

# Installation of Monitoring Wells MW-3, MW-4, and MW-5 for the Los Olivos Community Services District Groundwater Quality Monitoring Network

To: Guy Savage, Los Olivos Community Services District

Doug Pike, Los Olivos Community Services District

From: Tim Thompson, GSI Water Solutions

Andy Lapostol, GSI Water Solutions

Nehuen Fortunelli, GSI Water Solutions

**Attachments:** Attachment A – Lithologic Logs

Attachment B - Chip Tray Photos

Attachment C - Final Laboratory Report

Attachment D - Historical Water Quality Data

Attachment E - Well Permits

**Date:** March 19, 2024

#### Introduction

This memorandum provides documentation of the drilling, installation, and initial water quality testing results for three newly constructed monitoring wells (MW-3, MW-4, and MW-5) for the Los Olivos Community Services District (LOCSD). These wells have been installed to augment the shallow groundwater monitoring network in the Los Olivos area. This monitoring network is designed in alignment with the LOCSD Groundwater Monitoring Plan¹ the purpose of which is to (a) establish baseline groundwater quality conditions and (b) monitor changes over time as the Los Olivos Community Services District's (District) Wastewater Reclamation Program is implemented.

The following sections describe the construction and installation, development for the three new monitoring wells (MW-3, MW-4, and MW-5) along with groundwater data collected at all five (5) monitoring wells that now constitute the District's groundwater monitoring network. The locations of the District's monitoring wells are shown in Figure 1. The County permits for the new monitoring wells are provided in Attachment E.

**GSI** Water Solutions, Inc.

<sup>&</sup>lt;sup>1</sup> "Monitoring Well Installation Report (MW-1 and MW-2) – Los Olivos Groundwater Quality Monitoring Network", GSI, 2021, prepared for LOCSD.

#### **Well Construction and Installation**

MW-3, MW-4, and MW-5 were drilled and constructed by BC2 Environmental, under permits from the County of Santa Barbara Environmental Health Services Department. Drilling commenced at MW-5, located at the intersection of Alamo Pintado Road and Robles Avenue (Figure 1), on January 29<sup>th</sup>, 2024. The well was completed on January 30<sup>th</sup>, 2024. drilling and installation of MW-4, located at 2240 Olivet Avenue, was completed on January 31<sup>st</sup>. The drilling and installation of MW-3, located at 2280 Olivet Avenue, was completed on February 1<sup>st</sup>, 2024.

Drilling was conducted using a CME 95 truck-mounted drill rig, with 8-inch diameter hollow stem augers. Soil samples were collected at 5-foot intervals using a split-spoon sampler. GSI personnel inspected cuttings and prepared a lithologic log of each borehole, in addition to chip trays of the cuttings. Copies of the lithologic logs are included in Attachment A and photos of the chip trays are included in Attachment B.

MW-3, MW-4, and MW-5 were drilled to total depths of 90, 60, and 65 feet below ground surface (bgs), respectively. Regionally, the lithology consists of recent Alluvium overlying Paso Robles Formation. Both formations are generally composed of fines with interspersed lenses of coarse, gravelly sands. Alluvium and Paso Robles Formation are very similar in lithology and are not clearly distinguishable in the cuttings, although existing geological reports indicate that the depth of alluvium in the Los Olivos area is on the order of 70 feet bgs.

In MW-3, MW-4, and MW-5, water was encountered at depths of approximately 30, 25, and 35 feet bgs, respectively. Table 1 shows the completion details of each monitoring well.

Table 1. Monitoring V	<b>II Construction</b>	<b>Details</b>
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Well ID	Total Depth (feet bgs)	Perforated Interval (feet bgs)	Static Water Level (feet bgs)
MW-3	90	50 - 90	30
MW-4	60	25 - 60	25
MW-5	65	30 - 65	35

All three monitoring wells were constructed with 2-inch, schedule 40 PVC casing. The perforations have a slot size of 0.020-inches. The annular space of each boring was filled with a Cemex No. 3 sand gravel pack from the bottom of the hole to approximately 3 feet above the top of screen, followed by 3 feet of bentonite chips. Then, each monitoring well was sealed with a bentonite grout to slightly below ground surface. The wells were then completed at-grade with concrete and flush-mounted with an 8-inch diameter monitoring well cover.

### **Well Development**

Following the installation of MW-3, MW-4, and MW-5, BC2 Environmental mobilized a truck-mounted development rig to develop each well under supervision of GSI personnel. Each well was developed until the pumped water was clear and water quality proxies (temperature, pH, and electrical conductivity) were stable. MW-3 and MW-4 were completed on February 21<sup>st</sup>, 2024, and MW-5 was completed on February 22<sup>nd</sup>, 2024. A combination of bailing, swabbing, and pumping was utilized at each well to remove excess sediment and improve the hydraulic connection between the well's screened interval and the surrounding aquifer. Pumped water was discharged to the ground adjacent to the well.

#### **Water Quality**

After developing the newly constructed monitoring wells, water quality samples were collected at all the monitoring wells (MW-1 through MW-5) in the monitoring network. The samples were sent to a certified laboratory for analysis. The selected analytes and results are shown in Table 2, and the final report from the laboratory is included in Attachment C. Water quality results from samples collected following the construction of MW-1 and MW-2 in November 2022 are presented in Attachment D.

Based upon review of the analytical results, there are a few key observations:

- Nitrate (as N) concentration from groundwater samples collected at MW-2 and MW-4 was 11 mg/L, which is slightly above the maximum contaminant level (MCL) of 10 mg/L for nitrate. Nitrate concentrations in MW-1, MW-3 and MW-5 were below the MCL.
- Arsenic concentrations for MW-1 and MW-2 were 0.13 mg/L, which is slightly above the concentration
  of the MCL. Arsenic was not detected in MW-3, MW-4, and MW-5.
- Aluminum concentrations for MW-2, MW-3, and MW-5 were above the MCL of 1 mg/L.

**Table 2. Water Quality Sampling Results** 

	- Continue	Camping Room						
Analyte	Units	Maximum Contaminant Level <sup>1</sup>	Basin Water Quality Objective <sup>2</sup>	MW-1 Result	MW-2 Result	MW-3 Result	MW-4 Result	MW-5 Result
Chloride	mg/L	500₃	50	110	210	53	87	41
Nitrate as N	mg/L	10	1	2.4	11	6.3	11	4.5
Sulfate	mg/L	500 <sup>3</sup>	10	39	95	190	180	190
Total Dissolved Solids	mg/L	1,000³	600	492	1,120	846	1,090	791
Aluminum	mg/L	1	-	0.25	7.46	1.19	0.37	2.56
Arsenic	mg/L	0.010	-	0.013	0.013	ND	ND	ND
Boron	mg/L	-	0.5	0.083	0.18	0.14	0.21	0.14
Iron	mg/L	0.3 <sup>3</sup>	-	0.41	12.1	1.88	0.39	3.60
Manganese	mg/L	0.05 <sup>3</sup>	-	0.04	0.32	0.10	0.01	0.06

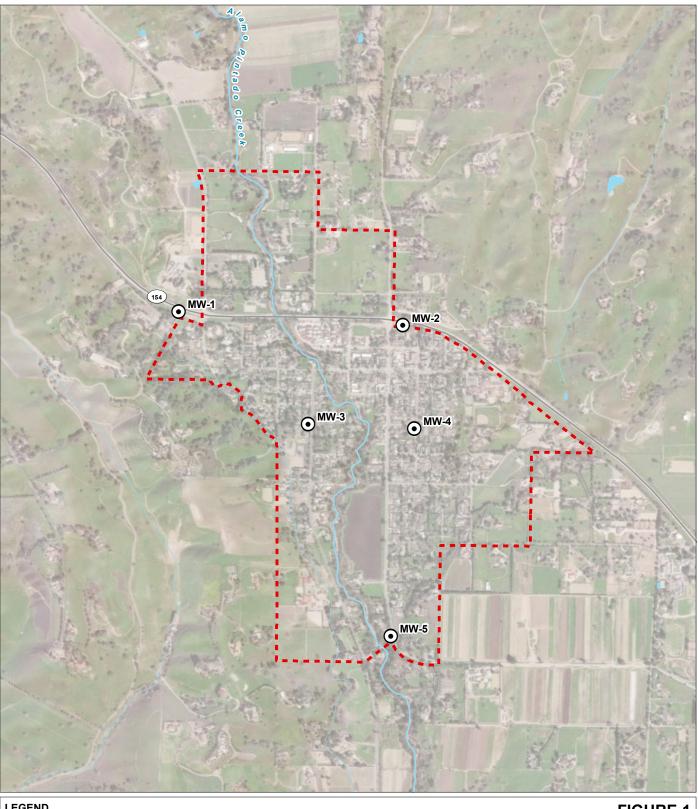
#### Notes:

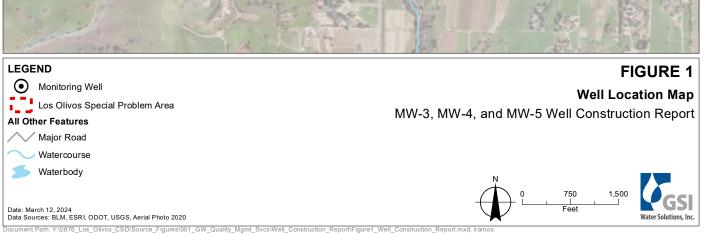
- 1 CA drinking water standards
- 2 Established in the Water Quality Control Plan for the Central Coast Basin (Regional Water Quality Control Board, 2019)
- 3 Secondary maximum contaminant level (upper)

Bolded values are at or above the Maximum Contaminant Level

#### **Next Steps and Recommendations**

- The successful installation of these three monitoring wells to augment the shallow aquifer monitoring network represents a significant step forward for the District, helping to establish the water quality (especially the nitrate concentrations) in the shallow sediments of the District's area.
- The water quality data obtained for all five monitoring wells following the installation of MW-3, MW-4, and MW-5 will serve as a baseline for future reference. Conducting sampling over the years to come (as recommended in the Monitoring Plan) will establish a time-series of water quality data which will be valuable in determining typical water quality in the areas proximal to each monitoring well as well as documenting changes to shallow groundwater water quality that are anticipated to occur in response to the planned establishment of the District's Wastewater Reclamation Program.
- Additional water level measurements planned to be collected over the coming years will support the
  assessment of the direction of groundwater flow, which is currently believed to be roughly north-tosouth based on the limited preliminary data available at this time.
- The owner of an existing privately-owned domestic well, located north of MW-2, has recently offered to allow the District to conduct water quality sampling on his well. Well construction information and historical well use will be collected and used to determine the appropriateness of using this well for the District's groundwater monitoring purposes. Provided that the well construction is appropriate (i.e., having the screened casing only in the shallow aquifer), obtaining test samples from it could provide valuable insight for a better understanding of nitrate distribution in the area.





