

Work Orders: 9A31094

Project: Irwindale SW Outfall Mon.

Attn: Edmond G. Suher

Client: AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

Report Date: 3/27/2019

Received Date: 1/31/2019

Turnaround Time: Normal

Phones: (818) 841-9004

Fax: (818) 841-8013

P.O. #:

Billing Code:

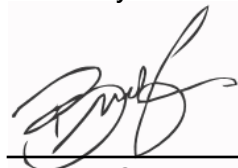
ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • HW-DOH # • ISO 17025 #L2457.01 • LACSD #10143 •  
NELAP-CA #04229CA • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

*This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.*

Dear Edmond G. Suher,

Enclosed are the results of analyses for samples received 1/31/19 with the Chain-of-Custody document. The samples were received in good condition, at 6.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Brandon Gee  
Operations Manager/Senior PM





WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

# Certificate of Analysis

FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
SAWPW-074A	ES/AH	9A31094-01	Water	01/31/19 13:49	
SGR-077	ES/AH	9A31094-02	Water	01/31/19 14:32	
BDW-027A	ES/AH	9A31094-03	Water	01/31/19 15:15	

## Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	By ANAB
<b>EPA 625.1 in Water</b>			
Naphthalene	91-20-3	✓	
Acenaphthylene	208-96-8	✓	
Acenaphthene	83-32-9	✓	
Fluorene	86-73-7	✓	
Phenanthrene	85-01-8	✓	
Anthracene	120-12-7	✓	
Fluoranthene	206-44-0	✓	
Pyrene	129-00-0	✓	
Benzo (a) anthracene	56-55-3	✓	
Chrysene	218-01-9	✓	
Benzo (b) fluoranthene	205-99-2	✓	
Benzo (k) fluoranthene	207-08-9	✓	
Benzo (a) pyrene	50-32-8	✓	
Indeno (1,2,3-cd) pyrene	193-39-5	✓	
Dibenzo (a,h) anthracene	53-70-3	✓	
Benzo (g,h,i) perylene	191-24-2	✓	
1,3-Dimethyl-2-nitrobenzene	81-20-9	✓	
Perylene-d12	1520-96-3	✓	
<b>SM 9221F in Water</b>			
E. coli		✓	



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FINAL REPORT

Reported:  
03/27/2019 10:37

## Sample Results

Sample: SAWPW-074A

Sampled: 01/31/19 13:49 by ES/AH

9A31094-01 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
<b>Anions by IC, EPA Method 300.0</b>							
Method: EPA 300.0	Batch ID: W9B0004	Instr: LC12	Prepared: 02/01/19 08:05	Analyst: jan			
Chloride, Total	1.2	0.10	0.50	mg/l	1	02/01/19 22:00	
Sulfate as SO <sub>4</sub>	2.3	0.10	0.50	mg/l	1	02/01/19 22:00	
<b>Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods</b>							
Method: EPA 160.4	Batch ID: W9B0045	Instr: OVEN11	Prepared: 02/01/19 14:44	Analyst: sar			
Volatile Suspended Solids	27	3.1	5.0	mg/l	1	02/04/19 10:30	
Method: EPA 180.1	Batch ID: W9B0016	Instr: TURB01	Prepared: 02/01/19 10:06	Analyst: SBN			
Turbidity	31	0.024	0.10	NTU	1	02/01/19 16:39	
Method: EPA 335.4	Batch ID: W9B0579	Instr: AA01	Prepared: 02/11/19 12:39	Analyst: MAT			
Cyanide, Total	ND	2.7	5.0	ug/l	1	02/12/19 12:44	
Method: EPA 350.1	Batch ID: W9B0197	Instr: AA06	Prepared: 02/05/19 10:22	Analyst: mcs			
Ammonia as N	0.43	0.048	0.10	mg/l	1	02/05/19 16:58	
Method: EPA 351.2	Batch ID: W9B0534	Instr: AA06	Prepared: 02/09/19 15:20	Analyst: mcs			
TKN	0.78	0.10	0.20	mg/l	2	02/20/19 18:46	
Method: EPA 353.2	Batch ID: W9B0010	Instr: AA01	Prepared: 02/01/19 09:13	Analyst: MAT			
NO <sub>2</sub> +NO <sub>3</sub> as N	480	83	200	ug/l	1	02/15/19 18:48	
Method: EPA 365.1	Batch ID: W9B0125	Instr: AA01	Prepared: 02/04/19 10:39	Analyst: mat			
Phosphorus as P, Total	0.31	0.0028	0.020	mg/l	1	02/07/19 11:56	M-06
Method: EPA 365.3	Batch ID: W9B0224	Instr: UVVIS04	Prepared: 02/05/19 13:53	Analyst: anb			
Phosphorus, Dissolved	0.15	0.00083	0.010	mg/l	1	02/15/19 12:24	
Method: EPA 410.4	Batch ID: W9B0754	Instr: UVVIS04	Prepared: 02/13/19 12:08	Analyst: ymt			
Chemical Oxygen Demand	57	0.73	5.0	mg/l	1	02/20/19 11:06	
Method: EPA 420.4	Batch ID: W9B1110	Instr: AA03	Prepared: 02/20/19 10:12	Analyst: mcs			
Phenolics	ND	0.0042	0.010	mg/l	1	02/21/19 12:32	
Method: SM 2320B	Batch ID: W9B0178	Instr: PH01	Prepared: 02/04/19 20:14	Analyst: anb			
Alkalinity as CaCO <sub>3</sub>	14	0.56	2.0	mg/l	1	02/05/19 12:12	
Method: SM 2510B	Batch ID: W9B0485	Instr: PH01	Prepared: 02/08/19 12:13	Analyst: sbn			
Specific Conductance (EC)	40	0.23	2.0	umhos/cm	1	02/08/19 14:05	
Method: SM 2540C M	Batch ID: W9B0159	Instr: OVEN01	Prepared: 02/04/19 16:38	Analyst: blg			
Total Dissolved Solids	5.0	4.0	10	mg/l	1	02/05/19 15:24	J
Method: SM 2540D	Batch ID: W9B0046	Instr: OVEN11	Prepared: 02/01/19 14:46	Analyst: sar			
Total Suspended Solids	100		5	mg/l	1	02/04/19 10:30	
Method: SM 4500O-G	Batch ID: W9B0013	Instr: PH13	Prepared: 02/01/19 09:57	Analyst: sar			
Dissolved Oxygen	8.49	0.500	1.00	mg/l	1	02/01/19 10:11	*
Method: SM 5210B	Batch ID: W9B0014	Instr: PH13	Prepared: 02/01/19 09:59	Analyst: SAR			
Biochemical Oxygen Demand	6.8	2.0	2.0	mg/l	1	02/06/19 16:08	

