sealed Certification by Professional Engineer

CERTIFICATION STATEMENT

COAL COMBUSTION RESIDUALS (CCR) LANDFILL TWIN OAKS POWER STATION ROBERTSON COUNTY, TEXAS

I certify I am a licensed professional engineer in the State of Texas and a *qualified professional engineer* as defined in 40 CFR §257.53. I certify that the groundwater monitoring data presented in the Alternate Source/Error Demonstration report, prepared by Hydrex Environmental on behalf of the Twin Oaks Power Station, are appropriate and meet the requirements of 40 CFR Part 257, Subpart D.



John J. Tayntor, P.E. Auckland Consulting, LLC TBPE Firm Registration No. F-16721

10/05/2022

Date

Appendix B

Figures







Appendix C

Laboratory Data Packages

🛟 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Houston 4145 Greenbriar Dr Stafford, TX 77477 Tel: (281)240-4200

Laboratory Job ID: 860-27143-1

Client Project/Site: Twin Oaks PP

For:

Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964

Attn: Michelle Transier

had a. Beithold

Authorized for release by: 6/21/2022 4:20:09 PM

Chad Bechtold, Project Manager (813)690-3563 Chad.Bechtold@et.eurofinsus.com



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

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

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3

Qualifiers	
HPLC/IC	Qualifier Description
Qualifier	Qualifier Description
U	indicates the analyte was analyzed for but not detected.
Metals	
Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.
General Che	mistry
Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
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)

MDLMethod Detection LimitMLMinimum 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)

RERRelative Error Ratio (Radiochemistry)RLReporting 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

Appendix A	
Laboratory Data Package Cover Page - Page 1 of 4	
This data package is for Eurofins Houston job number 860-27143-1 and consists of:	
☑ R1 - Field chain-of-custody documentation;	4
 R2 - Sample identification cross-reference; R3 - Test reports (analytical data sheets) for each environmental sample that includes: a. Items consistent with NELAC Chapter 5. 	5
b. dilution factors,	
c. preparation methods, d. cleanup methods, and	
e. if required for the project, tentatively identified compounds (TICs).	8
a. Calculated recovery (%R), and	9
 D. The laboratory's surrogate QC limits. ☑ R5 - Test reports/summary forms for blank samples; 	
☑ R6 - Test reports/summary forms for laboratory control samples (LCSs) including: a. LCS spiking amounts,	
b. Calculated %R for each analyte, and c. The laboratory's LCS OC limits	
☑ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:	13
a. Samples associated with the MS/MSD clearly identified, b. MS/MSD spiking amounts,	
 c. Concentration of each MS/MSD analyte measured in the parent and spiked samples, d. Calculated %Rs and relative percent differences (RPDs), and 	

- e. The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- \blacksquare R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Chad Bechtold Name (printed)

Chad a. Bestela Signature

6/21/2022 Date

Project Manager Official Title (printed)

Page 4 of 21

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Lab	orato	ry Name:	Eurofins Houston	LRC Date:	6/21/2022					
Proj	ect N	ame:	Twin Oaks PP	Laboratory Job Number:	860-27143-1					
Rev	iewer	·Name:	Chad Bechtold		-					•
# ¹	A ²		Description			Yes	No	NA ³	NR^4	ER#⁵
R1	01	Chain-of-o	ustody (C-O-C)							
		Did sample	s meet the laboratory's standard conditions of sample ad	cceptability upon receipt?		Х				
		Were all de	partures from standard conditions described in an excep	otion report?		Х				
R2	01	Sample ar	d quality control (QC) identification							
		Are all field	sample ID numbers cross-referenced to the laboratory I	D numbers?		Х				
		Are all labo	ratory ID numbers cross-referenced to the corresponding	g QC data?		Х				
R3	01	Test repor	ts							
		Were all sa	mples prepared and analyzed within holding times?			Х				
		Other than	those results < MQL, were all other raw values bracketer	d by calibration standards?		Х				
		Were calcu	lations checked by a peer or supervisor?			Х				
		Were all ar	alyte identifications checked by a peer or supervisor?			Х				
		Were sam	ole detection limits reported for all analytes not detected?			Х				
		Were all re	sults for soil and sediment samples reported on a dry we	eight basis?				Х		
		Were % m	pisture (or solids) reported for all soil and sediment samp	bles?				Х		
		Were bulk	soils/solids samples for volatile analysis extracted with m	nethanol per SW846 Metho	d 5035?			Х		
		If required	for the project, are TICs reported?					Х		
R4	0	Surrogate	recovery data							
		Were surro	gates added prior to extraction?					Х		
		Were surro	gate percent recoveries in all samples within the laborate	ory QC limits?				Х		
R5	01	Test repor	ts/summary forms for blank samples							
		Were appr	opriate type(s) of blanks analyzed?			Х				
		Were blan	s analyzed at the appropriate frequency?			X				
		Were meth	od blanks taken through the entire analytical process, in	cluding preparation and, if a	applicable, cleanup					
		procedures	?			Х				
		Were blan	concentrations < MQL?			Х				
R6	0	Laborator	/ control samples (LCS):							

R6	01	Laboratory control samples (LCS):				
		Were all COCs included in the LCS?	Х			
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	Х			
		Were LCSs analyzed at the required frequency?	Х			
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	Х			
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used				
		to calculate the SDLs?	Х			
		Was the LCSD RPD within QC limits?	Х			
R7	01	Matrix spike (MS) and matrix spike duplicate (MSD) data				
	-	Were the project/method specified analytes included in the MS and MSD?	Х			
		Were MS/MSD analyzed at the appropriate frequency?	Х			
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	Х			
		Were MS/MSD RPDs within laboratory QC limits?	Х			
R8	01	Analytical duplicate data				
		Were appropriate analytical duplicates analyzed for each matrix?			Х	
		Were analytical duplicates analyzed at the appropriate frequency?			Х	
		Were RPDs or relative standard deviations within the laboratory QC limits?			Х	
R9	OI	Method quantitation limits (MQLs):				
		Are the MQLs for each method analyte included in the laboratory data package?	Х			
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	Х			
		Are unadjusted MQLs and DCSs included in the laboratory data package?	Х			
R10	01	Other problems/anomalies				
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	Х			
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the				
		sample results?	X			
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices				
		and methods associated with this laboratory data package?	X			
	1.	Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required rep	ort(s). I	tems	;	
		identified by the letter "S" should be retained and made available upon request for the appropriate retention period.				
	2.	O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);				
	3.	NA = Not applicable;				
	4	NR = Not reviewed				

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review checklist: Supporting Data - Page 3 of 4

abc	rator	y Name:	Eurofins Houston	LRC Date:	6/	21/2022					
oje	ect N	ame:	Twin Oaks PP	Laboratory Job Nu	mber: 86	60-27143-1					
evi	ewer	Name:	Chad Bechtold		-						
#1	A2			Description			Vaa	Na		ND ⁴	ED# ⁵
#	A	Initial cali	exetion (ICAL)	Description			res	NO	NA	NK	ER#
		More reen	oracioni (ICAL)	enters for each analyte within OC lim	ita?						
		Were resp	onse lactors and/or relative response la	ria met?	115 ?		-				
		Were perco	in the second se	a mathad used for all analytes?			-				
		Was the fit	pints generated between the lowest and	bighost standard used to calculate	the curve?		$-\hat{\mathbf{v}}$				
			late queilable for all instruments used?	I nighest standard used to calculate			$-\hat{\mathbf{\nabla}}$				
		Has the ini	tial calibration curve been verified using	an appropriate second source stan	dard2		$-\hat{\mathbf{x}}$				
	1			an appropriate second source star	uaru		-				
2		Initial and	continuing calibration verification (I	CV and CCV) and continuing calib	vation blan						
2	101	Was the C	CV analyzed at the method-required fre								
		Was the C	ev analyzed at the method-required he	he method-required OC limits?							
		Was the IC	AL curve verified for each analyte?					+		\vdash	
		Was the at	solute value of the analyte concentration	on in the inorganic CCR < MDL2				+		\vdash	
3	0	Mase enor	tral tuning				+	-		\vdash	
5	0	Was the ar	propriate compound for the method us	ed for tuning?					x		
		Were ion a	bundance data within the method-requi	red OC limits?				-	x		
4	0	Internal et	andards (IS)					1		\vdash	
-	U	Were IS ar	ea counts and retention times within the	e method-required OC limits?					x		
5		Raw data	(NELAC Section 5 5 10)								
<u> </u>	101	Were the r	aw data (for example, chromatograms	spectral data) reviewed by an analy	st?		×				
		Were data	associated with manual integrations fla	inded on the raw data?	51.						
6	0	Dual colur	nn confirmation								
<u> </u>	U	Did dual co	hump confirmation results meet the me	thod-required OC?					x		
7	0	Tentativel	videntified compounds (TICs)								
	<u> </u>	If TICs wer	e requested were the mass spectra an	d TIC data subject to appropriate ch	ecks?				x		
8	1	Interferen	ce Check Sample (ICS) results				_				
	<u>l'</u>	Were perce	ent recoveries within method OC limits?)			×				
9	li –	Sorial dilu	tions nost digestion snikes and me	thod of standard additions							
5	<u>l'</u>	Were perce	ent differences recoveries and the line	arity within the OC limits specified in	the method	2	×				
10		Method de	etection limit (MDI) studies		r the method	•					
10	101	Was a MD	study performed for each reported an	alvte?			X				
		Is the MDI	either adjusted or supported by the an	alysis of DCSs?							
11		Proficienc	v test reports								
	1.01	Was the la	boratory's performance acceptable on t	he applicable proficiency tests or ev	aluation stur	lies?	x	1		\vdash	
12	0	Standards	documentation					1			
	<u> </u>	Are all star	ndards used in the analyses NIST-trace	able or obtained from other appropri	ate sources?)	x	1		\vdash	
13	0	Compoun	d/analyte identification procedures					1		\vdash	
	<u> </u>	Are the pro	cedures for compound/analyte identific	ation documented?			x	1			
14	0	Demonstr	ation of analyst competency (DOC)					1			
· ·	<u>.</u>	Was DOC	conducted consistent with NELAC Cha	pter 5?			X				
		Is docume	ntation of the analyst's competency up-	to-date and on file?			X				
15	Ю	Verificatio	n/validation documentation for meth	ods (NELAC Chapter 5)							
	0.	Voliniouno					<u> </u>				
		Are all the	methods used to generate the data doo	umented verified and validated w	ere annlicat	le?	x				
16	0	Laborator	v standard operating procedures (SC	(Ps)	applicat		+	1		\vdash	
	101	Are laborat	ory SOPs current and on file for each n	nethod performed?			x	-		┝──╂	
	1	Items ident	tified by the letter "R" must be included	in the laboratory data package subn	nitted in the T	RRP-required r	enort(s)	Items	L		
		identified b	v the letter "S" should be retained and r	made available upon request for the	appropriate	retention period					
	2	$\Omega = 0$	c analyses: I = inorganic analyses (and	deneral chemistry when applicable	oppiopilate	eternion periou.					
	∠. 3	$N\Delta = Not c$	o analyses, i – morganic analyses (and innlicable:	general enemistry, when applicable	,						
		11/1 - 11/1 9	יייייייייייייייייייייייייייייייייייייי								

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked). 5.

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:		Eurofins Houston	LRC Date:	6/21/2022				
Project Name:		Twin Oaks PP Laboratory Job Number: 860-27143-		860-27143-1				
Reviewer Name:		Chad Bechtold		-				
ER #1 Description								
			•					
1.	Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.							
2.	O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);							
3.	NA = Not	applicable;	•					
4.	NR = Not	reviewed;						
5.	ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

Case Narrative

Job ID: 860-27143-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-27143-1

Receipt

The samples were received on 6/1/2022 10:36 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

HPLC/IC

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

Metals

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

General Chemistry

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

Detection Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP Job ID: 860-27143-1

Lab Sample ID: 860-27143-1

Client Sample ID: MW-13

Analyte Sulfate	Result 360	Qualifier	RL 0.500	Unit mg/L	Dil Fac	D	Method 300.0	Prep Type Total/NA
Client Sample ID: MW-14					Lab S	a	mple ID: 8	60-27143-2
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	464		0.500	mg/L	1	_	300.0	Total/NA
Sulfate - DL	944		5.00	mg/L	10		300.0	Total/NA
Calcium	202		10.0	mg/L	50		6010B	Total/NA
Boron	0.718		0.0100	mg/L	1		6020A	Total/NA
Total Dissolved Solids	2240		20.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

Client Sample Results

Client: Hydrex Environmental Project/Site: Twin Oaks PP			-				Job ID: 860-2	27143-1		
Client Sample ID: MW-13 Date Collected: 05/31/22 12:05 Date Received: 06/01/22 10:36	Lab Sample ID: 860-27143-1 Matrix: Water									
Method: 300.0 - Anions, Ion C	hromatogra	iphy								
Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac		
Sulfate	360		0.500	mg/L		06/04/22 01:30				
Client Sample ID: MW-14 Date Collected: 05/31/22 11:21 Date Received: 06/01/22 10:36					L	ab Sample	e ID: 860-27 Matrix	'143-2 : Water		
Method: 300.0 - Anions, Ion C	hromatogra	phy	DI	11		Durananad	Amelunad			
Analyte	Result	Qualifier	RL		D	Prepared	Analyzed			
Method: 300.0 - Anions, Ion C Analyte	hromatogra Result	phy - DL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Method: 6010B - Metals (ICP) Analyte Calcium		Qualifier		Unit mg/L	D	Prepared 06/14/22 10:00	Analyzed 06/18/22 12:25	Dil Fac 50		
Method: 6020A - Metals (ICP/M Analyte	AS) Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Boron General Chemistry	0.718		0.0100	mg/L		06/10/22 10:23	06/10/22 17:46	1		
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Total Dissolved Solids	2240		20.0	mg/L			06/06/22 13:40	1		

Method: 300.0 - Anions, Ion Chromatography

5

Lab Sample ID: MB 860-55642/3 Matrix: Water								Clie	ent Sam	ple ID: M Prep Ty	ethod pe: To	Blank tal/NA
Analysis Batch: 55642												
	MB	MB										
Analyte	Result	Qualifier		RL		Unit) Р	repared	Analyz	zed	Dil Fac
Chloride	<0.500	U		0.500		mg/L				06/03/22	19:42	1
Sulfate	<0.500	U		0.500		mg/L				06/03/22	19:42	1
— Г												
Lab Sample ID: LCS 860-55642/6							Clier	nt Sa	mple ID:	Lab Cor	ntrol Sa	ample
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 55642												
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			10.0		9.615		mg/L		96	90 - 110		
Sulfate			10.0		9.635		mg/L		96	90 - 110		
Γ												_
Lab Sample ID: LCSD 860-55642/7						C	Client Sa	mple	ID: Lab	Control	Sampl	e Dup
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 55642												
			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			10.0		9.539		mg/L		95	90 - 110	1	20
Sulfate			10.0		9.611		mg/L		96	90 - 110	0	20
Lab Sample ID: LLCS 860-55642/5							Clier	nt Sa	mple ID:	Lab Cor	ntrol Sa	ample
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 55642												
			Spike		LLCS	LLCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			0.500		0.5387		mg/L		108	50 - 150		
Sulfate			0.500		0.5033		mg/L		101	50 - 150		
							-					
Method: 6010B - Metals (ICP)												
Г												
Lab Sample ID: MB 860-56819/1-A								Clie	ent Sam	ple ID: M	ethod	Blank
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 57486										Prep E	Batch:	56819
	MB	MB										
Analyte	Result	Qualifier		RL		Unit) P	repared	Analyz	zed	Dil Fac
Calcium	<0.200	U		0.200		mg/L		06/1	4/22 10:00	06/17/22	12:04	1
Lab Sample ID: LCS 860-56819/2-A	L I						Clier	nt Sa	mple ID:	Lab Cor	ntrol Sa	ample
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 57486										Prep E	Batch:	56819
			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Calcium			25.0		26.90		mg/L		108	80 - 120		
Lab Sample ID: LCSD 860-56819/3	-A					C	Client Sa	mple	ID: Lab	Control	Sampl	e Dup
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 57486										Prep E	Batch:	56819
			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added	_	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium			25.0		27.02		mg/L		108	80 - 120	0	20

Eurofins Houston
QC Sample Results

Job ID: 860-27143-1

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

Lab Sample ID: 860-27143-2	2 MS										Clier	nt Samp	le ID: I	MW-14
Matrix: Water												Prep Ty	/pe: To	otal/NA
Analysis Batch: 57486												Prep	Batch:	56819
	Sample	San	nple	Spike		MS	MS					%Rec		
Analyte	Result	Qua	alifier	Added	Res	sult	Qualifier	Unit		D	%Rec	Limits		
Calcium	191	Е		25.0	21	3.6	E 4	mg/L			93	75 - 125		
Lab Sample ID: 860-27143-											Clier	nt Samn		MW_1/
Matrix: Water											oner	Pren Ty	ne iD. i	otal/NΔ
Analysis Batch: 57486												Prep	Batch:	56819
	Sample	San	nple	Spike	M	SD	MSD					%Rec		RPD
Analyte	Result	Qua	lifier	Added	Res	sult	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Calcium	191	Е		25.0	21	3.6	E 4	mg/L			92	75 - 125	0	20
Method: 6020A - Metals	(ICP/MS)												
Γ		-												
Lab Sample ID: MB 860-564	18/1-A									Clie	ent Samp	DIE ID: N	lethod	Blank
Matrix: water												Prep I	/pe: ic	
Analysis Batch: 56535		мр	MD									Prep	Batch:	56418
Analyte	Re		ND Qualifier		RI		Unit		п	P	ronarod	۸nalı	hor	Dil Fac
Boron)100	U		0.0100				-	06/1	0/22 10:22	06/10/22	200	1
			-	-										
Lab Sample ID: LCS 860-56	418/2-A							CI	ient	Sai	nple ID:	Lab Co	ntrol S	Sample
Matrix: Water												Prep Ty	/pe: To	otal/NA
Analysis Batch: 56535												Prep	Batch:	56418
				Spike	L	CS	LCS					%Rec		
Analyte				Added	Res	sult	Qualifier	Unit		D	%Rec	Limits	·	
Boron				0.100	0.09	517		mg/L			96	80 - 120		
Lab Sample ID: LCSD 860-5	6418/3-A							liont	Sam	nlo	ID: Lah	Control	Samn	
Matrix: Water	0410/0-14								Jan	ipic	ID. Lab	Pren T	vne: To	otal/NΔ
Analysis Batch: 56535												Pren	Batch:	56418
				Spike	LC	SD	LCSD					%Rec		RPD
Analyte				Added	Res	sult	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Boron				0.100	0.1	036		mg/L			104	80 - 120	7	20
Method: SM 2540C - Sol	ids, Tota	I D	issolve	d (TD	S)									
				-	-					0				
Lab Sample ID: MB 860-557	69/1									CIIE	ent Samp			Biank
Analysis Ratch: 55769												Fieb i	pe. ic	
Analysis Datch. 55705		мв	мв											
Analvte	Re	sult	Qualifier		RL		Unit		D	Р	repared	Analy	zed	Dil Fac
Total Dissolved Solids	<	5.00	U		5.00		mg/L					06/06/22	2 13:40	1
	700/2							0		0-		Lak O		
Lap Sample ID: LUS 860-55	109/2							CI	ient	5 ai	inpie ID:			
Matrix: Water												Prep I	pe: 10	nai/NA
Analysis Daltil. 33/03														
· · · · · · · · · · · · · · · · · · ·				Spike	1	20	LCS					%Rec		
Analyte				Spike Added	L	.CS sult	LCS Qualifier	Unit		D	%Rec	%Rec Limits		

5

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCSD 860-55769/3 Matrix: Water Analysis Batch: 55769		C	Client Sa	Imple	ID: Lab	Control S Prep Ty	Sample pe: Tot	e Dup al/NA	
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Dissolved Solids	1000	966.0		mg/L		97	80 - 120	7	10
Lab Sample ID: LLCS 860-55769/4				Clie	nt Sai	nple ID	: Lab Con	trol Sa	mple
Matrix: Water							Prep Ty	pe: Tot	al/NA
Analysis Batch: 55769									
	Spike	LLCS	LLCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids	5.00	5.000		mg/L		100	50 - 150		

Prep Type

Matrix

Method

Client Sample ID

Analysis Batch: 55642

HPLC/IC

Lab Sample ID

Prep Batch

9

860-27143-1	MW-13	Iotal/NA	Water	300.0	
860-27143-2	MW-14	Total/NA	Water	300.0	
860-27143-2 - DL	MW-14	Total/NA	Water	300.0	
MB 860-55642/3	Method Blank	Total/NA	Water	300.0	
LCS 860-55642/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-55642/7	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-55642/5	Lab Control Sample	Total/NA	Water	300.0	
Metals					
Prep Batch: 56418					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	3010A	
MB 860-56418/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-56418/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-56418/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
Analysis Batch: 565	35				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2		Total/NA	Water	6020A	56418
MB 860-56418/1-A	Method Blank	Total/NA	Water	6020A	56418
LCS 860-56418/2-A	Lab Control Sample	Total/NA	Water	6020A	56418
LCSD 860-56418/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	56418
Prep Batch: 56819					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	3010A	
MB 860-56819/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-56819/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-56819/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
860-27143-2 MS	MW-14	Total/NA	Water	3010A	
860-27143-2 MSD	MW-14	Total/NA	Water	3010A	
Analysis Batch: 574	86				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-56819/1-A	Method Blank	Total/NA	Water	6010B	56819
LCS 860-56819/2-A	Lab Control Sample	Total/NA	Water	6010B	56819
LCSD 860-56819/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	56819
860-27143-2 MS	MW-14	Total/NA	Water	6010B	56819
860-27143-2 MSD	MW-14	Total/NA	Water	6010B	56819
Analysis Batch: 576	61				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	6010B	56819
General Chemist	ry				
Analysis Batch: 557	69				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	SM 2540C	
		- · · · · ·	141 1		