# -ATTACHMENT A-Lithologic Logs



PROJECT NUMBER:	BORING NUMBER	
876.876	MW-3	SHEET _1 OF _2

PROJECT: Los Olivos MW-3 LOCA
ELEVATION: DRILLING CONTRACTOR: BC2
DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger LOCATION: 2280 Olivet Street, Los Olivos

WATER LEVELS :				START: END:	OGGER : Nehuen Fortunelli	
DEPTH B	DEPTH BELOW SURFACE (FT)			CORE DESCRIPTION	COMMENTS	
	INTERVA					
		RECOVERY (IN) #/TYPE BLOWS	LITHOLOGIC LOG	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.	
5 - 5 -		11/13/20	CL	Silty Clay ; light brown ; fine-grained	- - - -	
10		5/10/14	CL	Some small gravel; slightly moist; fine grained		
15		10/14/19	GW	Gravel w/ sand; yellowish brown; sub rounded gravel; fine to coarse grained; dry		
20		6/11/14	CL	Gravelly clay; yellowish brown; with fine to coarse grained sand; slightly moist		
25		5/7/13	CL	No gravel; some fine to medium grained sand; organic matter (black filament similar to MW-5); moist		
30		8/13/16	CL	Sandy clay; fine to medium grained; moister		
35		8/11/11	SW	Sand with some clay; dark grayish brown; fine grained; moist;		
40		5/7/9	SW	Coarser grains; fine to medium grained; moist		
45		10/12/15?	sw	Coarser grains; wet		
50		5/13/18	SW	fine to medium grained; soaked		



PROJECT NUMBER: 876.876	BORING NUMBER	MW -3	Sheet 2 of 2
	3		

PROJECT: Los Olivos MW-3 LOCATION: 2280 Olivet Street, Los Olivos

ELEVATION: DRILLING : DRILLING : DRILLING : WATER LEVELS: START: DRILLING CONTRACTOR: BC2

		OD AND EQUIPMENT L	JSED: Hollow S				
WATER				START: END:	LOGGER : Nehuen Fortunelli		
		RFACE (FT)		CORE DESCRIPTION	COMMENTS		
	INTERVA	RECOVERY (IN) #/TYPE BLOWS	LITHOLOGIC LOG	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.		
- - 55 _		16/22/25	SW	Gravelly sand; dark gray; fine to coarse grained; some clay; wet	- - - - -		
60		5/10/15	SW	Finer			
65		4/7/11	GW	Sandy Gravel; wetter			
70		3/9/11	GW	Coarser			
75		9/7/24	GW	Gravel up to 2.5" in diameter; wet			
80		8/13/16	SW	Gravelly sand; medium to coarse grained; soaked			
85		15/17/20	sw	With some clay, yellowish brown; finer sand			
90			CL	Clay; dark gray  End of Boring			
				0-50 blank 50-90 screen Total Depth: 90 ft			
				0-47 grout 44-47 bentonite 47-90 #3 sand			

18 bags of concrete 28 gal of water Bentonite 5%



DJECT NUMBER:	BORING NUMBER	
76.876	MW-4	SHEET _1_ OF _2

ELEVATION: DRILLING CONTRACTOR: BC2

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger

WATER LEVELS:

WATER	WATER LEVELS :				START: END:	LOGGER: Nehuen Fortunelli
DEPTH B	DEPTH BELOW SURFACE (FT)				CORE DESCRIPTION	COMMENTS
	INTERVAL (FT)					
		RECOVERY		LITHOLOGIC	SOIL NAME, USCS GROUP SYMBOL, COLOR,	DEPTH OF CASING, DRILLING RATE,
		#/	TYPE	LOG	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,
		E	BLOWS		OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	TESTS, AND INSTRUMENTATION.
					Gravelly sand; brown; fine sand; sub	
					angular gravel; trace clay	_
					aligulal gravel, trace clay	_
5 _		1	7/22/26	SW	_	_
-					Silty sand w/ small gravel; fine sand;	
					sub-angular gravel	
10		1	11/13/17	SM		
					Gravel and sand; light brown; fine to	
					medium grained; some silt	
15		,	00/50 4	GW	<b>3</b> ,	
10		2	20/50x4	GVV		
					Gravel and sand; yellowish brown; fine to	
					coarse grained; some silt; slightly moist	
			4.4/0.4/0.0	GW-SM	coarse grained, some siit, slightly moist	
20		1	14/21/26	OVV-OIVI		
					Moister; reddish brown	
					Moister, reddisir brown	
25			10/44/47	GW		
			12/14/17			
					Sandy gravel; moderate brown; fine to	5 ft of water in borehole
					coarse grained; damp.	
30		8	3/16/19	GW		
		Ĭ	,,			
					Wet	
35			8/16/19?			
		'	o, 10, 10 :			
					Clayey gravel; yellowish brown; wetter	
					- , , , ,, ,, ,, ,,	
40			0/40//-	00		
40		8	8/12/15	GC		
	<u> </u>				Smaller gravel; soaked	minimal recovery
					Omaliei gravei, soakeu	minimal recovery
45				00		
-3		5	50x6	GC		
	1					
						No recovery
50						,



PROJECT NUMBER:	BORING NUMBER	
876.876	MW-4	SHEET _2_ OF _2

	water 50							
PROJECT : Los Olivos MW-4			V-4	LOCATION: 2440 Olivet Street, Los Olivos				
ELEVATION:				DRILLING CONTRACTOR: BC2				
		OD AND	EQUIPMENT L	JSED: Hollow S	Stem Auger			
	WATER LEVELS :				START: END:	LOGGER: Nehuen Fortunelli		
DEPTH B	ELOW SU	RFACE (F	T)		CORE DESCRIPTION	COMMENTS		
	INTERVA		•					
		RECOVE	RY (IN)	LITHOLOGIC	SOIL NAME, USCS GROUP SYMBOL, COLOR,	DEPTH OF CASING, DRILLING RATE,		
			#/TYPE	LOG	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,		
					OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.		
			BLOWS		MINERALOGY.			
					_	NI.		
_					_	No recovery		
_					_	_		
55 -					_	_		
55								
					Clay with gravel; very hard; wet			
				CL				
60			1	l ~ L	End of Boring			
<b> </b>			<del> </del>					
1			1		0-25 blank			
					25-60 screen			
					Total Depth= 60 ft			
					0.00			
				0-20 grout				
				20-23 bentonite				
					23-60 #3 sand			
					20 00 110 00110			
					9 bags of concrete			
					27 gal of water			
					5% bentonite			
1			<del> </del>					
1			1					
1			1					
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1			1					
1			1					
1			1					



PROJECT NUMBER:	BORING NUMBER	
876.876	MW-5	SHEET _1_ OF _2_

PROJECT : Los Olivos MW-5 LOCATION : Alamo Pintado and Grand Ave, Los Olivos

DRILLING CONTRACTOR: BC2

ELEVATION: DRILLING
DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger
WATER LEVELS: START:

		OD AND EQUIPMENT U	SED : Hollow Ste	Ÿ	
	LEVELS			START: END:	LOGGER : Nehuen F. / Andy L.
		RFACE (FT)		CORE DESCRIPTION	COMMENTS
	INTERVA	RECOVERY (IN) #/TYPE BLOWS	LITHOLOGIC LOG	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
5 -		11/14/20	SM-SW	Silty sand with gravel; dark brown; fine to_coarse grained	- - -
10		7/14/15	CL	Clayey silt; yellowish brown; trace fine sand	
15		8/9/11	ML	Silt with sand; grayish brown	
20		5/9/12	ML	Sandy silt; gray; very fine grained to fine grained; very moist	
25		5/7/12	CL	Clay; dark gray; trace coarse sand; trace organics (hairlike roots)	Tagged borehole, it was muddy
30		4/5/7	GC	Gravelly clay; well graded; brown; wet	
35		5/8/11	GM	36 ft; sand and gravel; well graded; brown; trace fines; saturated	2 ft of water in borehole
40		4/10/14	GM	Some gravel bigger than 2 inches in diameter	
45		5/7/17	GM	Alternating beds of clay	
50		7/14/19	CL	Silty clay; yellowish brown	



PROJECT NUMBER:	BORING NUMBER	
876.876	MW-5	SHEET _1_ OF _2_

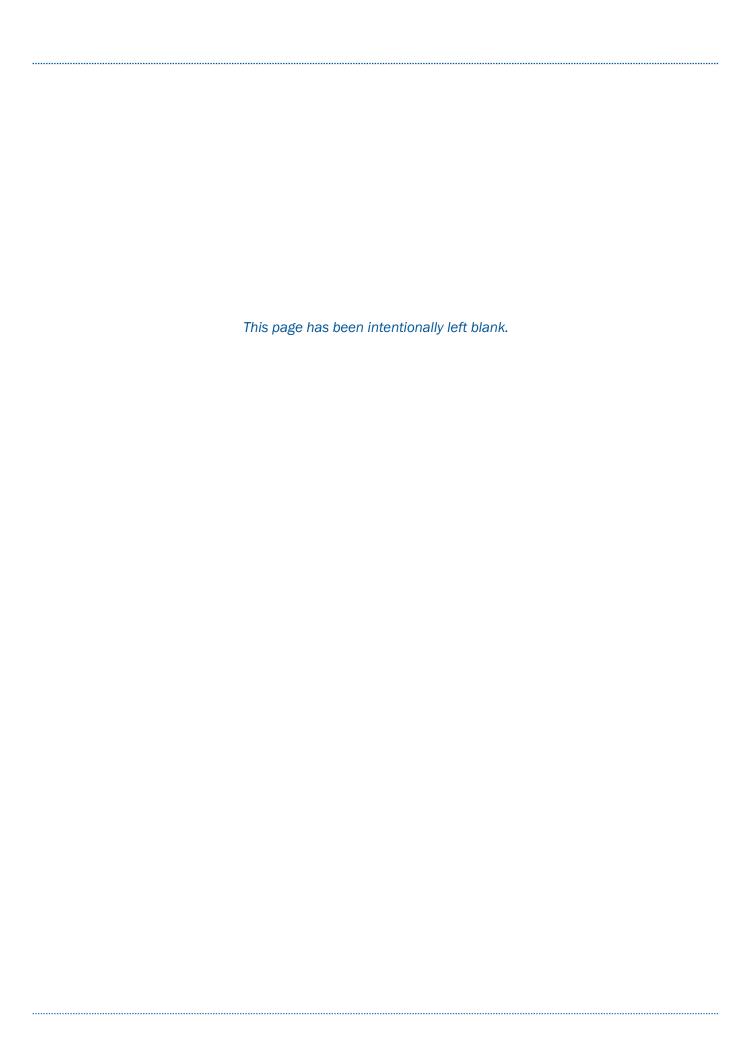
PROJECT : Los Olivos MW-5

ELEVATION : DRILLING

DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger LOCATION : Alamo Pintado and Grand Ave, Los Olivos

DRILLING CONTRACTOR : BC2

WATER LEVELS :					START : END : LOGGER : Nehuen F. / Andy L					
DEPTH B			T)		CORE DESCRIPTION	COMMENTS				
	INTERVA	L (FT)								
		RECOVE	RY (IN) #/TYPE BLOWS	LITHOLOGIC LOG	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.				
_			220110		Silty clay, yellowish brown; more silt	_				
55_			6/12/13	CL	- -	- - -				
					Same as previous	No recovery				
60			12/16/19	CL						
65					End of Boring					
					0-30 blank 30-65 screen Total Depth = 65 ft					
					0-24 grout seal 24-27 bentonite 27-65 #3 sand					
					9 bags of concrete 27 gal of water 5% bentonite					