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# Certificate of Analysis

FINAL REPORT

Reported:

03/27/2019 10:37

## Sample Results

(Continued)

Sample: SAWPW-074A

Sampled: 01/31/19 13:49 by ES/AH

9A31094-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
<b>Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)</b>							
Method: SM 5540C	Batch ID: W9B0076	Instr: UVVIS04	Prepared: 02/01/19 17:33	Analyst: mcs			
MBAS	0.15	0.019	0.050	mg/l	1	02/01/19 21:05	
<b>Hexavalent Chromium by IC</b>							
Method: EPA 218.6	Batch ID: W9B0358	Instr: LC13	Prepared: 02/06/19 11:00	Analyst: pjs			
Chromium 6+	0.13	0.0048	0.020	ug/l	1	02/06/19 18:58	
Method: EPA 218.6	Batch ID: W9B0643	Instr: LC13	Prepared: 02/12/19 09:11	Analyst: pjs			
Chromium 6+, Dissolved	0.25	0.0048	0.020	ug/l	1	02/12/19 14:49	
<b>Hydrocarbons by GC/FID</b>							
Method: EPA 8015B	Batch ID: W9B0282	Instr: GC04	Prepared: 02/06/19 08:36	Analyst: ars			
Diesel Range Organics	0.27	0.12	0.50	mg/l	5	02/15/19 01:40	M-04, J
Oil Range Organics	ND	1.6	2.5	mg/l	5	02/15/19 01:40	M-04
<i>Surrogate(s)</i>							
n-Tetracosane	108% Conc: 0.271	64-155				02/15/19 01:40	M-04
<b>Metals by EPA 200 Series Methods</b>							
Method: EPA 200.7	Batch ID: [CALC]	Instr: [CALC]	Prepared: 02/01/19 16:15	Analyst: mtt			
Calcium Hardness as CaCO3	14.9		0.250	mg/l	1	02/25/19 14:49	
Method: EPA 200.7	Batch ID: W9B0060	Instr: ICP03	Prepared: 02/01/19 16:15	Analyst: mtt			
Calcium, Total	5.96	0.0160	0.100	mg/l	1	02/25/19 14:49	
Phosphorus, Dissolved	0.12	0.012	0.020	mg/l	1	02/25/19 14:46	
Phosphorus, Total	0.32	0.012	0.020	mg/l	1	02/25/19 14:49	
Method: EPA 200.8	Batch ID: W9B0063	Instr: ICPMS02	Prepared: 02/01/19 16:24	Analyst: jea			
Aluminum, Dissolved	35	1.3	5.0	ug/l	1	03/09/19 13:20	
Aluminum, Total	3900	1.3	5.0	ug/l	1	03/09/19 13:27	
Antimony, Dissolved	0.37	0.045	0.50	ug/l	1	03/09/19 13:20	J
Antimony, Total	1.0	0.045	0.50	ug/l	1	03/09/19 13:27	
Arsenic, Dissolved	0.48	0.074	0.40	ug/l	1	03/09/19 13:20	
Arsenic, Total	1.9	0.074	0.40	ug/l	1	03/09/19 13:27	
Cadmium, Dissolved	ND	0.041	0.10	ug/l	1	03/09/19 13:20	
Cadmium, Total	0.18	0.041	0.10	ug/l	1	03/09/19 13:27	
Chromium, Dissolved	0.28	0.035	0.20	ug/l	1	03/09/19 13:20	
Chromium, Total	5.6	0.035	0.20	ug/l	1	03/09/19 13:27	
Copper, Dissolved	4.8	0.13	0.50	ug/l	1	03/09/19 13:20	
Copper, Total	21	0.13	0.50	ug/l	1	03/09/19 13:27	
Iron, Dissolved	47	0.91	20	ug/l	1	03/09/19 13:20	
Iron, Total	4600	0.91	20	ug/l	1	03/09/19 13:27	
Lead, Dissolved	0.25	0.031	0.20	ug/l	1	03/09/19 13:20	
Lead, Total	18	0.031	0.20	ug/l	1	03/09/19 13:27	