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-27143-2	MW-14	Total/NA	Water	SM 2540C	
MB 860-55769/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-55769/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Job ID: 860-27143-1

General Chemistry (Continued)

Analysis Batch: 55769 (Continued)

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
LCSD 860-55769/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-55769/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Client Sample ID: MW-13

Date Collected: 05/31/22 12:05

Date Received: 06/01/22 10:36

Lab Sample ID: 860-27143-1 **Matrix: Water**

Lab Sample ID: 860-27143-2

Matrix: Water

Batch Batch Dil Initial Final Batch Prepared Method Factor or Analyzed Prep Type Туре Run Amount Amount Number Analyst Lab Total/NA Analysis 300.0 55642 06/04/22 01:30 ANP XEN STF 1

Client Sample ID: MW-14 Date Collected: 05/31/22 11:21 Date Received: 06/01/22 10:36

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			55642	06/04/22 01:43	ANP	XEN STF
Total/NA	Analysis	300.0	DL	10			55642	06/04/22 01:56	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	56819	06/14/22 10:00	MD	XEN STF
Total/NA	Analysis	6010B		50			57661	06/18/22 12:25	AV	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	56418	06/10/22 10:23	PB	XEN STF
Total/NA	Analysis	6020A		1			56535	06/10/22 17:46	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	55769	06/06/22 13:40	JM	XEN STF

Laboratory References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Client: Hydrex Environmental Project/Site: Twin Oaks PP Job ID: 860-27143-1

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	21-038-0	08-04-22
Florida	NELAP	E871002	06-30-22
Louisiana	NELAP	03054	06-30-22
Oklahoma	State	2021-168	08-31-22
Texas	NELAP	T104704215-21-44	06-30-22
Texas	TCEQ Water Supply	T104704215	06-30-22
USDA	US Federal Programs	P330-22-00025	03-02-23

Method Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XEN STF
6010B	Metals (ICP)	SW846	XEN STF
6020A	Metals (ICP/MS)	SW846	XEN STF
SM 2540C	Solids, Total Dissolved (TDS)	SM	XEN STF
3010A	Preparation, Total Metals	SW846	XEN STF

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-27143-1	MW-13	Water	05/31/22 12:05	06/01/22 10:36
860-27143-2	MW-14	Water	05/31/22 11:21	06/01/22 10:36

Eurofins Houston 4145 Greenbriar Dr Staffrod, TX 77477	Chain of	Custody R	ecord		င့်နဲ့ eurofins Environment Testi	Po
Phone: 281-240-4200	Complex			Provine Transien Na At-		Г
Client Information	ample Shith	Becht	n told, Chad	Carrier Fracking two(s).	860-10541-3665.1	
Client Contact Michelie Transier	Phone:	E-Mait Chad	.Bechtold@et eurofinsus.com	State of Origin:	Page: Page 1 of 1	
Company: Hydrex Environmental	Md		Analysis Re	quested	+++ qop	<u> </u>
Address 1120 NVV Stallings Drive	Due Date Requested;				Preservation Codes: M Hexane	
City: Nacogdoches	TAT Requested (days):				B NaOH N None B NaOH O AsNaO2 C Zh Acetate D Acoust	
State, Zp: TX, 75964	Compliance Project: Δ Yes Δ No				E Nation R Nazoos	-
Phone: 936-568-9451 (Tel)	PO#: -14-1007				F MACUH S H2SO4 G Amchlor S H2SO4 H Ascentic Acid T TSP Dodecahydrat	
Emait: Intransier@hydrex-inc.com	W0 #: -14-1007		or No Sulta In		1 Ice U Acetone J Di Water V MCAA	
Project Name. Twin Oaks PP	Project #: 86000207		e (Yes oride (oride (oride (L EDA Y Trizma EDA Z other (specify)	
	SSOW#:		D2 0103 0103 0103 0103 010 0100 0100 0100		of Other of Other	
	Sample Sample	Umple Matrix Type Secold, -Comp, Conversion,	6400-0516-0516-0516-0516-0516-0516-0516-05		otal Number	·
		Plau Jernau Artin				
MINT 13	531-205/ 1905	3				<u> </u>
H NW	5-31-20 11.21 (N N C	XXX			{
	· ·					
					Temn 7 J IR ID HOU-323	
						
					Corrected Temp: 1.0	
Possible Hazard Identification	ison BRadi	ological	Sample Disposal (A fee may be	assessed if samples are ret Disposal Bv Lab	tained fonger than 1 month) Archive For Months	
Deliverable Requested: II III, IV Other (specify)			Special Instructions/QC Requirement	ents:		
Empty Kit Relinquished by	Date:		Time:	Melhod of Shipment:		1
Relinquished by: M.R. I	Date Time: 21-27 134	15 Company	x Received by 13	SUS Paterness 21-	22 Company	
	Date/Time:	Company	Received by:	CC Detertmer	Z 10.36 Company E	
Relinquished by:	Dale/Time:	Company	Received by:	Date of Tame.	Company	
Custody Seals Intact: Custody Seal No. A Yes A No			Cooler Temperature(s) °C and Other R	temarks:		[]
		1	11 12 13 14	7 8 9 10	2 3 4 5 6	1
			1 2 3			

Login Sample Receipt Checklist

Client: Hydrex Environmental

Login Number: 27143 List Number: 1 Creator: Rubio, Yuri

Question	Answer	Comment
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Job Number: 860-27143-1

List Source: Eurofins Houston

🛟 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Houston 4145 Greenbriar Dr Stafford, TX 77477 Tel: (281)240-4200

Laboratory Job ID: 860-28742-1

Client Project/Site: Twin Oaks PP

For:

..... Links

Review your project results through

EOL

Have a Question?

www.eurofinsus.com/Env

Visit us at:

Ask— The Expert Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964

Attn: Michelle Transier

had a. Beithold

Authorized for release by: 7/8/2022 12:56:46 PM

Chad Bechtold, Project Manager (813)690-3563 Chad.Bechtold@et.eurofinsus.com

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

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

Table of Contents

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Table of Contents	2
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Certification Summary	16
Method Summary	17
Sample Summary	18
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Client: Hydrex Environmental Project/Site: Twin Oaks PP

Qualifiers		3
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Metals		5
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
General Cher	nistry	
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		8
Abbreviation	These commonly used abbreviations may or may not be present in this report.	9
¤	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)	12
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	
PU5		
PQL		
PRES		
KEK	Relative Error Ratio (Radiochemistry)	
KL	Reporting Limit or Requested Limit (Radiochemistry)	
KPD	Relative Percent Difference, a measure of the relative difference between two points	

TEQToxicity Equivalent Quotient (Dioxin)TNTCToo Numerous To Count

Toxicity Equivalent Factor (Dioxin)

TEF

Appendix A	
Laboratory Data Package Cover Page - Page 1 of 4	
This data package is for Eurofins Houston job number 860-28742-1 and consists of:	
☑ R1 - Field chain-of-custody documentation;	4
R2 - Sample identification cross-reference; R3 - Test reports (analytical data sheets) for each environmental sample that includes: a. Items consistent with NELAC Chapter 5. 	5
b. dilution factors,	
c. preparation methods, d. cleanup methods, and	
e. if required for the project, tentatively identified compounds (TICs).	8
L R4 - Surrogate recovery data including: a. Calculated recovery (%R), and	9
b. The laboratory's surrogate QC limits. ☑ R5 - Test reports/summary forms for blank samples;	10
 R6 - Test reports/summary forms for laboratory control samples (LCSs) including: a. LCS spiking amounts, 	
b. Calculated %R for each analyte, and c. The laboratory's LCS QC limits.	
□ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:	13
 a. Samples associated with the MS/MSD clearly identified, b. MS/MSD spiking amounts, 	
c. Concentration of each MS/MSD analyte measured in the parent and spiked samples, d. Calculated %Rs and relative percent differences (RPDs), and	

- e. The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

☑ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

> Chad Bechtold Name (printed)

Chad a. Butter

Signature

7/8/2022 Date

Project Manager Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

abora	tory	Name: Eurofins Houston	LRC Date:	7/8/2022					
Project	Na	me: Twin Oaks PP I	_aboratory Job Number:	860-28742-1					
Review	/er l	Name: Chad Bechtold		•					
# ¹	A ²	Description			Yes	No	NA ³	NR⁴	ER#
11 C	Л	Chain-of-custody (C-O-C)							
		Did samples meet the laboratory's standard conditions of sample ac	ceptability upon receipt?		X				
		Nere all departures from standard conditions described in an excep	tion report?		Х				
2 C)I	Sample and quality control (QC) identification							
		Are all field sample ID numbers cross-referenced to the laboratory I	D numbers?		Х				
		Are all laboratory ID numbers cross-referenced to the corresponding	QC data?		Х				
3 C	ונ	Test reports							
	ľ	Nere all samples prepared and analyzed within holding times?			Х				
		Other than those results < MQL, were all other raw values bracketed	by calibration standards?		Х				
		Nere calculations checked by a peer or supervisor?			X				
		Nere all analyte identifications checked by a peer or supervisor?			Х				
	ſ	Nere sample detection limits reported for all analytes not detected?			Х				
		Nere all results for soil and sediment samples reported on a dry we	ght basis?				Х		
		Nere % moisture (or solids) reported for all soil and sediment samp	es?				Х		
		Nere bulk soils/solids samples for volatile analysis extracted with m	ethanol per SW846 Metho	d 5035?			Х		
	- F	f required for the project, are TICs reported?					Х		
24 C)	Surrogate recovery data							
		Were surrogates added prior to extraction?					Х		
		Nere surrogate percent recoveries in all samples within the laborato	ry QC limits?				Х		
₹5 C	ונ	Test reports/summary forms for blank samples							
	ľ	Nere appropriate type(s) of blanks analyzed?			Х				
		Nere blanks analyzed at the appropriate frequency?			Х				
	- [Were method blanks taken through the entire analytical process, inc	luding preparation and, if a	ipplicable, cleanup					
		procedures?			X				
		Were blank concentrations < MQL?			Х				
6 C	Л	Laboratory control samples (LCS):							
	ľ	Nere all COCs included in the LCS?			Х				
		Nas each LCS taken through the entire analytical procedure, includi	ing prep and cleanup steps	?	X				
		Nere LCSs analyzed at the required frequency?			Х				
		Nere LCS (and LCSD, if applicable) %Rs within the laboratory QC li	mits?		Х				
	ſ	Does the detectability check sample data document the laboratory's	capability to detect the CC	Cs at the MDL used					
	Ŀ	o calculate the SDLs?			X				
		Was the LCSD RPD within QC limits?			Х				
7 C	Л	Matrix spike (MS) and matrix spike duplicate (MSD) data							
		Nere the project/method specified analytes included in the MS and	MSD?				Х		
		Nere MS/MSD analyzed at the appropriate frequency?					Х		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC lim	its?				Х		
		Nere MS/MSD RPDs within laboratory QC limits?					Х		
8 C	DI .	Analytical duplicate data							
		Nere appropriate analytical duplicates analyzed for each matrix?					Х		
	ſ	Nere analytical duplicates analyzed at the appropriate frequency?					Х		
		Nere RPDs or relative standard deviations within the laboratory QC	limits?				Х		
2 9 C	Л	Method quantitation limits (MQLs):							
		Are the MQLs for each method analyte included in the laboratory da	ta package?		Х				
	ſ	Do the MQLs correspond to the concentration of the lowest non-zero	calibration standard?		Х				
	ļ,	Are unadjusted MQLs and DCSs included in the laboratory data pac	kage?		X				
10 C		Other problems/anomalies							

R10B

Х

х

х

Are all known problems/anomalies/special conditions noted in this LRC and ER?

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

and methods associated with this laboratory data package?

sample results?

NA = Not applicable;
 NR = Not reviewed;

Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the

Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices

identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review checklist: Supporting Data - Page 3 of 4

abo	rator	ry Name:	Eurofins Houston	LRC Date:	7/8/2022					
roje	ect N	ame:	Twin Oaks PP	Laboratory Job Number	: 860-28742-1					
evie	ewer	Name:	Chad Bechtold							
<u>1</u>	1 . 2	1		Description		- No -	1.1.	N 1 A 3		FD#5
#	A	Initial cali	hration (ICAL)	Description		Yes	NO	NA	NR	ER#
1	0		oration (ICAL)	stars for an above within OO limite?						
		vvere resp	onse factors and/or relative response fa	ctors for each analyte within QC limits?		×				
		were perc	ent RSDs or correlation coefficient criter	la met?		×				
		was the hi	umber of standards recommended in the	e method used for all analytes?		×	_			
		were all po	billis generated between the lowest and	nighest standard used to calculate the ci		^				
		Hee the ini	tial available for all instruments used?	an appropriate accord course standard?	,					
	1		tial calibration curve been vermed using	an appropriate second source standard?		^	-			
2		Initial and	continuing calibration varification (I	CV and CCV) and continuing calibratio	n blank (CCB):					
2	0	Was the C	CV analyzed at the method required fre	guonev?	II DIAIIK (CCD).	v				
		Was the C	ont differences for each analyte within the	quericy?		-	+			
		Was the IC	AL curve verified for each analyte?				+		\vdash	
		Was the at	solute value of the analyte concentration	on in the inorganic CCB < MDL2			+		\vdash	
3	0	Mass enco	tral funing							
5	<u> </u>	Was the ar	phronriate compound for the method use	ed for tuning?			+	x		
		Were ion a	bundance data within the method-requi	red QC limits?			+	X		
4	0	Internal et	andards (IS)				+		\vdash	
-	<u> </u>	Were IS an	rea counts and retention times within the	method-required OC limits?				X		
5		Raw data	(NELAC Section 5 5 10)				-			
<u> </u>		Were the r	aw data (for example, chromatograms	spectral data) reviewed by an analyst?		×	-			
		Were data	associated with manual integrations flag	nged on the raw data?			-			
6	0	Dual colur	nn confirmation				+			
•	Ŭ	Did dual co	hump confirmation results meet the met	bod-required OC?			+	x		
7	0	Tentativel	v identified compounds (TICs)				-			
<u> </u>	Ŭ	If TICs wer	re requested were the mass spectra and	d TIC data subject to appropriate checks	7		-	x		
8	li	Interferen	ce Check Sample (ICS) results		•		-			
-	I.	Were perc	ent recoveries within method OC limits?			×	-			
9	li	Serial dilu	tions, post digestion spikes, and met	thod of standard additions			+			
-	1.	Were perce	ent differences, recoveries, and the line	arity within the QC limits specified in the	method?		-	x		
10	0	Method de	etection limit (MDL) studies							
		Was a MD	L study performed for each reported and	alvte?		X				
		Is the MDL	either adjusted or supported by the ana	alysis of DCSs?		X				
11	01	Proficienc	v test reports	,						
	-	Was the la	boratory's performance acceptable on t	he applicable proficiency tests or evaluati	on studies?	X				
12	01	Standards	documentation							
		Are all star	ndards used in the analyses NIST-trace	able or obtained from other appropriate s	ources?	Х				
13	01	Compoun	d/analyte identification procedures	··· ·						
		Are the pro	ocedures for compound/analyte identific	ation documented?		Х				
14	01	Demonstra	ation of analyst competency (DOC)							
		Was DOC	conducted consistent with NELAC Chap	oter 5?		Х				
		Is docume	ntation of the analyst's competency up-	o-date and on file?		X				
15	01	Verificatio	n/validation documentation for meth	ods (NELAC Chapter 5)						
		Are all the	methods used to generate the data doc	umented, verified, and validated, where a	pplicable?	X	1			
16	01	Laborator	y standard operating procedures (SO	Ps)						
		Are laborat	tory SOPs current and on file for each m	nethod performed?		X				
	1.	Items ident	tified by the letter "R" must be included i	n the laboratory data package submitted	in the TRRP-require	ed report(s).	Items	;		
		identified b	y the letter "S" should be retained and r	nade available upon request for the appro	opriate retention per	iod.				
	2.	O = organi	c analyses; I = inorganic analyses (and	general chemistry, when applicable);						
	3.	NA = Not a	applicable;							
			aviawad:							

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laborato	ry Name:	Eurofins Houston	LRC Date:	7/8/2022					
Project N	ame:	Twin Oaks PP	Laboratory Job Number:	860-28742-1					
Reviewer	·Name:	Chad Bechtold		•					
FD #1	<u> </u>		Description						
ER#			Description						
R10B	Method 60 Elevated r	020A: The following sample was diluted reporting limits (RLs) are provided.	within the calibration range: MW-14 (860-28742-1).						
1.	Items iden identified I	ntified by the letter "R" must be included by the letter "S" should be retained and	I in the laboratory data package submitted in made available upon request for the appropri	the TRRP-required report(s). Items iate retention period.					
2.	O = organ	ic analyses; I = inorganic analyses (an	d general chemistry, when applicable);						
3.	3. NA = Not applicable;								
4.	NR = Not	reviewed;							
 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked). 									

5

Job ID: 860-28742-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-28742-1

Receipt

The sample was received on 6/29/2022 10:19 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C

HPLC/IC

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

Metals

Method 6020A: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-14 (860-28742-1). Elevated reporting limits (RLs) are provided.

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

General Chemistry

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

Client Sample ID: MW-14

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	423	<u></u>	5.00	mg/L	10	_	300.0	Total/NA
Sulfate	933	Ę	5.00	mg/L	10		300.0	Total/NA
Calcium	211		10.0	mg/L	50		6010B	Total/NA
Boron	1.64	0.	100	mg/L	10		6020A	Total/NA
Total Dissolved Solids	2340	2	20.0	mg/L	1		SM 2540C	Total/NA

Eurofins Houston

Lab Sample ID: 860-28742-1

Job ID: 860-28742-1

Client Sample Results

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Job ID: 860-28742-1

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-1 La ter

Client Sample ID: MW-14 Date Collected: 06/28/22 07:45 Date Received: 06/29/22 10:19

ab	Sample	ID:	860-28742
			Matrix: Wa

Method: 300.0 - Anions, Ion Chroma	tography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	423		5.00	mg/L			07/02/22 14:46	10
Sulfate	933		5.00	mg/L			07/02/22 14:46	10
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	211		10.0	mg/L		07/01/22 10:00	07/07/22 13:15	50
Method: 6020A - Metals (ICP/MS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.64		0.100	mg/L		07/02/22 10:45	07/07/22 00:30	10
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2340		20.0	mg/L			07/03/22 16:03	1

Job ID: 860-28742-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-59487/3 Matrix: Water										Client Sa	ample ID: M Prep Tv	ethod	Blank tal/NA
Analysis Batch: 59487											i icp iy	pc. 10	
Analysis Batch. 33407	MB	MB											
Analyte	Result	Qualifier		RL		Unit		D	P	repared	Analyze	d	Dil Fac
Chloride	<0.500			0.500		<u>ma/l</u>				opulou	07/01/22 15	<u>-</u>	1
Sulfate	<0.000			0.500		mg/L					07/01/22 15	5.11	1
	-0.000	0		0.000		mg/∟					01/01/22 10		
Lab Sample ID: MB 860-59487/76										Client Sa	ample ID: M	ethod	Blank
Matrix: Water											Prep Tv	pe: To	tal/NA
Analysis Batch: 59487													
· · · · · · · · · · · · · · · · · · ·	МВ	МВ											
Analyte	Result	Qualifier		RL		Unit		D	P	repared	Analyze	d	Dil Fac
Chloride	<0.500	U		0.500		ma/L					07/02/22 07	/:26	1
Sulfate	<0.500	U		0.500		ma/L					07/02/22 07	2:26	1
						5							
Lab Sample ID: LCS 860-59487/77								CI	ient	Sample	ID: Lab Cor	ntrol Sa	ample
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 59487													
			Spike		LCS	LCS					%Rec		
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits		
Chloride			10.0		9.342		mg/L		_	93	90 - 110		
Sulfate			10.0		9.329		mg/L			93	90 - 110		
Lab Sample ID: LCSD 860-59487/78							С	lient \$	Sam	ple ID: L	ab Control	Sampl	e Dup
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 59487													
			Spike		LCSD	LCSD					%Rec		RPD
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride			10.0		9.401		mg/L			94	90 - 110	1	20
Sulfate			10.0		9.364		mg/L			94	90 _ 110	0	20
_ _													
Lab Sample ID: LLCS 860-59487/5								CI	ient	Sample	ID: Lab Cor	ntrol Sa	ample
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 59487													
			Spike		LLCS	LLCS					%Rec		
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits		
Chloride			0.500		0.5897		mg/L			118	50 - 150		
Sulfate			0.500		0.5061		mg/L			101	50 - 150		
Method: 6010B - Metals (ICP)													
Lab Sample ID: MR 860-59428/1-A										Client S	amnle ID: M	ethod	Blank
Matrix: Water										onent of	Prop Ty		
Analysis Batch: 59884											Bron	pe. 10 Ratch:	59/28
Analysis Datch. 33004	MB	MB									Fiehr	Jaten.	JJ420
Analyte	Rocult	Qualifier		RI		l Init		п	P	renared	∆nalvzo	Ч	Dil Fac
Calcium	<0.200	U		0.200		01111 ma/L			07/0	1/22 10:00	07/05/22 19):34	1
	5.200	-				.				10.00			·
Lab Sample ID: LCS 860-59428/2-A								CI	ient	Sample	ID: Lab Cor	ntrol Sa	ample
Matrix: Water										-	Prep Ty	pe: To	tal/NA
Analysis Batch: 59884											Prep E	Batch:	5942 8
			Spike		LCS	LCS					%Rec		
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits		
Calcium			25.0		24.72		ma/L		_	99	80 - 120		