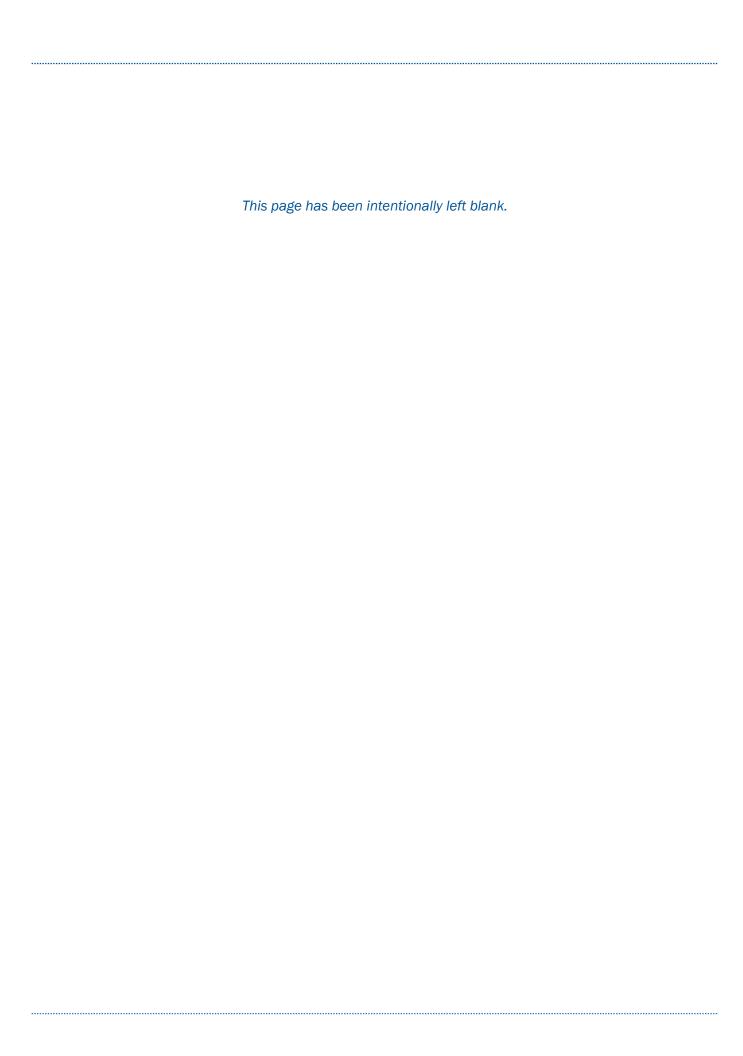


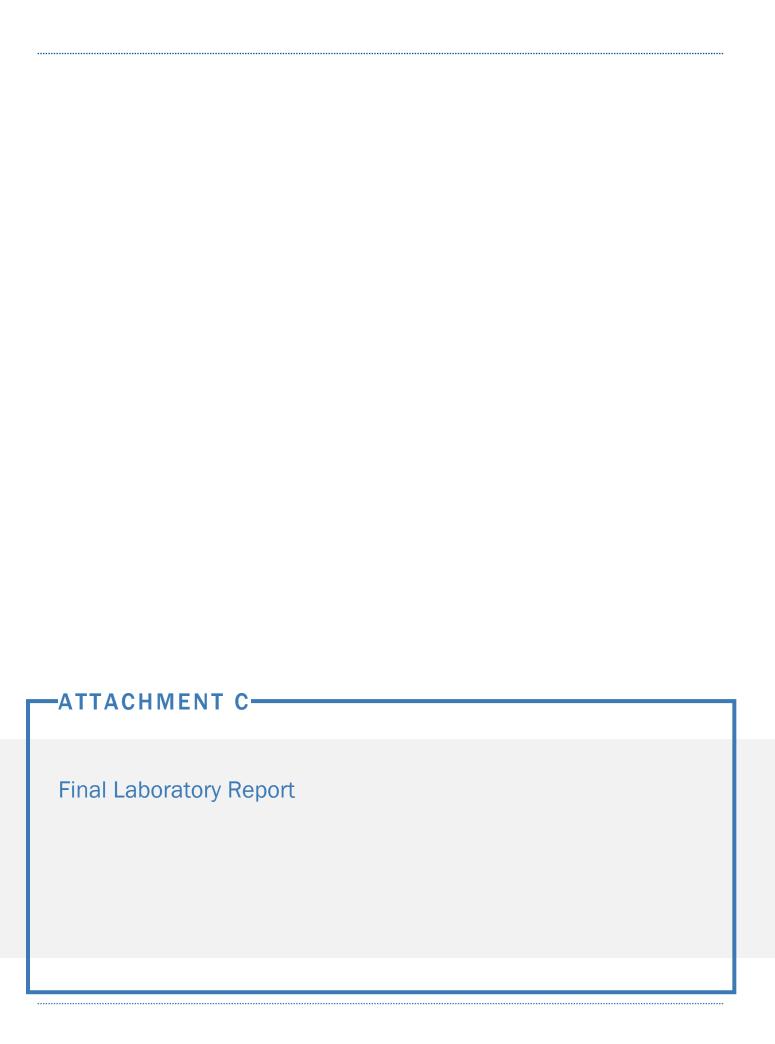
—ATTACHMENT B—		
Chip Tray Photos		

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6

8

10

11 12

13

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Andres Lapostol GSI Water Solutions, Inc 418 Chapala Street, Suite E Santa Barbara, California 93101

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# **JOB DESCRIPTION**

Los Olivos

# **JOB NUMBER**

570-173764-1

Eurofins Calscience 2841 Dow Avenue, Suite 100 Tustin CA 92780



# **Eurofins Calscience**

#### **Job Notes**

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# **Authorization**

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Client: GSI Water Solutions, Inc Project/Site: Los Olivos Laboratory Job ID: 570-173764-1

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# **Definitions/Glossary**

Client: GSI Water Solutions, Inc Job ID: 570-173764-1

Project/Site: Los Olivos

#### **Qualifiers**

Qualifier Qualifier Description

E Result exceeded calibration range.

**Metals** 

Qualifier Qualifier Description

B Compound was found in the blank and sample.
F1 MS and/or MSD recovery exceeds control limits.

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

#### **Glossary**

Abbreviation	These commonly	used abbreviations	may or may	not be i	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

**Eurofins Calscience** 

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#### **Case Narrative**

Client: GSI Water Solutions, Inc

Project: Los Olivos

Job ID: 570-173764-1 Eurofins Calscience

# Job Narrative 570-173764-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 2/23/2024 6:20 PM. 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 1.4°C.

#### HPLC/IC

Method 300\_ORGFM\_28D: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 570-413596 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Chloride in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

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

#### Metals

Method 200.7 - Total Recoverable: The method blank for preparation batch 570-415280 and analytical batch 570-415523 contained Boron above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 200.7 - Total Recoverable: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-415280 and analytical batch 570-415523 were outside control limits for Aluminum. 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.

#### **General Chemistry**

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

**Eurofins Calscience** 

Job ID: 570-173764-1

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Client: GSI Water Solutions, Inc

Client Sample ID: MW-1

Project/Site: Los Olivos

Job ID: 570-173764-1

Lab Sample ID: 570-173764-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	2.4		0.10	0.020	mg/L	1	_	300.0	Total/NA
Sulfate	39		1.0	0.18	mg/L	1		300.0	Total/NA
Chloride - DL	110		5.0	1.8	mg/L	5		300.0	Total/NA
Aluminum	0.249	J F1	0.500	0.0175	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.0126	J	0.100	0.00965	mg/L	1		200.7 Rev 4.4	Total Recoverable
Boron	0.0832	JB	0.500	0.00348	mg/L	1		200.7 Rev 4.4	Total Recoverable
Iron	0.405	J	0.500	0.0559	mg/L	1		200.7 Rev 4.4	Total Recoverable
Manganese	0.0385	J	0.0500	0.00129	mg/L	1		200.7 Rev 4.4	Total Recoverable
Total Dissolved Solids	492		10.0	8.70	mg/L	1		SM 2540C	Total/NA

**Client Sample ID: MW-2** 

# Lab Sample ID: 570-173764-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	210		10	3.6	mg/L		_	300.0	Total/NA
Nitrate as N - DL	11		1.0	0.20	mg/L	10		300.0	Total/NA
Sulfate - DL	95		10	1.8	mg/L	10		300.0	Total/NA
Aluminum	7.46		0.500	0.0175	mg/L	1		200.7 Rev 4.4	Total Recoverable
Arsenic	0.0133	J	0.100	0.00965	mg/L	1		200.7 Rev 4.4	Total Recoverable
Boron	0.176	JB	0.500	0.00348	mg/L	1		200.7 Rev 4.4	Total Recoverable
Iron	12.1		0.500	0.0559	mg/L	1		200.7 Rev 4.4	Total Recoverable
Manganese	0.315		0.0500	0.00129	mg/L	1		200.7 Rev 4.4	Total Recoverable
Total Dissolved Solids	1120		10.0	8.70	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-3

# Lab Sample ID: 570-173764-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	53		1.0	0.36	mg/L	1	_	300.0	Total/NA
Nitrate as N	6.3		0.10	0.020	mg/L	1		300.0	Total/NA
Sulfate - DL	190		10	1.8	mg/L	10		300.0	Total/NA
Aluminum	1.19		0.500	0.0175	mg/L	1		200.7 Rev 4.4	Total Recoverable
Boron	0.144	JB	0.500	0.00348	mg/L	1		200.7 Rev 4.4	Total Recoverable
Iron	1.88		0.500	0.0559	mg/L	1		200.7 Rev 4.4	Total Recoverable
Manganese	0.0951		0.0500	0.00129	mg/L	1		200.7 Rev 4.4	Total Recoverable
Total Dissolved Solids	846		10.0	8.70	mg/L	1		SM 2540C	Total/NA

**Client Sample ID: MW-4** 

# Lab Sample ID: 570-173764-4

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac D	Method	Prep Type
Chloride - DL	87	10	3.6 mg/L	10	300.0	Total/NA
Nitrate as N - DL	11	1.0	0.20 mg/L	10	300.0	Total/NA
Sulfate - DL	180	10	1.8 mg/L	10	300.0	Total/NA

This Detection Summary does not include radiochemical test results.

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# **Detection Summary**

Client: GSI Water Solutions, Inc

Client Sample ID: MW-4 (Continued)

Project/Site: Los Olivos

Lab Sample ID: 570-173764-4

Job ID: 570-173764-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.366	J	0.500	0.0175	mg/L	1	_	200.7 Rev 4.4	Total Recoverable
Boron	0.211	JB	0.500	0.00348	mg/L	1		200.7 Rev 4.4	Total Recoverable
Iron	0.388	J	0.500	0.0559	mg/L	1		200.7 Rev 4.4	Total Recoverable
Manganese	0.0124	J	0.0500	0.00129	mg/L	1		200.7 Rev 4.4	Total Recoverable
Total Dissolved Solids	1090		10.0	8.70	mg/L	1		SM 2540C	Total/NA

# Client Sample ID: MW-5 Lab Sample ID: 570-173764-5

Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	41	1.0	0.36	mg/L		_	300.0	Total/NA
Nitrate as N	4.5	0.10	0.020	mg/L	1		300.0	Total/NA
Sulfate - DL	190	10	1.8	mg/L	10		300.0	Total/NA
Aluminum	2.56	0.500	0.0175	mg/L	1		200.7 Rev 4.4	Total Recoverable
Boron	0.142 JB	0.500	0.00348	mg/L	1		200.7 Rev 4.4	Total Recoverable
Iron	3.60	0.500	0.0559	mg/L	1		200.7 Rev 4.4	Total Recoverable
Manganese	0.0569	0.0500	0.00129	mg/L	1		200.7 Rev 4.4	Total Recoverable
Total Dissolved Solids	791	10.0	8.70	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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Client: GSI Water Solutions, Inc Job ID: 570-173764-1

Project/Site: Los Olivos

Client Sample ID: MW-1 Lab Sample ID: 570-173764-1

Date Collected: 02/22/24 13:55 Matrix: Water

Date Received: 02/23/24 18:20

Analyte	Res	ult Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate a	is N	2.4	0.10	0.020	mg/L			02/24/24 02:35	1
Sulfate		39	1.0	0.18	mg/L			02/24/24 02:35	1

Method: EPA 300.0 - Anions, Ic	on Chromatograph	ıy - DL						
Analyte	Result Qualifier	r RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110	5.0	1.8	mg/L			02/26/24 19:10	5

Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.249	J F1	0.500	0.0175	mg/L		02/29/24 08:27	02/29/24 14:36	1
0.0126	J	0.100	0.00965	mg/L		02/29/24 08:27	02/29/24 14:36	1
0.0832	JB	0.500	0.00348	mg/L		02/29/24 08:27	02/29/24 14:36	1
0.405	J	0.500	0.0559	mg/L		02/29/24 08:27	02/29/24 14:36	1
0.0385	J	0.0500	0.00129	mg/L		02/29/24 08:27	02/29/24 14:36	1
	0.249 0.0126 0.0832 0.405	Result Qualifier  0.249 J F1  0.0126 J  0.0832 J B  0.405 J  0.0385 J	0.249       J F1       0.500         0.0126       J       0.100         0.0832       J B       0.500         0.405       J       0.500	0.249 J F1     0.500     0.0175       0.0126 J     0.100     0.00965       0.0832 J B     0.500     0.00348       0.405 J     0.500     0.0559	0.249     J F1     0.500     0.0175     mg/L       0.0126     J     0.100     0.00965     mg/L       0.0832     J B     0.500     0.00348     mg/L       0.405     J     0.500     0.0559     mg/L	0.249 J F1     0.500     0.0175 mg/L       0.0126 J     0.100     0.00965 mg/L       0.0832 J B     0.500     0.00348 mg/L       0.405 J     0.500     0.0559 mg/L	0.249 JF1     0.500     0.0175 mg/L     02/29/24 08:27       0.0126 J     0.100     0.00965 mg/L     02/29/24 08:27       0.0832 JB     0.500     0.00348 mg/L     02/29/24 08:27       0.405 J     0.500     0.0559 mg/L     02/29/24 08:27	0.249     J F1     0.500     0.0175     mg/L     02/29/24 08:27     02/29/24 14:36       0.0126     J     0.100     0.00965     mg/L     02/29/24 08:27     02/29/24 14:36       0.0832     J B     0.500     0.00348     mg/L     02/29/24 08:27     02/29/24 14:36       0.405     J     0.500     0.0559     mg/L     02/29/24 08:27     02/29/24 14:36

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	492		10.0	8.70	mg/L			02/29/24 13:53	1

Client Sample ID: MW-2

Date Collected: 02/22/24 12:35

Lab Sample ID: 570-173764-2

Matrix: Water

Date Collected: 02/22/24 12:35 Date Received: 02/23/24 18:20

Method: EPA 300.0 - Anions, Ion Chromatography - DL
method: El A 000.0 - Amons, fon omornatography - DE

Welliod. EPA 300.0 - A	mions, ion Ciromatography - D	<b>'</b> L				
Analyte	Result Qualifier	RL	MDL Unit	D Pre	epared Analyzed	Dil Fac
Chloride	210	10	3.6 mg/L		02/24/24 07:07	7 10
Nitrate as N	11	1.0	0.20 mg/L	<u>-</u>	02/24/24 07:07	7 10
Sulfate	95	10	1.8 mg/L	-	02/24/24 07:07	7 10

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7.46	0.500	0.0175	mg/L		02/29/24 08:27	02/29/24 14:43	1
Arsenic	0.0133 J	0.100	0.00965	mg/L		02/29/24 08:27	02/29/24 14:43	1
Boron	0.176 JB	0.500	0.00348	mg/L		02/29/24 08:27	02/29/24 14:43	1
Iron	12.1	0.500	0.0559	mg/L		02/29/24 08:27	02/29/24 14:43	1
Manganese	0.315	0.0500	0.00129	mg/L		02/29/24 08:27	02/29/24 14:43	1

General Chemistry								
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids (SM 2540C)	1120	10.0	8.70 mg/L			02/29/24 13:53	1	

Client Sample ID: MW-3

Date Collected: 02/22/24 11:30

Lab Sample ID: 570-173764-3

Matrix: Water

Date Received: 02/23/24 18:20

Metho	Method: EPA 300.0 - Anions, Ion Chromatography								
Analyte	Resu	lt Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloric	le 5	3	1.0	0.36	mg/L			02/24/24 04:41	1
Nitrate	as N 6.	3	0.10	0.020	mg/L			02/24/24 04:41	1

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Client: GSI Water Solutions, Inc Job ID: 570-173764-1

Project/Site: Los Olivos

Client Sample ID: MW-3 Lab Sample ID: 570-173764-3

Date Collected: 02/22/24 11:30 Matrix: Water Date Received: 02/23/24 18:20

Method: EPA 300.0 - Anions	s, Ion Chroma	tography - D	L						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	190		10	1.8	mg/L			02/24/24 07:28	10
Method: EPA 200.7 Rev 4.4	- Metals (ICP)	- Total Reco	verable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result Qualifie	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.19	0.500	0.0175	mg/L		02/29/24 08:27	02/29/24 15:02	1
Arsenic	ND	0.100	0.00965	mg/L		02/29/24 08:27	02/29/24 15:02	1
Boron	0.144 JB	0.500	0.00348	mg/L		02/29/24 08:27	02/29/24 15:02	1
Iron	1.88	0.500	0.0559	mg/L		02/29/24 08:27	02/29/24 15:02	1
Manganese	0.0951	0.0500	0.00129	mg/L		02/29/24 08:27	02/29/24 15:02	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	846		10.0	8.70	mg/L			02/29/24 13:53	1

Client Sample ID: MW-4

Date Collected: 02/22/24 11:05

Lab Sample ID: 570-173764-4

Matrix: Water

Date Received: 02/23/24 18:20

Date Received: 02/23/24 18:20

Method: EPA 300.0 - Ani	ons, Ion Chromatography - D	L						
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	87	10	3.6	mg/L			02/24/24 07:49	10
Nitrate as N	11	1.0	0.20	mg/L			02/24/24 07:49	10
Sulfate	180	10	1.8	mg/L			02/24/24 07:49	10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.366	J	0.500	0.0175	mg/L		02/29/24 08:27	02/29/24 15:04	1
Arsenic	ND		0.100	0.00965	mg/L		02/29/24 08:27	02/29/24 15:04	1
Boron	0.211	JB	0.500	0.00348	mg/L		02/29/24 08:27	02/29/24 15:04	1
Iron	0.388	J	0.500	0.0559	mg/L		02/29/24 08:27	02/29/24 15:04	1
Manganese	0.0124	J	0.0500	0.00129	mg/L		02/29/24 08:27	02/29/24 15:04	1

General Chemistry								
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1090	10.0	8.70	mg/L			02/29/24 13:53	1

Client Sample ID: MW-5

Date Collected: 02/22/24 10:35

Lab Sample ID: 570-173764-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41		1.0	0.36	mg/L			02/24/24 05:22	1
Nitrate as N	4.5		0.10	0.020	mg/L			02/24/24 05:22	1
Mathadi EDA 200 0 - A	niana lan Chuamat								
	•	• • •	L						
Method: EPA 300.0 - A Analyte	•	ography - Di Qualifier	L RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Welliou. EPA 200.7 Rev 4.4 - W	etais (ICP) - IUtai Rect	Jverable					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2.56	0.500	0.0175 mg/L		02/29/24 08:27	02/29/24 15:07	1

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# **Client Sample Results**

Client: GSI Water Solutions, Inc Job ID: 570-173764-1

Project/Site: Los Olivos

**Client Sample ID: MW-5** Lab Sample ID: 570-173764-5

**Matrix: Water** 

Date Collected: 02/22/24 10:35 Date Received: 02/23/24 18:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.100	0.00965	mg/L		02/29/24 08:27	02/29/24 15:07	1
Boron	0.142	JB	0.500	0.00348	mg/L		02/29/24 08:27	02/29/24 15:07	1
Iron	3.60		0.500	0.0559	mg/L		02/29/24 08:27	02/29/24 15:07	1
Manganese	0.0569		0.0500	0.00129	mg/L		02/29/24 08:27	02/29/24 15:07	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	791		10.0	8.70	mg/L			02/29/24 13:53	1

Client: GSI Water Solutions, Inc Job ID: 570-173764-1

Project/Site: Los Olivos

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 570-413595/5 Client Sample ID: Method Blank

**Matrix: Water** 

Analysis Batch: 413595

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte Prepared Nitrate as N 0.10 02/23/24 13:47 ND 0.020 mg/L

Lab Sample ID: LCS 570-413595/6 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 413595** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Nitrate as N 5.00 5.009 90 - 110 mg/L 100

Lab Sample ID: LCSD 570-413595/7 Client Sample ID: Lab Control Sample Dup **Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 413595** 

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Limits **RPD** Limit Analyte Unit %Rec Nitrate as N 5.00 5.003 100 mg/L

Lab Sample ID: 570-173764-1 MS Client Sample ID: MW-1 Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 413595** 

Spike MS MS %Rec Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Nitrate as N 5.00 7.606 80 - 120 2.4 mg/L 104

Lab Sample ID: 570-173764-1 MSD

**Matrix: Water** 

Analysis Batch: 413595

MSD MSD RPD Sample Sample Spike %Rec Analyte Result Qualifier Added Limits Result Qualifier Unit %Rec Limit Nitrate as N 2.4 5.00 7.699 106 80 - 120 mg/L

Lab Sample ID: MB 570-413596/5 **Client Sample ID: Method Blank** Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 413596** 

MB MB Analyte Result Qualifier **MDL** Unit Dil Fac RL Prepared Analyzed Chloride ND 1.0 0.36 mg/L 02/23/24 13:47 Sulfate ND 1.0 0.18 mg/L 02/23/24 13:47

Lab Sample ID: LCS 570-413596/6 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Matrix: Water** 

Analysis Ratch: 412506

Allalysis Dalcil. 413030								
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	50.71		mg/L		101	90 - 110	
Sulfate	50.0	49.75		ma/L		99	90 - 110	

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**Prep Type: Total/NA** 

Client Sample ID: MW-1

Prep Type: Total/NA

Client: GSI Water Solutions, Inc. Job ID: 570-173764-1

Project/Site: Los Olivos

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 570-413596/7 Client Sample ID: Lab Control Sample Dup

**Matrix: Water** 

Analysis Batch: 413596

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	50.0	50.54		mg/L	_	101	90 - 110	0	15
Sulfate	50.0	49.72		mg/L		99	90 - 110	0	15

Lab Sample ID: 570-173764-1 MS

**Matrix: Water** 

Analysis Batch: 413596

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	130	E	50.0	189.8	E	mg/L		113	80 - 120	
Sulfate	39		50.0	94.96		mg/L		111	80 - 120	

Lab Sample ID: 570-173764-1 MSD

**Matrix: Water** 

Analysis Batch: 413596

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	130	E	50.0	190.8	E	mg/L		115	80 - 120	1	20
Sulfate	39		50.0	96.17		mg/L		113	80 - 120	1	20

Lab Sample ID: MB 570-414198/5

**Matrix: Water** 

**Analysis Batch: 414198** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.36	mg/L			02/26/24 16:20	1

Lab Sample ID: LCS 570-414198/6

**Matrix: Water** 

Analysis Batch: 414198

	Spike	LCS LCS			%Rec
Analyte	Added	Result Qualifier	Unit D	%Rec	Limits
Chloride	50.0	50.63	ma/L	101	90 - 110

Lab Sample ID: LCSD 570-414198/7

**Matrix: Water** 

**Analysis Batch: 414198** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	50.0	50.50		mg/L		101	90 - 110	0	15

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 570-173764-1 MS

**Matrix: Water** 

Analysis Batch: 414198										
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride - DL	110		50.0	162.3		ma/L		101	80 - 120	

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**Prep Type: Total/NA** 

**Client Sample ID: MW-1** 

Client Sample ID: MW-1

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Type: Total/NA

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

Prep Type: Total/NA

Client Sample ID: MW-1

Prep Type: Total/NA

Client: GSI Water Solutions, Inc

Job ID: 570-173764-1 Project/Site: Los Olivos

Method: 300.0 - Anions, Ion Chromatography - DL (Continued)

Lab Sample ID: 570-173764-1 MSD **Matrix: Water** 

Analysis Batch: 414198

7 maryolo Batom 414100	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride - DL	110		50.0	163.2		mg/L		102	80 - 120	1	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 570-415280/1-A

**Matrix: Water** 

Analysis Batch: 415523

00/174	Chont Campio IB: Mothica Blank
	Prep Type: Total Recoverable
	Prep Batch: 415280
MB MB	

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.500	0.0175	mg/L		02/29/24 08:27	02/29/24 14:21	1
Arsenic	ND		0.100	0.00965	mg/L		02/29/24 08:27	02/29/24 14:21	1
Boron	0.04800	J	0.500	0.00348	mg/L		02/29/24 08:27	02/29/24 14:21	1
Iron	ND		0.500	0.0559	mg/L		02/29/24 08:27	02/29/24 14:21	1
Manganese	ND		0.0500	0.00129	mg/L		02/29/24 08:27	02/29/24 14:21	1