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

Lab Sample ID: LCSD 860-59428/3-A			CI	ient Sam	ple ID:	Lab Contro	I Sampl	e Dup	
Matrix: Water						Prep 1	ype: To	tal/NA	
Analysis Batch: 59884							Prep	Batch:	5942 8
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium	25.0	24.78		mg/L		99	80 - 120	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 860-59583/1-A Matrix: Water Analysis Batch: 60082	MB	MB						Client Sa	ample ID: Me Prep Typ Prep Ba	thod Blank e: Total/NA atch: 59583
Analyte	Result	Qualifier		RL	Unit		D P	repared	Analyzed	Dil Fac
Boron	<0.0100	U	0.0	0100	mg/L		07/0)2/22 10:45	07/07/22 00:1	3 1
Lab Sample ID: LCS 860-59583/2-A Matrix: Water Analysis Batch: 60082							Client	t Sample	ID: Lab Cont Prep Typ Prep Ba	rol Sample e: Total/NA atch: 59583
A			Spike	LCS	LCS	11 14	_	0/ D	%Rec	
Boron			0.100	0.08663	Qualifier	mg/L	<u> </u>	87 -	80 - 120	
Lab Sample ID: LCSD 860-59583/3-A Matrix: Water Analysis Batch: 60082						Cli	ent San	nple ID: L	ab Control S Prep Typ Prep Ba	ample Dup e: Total/NA atch: 59583
			Spike	LCSD	LCSD				%Rec	RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD Limit
Boron			0.100	0.09161		mg/L		92	80 - 120	6 20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-59635/1 Matrix: Water Analysis Batch: 59635									Client S	Sample ID: Prep 1	Method ype: To	Blank tal/NA
· · · · · · · · · · · · · · · · · · ·	МВ	МВ										
Analyte	Result	Qualifier		RL		Unit		DI	Prepared	Analyz	ed	Dil Fac
Total Dissolved Solids	<5.00	U		5.00		mg/L				07/03/22	16:03	1
Lab Sample ID: LCS 860-59635/2								Clien	t Sample	D: Lab Co	ontrol S	ample
Matrix: Water										Prep 1	ype: To	tal/NA
Analysis Batch: 59635												
-			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1000		1027		mg/L		103	80 - 120		
Lab Sample ID: LCSD 860-59635/3							С	lient Sar	nple ID:	Lab Contro	I Samp	le Dup
Matrix: Water									· · · ·	Prep 1	· vpe: To	tal/NA
Analysis Batch: 59635												
-			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Dissolved Solids			1000		1051		mg/L		105	80 - 120	2	10

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LLCS 860-59635/4 Matrix: Water												
	%Rec											
_ Unit	D %Rec Limits											
_	Unit mg/L											

QC Association Summary

HPLC/IC

Analysis Batch: 59487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-28742-1	MW-14	Total/NA	Water	300.0	
MB 860-59487/3	Method Blank	Total/NA	Water	300.0	
MB 860-59487/76	Method Blank	Total/NA	Water	300.0	
LCS 860-59487/77	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-59487/78	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-59487/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 59428

Lab Sample ID 860-28742-1	Client Sample ID MW-14	Prep Type Total/NA	Matrix Water	Method 3010A	Prep Batch
MB 860-59428/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-59428/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-59428/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Prep Batch: 59583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
860-28742-1	MW-14	Total/NA	Water	3010A
MB 860-59583/1-A	Method Blank	Total/NA	Water	3010A
LCS 860-59583/2-A	Lab Control Sample	Total/NA	Water	3010A
LCSD 860-59583/3-A	Lab Control Sample Dup	Total/NA	Water	3010A

Analysis Batch: 59884

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 860-59428/1-A	Method Blank	Total/NA	Water	6010B	59428
LCS 860-59428/2-A	Lab Control Sample	Total/NA	Water	6010B	59428
LCSD 860-59428/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	59428

Analysis Batch: 60082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-28742-1	MW-14	Total/NA	Water	6020A	59583
MB 860-59583/1-A	Method Blank	Total/NA	Water	6020A	59583
LCS 860-59583/2-A	Lab Control Sample	Total/NA	Water	6020A	59583
LCSD 860-59583/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	59583
LCSD 860-59583/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	
⊢ Analysis Batch: 60122					

Lab Sample IDClient Sample IDPrep TypeMatrixMethodPrep Batch860-28742-1MW-14Total/NAWater6010B59428

General Chemistry

Analysis Batch: 59635

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-28742-1	MW-14	Total/NA	Water	SM 2540C	
MB 860-59635/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-59635/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-59635/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-59635/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Client Sample ID: MW-14 Date Collected: 06/28/22 07:45 Date Received: 06/29/22 10:19

Lab Sample ID: 860-28742-1 Matrix: Water

10

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	0 mL	1.0 mL	59487	07/02/22 14:46	ANP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	59428	07/01/22 10:00	MD	XEN STF
Total/NA	Analysis	6010B		50			60122	07/07/22 13:15	DP	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	59583	07/02/22 10:45	MD	XEN STF
Total/NA	Analysis	6020A		10			60082	07/07/22 00:30	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	59635	07/03/22 16:03	ADL	XEN STF

Laboratory References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	21-038-0	08-04-22
Florida	NELAP	E871002	06-30-23
Louisiana	NELAP	03054	06-30-23
Oklahoma	State	2021-168	08-31-22
Texas	NELAP	T104704215-22-46	06-30-23
Texas	TCEQ Water Supply	T104704215	12-31-22
USDA	US Federal Programs	P330-22-00025	03-02-23

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method

300.0

6010B

6020A

3010A

SM 2540C

s, Ion Chromatography	MCAWW	XEN STF	- <u>A</u>
s (ICP)	SW846	XEN STF	
s (ICP/MS)	SW846	XEN STF	5
s, Total Dissolved (TDS)	SM	XEN STF	5
ration, Total Metals	SW846	XEN STF	
	s (ICP/ s (ICP/MS) , Total Dissolved (TDS) ration, Total Metals	s (ICP) SW846 s (ICP/MS) SW846 , Total Dissolved (TDS) SM ration, Total Metals SW846	(ICP)SW846XEN STF\$ (ICP/MS)SW846XEN STF, Total Dissolved (TDS)SMXEN STFration, Total MetalsSW846XEN STF

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

Protocol References:

XEN STF = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

l ah Samplo ID	Client Sample ID	Matrix	Collected	Pacaivad
		Wallix	Collected	Received
860-28742-1	MW-14	Water	06/28/22 07:45	06/29/22 10:19

∆ Yes ∆ No	Custody Seals Intact: Custody Seal No.	Relinquished by:	Neuinquisties by		Empty Air Keiinguisned by		Deliverable Requested II III N Other (snecify)	Possible Hazard Identification						MW-14		Sample Identification	Sile	Project Name: Twin Oaks PP	emai: mtransier@hydrex-inc.com	936-568-9451(Tel)	TX, 75964	Nacogdoches	Address: 1120 NW Stallings Drive	Company: Hydrex Environmental	Client Contact Michelle Transier	Client Information	Eurofins Xenco, Stafford 4147 Greenbriar Dr Stafford, TX 77477 Phone (281) 240-4200 Corrected Temp: O. (
		Date/Time: Compan		H 5111 COSP 9 1111 201	Uate	5	roison b Unknown Radiological							v s Shilo e8/84/99	Preservation C	Sample Mat Type (www Sample (C=comp, cows Sample Date Time G=grab) gr-Tase	SSOW#:	Project#: 86000207	W0 # -14-1007	PO # 1-14-1007	Compliance Project: A Yes A No	TAT Requested (days): RUSH 5 DAYS	Due Date Requested:	PWSID:	Phone: 936-568-9451	Isampler (1)05 Smith	Chain of Custod
	Cooler Temperature(s) °C and Other Remarks:	y Received by:	The second secon	Voltex Federal			Special Instructions/OC Requirements	Sample Disposal (A fee may be assessed if s								Etild Elitered Be corro Mell Chloride Sulfate Boron Calcium TDS	Şâinp Arte: ?		stori) Ato:					Analysis Requested	E-Mai chad.bechtold@eurofinset.com	Bechtold, Chad 860-28742 Chain of Custody	y Record
Ver 01/16/2019		Date/Time: Company	4) Jon A. 16/01 22/62 30 101	Line Charles 115 Contex			ab Archive For Month's	amples are retained longer than 1 month)								To Special Instructions/Note:	O Con	L EDA Z other (specify)	J DI Water V MCAA	G Amothor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate	E NaHSO4 Q Na2SO3	C Zin Actate O ASNAO2	A HCL M Hexane	· Coorte	age: /age 1 of 1		Curofins Environment Testing

Client: Hydrex Environmental

Login Number: 28742 List Number: 1 Creator: Torres, Sandra

Question	Answer	Comment
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	0.6
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Job Number: 860-28742-1

List Source: Eurofins Houston

🔅 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Houston 4147 Greenbriar Dr Stafford, TX 77477 Tel: (281)240-4200

Laboratory Job ID: 860-29672-1

Client Project/Site: Twin Oaks PP

For:

..... Links

Review your project results through

EOL

Have a Question?

Visit us at:

Ask-The

Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964

Attn: Michelle Transier

had a. Beithold

Authorized for release by: 7/25/2022 5:05:52 PM

Chad Bechtold, Project Manager (813)690-3563 Chad.Bechtold@et.eurofinsus.com



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Qualifiers

Qualifiers		3
Metals		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
General Che	mistry	5
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	6
Glossary		7
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	8
%R	Percent Recovery	U
CFL	Contains Free Liquid	0
CFU	Colony Forming Unit	3
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)	13
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: 860-29672-1

Project/Site: Twin Oaks PP

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-29672-1

Case Narrative

Receipt

The sample was received on 7/15/2022 12:17 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 23.4°C

Metals

Method 6020A: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-14 (860-29672-1). Elevated reporting limits (RLs) are provided.

Method 6020A: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-14 (860-29672-1). Elevated reporting limits (RLs) are provided.

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

General Chemistry

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

Detection Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Client Sample ID: MW-14

Lab Sample ID: 8	360-2
------------------	-------

Analyte	Result	Qualifier	RL	Unit	Dil Fac D	Method	Prep Type
Boron	0.762		0.0100	mg/L	1	6020A	Total/NA
Boron, Dissolved	1.03		0.500	mg/L	50	6020A	Dissolved
Total Dissolved Solids	2700		20.0	mg/L	1	SM 2540C	Total/NA

Page 5 of 15

5

Eurofins Houston

This Detection Summary does not include radiochemical test results.

Detection Summary does not include radiochemical test result

5 6

Client: Hydrex Environmental Project/Site: Twin Oaks PP Client Sample ID: MW-14

Lab Sample ID: 860-29672-1 Matrix: Water

Date Collected: 07/14/22 10:11 Date Received: 07/15/22 12:17

Method: 6020A - Metals (ICP/N	/IS)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Boron	0.762		0.0100	mg/L		07/16/22 10:45	07/18/22 18:13	1	
Method: 6020A - Metals (ICP/MS) - Dissolved									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Boron, Dissolved	1.03		0.500	mg/L		07/20/22 08:30	07/20/22 22:03	50	
General Chemistry									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids	2700		20.0	mg/L			07/20/22 12:09	1	
QC Sample Results

Job ID: 860-29672-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 860-61 Matrix: Water	259/1-A						C	lie	nt Sam	ple ID: M Prep Ty Prop F	ethod pe: To	Blank tal/NA
Analysis Batch. 01504	МВ	мв								Prep c	balch.	01239
Analyte	Result	Qualifier		RL	Unit		D	Р	repared	Analyz	zed	Dil Fac
Boron	<0.0100	U	0.0	100	mg/L		- 0	7/1	6/22 10:4	5 07/18/22	17:42	1
Lab Sample ID: LCS 860-6	1259/2-A					Cli	ent S	Sar	nple ID	Lab Cor	ntrol S	ample
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 61564			Cuilco	1.00	1.00					Prep E	satch:	61259
Analyta			Spike	Bocult	Cualifiar	Unit		п	% Boc	%Rec		
Boron			Audeu	0.00388	Quaimer	ma/l		<u> </u>		80 120		
			0.100	0.09500		ing/∟			54	00-120		
Lab Sample ID: LCSD 860-	61259/3-A				C	Client S	Samp	ole	ID: Lab	Control	Sampl	e Dup
Matrix: Water										Prep Ty	pe: To	tal/NA
Analysis Batch: 61564										Prep E	Batch:	61259
			Spike	LCSD	LCSD					%Rec		RPD
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Boron			0.100	0.09580		mg/L		_	96	80 - 120	2	20
Lab Sample ID: MB 860-61	673/1-A						C	ile	nt Sam		etnoa	Blank
Matrix: Water										Prep ly	pe: Io	
Analysis Batch: 61932	MB	MD								Prep E	satch:	010/3
Analyta	ND Bosult	ND		DI	Unit		п	ь.	oparad	Analy	rod	Dil Eac
Boron Dissolved				100				7/2	0/22 08:30	$\frac{1}{07/20/22}$	22.54	
	-0.0100	0	0.0	100	iiig/E		0	1,2	0722 00.00	01120122	22.04	
Lab Sample ID: LCS 860-6	1673/2-A					Cli	ent S	Sar	nple ID:	: Lab Cor	ntrol S	ample
Lab Sample ID: LCS 860-6 Matrix: Water	1673/2-A					Cli	ent S	Sar	nple ID:	Lab Cor Prep Ty	ntrol S pe: To	ample tal/NA
Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932	1673/2-A					Cli	ient S	Sar	nple ID:	Lab Cor Prep Ty Prep E	ntrol S pe: To Batch:	ample tal/NA 61673
Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932	1673/2-A		Spike	LCS	LCS	Cli	ent S	Sar	nple ID:	Lab Cor Prep Ty Prep E %Rec	ntrol S pe: To Batch:	ample tal/NA 61673
Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932 Analyte	1673/2-A		Spike Added	LCS Result	LCS Qualifier	Cli Unit	ient S	Sar D	nple ID %Rec	Lab Cor Prep Ty Prep E %Rec Limits	ntrol S pe: To Batch:	ample tal/NA 61673
Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved	1673/2-A		Spike Added 0.100	LCS Result 0.09984	LCS Qualifier	Cli Unit mg/L	ient S	Sar D	nple ID: <u>%Rec</u> 100	Lab Cor Prep Ty Prep E %Rec Limits 80 - 120	ntrol S pe: To Batch:	ample tal/NA 61673
Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved	1673/2-A		Spike Added 0.100	LCS Result 0.09984	LCS Qualifier	Cli Unit mg/L	ent S	<u>D</u>	%Rec 100	Lab Cor Prep Ty Prep E %Rec Limits 80 - 120	ntrol S pe: To Batch:	ample tal/NA 61673
Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: LCSD 860-	1673/2-A 		Spike Added 0.100	LCS Result 0.09984	LCS Qualifier	Cli Unit mg/L	ient S	D D D D	<mark>%Rec</mark> 100 − ID: Lab	: Lab Cor Prep Ty Prep E %Rec Limits 80 - 120 Control	ntrol S pe: To Batch: Sampl	ample tal/NA 61673
Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: LCSD 860- Matrix: Water	1673/2-A 		Spike Added 0.100	LCS Result 0.09984	LCS Qualifier	Cli <u>Unit</u> mg/L Client S	ient S	D D D	<mark>%Rec</mark> 100 − ID: Lab	: Lab Cor Prep Ty Prep E %Rec Limits 80 - 120 Control Prep Ty	sampl pe: To Batch: Sampl pe: To	ample tal/NA 61673
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Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: LCSD 860- Matrix: Water Analysis Batch: 61932	1673/2-A 		Spike Added 0.100 Spike	LCS Result 0.09984 LCSD Result	LCS Qualifier (LCSD Qualifier	Cli <u>Unit</u> mg/L Client S	ient S	Sar D D	<pre>%Rec 100 ID: Lab</pre>	Lab Cor Prep Ty Prep E %Rec Limits 80 - 120 Control Prep Ty Prep E %Rec Limits	Sampl pe: To Batch: Sampl pe: To Batch:	ample tal/NA 61673 e Dup tal/NA 61673 RPD
Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: LCSD 860- Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved	1673/2-A 		Spike Added 0.100 Spike Added	LCS Result 0.09984 LCSD Result 0.1030	LCS Qualifier C LCSD Qualifier	Cli Unit mg/L Client S	Samp	D D D D D D	%Rec 100 ID: Lab %Rec 103	Lab Cor Prep Ty Prep E %Rec Limits 80 - 120 Control Prep Ty Prep E %Rec Limits 80 - 120	Sampl pe: To Batch: Sampl pe: To Batch: RPD	ample tal/NA 61673 e Dup tal/NA 61673 RPD Limit 20
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Lab Sample ID: LCS 860-6 Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: LCSD 860- Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: MB 860-61	1673/2-A 		Spike Added 0.100 Spike Added 0.100	LCS Result 0.09984 LCSD Result 0.1030	LCS Qualifier C LCSD Qualifier	Cli mg/L Client S	Samp	Sar D D D Clie	%Rec 100 ID: Lab %Rec 103	: Lab Cor Prep Ty Prep E %Rec Limits 80 - 120 Control Prep Ty Prep E %Rec Limits 80 - 120 Prep E %Rec	ethod	ample tal/NA 61673 e Dup tal/NA 61673 RPD Limit 20 Blank
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Lab Sample ID: LCS 860-6" Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: LCSD 860- Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: MB 860-61 Matrix: Water Analysis Batch: 61932 Analyte Boron, Dissolved Lab Sample ID: LCS 860-6" Matrix: Water Analysis Batch: 61932 Analyte Analysis Batch: 61932 Analyte	1673/2-A 61673/3-A 475/1-B <u>MB</u> <u>Result</u> <0.0100 1475/2-B	MB Qualifier U	Spike Added 0.100 Spike Added 0.100 0.00 Spike Added	LCS Result 0.09984 LCSD Result 0.1030 RL 100 LCS Result	LCS Qualifier C LCSD Qualifier Unit mg/L	Cli mg/L Client S Unit mg/L	Samp	Sar D D D D C lie Pr 7/20 Sar	%Rec 100 ID: Lab %Rec 103 mt Sam %Pered 0/22 08:30 mple ID: %Rec 0/22 08:30 mple ID:	Lab Cor Prep Ty %Rec Limits 80 - 120 Control Prep Ty %Rec Limits 80 - 120 Control Prep Ty %Rec Limits 0 - 120 Prep Ty Prep E %Rec Limits Control Prep Ty Prep E %Rec Limits	sampl pe: To Batch: Sampl pe: To Batch: RPD 3 ethod e: Diss Batch: 2 2 2 1:51 ntrol S e: Diss Batch:	ample tal/NA 61673 e Dup tal/NA 61673 RPD Limit 20 Blank solved 61673 Dil Fac 1 ample solved 61673

Method: 6020A - Metals (ICP/N	/IS)											
Lab Sample ID: LCSD 860-61475/3 Matrix: Water Analysis Batch: 61932	-В					C	Client S	ample	ID: Lat	o Control Prep Typ Prep E	Sample: Diss Batch:	e Dup olved 61673
			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron, Dissolved			0.100		0.1021		mg/L		102	80 - 120	2	20
Method: SM 2540C - Solids, To	otal D	issolve	d (TD	S)								
Lab Sample ID: MB 860-61739/1 Matrix: Water Analysis Batch: 61739								Clie	ent San	nple ID: M Prep Ty	ethod pe: To	Blank tal/NA
	МВ	МВ										
Analyte	Result	Qualifier		RL		Unit		D P	repared	Analy	zed	Dil Fac
Total Dissolved Solids	<5.00	U		5.00		mg/L			•	07/20/22	12:09	1
Lab Sample ID: LCS 860-61739/2 Matrix: Water Analysis Batch: 61739							Clie	ent Sa	mple ID): Lab Cor Prep Ty	ntrol Sa pe: Tot	ample tal/NA
			Spike		LCS	LCS				%Rec		
Analyte			Added	I	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1000		1045		mg/L		105	80 - 120		
Lab Sample ID: LCSD 860-61739/3 Matrix: Water						C	Client S	ample	ID: Lat	o Control Prep Ty	Sample pe: Tot	e Dup tal/NA
Analysis Batch: 61739			Sniko							% Baa		
Analysia			Зріке Аддад		LC3D	Cuelifier	11			%Rec	000	RPD Limit
Total Dissolved Solids			1000		1010	Quaimer	mg/L		101	80 - 120	3	10
Lab Sample ID: LLCS 860-61739/4 Matrix: Water Analysis Batch: 61739							Clie	ent Sa	mple ID): Lab Cor Prep Ty	ntrol Sa pe: Tot	ample tal/NA
			Spike		LLCS	LLCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			5.00		<5.00	U	mg/L		70	50 - 150		