Lab Sample ID: LCS 570-415280/2-A

**Matrix: Water** 

Analysis Batch: 415523	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Aluminum	0.500	0.5094		mg/L		102	85 - 115
Arsenic	0.500	0.5041		mg/L		101	85 - 115
Boron	0.500	0.5334		mg/L		107	85 - 115
Iron	0.500	0.4914	J	mg/L		98	85 - 115
Manganese	0.500	0.5422		mg/L		108	85 - 115

Lab Sample ID: LCSD 570-415280/3-A

Matrix: Water Analysis Batch: 415523							/pe: Total Recoverable Prep Batch: 415280			
	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Aluminum	0.500	0.4972	J	mg/L		99	85 - 115	2	20	
Arsenic	0.500	0.5082		mg/L		102	85 - 115	1	20	
Boron	0.500	0.5273		mg/L		105	85 - 115	1	20	
Iron	0.500	0.4948	J	mg/L		99	85 - 115	1	20	
Manganese	0.500	0.5233		mg/L		105	85 - 115	4	20	

Lab Sample ID: 570-173764-1 MS

Matrix: Water Analysis Batch: 415523				0.11			F	Prep Ty	pe: Total Recoverable Prep Batch: 415280
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Aluminum	0.249	J F1	0.500	0.9033	F1	mg/L		131	80 - 120
Arsenic	0.0126	J	0.500	0.5312		mg/L		104	80 - 120
Boron	0.0832	JB	0.500	0.6240		mg/L		108	80 - 120
Iron	0.405	J	0.500	0.9345		mg/L		106	80 - 120
Manganese	0.0385	J	0.500	0.5629		mg/L		105	80 - 120

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**Client Sample ID: MW-1** 

Page 13 of 23

Client Sample ID: MW-1

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

**Prep Type: Total Recoverable** 

Prep Type: Total/NA

# **QC Sample Results**

Client: GSI Water Solutions, Inc Job ID: 570-173764-1

Project/Site: Los Olivos

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 570-173764-1 MSD

**Matrix: Water** 

**Analysis Batch: 415523** 

Client Sample ID: MW-1 **Prep Type: Total Recoverable** 

**Prep Batch: 415280** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	0.249	J F1	0.500	0.8768	F1	mg/L		126	80 - 120	3	20
Arsenic	0.0126	J	0.500	0.5253		mg/L		103	80 - 120	1	20
Boron	0.0832	JB	0.500	0.6078		mg/L		105	80 - 120	3	20
Iron	0.405	J	0.500	0.8972		mg/L		98	80 - 120	4	20
Manganese	0.0385	J	0.500	0.5493		mg/L		102	80 - 120	2	20

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

Lab Sample ID: MB 570-415477/1

**Matrix: Water** 

**Analysis Batch: 415477** 

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

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Total Dissolved Solids 10.0 8.70 mg/L 02/29/24 13:53 ND

Lab Sample ID: LCS 570-415477/2

**Matrix: Water** 

**Analysis Batch: 415477** 

Spike LCS LCS %Rec Added Result Qualifier Limits Analyte Unit D %Rec 1000 Total Dissolved Solids 1022 102 84 - 108 mg/L

Lab Sample ID: LCSD 570-415477/3

**Matrix: Water** 

Analysis Batch: 4154//									
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Dissolved Solids	 1000	1004		mg/L		100	84 - 108	2	10

**Eurofins Calscience** 

3/4/2024

# **QC Association Summary**

Client: GSI Water Solutions, Inc
Project/Site: Los Olivos

Job ID: 570-173764-1

# HPLC/IC

#### Analysis Batch: 413595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-173764-1	MW-1	Total/NA	Water	300.0	
570-173764-2 - DL	MW-2	Total/NA	Water	300.0	
570-173764-3	MW-3	Total/NA	Water	300.0	
570-173764-4 - DL	MW-4	Total/NA	Water	300.0	
570-173764-5	MW-5	Total/NA	Water	300.0	
MB 570-413595/5	Method Blank	Total/NA	Water	300.0	
LCS 570-413595/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-413595/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-173764-1 MS	MW-1	Total/NA	Water	300.0	
570-173764-1 MSD	MW-1	Total/NA	Water	300.0	

#### **Analysis Batch: 413596**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-173764-1	MW-1	Total/NA	Water	300.0	
570-173764-2 - DL	MW-2	Total/NA	Water	300.0	
570-173764-3	MW-3	Total/NA	Water	300.0	
570-173764-3 - DL	MW-3	Total/NA	Water	300.0	
570-173764-4 - DL	MW-4	Total/NA	Water	300.0	
570-173764-5	MW-5	Total/NA	Water	300.0	
570-173764-5 - DL	MW-5	Total/NA	Water	300.0	
MB 570-413596/5	Method Blank	Total/NA	Water	300.0	
LCS 570-413596/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-413596/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-173764-1 MS	MW-1	Total/NA	Water	300.0	
570-173764-1 MSD	MW-1	Total/NA	Water	300.0	

#### **Analysis Batch: 414198**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-173764-1 - DL	MW-1	Total/NA	Water	300.0	
MB 570-414198/5	Method Blank	Total/NA	Water	300.0	
LCS 570-414198/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 570-414198/7	Lab Control Sample Dup	Total/NA	Water	300.0	
570-173764-1 MS - DL	MW-1	Total/NA	Water	300.0	
570-173764-1 MSD - DL	MW-1	Total/NA	Water	300.0	

# Metals

#### **Prep Batch: 415280**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-173764-1	MW-1	Total Recoverable	Water	200.7	
570-173764-2	MW-2	Total Recoverable	Water	200.7	
570-173764-3	MW-3	Total Recoverable	Water	200.7	
570-173764-4	MW-4	Total Recoverable	Water	200.7	
570-173764-5	MW-5	Total Recoverable	Water	200.7	
MB 570-415280/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 570-415280/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 570-415280/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	
570-173764-1 MS	MW-1	Total Recoverable	Water	200.7	
570-173764-1 MSD	MW-1	Total Recoverable	Water	200.7	

**Eurofins Calscience** 

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# **QC Association Summary**

Job ID: 570-173764-1 Client: GSI Water Solutions, Inc

Project/Site: Los Olivos

#### **Metals**

#### **Analysis Batch: 415523**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
570-173764-1	MW-1	Total Recoverable	Water	200.7 Rev 4.4	415280	
570-173764-2	MW-2	Total Recoverable	Water	200.7 Rev 4.4	415280	
570-173764-3	MW-3	Total Recoverable	Water	200.7 Rev 4.4	415280	
570-173764-4	MW-4	Total Recoverable	Water	200.7 Rev 4.4	415280	
570-173764-5	MW-5	Total Recoverable	Water	200.7 Rev 4.4	415280	
MB 570-415280/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	415280	
LCS 570-415280/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	415280	
LCSD 570-415280/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	415280	
570-173764-1 MS	MW-1	Total Recoverable	Water	200.7 Rev 4.4	415280	
570-173764-1 MSD	MW-1	Total Recoverable	Water	200.7 Rev 4.4	415280	

# **General Chemistry**

# Analysis Batch: 415477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-173764-1	MW-1	Total/NA	Water	SM 2540C	_
570-173764-2	MW-2	Total/NA	Water	SM 2540C	
570-173764-3	MW-3	Total/NA	Water	SM 2540C	
570-173764-4	MW-4	Total/NA	Water	SM 2540C	
570-173764-5	MW-5	Total/NA	Water	SM 2540C	
MB 570-415477/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 570-415477/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 570-415477/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	

#### **Lab Chronicle**

Client: GSI Water Solutions, Inc Project/Site: Los Olivos

Lab Sample ID: 570-173764-1

**Matrix: Water** 

Job ID: 570-173764-1

Client Sample ID: MW-1 Date Collected: 02/22/24 13:55 Date Received: 02/23/24 18:20

Batch		Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	300.0 at ID: IC10		1	4 mL	4 mL	413595	02/24/24 02:35	JAR8	EET CAL 4
Total/NA	Analysis Instrumer	300.0 at ID: IC10		1	4 mL	4 mL	413596	02/24/24 02:35	JAR8	EET CAL 4
Total/NA	Analysis Instrumer	300.0 at ID: IC9	DL	5	4 mL	4 mL	414198	02/26/24 19:10	JAR8	EET CAL 4
Total Recoverable	Prep	200.7			50 mL	50 mL	415280	02/29/24 08:27	JP8N	EET CAL 4
Total Recoverable	Analysis Instrumer	200.7 Rev 4.4 at ID: ICP11		1			415523	02/29/24 14:36	P1R	EET CAL 4
Total/NA	Analysis Instrumer	SM 2540C at ID: BAL100		1	100 mL	1000 mL	415477	02/29/24 13:53	ZL7L	EET CAL 4

Lab Sample ID: 570-173764-2 **Client Sample ID: MW-2** Date Collected: 02/22/24 12:35

**Matrix: Water** 

Date Received: 02/23/24 18:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	413595	02/24/24 07:07	JAR8	EET CAL
	Instrumer	nt ID: IC10								
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	413596	02/24/24 07:07	JAR8	EET CAL 4
	Instrumer	nt ID: IC10								
Total Recoverable	Prep	200.7			50 mL	50 mL	415280	02/29/24 08:27	JP8N	EET CAL 4
Total Recoverable	Analysis	200.7 Rev 4.4		1			415523	02/29/24 14:43	P1R	EET CAL 4
	Instrumer	nt ID: ICP11								
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	415477	02/29/24 13:53	ZL7L	EET CAL 4
	Instrumer	nt ID: BAL100								

**Client Sample ID: MW-3** Lab Sample ID: 570-173764-3

Date Collected: 02/22/24 11:30 **Matrix: Water** Date Received: 02/23/24 18:20

Prep Type	Batch	Batch		Dil	Initial	Final	Batch	Prepared	Analyst	
	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed		Lab
Total/NA	Analysis Instrumen	300.0 t ID: IC10		1	4 mL	4 mL	413595	02/24/24 04:41	JAR8	EET CAL 4
Total/NA	Analysis Instrumen	300.0 t ID: IC10		1	4 mL	4 mL	413596	02/24/24 04:41	JAR8	EET CAL 4
Total/NA	Analysis Instrumen	300.0 t ID: IC10	DL	10	4 mL	4 mL	413596	02/24/24 07:28	JAR8	EET CAL 4
Total Recoverable	Prep	200.7			50 mL	50 mL	415280	02/29/24 08:27	JP8N	EET CAL 4
Total Recoverable	Analysis Instrumen	200.7 Rev 4.4 t ID: ICP11		1			415523	02/29/24 15:02	P1R	EET CAL 4
Total/NA	Analysis Instrumen	SM 2540C t ID: BAL100		1	100 mL	1000 mL	415477	02/29/24 13:53	ZL7L	EET CAL 4

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# **Lab Chronicle**

Client: GSI Water Solutions, Inc Job ID: 570-173764-1 Project/Site: Los Olivos

**Client Sample ID: MW-4** Lab Sample ID: 570-173764-4 Date Collected: 02/22/24 11:05

**Matrix: Water** 

Date Received: 02/23/24 18:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	300.0 t ID: IC10	DL	10	4 mL	4 mL	413595	02/24/24 07:49	JAR8	EET CAL 4
Total/NA	Analysis Instrumen	300.0 t ID: IC10	DL	10	4 mL	4 mL	413596	02/24/24 07:49	JAR8	EET CAL 4
Total Recoverable	Prep	200.7			50 mL	50 mL	415280	02/29/24 08:27	JP8N	EET CAL 4
Total Recoverable	Analysis Instrumen	200.7 Rev 4.4 t ID: ICP11		1			415523	02/29/24 15:04	P1R	EET CAL 4
Total/NA	Analysis Instrumen	SM 2540C t ID: BAL100		1	100 mL	1000 mL	415477	02/29/24 13:53	ZL7L	EET CAL 4

Lab Sample ID: 570-173764-5 **Client Sample ID: MW-5** Date Collected: 02/22/24 10:35 **Matrix: Water** 

Date Received: 02/23/24 18:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	4 mL	4 mL	413595	02/24/24 05:22	JAR8	EET CAL 4
	Instrumen	t ID: IC10								
Total/NA	Analysis	300.0		1	4 mL	4 mL	413596	02/24/24 05:22	JAR8	EET CAL 4
	Instrumen	t ID: IC10								
Total/NA	Analysis	300.0	DL	10	4 mL	4 mL	413596	02/24/24 08:51	JAR8	EET CAL 4
	Instrumen	t ID: IC10								
Total Recoverable	Prep	200.7			50 mL	50 mL	415280	02/29/24 08:27	JP8N	EET CAL 4
Total Recoverable	Analysis	200.7 Rev 4.4		1			415523	02/29/24 15:07	P1R	EET CAL 4
	Instrumen	t ID: ICP11								
Total/NA	Analysis	SM 2540C		1	100 mL	1000 mL	415477	02/29/24 13:53	ZL7L	EET CAL 4
	Instrumen	t ID: BAL100								

### **Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# **Accreditation/Certification Summary**

Client: GSI Water Solutions, Inc Job ID: 570-173764-1

Project/Site: Los Olivos

# **Laboratory: Eurofins Calscience**

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

Authority	Program	<b>Identification Number</b>	<b>Expiration Date</b>
California	State	3082	07-31-24
Oregon	NELAP	4175	02-03-25

7044

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# **Method Summary**

Client: GSI Water Solutions, Inc

Project/Site: Los Olivos

Job ID: 570-173764-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET CAL 4
200.7 Rev 4.4	Metals (ICP)	EPA	EET CAL 4
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAL 4
200.7	Preparation, Total Recoverable Metals	EPA	EET CAL 4

### **Protocol References:**

EPA = US Environmental Protection Agency

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

### **Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# **Sample Summary**

Client: GSI Water Solutions, Inc

Project/Site: Los Olivos

Job ID: 570-173764-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-173764-1	MW-1	Water	02/22/24 13:55	02/23/24 18:20
570-173764-2	MW-2	Water	02/22/24 12:35	02/23/24 18:20
570-173764-3	MW-3	Water	02/22/24 11:30	02/23/24 18:20
570-173764-4	MW-4	Water	02/22/24 11:05	02/23/24 18:20
570-173764-5	M\/\/-5	Water	02/22/24 10:35	02/23/24 18:20

**Environment Testing** 

Calscience

2841 Dow Avenue, Suite 100, Tustin, CA 92780 • (714) 895-5494

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

DATE: 2/22/24 PAGE: 1 OF 1

LABORATORY CLIENT: GSI WATER SOLI	Zhoit							JECT N									P.O. 1	NO,:					
ADDRESS: 418 CHAPALA ST, SUITE H	PINF							DNTACT	`	,							LAB	CONTAC	CT OR (	UOTE I	10.:		$\dashv$
SANTA BARBARA	CA	ZIP: Q	131	01																			
805-259-5066 E-MAIL: ALAPOS NFORTO	ol@ggins.c Velli@gsins.c	s.com				GLOE	BAL ID:					LOG	ODE:					V F	): (PRIN	T)			
TURNAROUND TIME (Rush surcharges may apply to any TAT not "STAND, SAME DAY 24 HR 48 HR 72 HI		STANDARD									_	EO	IEC	TED	AN	ALV	(SE	_					
EDD:						_								ox or fi									_
☐ COELT EDF ☐ OTHER  SPECIAL INSTRUCTIONS:					l					T	PIE	ase ch	eck b	OX OI I	III III DI	ank as	neeu	eu.		5	$\neg$		
			pa		pa	ם GRO	D DRO	TPH ☐ C6-C36 ☐ C6-C44		TBE □ 8260 □	30)	ss (8260)	5) ☐ En Core ☐ Terra Core	270)	(8081)	32)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals □ 6010/747X □ 6020/747X	Cr(VI) 🗆 7196 🗀 7199 🗀 218.6	Chloride, sulfate, TDS	rate as N	metals: Al, As	B, Fe, Mn
SAMPLE ID DATE TI	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	□ TPH(g) □ GRO	□ TPH(d) □ DRO	тРН 🗆 С6	ТРН	втех / мтве	VOCs (8260)	Oxygenates	Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs 🗆 8	T22 Metals	Cr(VI) 🗅 7	Chlo	Nitrate	10tal	
MW-8NF 1 2122124 13:	5 GW	2																		X	X	X	
MW-8 1 2122124 133 MW-2 123 MW-3 113 MW-4 40	5 1																				1	i	
3 MW-3 143																					Ш		
9 MW-4 40	5																						
MW-5 103	5																			V	4	V	
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			_						57	0-173	764 (	Chain	of C	ustod	У						_	_	
	D-t	7:	Poss		(Cinna)	10.00										Data				Time			Щ
Relinquished by: (Signature)	Date: 123 W7	Y Time:	1	ived by:	1_		16	20	2								23	3.2	4	111110	0	عـ	3
Relinquished by: (Signature)	Date: 2.73.7	Time:	1	ived by:	~	-	6	C								_	23	/21		(37	-3		
Relinquished by: (Signature)	Date: 2/23/24	Time:	Rece	ived by:	(Signal	ture/Aff	iliation)	K	<		5	C				Date 2	23	120	+	Time	7.2	Ø	

Attachment "Chain\_of\_Custody\_General\_Color\_221004rev.xls" to "US Eurofins Calscience - CoC Templates" Printed by Jenny Magana, d. Tue 04 Oct 2022 16:31 PDT

1-4 1-4 542

Page 1 of 1

# **Login Sample Receipt Checklist**

Client: GSI Water Solutions, Inc Job Number: 570-173764-1

Login Number: 173764 List Source: Eurofins Calscience

List Number: 1

Creator: Patel, Jayesh

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

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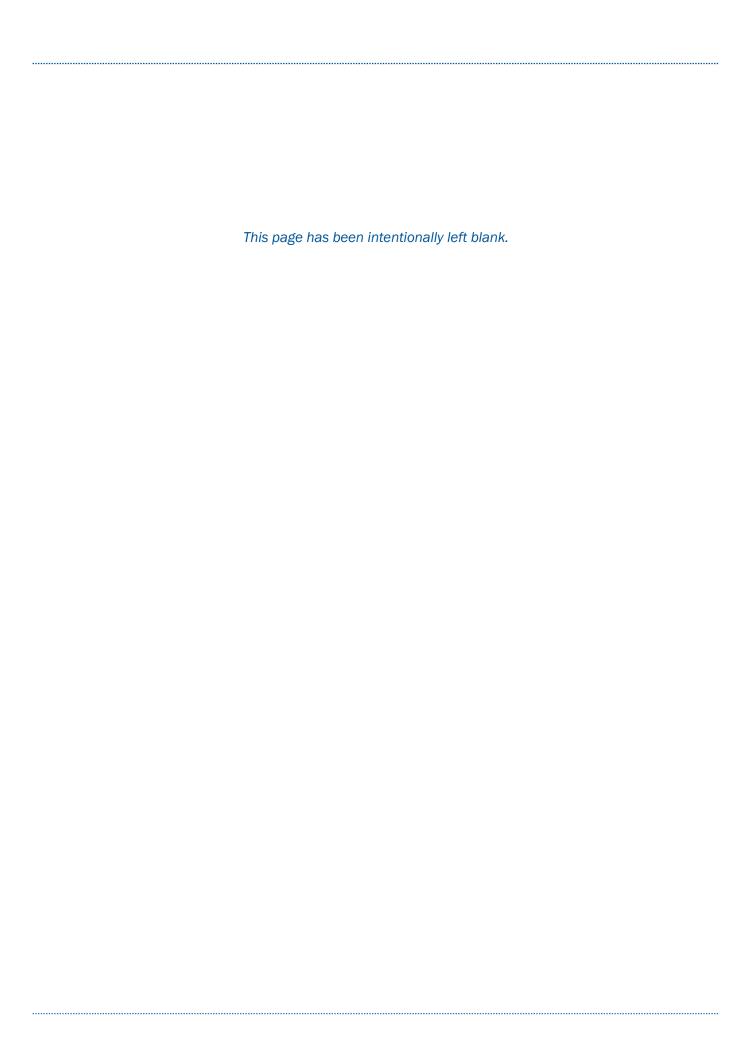
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# -ATTACHMENT D-Historical Water Quality Data

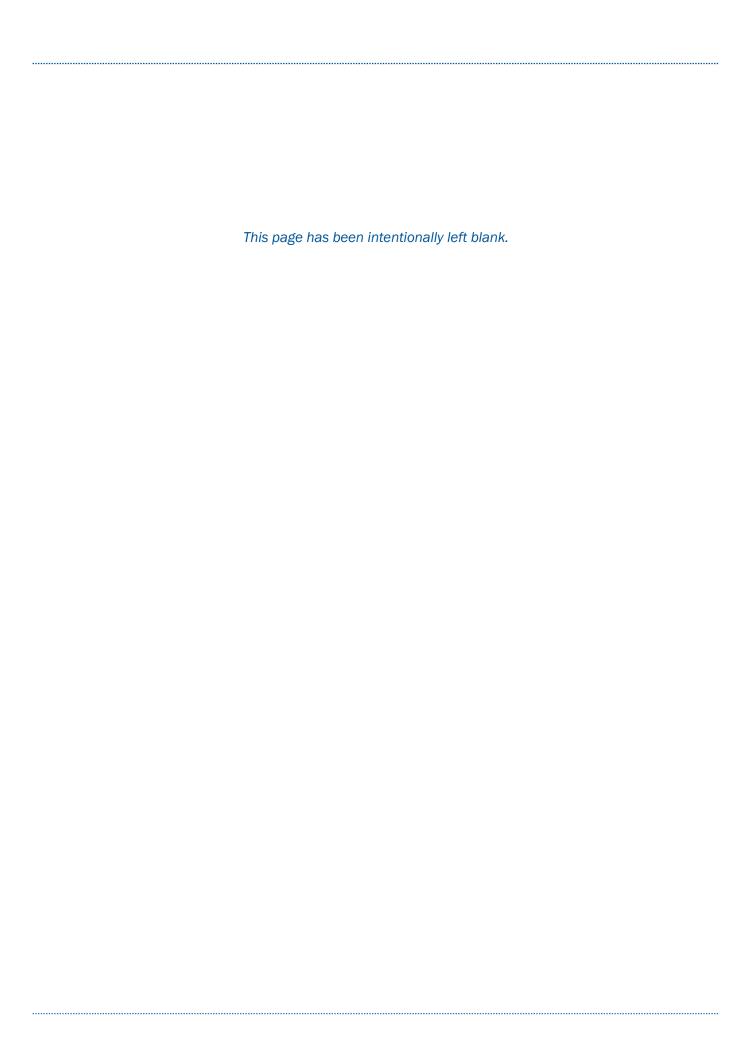
Attachment D. November 2022 Water Quality Sampling Results

Analyte	Units	Maximum Contaminant Level <sup>1</sup>	Basin Water Quality Objective <sup>2</sup>	MW-1	MW-2
Chloride	mg/L	500 <sup>3</sup>	50	110	130
Nitrate as N	mg/L	10	1	2.6	10
Sulfate	mg/L	500 <sup>3</sup>	10	40	120
Total Dissolved Solids	mg/L	1,000 <sup>3</sup>	600	450	840
Aluminum	mg/L	1	-	11	1.1
Arsenic	mg/L	0.010	-	0.011	0.004
Boron	mg/L	-	0.5	0.078	0.29
Iron	mg/L	0.33	-	22	2
Manganese	mg/L	$0.05^{3}$	-	0.37	0.11

### Notes:

- 1 State and federal drinking water standards
- 2 Established in the Water Quality Control Plan for the Central Coast Basin (Regional Water Quality Control Board, 2019)
- 3 Secondary maximum contaminant level