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Dissolved

Dissolved

Dissolved

Dissolved

Matrix

Water

Water

Water

Water

Matrix

Water

Water

Water

Water

Client Sample ID

Lab Control Sample

Client Sample ID

Lab Control Sample

Lab Control Sample Dup

Method Blank

Lab Control Sample Dup

Method Blank

MW-14

MW-14

Metals

860-29672-1

Prep Batch: 61259

MB 860-61259/1-A

LCS 860-61259/2-A

Lab Sample ID

MB 860-61475/1-B

LCS 860-61475/2-B

LCSD 860-61475/3-B

860-29672-1

LCSD 860-61259/3-A

Filtration Batch: 61475

Prep Batch

Prep Batch

Method

3010A

3010A

3010A

3010A

Method

Filtration

Filtration

Filtration

Filtration

6 7 8 0

Analysis Batch: 61564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-29672-1	MW-14	Total/NA	Water	6020A	61259
MB 860-61259/1-A	Method Blank	Total/NA	Water	6020A	61259
LCS 860-61259/2-A	Lab Control Sample	Total/NA	Water	6020A	61259
LCSD 860-61259/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	61259

Prep Batch: 61673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-29672-1	MW-14	Dissolved	Water	3010A	61475
MB 860-61475/1-B	Method Blank	Dissolved	Water	3010A	61475
MB 860-61673/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-61475/2-B	Lab Control Sample	Dissolved	Water	3010A	61475
LCS 860-61673/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-61475/3-B	Lab Control Sample Dup	Dissolved	Water	3010A	61475
LCSD 860-61673/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Analysis Batch: 61932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-29672-1	MW-14	Dissolved	Water	6020A	61673
MB 860-61475/1-B	Method Blank	Dissolved	Water	6020A	61673
MB 860-61673/1-A	Method Blank	Total/NA	Water	6020A	61673
LCS 860-61475/2-B	Lab Control Sample	Dissolved	Water	6020A	61673
LCS 860-61673/2-A	Lab Control Sample	Total/NA	Water	6020A	61673
LCSD 860-61475/3-B	Lab Control Sample Dup	Dissolved	Water	6020A	61673
LCSD 860-61673/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	61673

General Chemistry

Analysis Batch: 61739

Lab Sample ID 860-29672-1	Client Sample ID MW-14	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
MB 860-61739/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-61739/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-61739/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-61739/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Client Sample ID: MW-14 Date Collected: 07/14/22 10:11 Date Received: 07/15/22 12:17

5 6

9

Lab Sample ID: 860-29672-1 Matrix: Water

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			250 mL	250 mL	61475	07/18/22 12:00	PB	XEN STF
Dissolved	Prep	3010A			50 mL	50 mL	61673	07/20/22 08:30	MD	XEN STF
Dissolved	Analysis	6020A		50			61932	07/20/22 22:03	SHZ	XEN STF
Total/NA	Prep	3010A			50 mL	50 mL	61259	07/16/22 10:45	MD	XEN STF
Total/NA	Analysis	6020A		1			61564	07/18/22 18:13	SHZ	XEN STF
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	61739	07/20/22 12:09	ADL	XEN STF

Laboratory References:

XEN STF = Eurofins Houston, 4147 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Client: Hydrex Environmental Project/Site: Twin Oaks PP Job ID: 860-29672-1

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	21-038-0	08-04-22
Florida	NELAP	E871002	06-30-23
Louisiana	NELAP	03054	06-30-23
Oklahoma	State	2021-168	08-31-22
Texas	NELAP	T104704215-22-47	06-30-23
Texas	TCEQ Water Supply	T104704215	12-31-22
USDA	US Federal Programs	P330-22-00025	03-02-23

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Method Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	XEN STF
SM 2540C	Solids, Total Dissolved (TDS)	SM	XEN STF
3010A	Preparation, Total Metals	SW846	XEN STF
Filtration	Sample Filtration	None	XEN STF

Protocol References:

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

XEN STF = Eurofins Houston, 4147 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-29672-1	MW-14	Water	07/14/22 10:11	07/15/22 12:17

Eurofins Xenco, Stafford													onno sis	fine l		
4147 Greenbriar Dr Stafford, TX 77477	0	hain (of Cus	tody R	ecord									And Contraction	vironment Testing Ierica	
Phone (281) 240-4200		Į				ļ	Ì		ł	ļ	ł					r
Client Information	Sampler	ろう	16	Lab PJ Bech	d: told, Chao	- -			Cart	ier Trackir	g No(s);		COC No:	 	 	
Client Contact: Michelle Transier	Phone: 936-568-9451			E-Mail chad	bechtold	Deurofir	iset.com		State	s of Origin	}		Page: Page 1 of	τ Γ		· · · ·
Company: Hydrex Environmental			PWSID:				Ĭ	lvsis I	Seque	sted		ļ	Job #:			<u> </u>
Address: 1120 NW Stallings Drive	Due Date Requeste	÷				F					F	—	Preservat	ion Codes:		T ~
čity: Nacogdoches	TAT Requested (da	RUSH 31	DAYS										A HCC B NaOH C Zn Acet	ate N S Z O Z Z O Z Z O	Hexane Vone AsNaO2	
State, Zp. TX, 75964	Compliance Project	: A Yes d	QN										D Nitric A	<u>6</u> 01	Va204S Va2S03	
Phone: 936-568-9451(Tel)	P0.# -14-1007				. ((F IVEUH G Amchlo H Ascorbi	r r cAcid ⊤ 1	vazszos 12SO4 "SP Dodecahvorate	
Email: mtransier@hydrex-inc.com	WO #: 1-14-1007				itals								J Di Wate	22	Acetane ACAA	
Project Name: Twin Oaks PP	Project #; 86000207		{		ю (Деа		_						IBUIST	ЗN	pH 4-5 Mer (specify)	
Site:	SSOW#.		ļ		n Njeste Njeste								ot other			
			Sample Type	Matrix (Number,	S beretii Mi(simuu Noron								tedmuN			1
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	S=solid, O=wasterkoll, BT=Tissue, A=Air)	Discrit Vossiq	Boron		_					10101	ecial Instru	tions/Note:	
		X	Preservat	tion Code:	NXX	N Q		14 14	_						V	
MW-14	524420	101	υ	3	z	×					 		3 Lab filter (0.45 micron		~ ~
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					ירך ררך								 			
	R ID HOU-33	, ,											 			
Corrected Temp	23.4				₿{ [0-2967	2 Chain		A l		}		 			
					╺╌┤ ┝╼╌┥		-+									<u> </u>
						_	-+-									
Possible Hazard Identification			ladiological]		le Dispo	sal (A f	e may t	e asse: Dispr	sed if a	amples	are ret	iined longer mhive For	than 1 mon	th) forths	-
Deliverable Requested 1, II, III IV Other (specify)					Specia	I Instruc	tions/QC	Require	ments.	5						
Empty Kit Relinquished by		Date:			Time:			[ĺ	Method «	of Shipmer	- 				<u>r</u>
Relinquished by: S 4 when	Date/Time:	1430	¥	Company	X Rec	xeived by:	1	2				うてい	1430	Con	redet	r
Relinquis herpy C	i Date/Time:		<u>~</u>	Campany	n n n n n n n n n n n n n n n n n n n	yd beviet	7				Late	2/52	5 (6	(7 Con	X S	
Relinquished by	Date/Time:			Company	Rec L	zelved by:					Date/T	me:		Com	pany	r
Custody Seals Intact: Custody Seal No.		1			ð_	oler Tempe	stature(s) °(and Othe	r Remark	12				1		

Login Sample Receipt Checklist

Client: Hydrex Environmental

Login Number: 29672 List Number: 1 Creator: Milone, Jeancarlo

Question	Answer	Comment
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.	False	No ice per client request.
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Job Number: 860-29672-1

List Source: Eurofins Houston

🛟 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Houston 4145 Greenbriar Dr Stafford, TX 77477 Tel: (281)240-4200

Laboratory Job ID: 860-32955-1

Client Project/Site: Twin Oaks PP

For:

..... Links

Review your project results through

EOL

Have a Question?

www.eurofinsus.com/Env

Visit us at:

Ask— The Expert Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964

Attn: Michelle Transier

had a. Beithold

Authorized for release by: 9/23/2022 9:22:01 AM

Chad Bechtold, Project Manager (813)690-3563 Chad.Bechtold@et.eurofinsus.com

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

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

Table of Contents

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Certification Summary	18
Method Summary	19
Sample Summary	20
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Definitions/Glossary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Qualifiers

Dil Fac

HPLC/IC		
Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	
	applicable.	5
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
U	Indicates the analyte was analyzed for but not detected.	
Metals		
Qualifier	Qualifier Description	
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not	
	applicable.	0
E	Result exceeded calibration range.	0
U	Indicates the analyte was analyzed for but not detected.	
General Che	mistry	9
Qualifier	Qualifier Description	
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	10
U	Indicates the analyte was analyzed for but not detected.	
Glossary		1^
Abbreviation	These commonly used abbreviations may or may not be present in this report.	1
¤	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)	

DLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)EDLEstimated Detection Limit (Dioxin)LODLimit of Detection (DoD/DOE)LOQLimit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry) MDL Method Detection Limit Minimum Level (Dioxin) ML MPN Most Probable Number Method Quantitation Limit MQL 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 Quality Control QC 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)

Dilution Factor

TNTC Too Numerous To Count

Appendix A	
Laboratory Data Package Cover Page - Page 1 of 4	
This data package is for Eurofins Houston job number 860-32955-1 and consists of:	
☑ R1 - Field chain-of-custody documentation;	4
 R2 - Sample identification cross-reference; R3 - Test reports (analytical data sheets) for each environmental sample that includes: a. Items consistent with NELAC Chapter 5. 	5
b. dilution factors,	
c. preparation methods, d. cleanup methods, and	
e. if required for the project, tentatively identified compounds (TICs).	8
R4 - Surrogate recovery data including:	0
a. Calculated recovery (%R), and	Э
D. The laboratory's surrogate QC limits. ☑ R5 - Test reports/summary forms for blank samples:	
☑ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:	
a. LCS spiking amounts,	
b. Calculated %R for each analyte, and	
c. The laboratory's LCS QC limits.	
☑ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:	13
a. Samples associated with the MS/MSD clearly identified,	
b. MS/MSD spiking amounts,	
c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,	
a. Galculated %Rs and relative percent differences (RPDs), and	

- e. The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

☑ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

> Chad Bechtold Name (printed)

Chad a. Bestela Signature

9/23/2022 Date

Project Manager Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Labora	tory	Name: Eurofins Houston	LRC Date: 9/23/2022						
Project	Nar	ne: Twin Oaks PP	Laboratory Job Number: 860-3295	5-1					
eview	er N	ame: Chad Bechtold	· · ·						
# ¹	Δ ²	Description			Yes	No	NA ³	NR^4	ER
11 C) I	hain-of-custody (C-O-C)							
		id samples meet the laboratory's standard conditions of sample ac	ceptability upon receipt?		Х				
	V	Vere all departures from standard conditions described in an excep	tion report?		Х				
2 C) I S	ample and quality control (QC) identification	•						
	A	re all field sample ID numbers cross-referenced to the laboratory I	D numbers?		Х				
	Ā	re all laboratory ID numbers cross-referenced to the corresponding	QC data?		Х				
3 IC	л Т	est reports							
	v	Vere all samples prepared and analyzed within holding times?			Х				
	Ċ)ther than those results < MQL were all other raw values bracketed	by calibration standards?		X				
	Ī	Vere calculations checked by a peer or supervisor?			X				
	Ū.	Vere all analyte identifications checked by a peer or supervisor?		X					
	v.	Vere sample detection limits reported for all analytes not detected?		X	┝─┤				
	1	Vere all results for soil and sediment samples reported on a dry we		~		X			
	V	Vere % moisture (or solids) reported for all soil and sediment same				X			
	- H	Vere bulk soils/solids samples for volatile analysis extracted with m				X			
	H	required for the project, are TICs reported?					X		
		required for the project, are nos reported?					^		
4		Vero surregates added prior to extraction?					v		
	H	Vere surrogate percent recoveries in all camples within the laborate	ny OC limite?				Ŷ		
		vere surrogate percent recoveries in all samples within the laborate					^		
(3 C				v					
	H				~				
	Ľ	vere blanks analyzed at the appropriate frequency?		^					
	V	vere method blanks taken through the entire analytical process, inc	eanup	v					
	p D				X				
		vere blank concentrations < MQL?			X				
		aboratory control samples (LCS):			V				
	Ľ	Vere all COCS included in the LCS?			X				
	Ľ	vas each LCS taken through the entire analytical procedure, includ	ing prep and cleanup steps?		X				
	Ľ	Vere LCSs analyzed at the required frequency?			X				
	Ľ	Vere LCS (and LCSD, if applicable) %Rs within the laboratory QC I	mits?		X				
		oes the detectability check sample data document the laboratory's	capability to detect the COCs at the M	DL used					
	te	calculate the SDLs?			X				
		Vas the LCSD RPD within QC limits?			Х				
R7 C		latrix spike (MS) and matrix spike duplicate (MSD) data							
	Ľ	Vere the project/method specified analytes included in the MS and	MSD?		Х				
		Vere MS/MSD analyzed at the appropriate frequency?			Х				
	V	vere MS (and MSD, if applicable) %Rs within the laboratory QC lim	its?			X			R07C
	V	Vere MS/MSD RPDs within laboratory QC limits?			Х				
: 8 C) A	nalytical duplicate data							
	V	/ere appropriate analytical duplicates analyzed for each matrix?					Х		
	۷	Vere analytical duplicates analyzed at the appropriate frequency?					X		
	V	Vere RPDs or relative standard deviations within the laboratory QC	limits?				Х		
19	DI N	lethod quantitation limits (MQLs):							
	A	re the MQLs for each method analyte included in the laboratory da	ta package?		Х				
		to the MQLs correspond to the concentration of the lowest non-zero	o calibration standard?		Х				
	Ā	re unadjusted MQLs and DCSs included in the laboratory data pac	kage?		Х				

Х

Х

х

R10 OI Other problems/anomalies

sample results?

NA = Not applicable;
 NR = Not reviewed;

Are all known problems/anomalies/special conditions noted in this LRC and ER?

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

and methods associated with this laboratory data package?

Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the

Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices

identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review checklist: Supporting Data - Page 3 of 4

abo	rator	y Name:	Eurofins Houston	LRC Date:		9/23/2022					
oje	ect N	ame:	Twin Oaks PP	Laboratory Job	Number:	860-32955-1					
evi	ewer	Name:	Chad Bechtold								
<i>µ</i> 1	1 • 2							1	N 1 A 3		FD # ⁵
#	A	Initial calil	hyption (ICAL)	Description			Yes	NO	NA	NR	ER#
1	0		bration (ICAL)	estere fan eeste en ek te witkin OC li							
		were respo	onse factors and/or relative response fa	actors for each analyte within QC II	mits ?						
		were perce	ent RSDs or correlation coefficient crite	eria met ?				-			
		Was the hu	under of standards recommended in tr	le method used for all analytes?	a tha aumu	.0					
			bints generated between the lowest and	a highest standard used to calculat		<i>;</i>					
		Hee the init	tial available for all instruments used?	a an appropriate accord course at	and ord?			-			
	1			g an appropriate second source sta	anuaru?		- ^	-			
2		Initial and	continuing calibration varification (CV and CCV) and continuing cal	libration b	lank (CCR)					
2	101	Wee the C	CV applyzed at the method required fr		- v	-					
		Was the C	CV analyzed at the method-required in	the method required OC limite?							
		Was the IC	Al curve verified for each analyte?							$\left \right $	
		Was the of	solute value of the analyte concentration	on in the inorganic CCR < MDL2						\vdash	
2		Mass enor	stral funing				+	+		╞──┤	
5	<u> </u>	Was the or	phone and the second	ed for tuning?					Y	┝──┤	
		Were ion a	bundance data within the method-requi	ired OC limits?				+	Ŷ	+	
4	0	Internal st	andards (IS)								
-	<u> </u>	Woro IS or	ea counts and retention times within th	e method-required OC limits?				-	v		
5		Raw data	(NELAC Section 5.5.10)								
5	101	Were the r	aw data (for example, chromatograms	spectral data) reviewed by an ana	lvet?		X	-			
		Were data	associated with manual integrations fl	aged on the raw data?	iyət:			-			
6	0	Dual colur	nn confirmation				^				
<u> </u>	<u> </u>	Did dual co	humn confirmation results meet the me	atbod-required OC?				-	X		
7	0	Tentativel	v identified compounds (TICs)								
<u> </u>	<u> </u>	If TICs wer	re requested were the mass spectra at	od TIC data subject to appropriate	checks?			-	x		
8	li l	Interferen	ce Check Sample (ICS) results								
<u> </u>	<u>l'</u>	Were perce	ent recoveries within method OC limits	2			X				
9	li –	Serial dilu	tions nost digestion spikes and me	thod of standard additions			^	-			
5	<u>.</u>	Were perce	ent differences recoveries and the line	parity within the OC limits specified	in the met	hod?	X	-			
10		Method de	etection limit (MDL) studies								
	101	Was a MD	study performed for each reported ar	alvte?			X	-			
		Is the MDI	either adjusted or supported by the ar	alysis of DCSs2				+			
11	0	Proficienc	ev test reports								
	1.01	Was the la	boratory's performance acceptable on	the applicable proficiency tests or	evaluation	studies?	x	1			
12	01	Standards	documentation					+			
	<u>, , , , , , , , , , , , , , , , , , , </u>	Are all star	dards used in the analyses NIST-trace	able or obtained from other approx	oriate sour	ces?	X				
13	0	Compound	d/analyte identification procedures								
	<u>.</u>	Are the pro	ocedures for compound/analyte identified	cation documented?			X				
14	0	Demonstra	ation of analyst competency (DOC)								
		Was DOC	conducted consistent with NELAC Cha	pter 5?			X				
		Is documer	ntation of the analyst's competency up	-to-date and on file?			X				
15	0	Verificatio	n/validation documentation for method	nods (NELAC Chapter 5)							
	<u>.</u>										
		Are all the	methods used to generate the data do	cumented verified and validated v	where appl	icable?	X				
16	Ю	Laborator	v standard operating procedures (SC	OPs)	intere app.						
	1	Are laborat	tory SOPs current and on file for each	method performed?			x	+			
	1.	Items ident	tified by the letter "R" must be included	in the laboratory data package sub	omitted in t	he TRRP-required	report(s)	Items		· 1	
		identified h	w the letter "S" should be retained and	made available upon request for th	e appropri	ate retention period					
	2	O = organi	c analyses: I = inorganic analyses (and	general chemistry when applicable	le):	ponou					
	3	NA = Not a	applicable:	general ensembles, mion applicab	· - /,						
	υ.										

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked). 5.