Bolded values are at or above the Maximum Contaminant Level



ATTACHMENT E-		
Woll Down;to		
Well Permits		



# **Environmental Health Services**

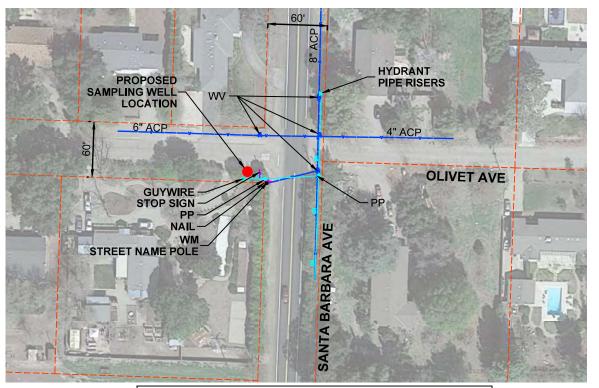
225 Camino Del Remedio, Santa Barbara, CA. 93110 ◆(805) 681-4900 2125 S. Centerpointe Pkwy., #333 ◆ Santa Maria, CA 93455-1340 ◆ (805) 346-8460

	MONITORIN	IG WELL P	ERMIT APPLICA	ATION	
TYPE OF PERMIT (Plea	ase check the appropriate l	box below)			FOR OFFICE USE ONLY
	\$670 first well \$260 per additional well	reperforation,	neans the deepening of a sealing or replacement of ruction of one completed	well	Rec'd Date: 02/22/2024  Rec'd By: Cristina Belu
I I I Well Destruction	\$655 first well \$260 per additional well		- Complete filling of the		Permit #: <u>20020</u> W/P #: <u>EH-LUA-24-000060</u>
Required Attachments: P	lot plan indicating the loc	cation of the we	ll with respect to the fo	llowing	P/E #: 4674 Hazmat Site #: Non-Site
<ol> <li>Property lines</li> <li>Below grade utilities, j</li> <li>Access roads and ease</li> <li>Existing and/or propos</li> </ol>	ments (water, sewer, utilit		age or industrial w	astes within onal, natural	orks carrying or containing sew- the vicinity of the proposed well l, or artificial water bodies or
OWNER INFO:					
Well Owner Name (Require	ed): Los Olivos Commi	unity Services	District	Primar	y Phone (800) 500-4098
Owner Mailing Address: F					
Julier Mailing Address.	Street Number and Str	eet Name	City		State/ Zip Code
Project Coordinator/Certific Mailing Address: 418 Cl	the person coordinating the ded Professional Name: An example An Anapala St Suite E, Sant et Number and Name  79 _ 3088	dres Lapostol (GS	93101 City		State / Zip Code
WELL INFO:					
Well Location: 2280 Olive		CA 93441 (see			
	umber and Street Name	135_110_01	City		State/ Zip Code
Well Location's Assessor' Well Use: ■ Ground Wate					
Orilling Method:  Hollov	√ Stem Auger □ Mud Ro	otary 🗆 Air Ro	otary 🗆 Sonic 🗆 Dia	rect Push [	Other
Proposed Depth 90	ft.		Casing Inform	<u>nation</u>	
Well Bore Diam. 8	in. Type: □ Steel	■ PVC □ Othe	r		
50.00	ft bgs Wall Thickness	sch 40	Diameter 2	in. Ann	ular Seal Depth 45 ft.
<b>Sealing Material</b>	Additional Work	k Description	install 2" monitoring	well to mor	nitor groundwater quality
□ Neat Cement □ Clay	in Los Olivos S	Special Proble	ems Area.		
■ Cement Grout □ Cor	icrete				
Well ID # MW-3	If destruction by	pressure grout,	grout volume:		

Page 1 of 2 EHS 46-2 (Rev 7/9/2019)

	LEGAL DECLARA	ATION		1
LICENSED CONTRACTOR DECLARATION I hereby affirm that I am licensed under the provision Code (B. & P.C.) as a well drilling contractor (C-57 licenses).				the Business and Professions
BC2 Environmental	Scott Traub	Digitally signed by Sco Date: 2024.02.02 14:40	tt Traub 0:15 -08'00'	2/2/2024
Print Name of Driller	Signature o		G 11 D1 7	Date
Lic. No.: 1051275	Office Telephone 714.744.	2990	Cell Phone: _7	14.020.4032
Business Name:	Address			
(Complete 'A' or 'B')  A. WORKERS' COMPENSATION DECLARATION  I hereby affirm one of the following:  I have and will maintain a certiff Section 3700 of the Labor Code, for I have and will maintain workers for the performance of work for whe Carrier Zurich	icate of consent to self- r the performance of the compensation insurance	work for which te, as provided to My insurance	this permit is issu for by Section 37	ed. 00 of the Labor Code,
Applicant Signature Scott Traub	Digitally signed by Scott Traub Date: 2024.02.02 14:40:54 -08'00'	Policy No.	Date 2/2/2024	
• •		N. INGVENIE	Date	
B. CERTIFICATION OF EXEMPTION FROM WO I certify that in the performance of work for wh come subject to the Worker's Compensation La Applicant Signature	nich this permit is issued		oloy any person in	a manner so as to be-
Notice to Applicant: If, after making this Certifica Labor Code, you must forthwith comply with such p				mpensation provisions of the
Health Services (EHS). Final clearance will not be I hereby agree to comply with all regulationstruction, repair, modification, destruction and in pleted well log upon completion of well construction.	ons of the County of Sar nactivation. The propert ction, destruction, or mod	nta Barbara and y owner, well d	California Well S riller, or agent wil	tandards pertaining to well of turnish EHS a copy of a co
I certify that I have read this application a and complete. I hereby authorize representative herein for compliance with county requirements.	s of EHS to enter the pr			
REQUIRED INSPECTIONS / FINAL inspection must be scheduled directly with the business days in advance for:				
<ul> <li>✓ The sealing of the annular space on a v</li> <li>✓ The destruction of wells;</li> <li>✓ Any operation stipulated on the permit</li> </ul>	t to address special or unus		W.L	
❖ Final clearance of the well will be	issuea upon receipt of	tne ariller's we	11 10g.	
Signed Guy W. Savage	Guy Savage		by Guy Savage 02 17:13:13 -08'00'	2/2/2024
Applicant (Print Name)  APPLICATI  Signed  Environmental Health Specialist	ON DISPOSITION:	nt's Signature  Approve  02/26/20  Date		Date
	FOR DEPARTMEN	T USE ONLY		
Fixed Fee Rec'd: by: CB Date: Date:			Cash 🗆 C	Check #_ C/C #0153
Permit Conditions:				
Final Construction Approved by:				
Final Clearance by:				

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2" Water Quality Sampling Well
Olivet Ave & Santa Barbara Ave Exibit Drawing



### LEGEND:

PP POWER POLE WM WATER METER WV WATER VALVE

PROPERTY LINEOVERHEAD WIRE

── WATER LINE

raffic Rated Well

Can and Cap Labelled

Sampling Well

Ground Water Elevation Varies (To Be Measured)

2: PVC Well

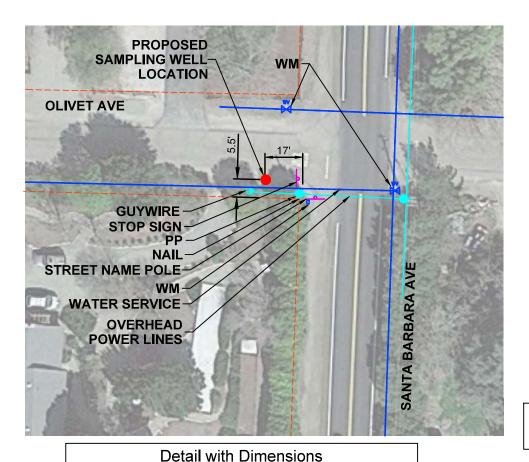
Casing

Ground Surface
Elevation

Well Depth

Varies (As directed by

Hydrologist) Est. 65-150 ft)



2" Water Quality Sampling Well Typical Profile

LOS OLIVOS CSD
OLIVET AVE AND SANTA BARBARA AVE
WATER QUALITY SAMPLING WELL LOCATION



# **Environmental Health Services**

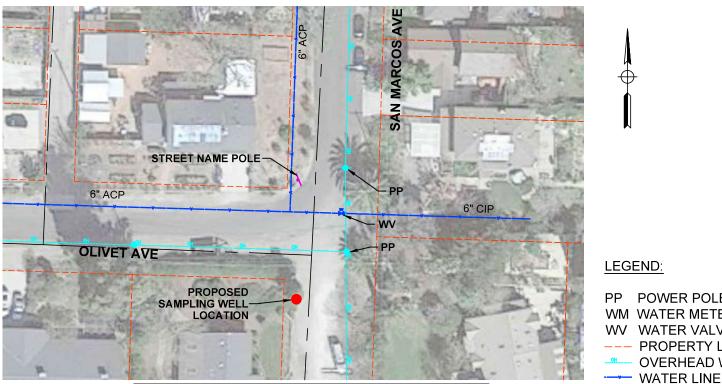
225 Camino Del Remedio, Santa Barbara, CA. 93110 ◆(805) 681-4900 2125 S. Centerpointe Pkwy., #333 ◆ Santa Maria, CA 93455-1340 ◆ (805) 346-8460

TVDE OF DEDMIT (			RMIT APPLICATIO	)N
Construction or Modification	\$670 first well \$260 per additional well	Modification mea	ans the deepening of a well, aling or replacement of well tion of one completed well.	FOR OFFICE USE ONLY  Rec'd Date: 02/22/2024  Rec'd By: Cristina Belu
☐ Well Destruction	\$655 first well \$260 per additional well	Abandonment – C	Complete filling of the well	Permit #: <u>20021</u> W/P #: <u>EH-LUA-24-000061</u>
tems: 1. Property lines 2. Below grade utilities	sements (water, sewer, utilit	5.	Sewage disposal systems age or industrial wastes w	or works carrying or containing sew- vithin the vicinity of the proposed well atural, or artificial water bodies or
OWNER INFO:				
	uired): Los Olivos Commu	unity Services D	istrict P1	rimary Phone (800) 500-4098
Owner Mailing Address:	PO Box 345, Los Olivos Street Number and Street	CA 93441	City	State/ Zip Code
Mailing Address: 418	tified Professional Name: And Chapala St Suite E, Santa Street Number and Name  979 3088		3101 City	State / Zip Code
WELL INFO:	livet Avenue, Los Olivos (	CA 93441 (see p	page 3)	
Street	Number and Street Name or's Parcel Number (APN):	135-151-004	City	State/ Zip Code
Well Use: 🗏 Ground W	ater Monitoring □ Vapor low Stem Auger □ Mud Ro	☐ Other	rry □ Sonic □ Direct Pus	sh 🗆 Other
Proposed Depth 60	ft.		Casing Information	
Well Bore Diam. 8	in. Type: □ Steel I	■ PVC □ Other _		
Screen Interval 25-60	ft bgs Wall Thickness	sch 40	Diameter 2 in.	Annular Seal Depth 23 ft.
Sealing Material	Additional Work	C Description in	stall 2" monitoring well to	monitor groundwater quality
□ Neat Cement □ C	lay in Los Olivos S	Special Problems	s Area.	
■ Cement Grout □ C	Concrete			
Well ID # MW-4	If destruction by	nressure grout, gr	rout volume:	