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laborato	ry Name:	Eurofins Houston	LRC Date:	9/23/2022
Project N	ame:	Twin Oaks PP	Laboratory Job Number:	860-32955-1
Reviewer	Name:	Chad Bechtold		
ER # ¹			Description	
R07C	Method 30 Method 30 Method 60 analytical I criteria.	0.0: 860-32955-1 MS failed the recover 0.0: 860-32955-1 MSD failed the recov 10B: Due to the high concentration of 0 patch 860-68977 could not be evaluated	ry criteria for the following analyte(s): Chlorid ery criteria for the following analyte(s): Chlor Calcium, the matrix spike / matrix spike dupli d for accuracy and precision. The associate	le, Sulfate. Matrix interference is suspected. ide, Sulfate. Matrix interference is suspected. cate (MS/MSD) for preparation batch 860-68824 and d laboratory control sample (LCS) met acceptance
1.	I Items iden identified b	tified by the letter "R" must be included by the letter "S" should be retained and	in the laboratory data package submitted in made available upon request for the appropriate	the TRRP-required report(s). Items riate retention period.
2.	O = organi	c analyses; I = inorganic analyses (and	I general chemistry, when applicable);	
3.	NA = Not a	applicable;		
4.	NR = Not r	eviewed;		

Job ID: 860-32955-1

Project/Site: Twin Oaks PP

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-32955-1

Case Narrative

Receipt

The samples were received on 9/9/2022 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C

HPLC/IC

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

Metals

Method 6010B: Due to the high concentration of Calcium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 860-68824 and analytical batch 860-68977 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

General Chemistry

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

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Client Sample ID: MW-18

Lab Sample ID: 860-32955-1

Lab Sample ID: 860-32955-2

Lab Sample ID: 860-32955-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	DN	lethod	Prep Type
Chloride	116		0.500	mg/L	1	3	300.0	Total/NA
Sulfate	335		0.500	mg/L	1	3	300.0	Total/NA
Calcium	113		10.0	mg/L	50	6	6010B	Total/NA
Boron	0.157		0.0500	mg/L	1	6	6010B	Total/NA
Total Dissolved Solids	802		10.0	mg/L	1	S	SM 2540C	Total/NA
pH	6.9	HF		SU	1	S	SM 4500 H+ B	Total/NA
Temperature	14.7	HF		Degrees C	1	S	SM 4500 H+ B	Total/NA

Client Sample ID: MW-20

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D Method	Prep Type
Chloride	155		0.500	mg/L	1	300.0	Total/NA
Sulfate	308		0.500	mg/L	1	300.0	Total/NA
Calcium	79.5		10.0	mg/L	50	6010B	Total/NA
Boron	0.205		0.0500	mg/L	1	6010B	Total/NA
Total Dissolved Solids	780		10.0	mg/L	1	SM 2540C	Total/NA
pH	6.6	HF		SU	1	SM 4500 H+ B	Total/NA
Temperature	15.4	HF		Degrees C	1	SM 4500 H+ B	Total/NA

Client Sample ID: MW-21

Analyte	Result Qu	ualifier RL	Unit	Dil Fac	D Method	Prep Type
Chloride	133	0.500	mg/L	1	300.0	Total/NA
Sulfate	177	0.500	mg/L	1	300.0	Total/NA
Calcium	43.9	0.200	mg/L	1	6010B	Total/NA
Total Dissolved Solids	529	10.0	mg/L	1	SM 2540C	Total/NA
pH	6.3 HF	F	SU	1	SM 4500 H+ B	Total/NA
Temperature	16.4 HF	F	Degrees C	1	SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Client Sample ID: MW-18 Date Collected: 09/07/22 13:50

Date Received: 09/09/22 10:20

Method: 300.0 - Anions, Ion Chrom	atography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	116		0.500	mg/L			09/22/22 14:46	1
Fluoride	<0.500	U	0.500	mg/L			09/22/22 14:46	1
Sulfate	335		0.500	mg/L			09/22/22 14:46	1
– Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	113		10.0	mg/L		09/13/22 11:20	09/13/22 20:36	50
Boron	0.157		0.0500	mg/L		09/13/22 11:20	09/13/22 20:18	1
General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	802		10.0	mg/L			09/12/22 10:39	1
рН	6.9	HF		SU			09/13/22 13:13	1
Temperature	14.7	HF		Degrees C			09/13/22 13:13	1

Client Sample ID: MW-20

Date Collected: 09/07/22 10:40 Date Received: 09/09/22 10:20

Method: 300.0 - Anions, Ion Chromatography Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Chloride 0.500 09/22/22 15:21 155 mg/L 1 Fluoride <0.500 U 0.500 mg/L 09/22/22 15:21 1 0.500 09/22/22 15:21 Sulfate 308 mg/L 1 Method: 6010B - Metals (ICP) Result Qualifier Analyte D Prepared Dil Fac RL Unit Analyzed 79.5 10.0 09/13/22 11:20 09/13/22 22:31 50 Calcium mg/L 09/13/22 11:20 Boron 0.205 0.0500 mg/L 09/13/22 20:47 1 **General Chemistry** Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac 10.0 **Total Dissolved Solids** mg/L 09/12/22 10:39 780 1 SU 09/13/22 13:14 pН 6.6 HF 1 09/13/22 13:14 Temperature 15.4 HF Degrees C 1

Client Sample ID: MW-21

Date Collected: 09/07/22 16:10 Date Received: 09/09/22 10:20

Method: 300.0 - Anions, Ion Chrom	natography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	133		0.500	mg/L			09/22/22 15:33	1
Fluoride	<0.500	U	0.500	mg/L			09/22/22 15:33	1
Sulfate	177		0.500	mg/L			09/22/22 15:33	1
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	43.9		0.200	mg/L		09/13/22 11:20	09/13/22 20:51	1
Boron	<0.0500	U	0.0500	mg/L		09/13/22 11:20	09/13/22 20:51	1

Matrix: Water

Job ID: 860-32955-1

Lab Sample ID: 860-32955-2

Lab Sample ID: 860-32955-3

Matrix: Water

2 Lab Sample ID: 860-32955-1 Matrix: Water 4 Prepared Analyzed 09/22/22 14:46 1 09/22/22 14:46 1 09/22/22 14:46 1 09/22/22 14:46 1 7 7 Prepared Analyzed Dil Fac 0 0 1 0 0 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1

11 12 13

9/23/2022

Project/Site: Twin Oaks PP Client Sample ID: MW-21 Date Collected: 09/07/22 16:10 Date Received: 09/09/22 10:20

Client: Hydrex Environmental

Lab Sample ID: 860-32955-3 Matrix: Water

General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	529		10.0	mg/L			09/12/22 10:39	1
рН	6.3	HF		SU			09/13/22 13:16	1
Temperature	16.4	HF		Degrees C			09/13/22 13:16	1

Method: 300.0 - Anions, Ion Chromatography

								Client S	Sample ID: I	Method	Blank
Matrix: Water									Prep T	ype: To	tal/NA
Analysis Batch: 70205											
-		MB MB									
Analyte	Re	sult Qualifier		RL	Unit		DI	Prepared	Analyz	ed	Dil Fac
Chloride	<0.	500 U		0.500	mg/L				09/22/22 1	13:46	1
Fluoride	<0.	500 U		0.500	mg/L				09/22/22 1	13:46	1
Sulfate	<0.	500 U		0.500	mg/L				09/22/22 1	13:46	1
Lab Sample ID: LCS 860-70205/6							Clien	t Sample	e ID: Lab Co	ontrol S	ample
Matrix: Water									Prep T	vpe: To	tal/NA
Analysis Batch: 70205										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
······, ·····			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			10.0	9.558		mg/L		96	90 - 110		
Fluoride			10.0	10.59		mg/L		106	90 - 110		
Sulfate			10.0	9.033		mg/L		90	90 - 110		
Lab Sample ID: LCSD 860-70205/7						C	lient Sar	nnle ID:	Lab Contro	l Samn	
Matrix: Water								inpic ib.	Pren T	vpe: To	tal/NA
Analysis Batch: 70205										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Analysis Baten. rozoo			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			10.0	9.595		mg/L		96	90 - 110	0	20
Fluoride			10.0	10.64		mg/L		106	90 - 110	0	20
Sulfate			10.0	9.109		mg/L		91	90 - 110	1	20
Lab Sample ID: LLCS 860-70205/5							~				•
							Clien	t Sample	e ID: Lab Co	ontrol S	ample
Matrix: Water							Clien	t Sample	e ID: Lab Co Prep T	ontrol S ype: To	ample otal/NA
Matrix: Water Analysis Batch: 70205			Spike		11.00		Clien	it Sample	e ID: Lab Co Prep T	ontrol S ype: To	ample otal/NA
Matrix: Water Analysis Batch: 70205			Spike	LLCS	LLCS	Unit	Clien	V Baa	e ID: Lab Co Prep T %Rec	ontrol S ype: To	ample otal/NA
Matrix: Water Analysis Batch: 70205 Analyte			Spike Added	LLCS	LLCS Qualifier	Unit	Clien	%Rec	e ID: Lab Co Prep T %Rec Limits	ontrol S ype: To	ample otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Elugride			Spike Added 0.500	LLCS 	LLCS Qualifier J	Unit mg/L	Clien	**************************************	* ID: Lab Co Prep T %Rec Limits 50 - 150	ontrol S Type: To	ample otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate			Spike Added 0.500 0.500	LLCS Result 0.4966 0.4554 0.5233	LLCS Qualifier J J	Unit mg/L mg/l	Clien		* ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150	ontrol S ype: To	ample otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate			Spike Added 0.500 0.500 0.500	LLCS Result 0.4966 0.4554 0.5233	LLCS Qualifier J J	Unit mg/L mg/L mg/L	Clien		* ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150	ontrol S ype: To	ample otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS			Spike Added 0.500 0.500 0.500	LLCS Result 0.4966 0.4554 0.5233	LLCS Qualifier J J	Unit mg/L mg/L mg/L	Clien	%Rec 99 91 105	* ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp	ontrol S ype: To 	ample otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water			Spike Added 0.500 0.500 0.500	LLCS Result 0.4966 0.4554 0.5233	LLCS Qualifier J J	Unit mg/L mg/L mg/L	Clien	%Rec 99 91 105	* ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T	ontrol S ype: To ole ID: I ype: To	MW-18 otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205			Spike Added 0.500 0.500 0.500	LLCS Result 0.4966 0.4554 0.5233	LLCS Qualifier J J	Unit mg/L mg/L mg/L	Clien		* ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T	ontrol S ype: To ole ID: I ype: To	MW-18
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205	Sample	Sample	Spike Added 0.500 0.500 0.500 Spike	LLCS Result 0.4966 0.4554 0.5233 MS	LLCS Qualifier J J	Unit mg/L mg/L mg/L	Clien		* ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec	ontrol S ype: To ole ID: I ype: To	MW-18
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte	Sample Result	Sample Qualifier	Spike Added 0.500 0.500 0.500 0.500 0.500 Spike Added	LLCS <u>Result</u> 0.4966 0.4554 0.5233 MS <u>Result</u>	LLCS Qualifier J J MS Qualifier	Unit mg/L mg/L mg/L	Clien	%Rec 99 91 105	* ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits	ontrol S jype: To ole ID: I jype: To	MW-18
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride	Sample Result	Sample Qualifier	Spike Added 0.500 0.500 0.500 0.500 Spike Added 10.0	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2	LLCS Qualifier J J MS Qualifier 4	Unit mg/L mg/L mg/L	Clien	<u>%Rec</u> 99 91 105 <u>%Rec</u> 32	e ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110	ontrol S ype: To ole ID: I ype: To	MW-18 otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride	Sample Result 116 <0.500	Sample Qualifier	Spike Added 0.500 0.500 0.500 Spike Added 10.0 10.0	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44	LLCS Qualifier J J MS Qualifier 4	Unit mg/L mg/L mg/L	Clien	%Rec 99 91 105 %Rec 32 103	Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110	ontrol S ype: To ole ID: I ype: To	MW-18 otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate	Sample Result 116 <0.500 335	Sample Qualifier	Spike Added 0.500 0.500 0.500 Spike Added 10.0 10.0	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0	LLCS Qualifier J J MS Qualifier 4	Unit mg/L mg/L mg/L mg/L mg/L	Clien	%Rec 99 91 105	e ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110	ontrol S ype: To ole ID: I ype: To	MW-18 otal/NA
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MSD	Sample Result 116 <0.500 335	Sample Qualifier	Spike Added 0.500 </td <td>LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0</td> <td>LLCS Qualifier J J J MS Qualifier 4</td> <td>Unit mg/L mg/L mg/L mg/L mg/L mg/L</td> <td>Clien</td> <td>%Rec 99 91 105 %Rec 32 103 -59</td> <td>E ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110</td> <td>ontrol S jype: To oble ID: I jype: To oble ID: I</td> <td>MW-18 MW-18 MW-18</td>	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0	LLCS Qualifier J J J MS Qualifier 4	Unit mg/L mg/L mg/L mg/L mg/L mg/L	Clien	%Rec 99 91 105 %Rec 32 103 -59	E ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110	ontrol S jype: To oble ID: I jype: To oble ID: I	MW-18 MW-18 MW-18
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MSD Matrix: Water	Sample Result 116 <0.500 335	Sample Qualifier	Spike Added 0.500 0.500 0.500 Spike Added 10.0 10.0	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0	LLCS Qualifier J J MS Qualifier 4	Unit mg/L mg/L mg/L mg/L mg/L mg/L	Clien	%Rec 99 91 105 %Rec 32 103 -59 -59	e ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110 Client Samp Prep T	ontrol S ype: To ole ID: I ype: To ole ID: I ype: To	MW-18 MW-18 MW-18 MW-18 MW-18 MW-18
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MSD Matrix: Water Analysis Batch: 70205	Sample Result 116 <0.500 335	Sample Qualifier	Spike Added 0.500 0.500 0.500 Spike Added 10.0 10.0	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0	LLCS Qualifier J J MS Qualifier 4	Unit mg/L mg/L mg/L mg/L mg/L mg/L	Clien	%Rec 99 91 105 %Rec 32 103 -59	e ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110 Client Samp Prep T	ontrol S ype: To ole ID: I ype: To ole ID: I	MW-18 MW-18 MW-18 MW-18 MW-18 MW-18
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MSD Matrix: Water Analysis Batch: 70205	Sample Result 116 <0.500 335 Sample	Sample Qualifier U Sample	Spike Added 0.500 0.500 0.500 Spike Added 10.0 10.0 10.0 Spike	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0	LLCS Qualifier J J MS Qualifier 4 4	Unit mg/L mg/L mg/L mg/L mg/L	Clien	%Rec 99 91 105 %Rec 32 103 -59 -59	e ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110 Client Samp Prep T %Rec	ontrol S ype: To ole ID: I ype: To ole ID: I	MW-18 MW-18 MW-18 MW-18 MW-18 MW-18 MW-18 MW-18
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MSD Matrix: Water Analysis Batch: 70205 Analyte	Sample Result 116 <0.500 335 Sample Result	Sample Qualifier U Sample Qualifier	Spike Added 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 0.500 Spike Added Spike Added	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0 MSD Result	LLCS Qualifier J J MS Qualifier 4 4 MSD Qualifier	Unit mg/L mg/L mg/L mg/L mg/L mg/L	Clien	%Rec 99 91 105 %Rec 32 103 -59 \$	e ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110 90 - 110 90 - 110 90 - 110	ontrol S ype: To ole ID: I ype: To ole ID: I ype: To 	MW-18 otal/NA MW-18 otal/NA MW-18 otal/NA ELimit
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MSD Matrix: Water Analysis Batch: 70205 Analysis Batch: 70205 Analyte Chloride	Sample Result 116 <0.500 335 Sample Result 116	Sample Qualifier U Sample Qualifier	Spike Added 0.500 0.00 10.0 10.0 10.0	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0 MSD Result 119.5	LLCS Qualifier J J MS Qualifier 4 4 MSD Qualifier 4	Unit mg/L mg/L Mg/L mg/L mg/L mg/L	Clien	%Rec 99 91 105 %Rec 32 103 -59 -59 %Rec 35 35	e ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110 Client Samp Prep T %Rec Limits 90 - 110	ontrol S ype: To ole ID: I ype: To ole ID: I ype: To RPD 0	MW-18 otal/NA MW-18 otal/NA MW-18 otal/NA RPD Limit 20
Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Sulfate Lab Sample ID: 860-32955-1 MSD Matrix: Water Analysis Batch: 70205 Analyte Chloride Fluoride Fluoride Sulfate	Sample Result 116 <0.500 335 Sample Result 116 <0.500	Sample Qualifier U Sample Qualifier	Spike Added 0.500 0.500 0.500 0.500 Spike Added 10.0 10.0 10.0 10.0 10.0 10.0 10.0	LLCS Result 0.4966 0.4554 0.5233 MS Result 119.2 10.44 329.0 MSD Result 119.5 10.52	LLCS Qualifier J J MS Qualifier 4 4 MSD Qualifier 4	Unit mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	Clien	%Rec 99 91 105 %Rec 32 103 -59 %Rec 35 104	e ID: Lab Co Prep T %Rec Limits 50 - 150 50 - 150 50 - 150 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110 Client Samp Prep T %Rec Limits 90 - 110 90 - 110 90 - 110	ble ID: I ble ID: I ype: To ype: To ble ID: I ype: To 0 1	MW-18 otal/NA MW-18 otal/NA MW-18 otal/NA RPD Limit 20 20

RL

0.200

0.0500

Spike

Added

25.0

1.00

Spike

Added

25.0

1.00

Unit

mg/L

mg/L

Unit

mg/L

mg/L

Unit

mg/L

mg/L

LCS LCS

LCSD LCSD

24.20

0.9790

Result Qualifier

24.10

0.9780

Result Qualifier

D

Prepared

09/13/22 11:20

09/13/22 11:20

%Rec

%Rec

97

98

96

98

D

D

MB MB

<0.200 U

<0.0500 U

Result Qualifier

Matrix: Water

Matrix: Water

Matrix: Water

Analyte

Calcium

Analyte

Calcium

Boron

Analyte

Calcium

- 1.

Boron

Boron

Analysis Batch: 68977

Analysis Batch: 68977

Analysis Batch: 68977

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 860-68824/1-A

Lab Sample ID: LCS 860-68824/2-A

Lab Sample ID: LCSD 860-68824/3-A

000-

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 68824

RPD

0

0

RPD

Limit

20

20

Prep Batch: 68824

Prep Batch: 68824

Client Sample ID: Method Blank

Analyzed

09/13/22 20:06

09/13/22 20:06

Client Sample ID: Lab Control Sample

%Rec

Limits

80 - 120

80 - 120

%Rec

Limits

80 - 120

80 - 120

Client Sample ID: Lab Control Sample Dup

5
8
0

Dil Fac

1

1

Lab Sample ID: 860-32955-1 MS Matrix: Water Analysis Batch: 68977	;								Client Sample Prep Typ Prep Ba	ID: MW-18 e: Total/NA atch: 68824
-	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Calcium	117	E	25.0	135.0	E 4	mg/L		72	75 - 125	
Boron	0.157		1.00	1.130		mg/L		97	75 - 125	
_ Lab Sample ID: 860-32955-1 MS Matrix: Water	D							(Client Sample Prep Typ	ID: MW-18 e: Total/NA

Prep Type: Total/NA -----

Analysis Batch: 68977									Prep	Batch:	68824
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium	117	E	25.0	136.0	E 4	mg/L		76	75 - 125	1	20
Boron	0.157		1.00	1.140		mg/L		98	75 - 125	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-68647/1 Matrix: Water									Clie	ent Sa	ample ID: Metho Prep Type: 1	d Blank Fotal/NA
Analysis Batch: 68647	MB	MB										
Analyte	Result	Qualifier		RL		Unit		D	Prepar	ed	Analyzed	Dil Fac
Total Dissolved Solids	<5.00	U		5.00		mg/L					09/12/22 10:39	1
_ Lab Sample ID: LCS 860-68647/2								Clie	nt Sar	nple	ID: Lab Control	Sample
Matrix: Water										÷	Prep Type: 1	Fotal/NA
Analysis Batch: 68647												
			Spike		LCS	LCS					%Rec	
Analyte			Added		Result	Qualifier	Unit	I	D %R	lec	Limits	
Total Dissolved Solids			1000		962.0		mg/L			96	80 - 120	

Job ID: 860-32955-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCSD 860-68647/3 Matrix: Water Analysis Batch: 68647				CI	ient Sam	ple ID:	Lab Contro Prep ⁻	ol Sampl Type: To	e Dup tal/NA
-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Dissolved Solids	1000	966.0		mg/L		97	80 - 120	0	10
Lab Sample ID: LLCS 860-68647/4					Client	Sample	ID: Lab C	ontrol S	ample
Matrix: Water							Prep [·]	Гуре: То	tal/NA
Analysis Batch: 68647									
	Spike	LLCS	LLCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids	5.00	<5.00	U	mg/L		90	50 - 150		

HPLC/IC

Analysis Batch: 70205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-32955-1	MW-18	Total/NA	Water	300.0	
860-32955-2	MW-20	Total/NA	Water	300.0	
860-32955-3	MW-21	Total/NA	Water	300.0	
MB 860-70205/3	Method Blank	Total/NA	Water	300.0	
LCS 860-70205/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-70205/7	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-70205/5	Lab Control Sample	Total/NA	Water	300.0	
860-32955-1 MS	MW-18	Total/NA	Water	300.0	
860-32955-1 MSD	MW-18	Total/NA	Water	300.0	

Metals

Prep Batch: 68824

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-32955-1	MW-18	Total/NA	Water	3010A	
860-32955-2	MW-20	Total/NA	Water	3010A	
860-32955-3	MW-21	Total/NA	Water	3010A	
MB 860-68824/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-68824/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-68824/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
860-32955-1 MS	MW-18	Total/NA	Water	3010A	
860-32955-1 MSD	MW-18	Total/NA	Water	3010A	

Analysis Batch: 68977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-32955-1	MW-18	Total/NA	Water	6010B	68824
860-32955-1	MW-18	Total/NA	Water	6010B	68824
860-32955-2	MW-20	Total/NA	Water	6010B	68824
860-32955-2	MW-20	Total/NA	Water	6010B	68824
860-32955-3	MW-21	Total/NA	Water	6010B	68824
MB 860-68824/1-A	Method Blank	Total/NA	Water	6010B	68824
LCS 860-68824/2-A	Lab Control Sample	Total/NA	Water	6010B	68824
LCSD 860-68824/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	68824
860-32955-1 MS	MW-18	Total/NA	Water	6010B	68824
860-32955-1 MSD	MW-18	Total/NA	Water	6010B	68824

General Chemistry

Analysis Batch: 68647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-32955-1	MW-18	Total/NA	Water	SM 2540C	_
860-32955-2	MW-20	Total/NA	Water	SM 2540C	
860-32955-3	MW-21	Total/NA	Water	SM 2540C	
MB 860-68647/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-68647/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-68647/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-68647/4	Lab Control Sample	Total/NA	Water	SM 2540C	
—					

Analysis Batch: 68854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-32955-1	MW-18	Total/NA	Water	SM 4500 H+ B	
860-32955-2	MW-20	Total/NA	Water	SM 4500 H+ B	

QC Association Summary

9

General Chemistry (Continued)

Analysis Batch: 68854 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
860-32955-3	MW-21	Total/NA	Water	SM 4500 H+ B	