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	LEGAL DECLARA	ATION		
LICENSED CONTRACTOR DECLARATION  I hereby affirm that I am licensed under the provi  Code (B. & P.C.) as a well drilling contractor (C-57)		n full force and ef	fect.	the Business and Professions
BC2 Environmental Print Name of Driller	Scott Traub Signature of	Digitally signed by Sco Date: 2024.02.02 14:3	tt Traub 0:03 -08'00'	2/2/2024 Date
Lic. No.: 1051275	Office Telephone 714.744.		Cell Phone: <sup>7</sup>	
Business Name:	Address		Cell Fliolie	
	7 Iddi ess			
(Complete 'A' or 'B')  A. WORKERS' COMPENSATION DECLARATION I hereby affirm one of the following:  I have and will maintain a cert Section 3700 of the Labor Code, for the performance of work for we Carrier Zurich	ificate of consent to self- for the performance of the rs' compensation insurance	work for which e, as provided My insurance	this permit is issu for by Section 37	ed. 00 of the Labor Code,
Applicant Signature Scott Traub	Digitally signed by Scott Traub Date: 2024.02.02 14:32:52 -08'00'	Policy No.	Date 2/2/2024	
			Date 2/2/2024	<del></del>
B. CERTIFICATION OF EXEMPTION FROM W I certify that in the performance of work for v come subject to the Worker's Compensation Applicant Signature	which this permit is issued		oloy any person in	a manner so as to be-
Notice to Applicant: If, after making this Certific Labor Code, you must forthwith comply with such				mpensation provisions of the
Health Services (EHS). Final clearance will no I hereby agree to comply with all regula struction, repair, modification, destruction and pleted well log upon completion of well constru	tions of the County of Sar inactivation. The propert uction, destruction, or mod	nta Barbara and y owner, well d dification.	California Well S riller, or agent wil	tandards pertaining to well of turnish EHS a copy of a c
I certify that I have read this application and complete. I hereby authorize representative herein for compliance with county requirement	ves of EHS to enter the pr			
REQUIRED INSPECTIONS / FINAI inspection must be scheduled directly with the business days in advance for:				
<ul> <li>✓ The sealing of the annular space on a</li> <li>✓ The destruction of wells;</li> <li>✓ Any operation stipulated on the perm</li> </ul>		sual conditions.		
<ul> <li>Final clearance of the well will be</li> </ul>	e issued upon receipt of	the driller's we	ll log.	
Signed Guy Savage (LOCSD)  Applicant (Print Name)	Guy Savage	Digitally signer Date: 2024.02	l by Guy Savage 02 17:14:04 -08'00'	2/2/2024 Date
11 ,	TION DISPOSITION:	U	)24	Date
	FOR DEPARTMENT		_	
Fixed Fee Rec'd: by: CB Date:	02/22/2024 Amt.\$	260	Cash C	Check #_ C/C #1053
Receipt No.:#: <u>2181982</u>				
			Data	
Final Construction Approved by: Final Clearance by:				
i iilai Gidaiailoo by.			Date	

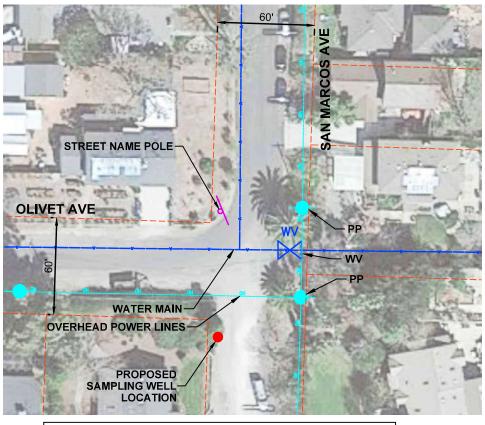
EHS 46-2 (Rev 7/9/2019) Page 2 of 2



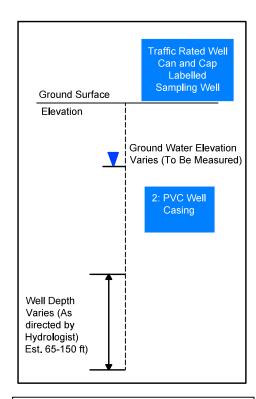
2" Water Quality Sampling Well Olivet Ave & San Marcos Ave Exibit Drawing

**POWER POLE** WM WATER METER WATER VALVE PROPERTY LINE

**OVERHEAD WIRE** 



**Detail with Dimensions** 



2" Water Quality Sampling Well Typical Profile

LOS OLIVOS CSD **OLIVET AVE AND SAN MARCOS AVE** WATER QUALITY SAMPLING WELL LOCATION



# **Environmental Health Services**

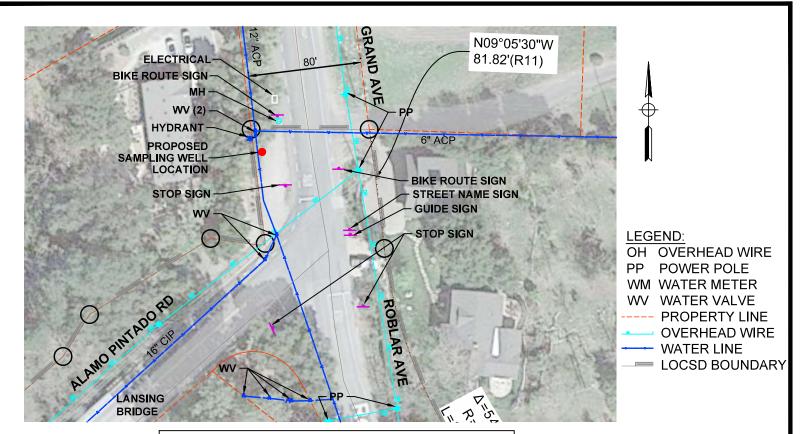
225 Camino Del Remedio, Santa Barbara, CA. 93110 ◆(805) 681-4900 2125 S. Centerpointe Pkwy., #333 ◆ Santa Maria, CA 93455-1340 ◆ (805) 346-8460

	MONITORIN	IG WELL PEI	RMIT APPLICATI	ION			
TYPE OF PERMIT (P  Construction or Modification	\$670 first well \$260 per additional well	Modification mea reperforation, seal	ans the deepening of a well ling or replacement of well tion of one completed well	Rec'd Date: 02/22/2024 Rec'd By: Cristina Belu			
☐ Well Destruction	\$655 first well \$260 per additional well	Abandonment – C	Complete filling of the well	W/P #: EH-LUA-24-000002			
tems: 1. Property lines 2. Below grade utilities	sements (water, sewer, utilit	5.	Sewage disposal syster age or industrial wastes	ms or works carrying or containing sews within the vicinity of the proposed well, natural, or artificial water bodies or			
OWNER INFO:							
Well Owner Name (Requ	ired): Los Olivos Commu	unity Services Di	strict	Primary Phone (800) 500-4098			
	PO Box 345, Los Olivos Street Number and Str	CA 93441		State/ Zip Code			
			City	•			
Project Coordinator/Cert Mailing Address: 418 (	f the person coordinating the tified Professional Name: And Chapala St Suite E, Sant treet Number and Name  979 3088	dres Lapostol (GSI V	Water Solutions, Inc.) 3101 City	State / Zip Code			
WELL INFO: Well Location: 2455 Gr	and Avenue, Los Olivos	 СА 93441 (see г	page 3)				
Street Number and Street Name  City State/ Zip Code  Vell Location's Assessor's Parcel Number (APN):							
	ater Monitoring ☐ Vapor ow Stem Auger ☐ Mud Ro		ry Sonic Direct 1	Push			
Proposed Depth 65	ft.		Casing Information	<u>on</u>			
Well Bore Diam. 8	''''   ' ' '	■ PVC □ Other _					
Screen Interval 30-65	ft bgs Wall Thickness	sch 40 <sub>I</sub>	Diameter 2 i	in. Annular Seal Depth 27 ft.			
Sealing Material		Additional Work Description install 2" monitoring well to monitor groundwater quality					
□ Neat Cement □ Cl	ay in Los Olivos S	Special Problems	s Area.				
■ Cement Grout □ C	oncrete						
Well ID # MW-5	If destruction by	If destruction by pressure grout, grout volume:					

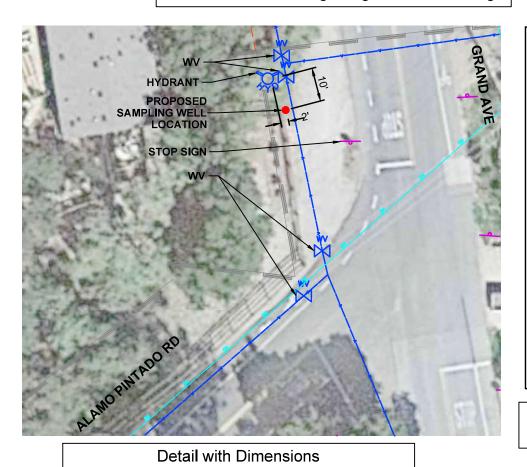
EHS 46-2 (Rev 7/9/2019) Page 1 of 2

	LEGAL DECLARA	ATION		
LICENSED CONTRACTOR DECLARATION I hereby affirm that I am licensed under the provision Code (B. & P.C.) as a well drilling contractor (C-57 licenses).		n full force and ef	fect.	the Business and Professions
BC2 Environmental Print Name of Driller	Scott Traub	Digitally signed by Sco Date: 2024.02.02 14:3	tt Traub 8:17 -08'00'	2/2/2024
Lic. No.: 1051275	Office Telephone 714.744.		Cell Phone: <sup>7</sup>	Date 714 620 4652
Business Name:			Cell Phone: _/	14.020.4002
	Address			
(Complete 'A' or 'B')  A. WORKERS' COMPENSATION DECLARATIO I hereby affirm one of the following:  I have and will maintain a certif Section 3700 of the Labor Code, fo  I have and will maintain workers for the performance of work for whe Carrier Zurich	ficate of consent to self- or the performance of the c' compensation insurance	work for which e, as provided My insurance	this permit is issu for by Section 37	ned. 00 of the Labor Code,
Applicant Signature Scott Traub	Digitally signed by Scott Traub Date: 2024.02.02 14:38:53 -08'00'	Policy No.	Date 2/2/2024	<del></del>
B. CERTIFICATION OF EXEMPTION FROM WO I certify that in the performance of work for we come subject to the Worker's Compensation L Applicant Signature	hich this permit is issued		oloy any person in	a manner so as to be-
Notice to Applicant: If, after making this Certifica Labor Code, you must forthwith comply with such				ompensation provisions of the
Health Services (EHS). Final clearance will not I hereby agree to comply with all regulati struction, repair, modification, destruction and in pleted well log upon completion of well construction.	ons of the County of San nactivation. The propert ction, destruction, or mod	nta Barbara and y owner, well d lification.	California Well S riller, or agent wi	tandards pertaining to well of the furnish EHS a copy of a co
I certify that I have read this application and complete. I hereby authorize representative herein for compliance with county requirements.	es of EHS to enter the pr			
REQUIRED INSPECTIONS / FINAL inspection must be scheduled directly with the business days in advance for:				
<ul> <li>✓ The sealing of the annular space on a</li> <li>✓ The destruction of wells;</li> <li>✓ Any operation stipulated on the permit</li> </ul>	it to address special or unus			
<ul> <li>Final clearance of the well will be</li> </ul>	e issued upon receipt of t	the driller's we	II log.	
Signed Guy Savage (LOCSD)	Guy Savage		by Guy Savage 02 17:15:03 -08'00'	2/2/2024
Applicant (Print Name)  APPLICAT  Signed  Environmental Health Specialist	ION DISPOSITION:	nt's Signature  Approve  02/26/20  Date	)24	Date
	FOR DEPARTMEN	T USE ONLY		
<b>Fixed Fee Rec'd:</b> by: Date: Receipt No.:#: 2181982			Cash 🔲 0	Check #_ C/C #0153
Permit Conditions:				
Final Construction Approved by:				<del></del>
Final Clearance by:	Date:			

EHS 46-2 (Rev 7/9/2019) Page 2 of 2



2" Water Quality Sampling Well
Grand Ave at Lansing Bridge Exhibit Drawing



2" Water Quality Sampling Well Typical Profile

raffic Rated Well Can and Cap Labelled

Sampling Well

Ground Water Elevation Varies (To Be Measured)

2: PVC Well Casing

Ground Surface Elevation

Well Depth Varies (As directed by Hydrologist) Est. 65-150 ft)

LOS OLIVOS CSD
GRAND AVE AT LANSING BRIDGE
WATER QUALITY SAMPLING WELL LOCATION