Initial

Amount

50 mL

50 mL

100 mL

Final

Amount

50 mL

50 mL

200 mL

Batch

70205

68824

68977

68824

68977

68647

68854

Number

Dil

1

1

50

1

1

Factor

Run

Client Sample ID: MW-18 Date Collected: 09/07/22 13:50 Date Received: 09/09/22 10:20

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Batch

Туре

Prep

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Batch

Method

300.0

3010A

6010B

3010A

6010B

SM 2540C

SM 4500 H+ B

Lab

EET HOU

Matrix: Water

Lab Sample ID: 860-32955-1 Matrix: Water

Analyst

WP

MD

DP

MD

DP

MCA

Lab Sample ID: 860-32955-2

TL

Prepared

or Analyzed

09/22/22 14:46

09/13/22 11:20

09/13/22 20:18

09/13/22 11:20

09/13/22 20:36

09/12/22 10:39

09/13/22 13:13

Client Sample ID: MW-20

Date Collected: 09/07/22 10:40 Date Received: 09/09/22 10:20

—	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			70205	09/22/22 15:21	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	68824	09/13/22 11:20	MD	EET HOU
Total/NA	Analysis	6010B		1			68977	09/13/22 20:47	DP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	68824	09/13/22 11:20	MD	EET HOU
Total/NA	Analysis	6010B		50			68977	09/13/22 22:31	DP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	68647	09/12/22 10:39	MCA	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			68854	09/13/22 13:14	TL	EET HOU

Client Sample ID: MW-21

Date Collected: 09/07/22 16:10 Date Received: 09/09/22 10:20

Lab Sample ID: 860-32955-3

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			70205	09/22/22 15:33	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	68824	09/13/22 11:20	MD	EET HOU
Total/NA	Analysis	6010B		1			68977	09/13/22 20:51	DP	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	68647	09/12/22 10:39	MCA	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			68854	09/13/22 13:16	TL	EET HOU

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-04-23
Florida	NELAP	E871002	06-30-23
Louisiana	NELAP	03054	06-30-23
Oklahoma	State	1306	08-31-23
Texas	NELAP	T104704215-22-47	06-30-23
Texas	TCEQ Water Supply	T104704215	12-31-22
USDA	US Federal Programs	P330-22-00025	03-02-23

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET HOU
6010B	Metals (ICP)	SW846	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 4500 H+ B	рН	SM	EET HOU
3010A	Preparation, Total Metals	SW846	EET HOU

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-32955-1	MW-18	Water	09/07/22 13:50	09/09/22 10:20
860-32955-2	MW-20	Water	09/07/22 10:40	09/09/22 10:20
860-32955-3	MW-21	Water	09/07/22 16:10	09/09/22 10:20

curoiins Aerico, Stanord															- 44	ik eurofir	20		
1147 Greenbriar Dr Stafford, TX 77477 Phone (281) 240-4200	U	Shain (of Cus	stody F	Seco	ē									r		Ame	ronment Testing :rica	
Client Information	Sampler U 7	21012	en de	Be La	PM: chtold, Cl	ad					Ca C	tier Tra	cking No(÷	Γ	COC No:			r
lient Contact Vichelle Transier	Phone: 936-568-9451			Cha Cha	ail: Id.bechto	ld@ei	Inofins	etcor			<u>8</u> ř	te of O	igin:			Page: Page 1 of 1			T
ompany: tydrex Environmental			:OISMd					₹		sis R		sted				dol #			
ddress: 1120 NW Stallings Drive	Due Date Requeste	ÿ			S.					⊢			-		8 8	Preservation (Codes:		1
tik. 4acogdaches	TAT Requested (da	ys): RUS														A HCL B NaOH C Zn Acetate	ĨŽ∛ ∑zo	exane one sNaO2	
tate. Zp: X. 75964	Compliance Projec	t: ∆Yes ⊿	N		·····											D Nitric Acid E NaHSO4	l ž ž I L O	204S	
home: 366-568-9451(Tel)	P0 #: 1-14-1007				(-in	F MeOH G Amchlor U Associatio	α α α η	2S203 SO4 B Podochidroto	
mait: httansier@hvdrex-inc.com	wo # -14-1007				୍ର ଭୁକୁନ୍ତି							_			Ć.	l loe J DI Water	> R	etone CAA	
roject Name: Win Oaks PP	Project #: 86000207				st X.V)e										ແມ່ເສັ	K EDTA L EDA	≂ ≥ N	H 4-5 ter (specify)	
site:	:#MOSS				Alpuré 							_			nemite	Other			
		Sample	Sample Type (C=comp.	Matrix (w-water, s=solid, Demonstrated	nn ar e co spoiailteigt	oride	ete ete	uo	wnja)ការបំណែវិង្សា)				<u> </u>
Sample Identification	Sample Date	Time	G=grab) Breserva	BT-Tissue, A-Ali 101 2000		140 2	uns 2	Dor	cal D	301 ²	Hd					Specia	al Instruct	ions/Note:	
AW-18	24/2/6	1350	υ	M	z	×	×	×	×	×	×								-
dW-20	21/t/b	040	σ	>	z	×	×	×	×	×	×				5 (Gr. 10 1997 - 1997 1997 - 1997				1
JW-21	22/2/6	/1010	σ	×	z	×	×	×	×	×	×				<u>6</u>				
															0				T
															an a				r –
																			<u> </u>
				-												Temp:].		D-HOU-343	
														_	L	C/⊢⁺+U.3 Corrected T		√.	
860-32955 Chain of Custody						-	-	1		-	-	<u> </u>					-)	τ
1						+	-					-							-
Ossible Hazard Identification	Poison B		Radiologica			Lafe Ref	íspos um To	al (A Clier	fee	je⊓ I	e asse Disp	ssed osal E	if samp v Lab	les are	Arch	<mark>d longer tha</mark> ve For	un 1 monti Mc	h) onths	—
Deliverable Requested: 1 II III, IV Other (specify)					Spe	cial In	structi	O/suc	C Re	quirer	nents								-
Empty Kit Relinquished by		Date:			Time:							Meth	od of Ship	ment					1
celinquished by: Lann Kunhan	Date/Time: 9/9	- 227		Company Hud	メギン	Receive	id by:	\mathcal{A}	\mathcal{J}	2	Δľ	τΛ			12	2 10		卽	_
telinquished by:	Date/Time:			Сотрану		Receive	žą į			•			Da	e fime:			Сопр	any	
telinquished by:	Date/Time:			Company		Receive	Sq pic						D D	:e/Time:			Сотр	any	
Custody Seals Intact: Custody Seal No.						Cooker		ature(s)	ູ ເ	Other	Remar	ij							
]												Ver	01/16/2019	٦

5

Eurofins Xenco, Stafford

Client: Hydrex Environmental

Login Number: 32955 List Number: 1 Croater: Pubio Xuri

Creator:	Rubio,	ruri

Question	Answer	Comment
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Job Number: 860-32955-1

List Source: Eurofins Houston

🛟 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Houston 4145 Greenbriar Dr Stafford, TX 77477 Tel: (281)240-4200

Laboratory Job ID: 860-32956-1

Client Project/Site: Twin Oaks PP

For:

..... Links

Review your project results through

EOL

Have a Question?

www.eurofinsus.com/Env

Visit us at:

Ask— The Expert Hydrex Environmental 1120 NW Stallings Drive Nacogdoches, Texas 75964

Attn: Michelle Transier

had a. Beithold

Authorized for release by: 9/23/2022 9:26:56 AM

Chad Bechtold, Project Manager (813)690-3563 Chad.Bechtold@et.eurofinsus.com

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

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

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Sample Summary	17
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Qualifiers

Qualifiers		3
HPLC/IC	Qualifier Description	Λ
J U	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. Indicates the analyte was analyzed for but not detected.	4
Metals Qualifier	Qualifier Description	6
4 E	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. Result exceeded calibration range.	
U	Indicates the analyte was analyzed for but not detected.	8
General Ch Qualifier	emistry Qualifier Description	

Quaimer	Qualitier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

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

Appendix A								
Laboratory Data Package Cover Page - Page 1 of 4								
This data package is for Eurofins Houston job number 860-32956-1 and consists of:								
☑ R1 - Field chain-of-custody documentation; ☑ R2 - Sample identification cross references	4							
 R2 - Sample identification cross-reference; R3 - Test reports (analytical data sheets) for each environmental sample that includes: 	5							
b. dilution factors,								
c. preparation methods, d. cleanup methods, and								
e. if required for the project, tentatively identified compounds (TICs).	8							
a. Calculated recovery (%R), and	9							
b. The laboratory's surrogate QC limits. ☑ R5 - Test reports/summary forms for blank samples;								
R6 - Test reports/summary forms for laboratory control samples (LCSs) including: a. LCS spiking amounts.								
b. Calculated %R for each analyte, and								
Internation of a constraint of a constrain	13							
 a. Samples associated with the MS/MSD clearly identified, b. MS/MSD spiking amounts, 								
 c. Concentration of each MS/MSD analyte measured in the parent and spiked samples, d. Calculated %Rs and relative percent differences (RPDs), and 								

- e. The laboratory's MS/MSD QC limits
- □ R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- \blacksquare R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Chad Bechtold Name (printed)

Chad a. Bestela Signature

9/23/2022 Date

Project Manager Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Labo	orato	y Name:	Eurofins Houston LRC	C Date: 9/23/2022					
Project Na		ame: Twin Oaks PP Laboratory Job Number: 860-32956-1							
evi	ewer	Name:	Chad Bechtold	· · · ·					
# ¹	A ²		Description		Yes	No	NA ³	NR^4	ER
R1 01		Chain-of-custody (C-O-C)							
	•	Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?							
		Were all departures from standard conditions described in an exception report?							
R2 0		Sample and quality control (QC) identification							
	-	Are all field sample ID numbers cross-referenced to the laboratory ID numbers?							
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?							
3	0	Test renorts							
		Were all sa	mples prepared and analyzed within holding times?		X				
		Other than	those results < MQL, were all other raw values bracketed by	/ calibration standards?	X				
		Were calcu	lations checked by a peer or supervisor?		X				
		Were all a	alve identifications checked by a peer or supervisor?			1			
		Were same	ble detection limits reported for all analytes not detected?			1			
		Were all re	sults for soil and sediment samples reported on a dry weight	t basis?		-	x		
		Were % moisture (or solids) reported for all soil and sediment samples?					X		
		Were % moisture (or solids) reported for all soli and sediment samples?					X		
		If required	for the project are TICs reported?			-			
R4 (10	If required for the project, are TICs reported?							
	V	Were surregetee added prior to extraction?							
		Were surre	gates added prior to extraction:	OC limite?		-			
DE		Test rene	to aumment forme for blank complee			-			
KD	101	Were appropriate type(c) of blanks amples				-			
		Were appr	re analyzed at the appropriate frequency?			-			
		Were method blanks taken through the entire analytical process, including propagation and, if applicable, cleanup							
		procedures?							
		procedures	?						
		vvere blan			<u> </u>	_			
<u>K0</u>	101	Laborator	/ control samples (LCS):						
		were all C	JUS Included in the LUS?						
		was each	LCS taken through the entire analytical procedure, including	prep and cleanup steps?		_			
		were LCS	s analyzed at the required frequency?			_			
		vvere LCS	(and LCSD, if applicable) %Ks within the laboratory QC limit		<u> </u>				
		Does the d	etectability check sample data document the laboratory's ca	pability to detect the COCs at the MDL use	a	1			
		to calculate	the SDLs?		X	_			
		Was the Lo	SD RPD within QC limits?		X	<u> </u>			
R7	0	Matrix spi	ke (MS) and matrix spike duplicate (MSD) data						
		Were the p	roject/method specified analytes included in the MS and MS	D?	<u> </u>				
		Were MS/	ISD analyzed at the appropriate frequency?		<u> </u>				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	}		X			R07C
		Were MS/	ISD RPDs within laboratory QC limits?		X				
R8	01	Analytical	duplicate data			<u> </u>			
		Were appr	opriate analytical duplicates analyzed for each matrix?				X		
		Were anal	tical duplicates analyzed at the appropriate frequency?				X		
		Were RPD	s or relative standard deviations within the laboratory QC lim	its?			Х		
R9	01	Method qu	antitation limits (MQLs):						
		Are the MC	Ls for each method analyte included in the laboratory data p	backage?	Х				
		Do the MQ	Ls correspond to the concentration of the lowest non-zero ca	alibration standard?	X				
		Are unadiu	sted MQLs and DCSs included in the laboratory data packad	ae?	X	T T			

Х

Х

х

R10 OI Other problems/anomalies

sample results?

NA = Not applicable;
 NR = Not reviewed;

Are all known problems/anomalies/special conditions noted in this LRC and ER?

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

and methods associated with this laboratory data package?

Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the

Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices

identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).
Laboratory Review checklist: Supporting Data - Page 3 of 4

abo	rator	y Name:	Eurofins Houston	LRC Date:		9/23/2022					
oje	ct N	ame:	Twin Oaks PP	Laboratory	Job Number:	860-32956-1					
evie	ewer	Name:	Chad Bechtold								
<i>u</i> 1	•2			b 1.4				1	N1 A 3	ND4	50 <i>4</i> ⁵
#	A	Initial cali	exetion (ICAL)	Description			Yes	NO	NA	NR	ER#
1	0		oration (ICAL)								
		vvere resp	onse factors and/or relative response to		QC limits?						
		were perc	ent RSDs of correlation coefficient crite	eria met?	-0						
		Was the hu	inder of standards recommended in tr	le method used for all analyte	S?	-0					
			bints generated between the lowest and	a highest standard used to ca	culate the curv	er					
		Hee the ini	tial adilitation outro been verified using	a on appropriate accord cour	o atandard?			<u> </u>			
				g an appropriate second source	e stanuaru?		^				
2		Initial and	continuing calibration varification (ICV and CCV/) and continuin	a calibration l	alank (CCR)					
2	101	Wee the C	Continuing calibration vertication (auonov?	g campration i						
		Was the C	CV analyzed at the method-required ne	equency?	.0						
		Was the IC	A curve verified for each analyte?							\vdash	
		Was the of		ion in the inorganic CCR < MC	01.2			-		\vdash	
2		Mass ence	stral funing		·L:		+	-		\vdash	
5	0	Was the or	propriate compound for the method us	sed for tuning?				-	Y	\vdash	
		Were ion a	bundance data within the method requ	ired OC limits?				-	X	\vdash	
4	0	Internal st	andards (IS)						~		
-	<u> </u>	Woro IS or	ea counts and retention times within th	e method-required OC limits?					Y		
5		Raw data	(NEL AC Section 5 5 10)								
5		Were the r	aw data (for example, chromatograms	spectral data) reviewed by a	analyst?		×	-			
		Were data	associated with manual integrations fla	agged on the raw data?	i analyst:			-			
6	0	Dual colur	nn confirmation								
<u> </u>	<u> </u>	Did dual co	hump confirmation results meet the me	atbod-required OC2					x		
7	0	Tentativel	videntified compounds (TICs)						~		
<u> </u>	<u> </u>	If TICs wer	e requested were the mass spectra ar	nd TIC data subject to approp	iate checks?				x		
8	1	Interferen	ce Check Sample (ICS) results						~		
<u> </u>	<u>'</u>	Were perce	ent recoveries within method OC limits	2			×				
9	1	Serial dilu	tions post digestion spikes and me	thod of standard additions							
5	<u>'</u>	Were perce	ent differences recoveries and the line	parity within the OC limits spe	rified in the me	thod?	X				
10		Method de	etection limit (MDL) studies								
		Was a MD	study performed for each reported an	alvte?			×				
		Is the MDI	either adjusted or supported by the an	alysis of DCSs?				-			
11	loi	Proficienc	v test reports								
	0	Was the la	boratory's performance acceptable on	the applicable proficiency test	s or evaluation	studies?	X				
12	0	Standards	documentation								
		Are all star	ndards used in the analyses NIST-trace	able or obtained from other a	ppropriate sou	rces?	X				
13	0	Compoun	d/analyte identification procedures								
	•	Are the pro	cedures for compound/analyte identific	cation documented?			X				
14	0	Demonstr	ation of analyst competency (DOC)								
		Was DOC	conducted consistent with NELAC Cha	apter 5?			X				
		Is docume	ntation of the analyst's competency up-	-to-date and on file?			X				
15	0	Verificatio	n/validation documentation for meth	nods (NELAC Chapter 5)							
-	· - ·										
		Are all the	methods used to generate the data do	cumented, verified and valida	ted, where and	licable?	x				
16	01	Laborator	v standard operating procedures (SC	OPs)				1		\vdash	
	<u>, , , , , , , , , , , , , , , , , , , </u>	Are laborat	for SOPs current and on file for each r	method performed?			x			\vdash	
	1	Items ident	tified by the letter "R" must be included	in the laboratory data package	e submitted in	the TRRP-required	report(s)	Items			
	••	identified h	v the letter "S" should be retained and	made available upon request	for the appropr	iate retention period					
	2	O = organi	c analyses: I = inorganic analyses (and	l general chemistry when an	licable).						
	3	$NA = Not \alpha$	innlicable:	general onematry, when app							
	υ.	1111 11010	ippiloabio,								

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laborato	ry Name:	Eurofins Houston	LRC Date:	9/23/2022				
Project N	lame:	Twin Oaks PP	Laboratory Job Number:	860-32956-1				
Reviewer	r Name:	Chad Bechtold						
ER # ¹			Description					
R07C	Method 60 analytical criteria.	010B: Due to the high concentration of batch 860-69693 could not be evaluate	Calcium, the matrix spike / matrix spike duplic ed for accuracy and precision. The associated	ate (MS/MSD) for preparation batch 860-69578 and laboratory control sample (LCS) met acceptance				
1.	Items iden identified t	tified by the letter "R" must be include by the letter "S" should be retained and	d in the laboratory data package submitted in t I made available upon request for the appropri	he TRRP-required report(s). Items ate retention period.				
2.	O = organ	ic analyses; I = inorganic analyses (an	d general chemistry, when applicable);					
3.	NA = Not a	applicable;						
4.	NR = Not	reviewed;						
5.	ER# = Exc	ception Report identification number (a	number (an Exception Report should be completed for an item if "NR" or "No" is checked					

Job ID: 860-32956-1

Laboratory: Eurofins Houston

Narrative

Job Narrative 860-32956-1

Receipt

The samples were received on 9/9/2022 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C

HPLC/IC

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

Metals

Method 6010B: Due to the high concentration of Calcium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 860-69578 and analytical batch 860-69693 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

General Chemistry

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

Client Sample ID: MW-19

Lab Sample ID: 860-32956-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	215		0.500	mg/L	1	_	300.0	Total/NA
Fluoride	0.661		0.500	mg/L	1		300.0	Total/NA
Sulfate - DL	831		5.00	mg/L	10		300.0	Total/NA
Calcium	270		10.0	mg/L	50		6010B	Total/NA
Boron	0.286		0.0500	mg/L	1		6010B	Total/NA
Total Dissolved Solids	1590		20.0	mg/L	1		SM 2540C	Total/NA
рН	6.8	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	18.1	HF		Degrees C	1		SM 4500 H+ B	Total/NA
Client Sample ID: MW-22					La	ıb	Sample ID:	860-32956-2

Client Sample ID: MW-22

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	68.4		0.500	mg/L	1	_	300.0	Total/NA
Sulfate	18.9		0.500	mg/L	1		300.0	Total/NA
Calcium	11.3		0.200	mg/L	1		6010B	Total/NA
Total Dissolved Solids	213		5.00	mg/L	1		SM 2540C	Total/NA
pН	6.2	HF		SU	1		SM 4500 H+ B	Total/NA
Temperature	18.2	HF		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample Results

Job ID: 860-32956-1

Matrix: Water

Lab Sample ID: 860-32956-1

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Client Sample ID: MW-19 Date Collected: 09/08/22 09:15

Date Received: 09/09/22 10:20

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	215		0.500	mg/L			09/22/22 16:09	1
Fluoride	0.661		0.500	mg/L			09/22/22 16:09	1
– Method: 300.0 - Anions. Ion Chrom	natography -	DL						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	831		5.00	mg/L			09/22/22 18:00	10
 Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	270		10.0	mg/L		09/19/22 09:30	09/19/22 15:34	50
Boron	0.286		0.0500	mg/L		09/19/22 09:30	09/19/22 15:12	1
– General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1590		20.0	mg/L			09/14/22 16:18	1
рН	6.8	HF		SU			09/16/22 15:07	1
Temperature	18.1	HF		Degrees C			09/16/22 15:07	1
Client Sample ID: MW-22						Lab Sam	ple ID: 860-3	2956-2
Date Collected: 09/08/22 10:40							Matrix	k: Water
Date Received: 09/09/22 10:20								
Method: 300.0 - Anions, Ion Chrom	natography							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	68.4		0.500	mg/L			09/22/22 16:21	1
Fluoride	<0.500	U	0.500	mg/L			09/22/22 16:21	1
Sulfate	18.9		0.500	mg/L			09/22/22 16:21	1
Method: 6010B - Metals (ICP)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Coloium	11.3		0.200	mg/L		09/19/22 09:30	09/19/22 15:30	1
Calcium								

General Chemistry								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	213		5.00	mg/L			09/14/22 16:18	1
pH	6.2	HF		SU			09/16/22 15:09	1
Temperature	18.2	HF		Degrees C			09/16/22 15:09	1

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

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

_	
Lab Sample ID: MB 860-70205/3	

Method: 300.0 - Anions, Ion Chromatography

Matrix: Water	atrix: Water							Fotal/NA
Analysis Batch: 70205								
	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500	mg/L			09/22/22 13:46	1
Fluoride	<0.500	U	0.500	mg/L			09/22/22 13:46	1
Sulfate	<0.500	U	0.500	mg/L			09/22/22 13:46	1

Lab Sample ID: LCS 860-70205/6 Matrix: Water

Analysis Batch: 70205

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	10.0	9.558		mg/L		96	90 - 110	
Fluoride	10.0	10.59		mg/L		106	90 - 110	
Sulfate	10.0	9.033		mg/L		90	90 - 110	

Lab Sample ID: LCSD 860-70205/7 Matrix: Water

Analysis Batch: 70205

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	10.0	9.595		mg/L		96	90 _ 110	0	20
Fluoride	10.0	10.64		mg/L		106	90 - 110	0	20
Sulfate	10.0	9.109		mg/L		91	90 - 110	1	20

Lab Sample ID: LLCS 860-70205/5

Matrix: Water

thatysis Batch: 70205												
	Spike	LLCS	LLCS				%Rec					
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits					
Chloride	0.500	0.4966	J	mg/L		99	50 - 150					
Fluoride	0.500	0.4554	J	mg/L		91	50 - 150					
Sulfate	0.500	0.5233		mg/L		105	50 - 150					

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 860-69578/1-A Matrix: Water Analysis Batch: 69693								Client	Sample ID: Metl Prep Type Prep Bat	nod Blank : Total/NA :ch: 69578
Analuto	MB	MB Qualifier	Р		Unit		P	Broparod	Analyzod	Dil Eac
Calcium	<0.200		0.20	0	01111 mg/L		- — —)9/19/22 09:	30 09/19/22 14:53	$\frac{Dirrac}{1}$
Boron	<0.0500	U	0.050	0	mg/L		(09/19/22 09:	30 09/19/22 14:53	1
_ Lab Sample ID: LCS 860-69578/2-A							Cli	ent Samp	le ID: Lab Contro	ol Sample
Matrix: Water									Prep Type	: Total/NA
Analysis Batch: 69693									Prep Bat	ch: 69578
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit		D %Rec	Limits	
Calcium			25.0	24.30		mg/L		97	80 - 120	
Boron			1.00	0.9810		mg/L		98	80 - 120	

5

8

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

Lab Sample ID: LCSD 860-69578/3	- A					Clie	ent Sam	nple ID:	Lab Contro	I Sampl	e Dup
Matrix: Water									Prep 1	Type: To	tal/NA
Analysis Batch: 69693									Prep	Batch:	69578
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium			25.0	24.20		mg/L		97	80 - 120	0	20
Boron			1.00	0.9810		mg/L		98	80 - 120	0	20
 Lab Sample ID: 860-32956-1 MS									Client Sam	ple ID: N	/W-19
Matrix: Water									Prep 1	vpe: To	tal/NA
Analysis Batch: 69693									Prep	Batch:	69578
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Calcium	267	E	25.0	278.0	E 4	mg/L		44	75 - 125		
Boron	0.286		1.00	1.300		mg/L		101	75 - 125		
 Lab Sample ID: 860-32956-1 MSD									Client Sam	ple ID: N	/W-19
Matrix: Water									Prep 1	vpe: To	tal/NA
Analysis Batch: 69693									Prep	Batch:	69578
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium	267	E	25.0	279.0	E 4	mg/L		48	75 - 125	0	20
Boron	0.286		1.00	1.300		mg/L		101	75 - 125	0	20

Lab Sample ID: MB 860-69063/1 Matrix: Water									Client	Sample ID: Prep 1	Method Type: To	Blank otal/NA
Analysis Baten. 00000	МВ	МВ										
Analyte	Result	Qualifier		RL		Unit		D	Prepared	Analyz	ed	Dil Fac
Total Dissolved Solids	<5.00	U		5.00		mg/L				09/14/22	16:18	1
Lab Sample ID: LCS 860-69063/2								Clie	nt Sample	e ID: Lab Co	ontrol S	ample
Matrix: Water										Prep 1	Type: To	otal/NA
Analysis Batch: 69063											-	
-			Spike		LCS	LCS				%Rec		
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1000		938.0		mg/L		94	80 - 120		
Lab Sample ID: LCSD 860-69063/3							с	lient Sa	mple ID:	Lab Contro	ol Samp	le Dup
Matrix: Water										Prep 1	· Type: To	otal/NA
Analysis Batch: 69063												
-			Spike		LCSD	LCSD				%Rec		RPD
Analyte			Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Dissolved Solids			1000		945.0		mg/L		95	80 - 120	1	10

QC Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Water

Water

Water

Water

Water

Water

Water

Matrix

Water

Water

Water

Water

Water

Water

Water

Method

300.0

300.0

300.0

300.0

300.0

300.0

300.0

Method

3010A

3010A

3010A

3010A

3010A

3010A

3010A

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Client Sample ID

MW-19

MW-19

MW-22

Method Blank

Lab Control Sample

Lab Control Sample

Client Sample ID

MW-19

MW-22

MW-19

MW-19

Method Blank

Lab Control Sample

Lab Control Sample Dup

Lab Control Sample Dup

Analysis Batch: 70205

HPLC/IC

Lab Sample ID

860-32956-1 - DL

MB 860-70205/3

LCS 860-70205/6

LCSD 860-70205/7

LLCS 860-70205/5

Prep Batch: 69578 Lab Sample ID

MB 860-69578/1-A

LCS 860-69578/2-A

LCSD 860-69578/3-A

860-32956-1 MS

860-32956-1 MSD

860-32956-1

860-32956-2

860-32956-1

860-32956-2

Metals

Prep Batch

Prep Batch

()	

Analysis Batch: 69693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-32956-1	MW-19	Total/NA	Water	6010B	69578
860-32956-1	MW-19	Total/NA	Water	6010B	69578
860-32956-2	MW-22	Total/NA	Water	6010B	69578
MB 860-69578/1-A	Method Blank	Total/NA	Water	6010B	69578
LCS 860-69578/2-A	Lab Control Sample	Total/NA	Water	6010B	69578
LCSD 860-69578/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	69578
860-32956-1 MS	MW-19	Total/NA	Water	6010B	69578
860-32956-1 MSD	MW-19	Total/NA	Water	6010B	69578

General Chemistry

Analysis Batch: 69063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-32956-1	MW-19	Total/NA	Water	SM 2540C	
860-32956-2	MW-22	Total/NA	Water	SM 2540C	
MB 860-69063/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-69063/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-69063/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	

Analysis Batch: 69426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-32956-1	MW-19	Total/NA	Water	SM 4500 H+ B	
860-32956-2	MW-22	Total/NA	Water	SM 4500 H+ B	

Initial

Amount

50 mL

50 mL

50 mL

Final

Amount

50 mL

50 mL

200 mL

Batch

Number

70205

70205

69578

69693

69578

69693

69063

69426

Dil

1

10

1

50

1

1

Factor

Run

DL

Client Sample ID: MW-19 Date Collected: 09/08/22 09:15 Date Received: 09/09/22 10:20

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Batch

Туре

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Prep

Prep

Batch

Method

300.0

300.0

3010A

6010B

3010A

6010B

SM 2540C

SM 4500 H+ B

Lab

EET HOU

Matrix: Water

Lab Sample ID: 860-32956-1 Matrix: Water

Analyst

WP

WP

MD

DP

MD

DP

MCA

Lab Sample ID: 860-32956-2

TL

Prepared

or Analyzed

09/22/22 16:09

09/22/22 18:00

09/19/22 09:30

09/19/22 15:12

09/19/22 09:30

09/19/22 15:34

09/14/22 16:18

09/16/22 15:07

Client Sample ID: MW-22

Date Collected: 09/08/22 10:40 Date Received: 09/09/22 10:20

-	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			70205	09/22/22 16:21	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	69578	09/19/22 09:30	MD	EET HOU
Total/NA	Analysis	6010B		1			69693	09/19/22 15:30	DP	EET HOU
Total/NA	Analysis	SM 2540C		1	200 mL	200 mL	69063	09/14/22 16:18	MCA	EET HOU
Total/NA	Analysis	SM 4500 H+ B		1			69426	09/16/22 15:09	TL	EET HOU

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-04-23
Florida	NELAP	E871002	06-30-23
Louisiana	NELAP	03054	06-30-23
Oklahoma	State	1306	08-31-23
Texas	NELAP	T104704215-22-47	06-30-23
Texas	TCEQ Water Supply	T104704215	12-31-22
USDA	US Federal Programs	P330-22-00025	03-02-23

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET HOU
6010B	Metals (ICP)	SW846	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 4500 H+ B	рН	SM	EET HOU
3010A	Preparation, Total Metals	SW846	EET HOU

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Hydrex Environmental Project/Site: Twin Oaks PP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-32956-1	MW-19	Water	09/08/22 09:15	09/09/22 10:20
860-32956-2	MW-22	Water	09/08/22 10:40	09/09/22 10:20

Eurofins Xenco, Stafford		ľ	((🕃 euro	fins		
414/ Steenorial or Stafford, TX 77477 Phone (281) 240-4200	0	hain c	of Cust	ody R	ecor	ъ								I		Environment lesting America	
Plinet Information	Sampler U 7 (0 1 0	400	Lab P Rect	M: tota Cho					Cant	er Trackin	l No(s):		COC Ne:			
	Dhone.		100 122							State	of Onoin-			Pade			Т
Michelle Transier	936-568-9451			chac	bechtold	@eurof	inset.cc	E		Ĕ				Page 1 of	Ť.		
Company: Hydrex Environmental			:CISMd				1	Analy:	sis R	sənbə	ted			H qor			
Address: 1120 NNV Stallinge Drive	Due Date Requested						┝		┢		\vdash	E		Preservati	ion Codes		
City: Nacodoches	TAT Requested (day:): Stands	1		<u> 126</u>									A HCL B NaOH C Zn Acet	a te te te te te te te te te te te te te	// Hexane // None 0_AsNaO2	
State, Zp. TX 75564	Compliance Proiect:	∆ Yes ∆	2 2											D Nitric A	E O	Na204S	
Phone: 936-568-9451(Tel)	P0# -14-1007													F MeOH G Amchlo		R Na2S203 5 H2S04 • TSP Duderahvdrate	
Email: mtransier@hydrex-inc.com	wo # -14-1007				01.10			-						J DI Wate		J Acetone / MCAA	
Project Name: Twin Oaks PP	Project #: 86000207				50人) e									Iente L EDA Iente	2 N	v pH 4-5 c other (specify)	-
Site:	:#MOSS				ndrifie Maria									COTHER Other			_
			Sample Type	Matrix (^{wavater} ,	5 PE(0) 4	ər	6	. <u> </u>						Nigmber			T
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab) B	S=secEd, D=wasta/ol E=Tissue, A=Air)	107577 [P](0]3]	Fluoric	stehiuð Boron	Calctu	801	на				5 8 10191	<u>ecial Inst</u>	ructions/Note:	Ŀ
		X	Preservati	on Code:	XX		0 Z	0									建 新
MW-19	22/8/8	٦٩١٢	U	M	z	×	× ×	×	×	×				HOLD RE	SULTS UN	ITIL CONFIRMED	- 1
MW-22	22/2/6	0101	U	M	z	××	××	×	×	×							
															ŀ	<u></u>	
							╞					_		Temp:	17		
														Correcte	ed Temp	<u>v</u>	
												_					
									\vdash								
Possible Hazard Identification					Sam	ole Disp) leso	Afeer	nay b ⊓	sasses	sed if s	amples	are ret	ined longer	than 1 m	onth)	
von-razard rtarmaore Skin innant Pois Deliverable Requested. I, III IV Other (specify)			aalological		Spec	al Instr	ictions/	OC Re	quiren	Tents:		an				INU/IRIS	
Empty Kit Relinquished by:		ate:			Time:						Method o	f Shipmen					Τ_
Relinquished by: LA in Durch	Date/Time: q / q	- 221	<u>ں</u>	ompany M	L. K.	Bceived b	04		W.			Date T		12	R	Aneduo	
Relinquished by:	Date/Time:			ompany	<u> </u>	sceived b						Daj e /Tir	b e		<u> </u>	Сотрапу	
Reiinquished by:	Date/Time:			ompany	×	eceived by	s					Date/Tir	ä		Ľ	Company	r i
Custody Seals Intact: Custody Seal No.						oler Tem	perature(s) °C an	d Other	Remarks							— —
					1											Ver 01/16/2019	٦

Client: Hydrex Environmental

Login Number: 32956 List Number: 1 Creator: Rubio, Yuri

Question	Answer	Comment
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Job Number: 860-32956-1

List Source: Eurofins Houston

Appendix D

Statistical Evaluation Data

Monitor Wells MW-7, MW-13, and MW-14 Twin Oaks CCR Landfill (June 2016 - January 2017)

Monitor Well MW-7



Monitor Well MW-14



Monitor Well MW-13



Monitor Wells MW-7, MW-13, and MW-14 Twin Oaks CCR Landfill (March 2017 - April 2018)

Monitor Well MW-7



Monitor Wells MW-7, MW-13, and MW-14 Twin Oaks CCR Landfill (October 2018 - October 2020)



Monitor Well MW-14









Monitor Well MW-13



Monitor Wells MW-7, MW-13, and MW-14 Twin Oaks CCR Landfill (April 2021 - April 2022)

Monitor Well MW-7



Monitor Well MW-14





Shewhart-Cusum Control Chart / Rank Sum

	Twin Oaks Power Station (Client: Ma	ajor Oak P	ower	Data: Twin Oaks	Printed 9/23/2022, 1	:51 PM	
Constituent Sulfate (mg/l)	Well MW-13	<u>Sig.</u> Yes	<u>h</u> 195 2	<u>SCL</u> 195.2	<u>N</u> 16	<u>%NDs</u>	<u>Transform</u>	<u>Method</u> Param Intra
ounde (ing/L)	1011-10	103	100.2	100.2	10	0.20	110	i urum muu

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Background Data Summary: Mean=55.67, Std. Dev.=27.91, n=16, 6.25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.969, critical = 0.887. Report alpha = 0.000082. Dates ending 4/28/2021 used for control stats. Standardized h=5, SCL=5.

Constituent: Sulfate Analysis Run 9/23/2022 1:50 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks

Shewhart-Cusum Control Chart / Rank Sum

	Twin Oaks Power Station	Client: M	lajor Oak P	ower	Data: Twin Oaks	Printed 9/23/20	022, 1:52 PM	
Constituent	Well	<u>Sig.</u>	<u>h</u>	<u>SCL</u>	<u>N</u>	<u>%NDs</u>	Transform	Method
Calcium (mg/L)	MW-14	Yes	141.2	141.2	14	0	No	Param Intra
Chloride (mg/L)	MW-14	No	440.9	440.9	15	0	No	Param Intra
Sulfate (mg/L)	MW-14	Yes	841.2	841.2	15	0	sqrt(x)	Param Intra
Total Dissolved Solids (mg/L)	MW-14	Yes	1940	1940	15	0	No	Param Intra



Background Data Summary: Mean=80.96, Std. Dev.=12.04, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8921, critical = 0.874. Report alpha = 0.000158. Dates ending 4/28/2020 used for control stats. Standardized h=5, SCL=5.

Constituent: Calcium Analysis Run 9/23/2022 1:51 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Background Data Summary: Mean=347.4, Std. Dev.=18.7, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9535, critical = 0.881. Report alpha = 0.000122. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.

Constituent: Chloride Analysis Run 9/23/2022 1:51 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Background Data Summary (based on square root transformation): Mean=15.29, Std. Dev.=2.743, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9051, critical = 0.881. Report alpha = 0.000122. Dates ending 11/23/2020 used for control stats. Standardized h=5, SCL=5.

Constituent: Sulfate Analysis Run 9/23/2022 1:51 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Background Data Summary: Mean=1194, Std. Dev.=149.2, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8979, critical = 0.881. Report alpha = 0.000122. Dates ending 10/27/2020 used for control stats. Standardized h=5, SCL=5.

Constituent: Total Dissolved Solids Analysis Run 9/23/2022 1:51 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks

Prediction Limit

	Twin	Oaks Power St	ation CCR LF	Client: N	/lajor C	ak Po	ower Data:	Twin Oaks	Printec	9/23/2022, 1:53	PM	
Constituent	Well	Upper Lim.	<u>Date</u>	Observ.	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	Std. Dev.	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	Method
Boron (mg/L)	MW-14	0.6019	7/14/2022	0.762	Yes	15	0.1857	0.1387	0	No	0.000	Param Intra 1 of 2

Exceeds Limit

Prediction Limit



Background Data Summary: Mean=0.1857, Std. Dev.=0.1387, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8773, critical = 0.835. Kappa = 3 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.0001672.

Constituent: Boron Analysis Run 9/23/2022 1:52 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks

Shewhart-Cusum Control Chart / Rank Sum

	Twin Oaks Power Station (Client: Ma	ajor Oak P	ower	Data: Twin Oaks	Printed 9/26/2022, 2:34 PM		
Constituent	Well	<u>Sig.</u>	<u>h</u>	<u>SCL</u>	N	<u>%NDs</u>	<u>Transform</u>	Method
Sulfate (mg/L)	MW-13	No	1107	1107	8	0	No	Param Inter
Calcium (mg/L)	MW-14	No	338.8	338.8	8	0	No	Param Inter
Sulfate (mg/L)	MW-14	No	1107	1107	8	0	No	Param Inter



Background Data Summary: Mean=214, Std. Dev.=24.96, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9433, critical = 0.818. Report alpha = 0.008256. Control stats constructed using data from MW-7. Standardized h=5, SCL=5.

Constituent: Calcium Analysis Run 9/26/2022 2:34 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks Sanitas[™] v.9.6.35 For the statistical analysis of ground water by Hydrex Environmental, Inc. only. UG Hollow symbols indicate censored values.



Background Data Summary: Mean=753.1, Std. Dev.=70.85, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9175, critical = 0.818. Report alpha = 0.008256. Control stats constructed using data from MW-7. Standardized h=5, SCL=5.

Constituent: Sulfate Analysis Run 9/26/2022 2:34 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Background Data Summary: Mean=753.1, Std. Dev.=70.85, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9175, critical = 0.818. Report alpha = 0.008256. Control stats constructed using data from MW-7. Standardized h=5, SCL=5.

Constituent: Sulfate Analysis Run 9/26/2022 2:34 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks

Prediction Limit

	Twin	Oaks Power St	ation CCR LI	F Client: N	/lajor C	ak Po	wer Data:	Twin Oaks	Printeo	9/26/2022, 2:33	PM	
Constituent	Well	Upper Lim.	<u>Date</u>	Observ.	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	Std. Dev.	<u>%NDs</u>	Transform	<u>Alpha</u>	Method
Boron (mg/L)	MW-14	0.7844	7/14/2022	0.762	No	8	0.5672	0.08217	0	sqrt(x)	0.000	Param Inter 1 of 2



Prediction Limit



Background Data Summary (based on square root transformation): Mean=0.5672, Std. Dev.=0.08217, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7594, critical = 0.749. Kappa = 3.876 (c=15, w=21, 1 of 2, event alpha = 0.05132). Report alpha = 0.003506. Individual comparison alpha = 0.0001672. Assumes 20 future values.

> Constituent: Boron Analysis Run 9/26/2022 2:33 PM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks

Trend Test

Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks Printed 9/26/2022, 10:19 AM

Constituent	Well	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	Method
Sulfate (mg/L)	MW-13	16.83	13	17	No	7	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW-14	0.09421	13	13	No	6	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW-14	28.15	10	10	No	5	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW-14	116.2	5	13	No	6	16.67	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW-14	244.9	13	13	No	6	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW-7 (bg)	-0.01899	-14	-17	No	7	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW-7 (bg)	0	0	17	No	7	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW-7 (bg)	12.59	3	17	No	7	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW-7 (bg)	0	0	17	No	7	0	n/a	n/a	0.02	NP



Constituent: Boron Analysis Run 9/26/2022 10:18 AM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks

mg/L


Constituent: Boron Analysis Run 9/26/2022 10:18 AM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Constituent: Calcium Analysis Run 9/26/2022 10:18 AM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Constituent: Calcium Analysis Run 9/26/2022 10:18 AM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Constituent: Sulfate Analysis Run 9/26/2022 10:19 AM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks

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Sen's Slope Estimator

Constituent: Sulfate Analysis Run 9/26/2022 10:19 AM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Constituent: Sulfate Analysis Run 9/26/2022 10:19 AM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks



Constituent: Total Dissolved Solids Analysis Run 9/26/2022 10:19 AM View: CC 2022 Twin Oaks Power Station CCR LF Client: Major Oak Power Data: Twin Oaks





Appendix E

Monitoring Well Installation Documentation



HUGICA		N	M c Ionitor	Nitor Well No	Wel	l Log	STATE OF TEATS	
PROJECT INFORMATION			DRI	LLING IN	IFORM	ATION	MICHELL	E TRANSIER P
PROJECT: Twin Oaks CCR Landfill	DRIL	LER:	SLICEN	SE NO - 400	Bruce Mill	on	GEC GEC	LOGY
LOGGED BY: Uziel Rendon	RIG	TYPE	:	CM	E-75		52 11	360
SUPERVISING PG: Michelle K. Transier, P.G.	METH	HOD	OF DRI	LLING: Ho	llow Stem	Auger	ONAL	ENSEDSC
DRILLING COMPLETION: 9/7/2022	SAM		G METH	ODS: Spl	lit Core		1.1	G
SITE LOCATION: 13065 Plant Road, Bremond, TX	HOLE	E DIA	METER	: 8.2	5"		hhl	10
WELL OWNER: Twin Oaks Power Plant	LATI	TUDE	31.0	5515046°LO	NGITUDE	-96.41301379°	16 -5	-9032
Yater level after completion		Ž	Z Wa	ter level wh	ile drillin	9	TBPG Fin	m No. 50027
DESCRIPTION		NSCS	SVMBOLS SOIL	DEPTH	WATER	C	WELL	
				-4				
				<u> </u>		Locking Well		Locking Well Cap
				2		Protective Well		
				 -1		Casing		
			••••	<u>+</u> 0		Concrete Pad		Ground Surface
size, dry		SP		<u>+</u> 1		Cement		
				2			0 0	
				+			00000	
				- 4			00 00	
				<u> </u>			00 00	
				<u>+</u> 7			00	
			::::				0	
				9		Pontonito	00000	Riser
Clayey Sand - reddish brown, iron staining, dense, medium	1	SC				Grout	00 00	100000000000000000000000000000000000000
still, weir solted, inte grain size, dry				<u> </u>			Oe Oe	
				12			001	
			///	13			00	
			//	<u> </u>			00000	
			///	+ 15			00 00	
			1.	10			00 00	
			//	- 18				
			//				0 0	
			///			Dentenite Cool		
			/./.			Bentonite Seal		
			1.					
			<u> </u>					
Sand- gray, poorly sorted, medium coarse grain size, trace of manganese and gypsum, saturated	S	SP		24				
				26	Ţ	20/40 Silica		
						Sand		0.010" Slotted
				- 20				Screen
			····					
				33				
				34				DVC Bottom Com
			•••	35				I FVG BOLLOM Cap

Description Description	DRILLE DRILLE RIG TY METHO SAMPL TOP O HOLE I LATITU		MC onito DRI S LICEN OF DRI G METHASING METER S 31.0 Var S NOBWAS	r Well N LLING L ISE NO.: 4 ODS: 5 ELEV. E: 8 5431705°L Iter level v	r Wel	I Log 20 ATION on Auger : -96,41208995°	TBPG Fin WELL CONSTRUCTION	$\frac{DF}{TE} + \frac{1}{T}$ $\frac{TRANSIER}{360}$ $\frac{1}{T}$ $\frac{1}{5}$ 1
		I 1			l			
				4 		Locking Well Casing Cover Protective Well Casing		Locking Well Cap
Clayey Silt: light tan, iron staining, dry	N	ΛL		-1 -0 -1 -1 -2 -2 -3		Concrete Pad Cement	000	Ground Surface
Sandy Clay: reddish brown, well sorted, fine grain size, iron staining, manganese nodules, some silt content, dry	· C	CL						2" Sch. 40 PVC Riser
Silty Sand: brown, well sorted, fine grain size, dry Silty Clay: grayish brown, iron staining, manganese nodules organic odor, dry	s, C	SC CL		-10 -11 -12 -13 -14				
Clayey Sand: reddish gray, well sorted, fine grain size, som manganese, iron staining, dry @ 18ft increase of iron content	ne S	SC				Bentonite Grout		
Clay : gray, very stiff, dense, iron staining, dry	C	н		$\begin{array}{c} + \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\$			0000000 0000000 0000000	

HUDICX	Monitor Well Log Monitor Well No. MW-20	
PROJECT INFORMATION	DRILLING INFORMATION	
PROJECT: Twin Oaks CCR Landfill PROJECT NO.: I-14-1007 LOGGED BY: Uziel Bendon	DRILLER: L. Bruce Milton DRILLER'S LICENSE NO.: 4926 RIG TYPE: CME-75	
SUPERVISING PG: Michelle K Transier, P.G.	METHOD OF DRILLING: Hollow Stem Auger	
DRILLING COMPLETION: 9/6/2022	SAMPLING METHODS: Split Core	
DEVELOPMENT: 9/7/2022	TOP OF CASING ELEV. 423.19'	
SITE LOCATION: 13065 Plant Road, Bremond, TX	HOLE DIAMETER: 8.25"	
WELL OWNER: Twin Oaks Power Plant	LATITUDE: 31.05431705°LONGITUDE: -96.41208995°	
Water level after completion		TBPG Firm No. 50027
DESCRIPTION	USCS SYMBOLS DEPTH WATER LEVEL	WELL NSTRUCTION
@ 28 ft manganese nodules	26 27 28 29 30 31 32 33 Bentonite Seal	
Clayey Sand : gray, well sorted, sub-rounded, medium coa sand grain size, iron staining, traces of gypsum and manganese, moist	rse SC 34 20/40 Silica Sand	0.010" Slotted Sch. 40 PVC Well Screen
Sand : light brown, well sorted fine grain size, saturated	$\begin{array}{c} SP & & & & & & \\ & & & & & & \\ & & & & & $	

PROJECT INFORMATION PROJECT INFORMATION PROJECT NO.: 1-14-1007 LOGGED BY: Uziel Rendon SUPERVISING PG: Michelle K. Transier, P.G. DRILLING COMPLETION: 9/7/2022 DEVELOPMENT: 9/7/2022 SITE LOCATION: 13065 Plant Road, Bremond, TX WELL OWNER: Twin Oaks Power Plant	Monitor Well Log Monitor Well No. MW-21 DRILLING INFORMATION DRILLER: L. Bruce Milton DRILLER'S LICENSE NO.: 4926 RIG TYPE: CME-75 METHOD OF DRILLING: Hollow Stem Auger SAMPLING METHODS: Split Core TOP OF CASING ELEV. 387.52' HOLE DIAMETER: 8.25'' LATITUDE: 31.06023101°LONGITUDE: -96.41090925°					PROFESSION 10-5	$\frac{DF}{T} \frac{T}{E} \frac{1}{T} 1$	
Y Water level after completion		2	Z Wa	ater level wh	ile drillin	g	TBPG Fin	m No. 50027
DESCRIPTION		nscs	SYMBOI	DEPTH	WATE	С	WELL	
				-4				
						Locking Well Casing Cover Protective Well Casing		Locking Well Cap
Condu Claur light fon well optical medium spores and area		<u>.</u>				Concrete Pad		Ground Surface
size, iron staining, traces of manganese, dry		CL		$\begin{array}{c}1 \\2 \\3 \\3 \end{array}$	₹	Cement	000	
Clay: gray, dense, stiff, manganese nodules, iron staining, o	dry	СН				Bentonite Grout	000000	
Silty Clay: grayish brown, dense, stiff, iron stone, traces of manganese, dry		CL		9 		Bentonite Seal		2" Sch. 40 PVC Riser
		-						
Clayey Sand, light gray, well sorted, fine sand grain size, iro staining, moist @19-20 ft color change to orange and traces of manganese and gypsum	on	SC			\	20/40 Silica		
Sand- reddish brown, well sorted, medium coarse grain size traces of manganese, saturated	э,	SP		+ 23 + 21 + 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 29		Sand		0.010" Slotted Sch. 40 PVC Well Screen PVC Bottom Cap



STATE OF TEXAS WELL REPORT for Tracking #619552								
Owner:	Twin Oaks Power Plant	Owner Well #:	MW-18					
Address:	13065 Plant Road Bremond, TX 76629	Grid #:	39-59-2					
Well Location:	13065 Plant Road	Latitude:	31° 05' 58" N					
	Bremond, TX 76629	Longitude:	096° 41' 22" W					
Well County:	Robertson	Elevation:	No Data					
Type of Work:	New Well	Proposed Use:	Monitor					

Drilling Start Date: 9/6/2022

Drilling End Date: 9/6/2022

	Diameter	(in.)	Top Depth (ft.)		Bottom Depth	n (ft.)	
Borehole:	8.25	8.25		0			
Drilling Method:	Hollow Stem A	luger					
Borehole Completion:	Filter Packed						
	Top Depth (ft.)	Bottom Depth	n (ft.)	Filter M	aterial	Size	
Filter Pack Intervals:	22	35		Sar	nd	20/40	
	Top Depth (ft.)	Bottom	Depth (ft.)	Des	Description (number of sacks & materia		
Annular Seal Data:	0	1	19		/Sacks		
	19	2	22	Bentonite 1 Bags/Sacks			
Seal Method: Tr	emie		Dist	ance to Pro	operty Line (ft.): N	o Data	
Sealed By: Dr	riller		Distance to Septic Field or other concentrated contamination (ft.): No Data				
			Distance to Septic Tank (ft.): No Data				
				Method	of Verification: N	o Data	
Surface Completion:	Surface Slab I	nstalled		Su	rface Completion	n by Driller	
Water Level:	No Data						
Packers:	No Data						
Type of Pump:	No Data						
Well Tests:	No Test Data	Specified					

	Strata Depth (ft.)	Water Type		
Water Quality:	No Data No Data			
		Chemical Analysis Made:	No	
	Did the driller	knowingly penetrate any strata which contained injurious constituents?:	Νο	
Certification Data: T d c th	he driller certified th riller's direct supervi orrect. The driller u ne report(s) being re	nat the driller drilled this well (or the well ision) and that each and all of the state nderstood that failure to complete the r eturned for completion and resubmittal.	ll was drille ments her equired ite	ed under the rein are true and ems will result in
Company Information:	BEST DRILLING S	SERVICES, INC.		
	P.O. BOX 70822 Houston, TX 7727	70		
Driller Name:	L. Bruce Milton	License N	lumber:	4926
Comments:	No Data			
Lithe DESCRIPTION & COLOR	ology: OF FORMATION M	ATERIAL BLANK PIPE &	Casing: WELL SC	REEN DATA

Top (ft.)	Bottom (ft.)	Description	
0	4	SANDY, drk. brown	
4	10	SANDY CLAY, reddish brown	
10	22	SILTY CLAY, brownish	
22	35	SAND, lt. brown	

Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	Riser	New Plastic (PVC)	40	0	25
2	Screen	New Plastic (PVC)	40 0.010	25	35

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

STATE OF TEXAS WELL REPORT for Tracking #619551								
Owner:	Twin Oaks Power Plant	Owner Well #:	MW-19					
Address:	13065 Plant Road Bremond TX 76629	Grid #:	39-59-2					
Well Location:	13065 Plant Road	Latitude:	31° 05' 52" N					
	Bremond, TX 76629	Longitude:	096° 41' 31" W					
Well County:	Robertson	Elevation:	No Data					
Type of Work:	New Well	Proposed Use:	Monitor					

Drilling Start Date: 9/7/2022

Drilling End Date: 9/7/2022

	Diameter	(in.)	Top Depth (f		Bottom Dept	h (ft.)	
Borehole:	8.25		0		35		
Drilling Method:	Hollow Stem A	uger					
Borehole Completion:	Filter Packed						
	Top Depth (ft.)	Bottom Depth	(ft.)	Filter M	laterial	Size	
Filter Pack Intervals:	22	35		Sai	nd	20/40	
	Top Depth (ft.)	Bottom D	epth (ft.)	Des	scription (number of sa	cks & material)	
Annular Seal Data:	0	19	9	Cement 1 Bags/Sa		Sacks	
	19	22	2	Bentonite 1 Bags/Sacks			
Seal Method: Tr	emie		Dist	ance to Pro	operty Line (ft.): N	o Data	
Sealed By: Dr	riller		Distance to Septic Field or other concentrated contamination (ft.): No Data				
			Distance to Septic Tank (ft.): No Data				
				Method	d of Verification: N	o Data	
Surface Completion:	Surface Slab Ir	nstalled		Su	Irface Completion	n by Driller	
Water Level:	No Data						
Packers:	No Data						
Type of Pump:	No Data						
Well Tests:	No Test Data	Specified					

	Strata Depth (ft.)	Water Type						
Water Quality:	No Data	No Data						
		Chemical Analysis Made:	No					
	Did the driller	knowingly penetrate any strata which contained injurious constituents?:	No					
Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.								
Company Information:	BEST DRILLING S	SERVICES, INC.						
	P.O. BOX 70822 Houston, TX 7727	70						
Driller Name:	L. Bruce Milton	License	Number:	4926				
Comments:	No Data							
1 :	la a la an u		O a alia au					

Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing: BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description	Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
0	9	SAND, brown	2	Risor	New Plastic (PVC)	40	0	25
0	22	CLAYEY SAND, reddish	2	11301				23
9	23	brown	2	2 Screen	en New Plastic (PVC)	40 0.010	25	35
23	35	SAND, grav	2					35

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Please include the report's Tracking Number on your written request.

STATE OF TEXAS WELL REPORT for Tracking #619549						
Owner:	Twin Oaks Power Plant	Owner Well #:	MW-20			
Address:	13065 Plant Road Bremond, TX_76629	Grid #:	39-59-2			
Well Location:	13065 Plant Road	Latitude:	31° 05' 44" N			
	Bremond, TX 76629	Longitude:	096° 41' 22" W			
Well County:	Robertson	Elevation:	No Data			
Type of Work:	New Well	Proposed Use:	Monitor			

Drilling Start Date: 9/6/2022

Drilling End Date: 9/6/2022

	Diameter	(in.)	Top Depth (ft.)		Bottom Depti	h (ft.)	
Borehole:	8.25		0		45		
Drilling Method:	Hollow Stem A	Auger					
Borehole Completion:	Filter Packed						
	Top Depth (ft.)	Bottom Depth	(ft.)	Filter M	aterial	Size	
Filter Pack Intervals:	33	45		Sar	nd	20/40	
	Top Depth (ft.)	Bottom Depth (ft.)		Description (number of sacks & materi			
Annular Seal Data:	0	3	0		Cement 1 Bags/Sacks		
	30	3	3		Bentonite 1 Bags/Sacks		
Seal Method: Tr	remie		Dist	tance to Pro	operty Line (ft.): N	o Data	
Sealed By: D	riller		Distance to Septic Field or other concentrated contamination (ft.): No Data				
			Distance to Septic Tank (ft.): No Data				
				Method	of Verification: N	o Data	
Surface Completion: Surface Slab Installed				Su	rface Completion	n by Driller	
Water Level:	No Data						
Packers:	No Data						
Type of Pump:	No Data						
Well Tests:	No Test Data	Specified					

	Strata Depth (ft.)	Water Type		
Water Quality:	No Data	No Data		
		Chemical Analysis Made:	No	
	Did the driller	knowingly penetrate any strata which contained injurious constituents?:	No	
Certification Data:	The driller certified th driller's direct superv correct. The driller u he report(s) being re	nat the driller drilled this well (or the wel rision) and that each and all of the state Inderstood that failure to complete the r eturned for completion and resubmittal.	l was drille ments her equired ite	ed under the rein are true and ems will result in
Company Information:	BEST DRILLING S	SERVICES, INC.		
	P.O. BOX 70822 Houston, TX 7727	70		
Driller Name:	L. Bruce Milton	License N	lumber:	4926
Comments:	No Data			
Lith DESCRIPTION & COLOR	ology: OF FORMATION M	(ATERIAL BLANK PIPE &	Casing: WELL SC	REEN DATA

Top (ft.)	Bottom (ft.)	Description
0	15	SANDY CLAY, reddish brown
15	30	SILTY CLAY, reddish orange
30	35	SANDY CLAY, It. brown
35	45	SAND, lt. brown

Dla (in.)	Туре	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	Riser	New Plastic (PVC)	40	0	35
2	Screen	New Plastic (PVC)	40 0.010	35	45

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Please include the report's Tracking Number on your written request.

	STATE OF TEXAS WELL REPORT for Tracking #619537						
Owner:	Twin Oaks Power Plant	Owner Well #:	MW-21				
Address:	13065 Plant Road Bremond TX 76629	Grid #:	39-59-2				
Well Location:	13065 Plant Road	Latitude:	31° 06' 03" N				
	Bremond, TX 76629	Longitude:	096° 41' 10" W				
Well County:	Robertson	Elevation:	No Data				
Type of Work:	New Well	Proposed Use:	Monitor				

Drilling Start Date: 9/7/2022

Drilling End Date: 9/7/2022

	Diameter	(in.)	Top Depth (ft.)		Bottom Depth (ft.)		
Borehole:	8.25		0		30		
Drilling Method:	Hollow Stem A	luger					
Borehole Completion:	Filter Packed						
	Top Depth (ft.)	Bottom Depth	n (ft.)	Filter M	aterial	Size	
Filter Pack Intervals:	17	30		Sar	nd	20/40	
	Top Depth (ft.)	Bottom Depth (ft.)		Description (number of sacks & materia			
Annular Seal Data:	0	14		Cement 1 Bags		s/Sacks	
	14	1	17		Bentonite 1 Bags/Sacks		
Seal Method: Tr	emie		Dis	tance to Pro	operty Line (ft.): N	o Data	
Sealed By: D	riller		Distance to Septic Field or other concentrated contamination (ft.): No Data				
			Distance to Septic Tank (ft.): No Data				
				Method	l of Verification: N	o Data	
Surface Completion: Surface Slab Installed				Su	rface Completio	n by Driller	
Water Level:	No Data						
Packers:	No Data						
Type of Pump:	No Data						
Well Tests:	No Test Data	Specified					

	Strata Depth (ft.)	Water Type		
Water Quality:	No Data	No Data		
		Chemical Analysis Made:	No	
	Did the driller	knowingly penetrate any strata which contained injurious constituents?:	No	
Certification Data: 7 c c t	The driller certified th Iriller's direct supervition Forrect. The driller un The report(s) being re	hat the driller drilled this well (or the wel ision) and that each and all of the state nderstood that failure to complete the r oturned for completion and resubmittal.	l was drille ments her equired ite	ed under the rein are true and ems will result in
Company Information:	BEST DRILLING S	ERVICES, INC.		
	P.O. BOX 70822 Houston, TX 7727	0		
Driller Name:	L. Bruce Milton	License N	lumber:	4926
Comments:	No Data			
Lith DESCRIPTION & COLOR	ology: OF FORMATION M	ATERIAL BLANK PIPE &	Casing: WELL SC	REEN DATA

DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description	Dla (in.)		Material	Sch./Gage	Top (ft.)	Bottom (ft.)
0	5	CLAYEY SAND, It. brown	2	Risor	New Plastic (PVC)	40	0	20
5	19	SILTY CLAY, brown						20
19	30	SAND, reddish brown	2	Screen	New Plastic (PVC)	40 0.010	20	30

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Please include the report's Tracking Number on your written request.

STATE OF TEXAS WELL REPORT for Tracking #619536						
Owner:	Twin Oaks Power Plant	Owner Well #:	MW-22			
Address:	13065 Plant Road Bremond, TX_76629	Grid #:	39-59-2			
Well Location:	13065 Plant Road	Latitude:	31° 05' 55" N			
	Bremond, TX 76629	Longitude:	096° 41' 39" W			
Well County:	Robertson	Elevation:	No Data			
Type of Work:	New Well	Proposed Use:	Monitor			

Drilling Start Date: 9/8/2022

Drilling End Date: 9/8/2022

	Diameter ((in.)	Top Depth (ft.)		Bottom Depth (ft.)		
Borehole:	8.25		0		35		
Drilling Method:	Hollow Stem A	Hollow Stem Auger					
Borehole Completion:	Filter Packed						
	Top Depth (ft.)	Bottom Depth	(ft.)	Filter Ma	aterial	Size	
Filter Pack Intervals:	19	35		Sar	nd	20/40	
	Top Depth (ft.)	Bottom D	Bottom Depth (ft.)		Description (number of sacks & materia		
Annular Seal Data:	0	1	6	Cement 1 Bags/Sacks		/Sacks	
	16	1	9		Bentonite 1 Bags/Sacks		
Seal Method: Tr	emie		Dis	tance to Pro	operty Line (ft.): N	o Data	
Sealed By: D	riller		Distance to Septic Field or other concentrated contamination (ft.): No Data				
			Distance to Septic Tank (ft.): No Data				
				Method	of Verification: N	o Data	
Surface Completion: Surface Slab Installed				Su	rface Completio	n by Driller	
Water Level:	No Data						
Packers:	No Data						
Type of Pump:	No Data						
Well Tests:	No Test Data	Specified					

	Strata Depth (ft.)	Water Type		
Water Quality:	No Data	No Data		
		Chemical Analysis Made:	No	
	Did the driller	knowingly penetrate any strata which contained injurious constituents?:	Νο	
Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.				
Company Information: BEST DRILLING SERVICES, INC.				
	P.O. BOX 70822 Houston, TX 7727	0		
Driller Name:	L. Bruce Milton	License N	lumber:	4926
Comments:	No Data			
Lithology: DESCRIPTION & COLOR OF FORMATION MATERIAL		ATERIAL BLANK PIPE &	Casing: WELL SC	REEN DATA

DESCRIPTION & COLOR OF FORMATION MATERIAL

Dla Bottom Top (ft.) Bottom (ft.) Description Material Sch./Gage Top (ft.) Туре (in.) (ft.) 0 9 SANDY CLAY, reddish brown New Plastic 40 2 Riser 0 25 (PVC) 9 19 **CLAYEY SAND**, gray New Plastic 40 2 25 35 Screen 19 35 SAND, It. brown (PVC) 0.010

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