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FINAL REPORT

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03/27/2019 10:37

Project Manager: Edmond G. Suher

## Sample Results

(Continued)

Sample: SAWPW-074A

Sampled: 01/31/19 13:49 by ES/AH

9A31094-01 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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### Metals by EPA 200 Series Methods (Continued)

Method: EPA 200.8	Batch ID: W9B0063	Instr: ICPMS02	Prepared: 02/01/19 16:24	Analyst: jea	
Nickel, Dissolved	1.3	0.045	0.80 ug/l	1	03/09/19 13:20
Nickel, Total	7.1	0.045	0.80 ug/l	1	03/09/19 13:27
Zinc, Dissolved	14	0.94	5.0 ug/l	1	03/09/19 13:20
Zinc, Total	110	0.94	5.0 ug/l	1	03/09/19 13:27

### Microbiological Parameters by Standard Methods

Method: SM 9221F	Batch ID: W9B1435	Instr: _ANALYST	Prepared: 01/31/19 18:45	Analyst: jns	
E. coli	22000	1.8	MPN/100ml	1	02/25/19 14:08

### Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 625.1	Batch ID: W9B0006	Instr: GCMS15	Prepared: 02/01/19 08:42	Analyst: EFC			
Acenaphthene	3.0	2.2	25	ng/l	1	02/20/19 04:13	M-02, J
Acenaphthylene	3.8	2.6	25	ng/l	1	02/20/19 04:13	M-02, J
Anthracene	ND	4.6	25	ng/l	1	02/20/19 04:13	M-02
Benzo (a) anthracene	ND	4.0	25	ng/l	1	02/20/19 04:13	M-02
Benzo (a) pyrene	ND	2.9	25	ng/l	1	02/20/19 04:13	M-02
Benzo (b) fluoranthene	ND	8.0	25	ng/l	1	02/20/19 04:13	M-02
Benzo (g,h,i) perylene	10	4.5	25	ng/l	1	02/20/19 04:13	M-02, J
Benzo (k) fluoranthene	ND	2.6	25	ng/l	1	02/20/19 04:13	M-02
Chrysene	7.6	2.6	25	ng/l	1	02/20/19 04:13	M-02, J
Dibenzo (a,h) anthracene	ND	6.0	25	ng/l	1	02/20/19 04:13	M-02
Fluoranthene	12	6.5	25	ng/l	1	02/20/19 04:13	M-02, J
Fluorene	5.3	3.8	25	ng/l	1	02/20/19 04:13	M-02, J
Indeno (1,2,3-cd) pyrene	7.6	5.0	25	ng/l	1	02/20/19 04:13	M-02, J
Naphthalene	11	2.6	25	ng/l	1	02/20/19 04:13	M-02, J
Phenanthrene	17	4.8	25	ng/l	1	02/20/19 04:13	M-02, J
Pyrene	15	3.4	25	ng/l	1	02/20/19 04:13	M-02, J

#### Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	89%	Conc: 447	50-150	02/20/19 04:13	M-02
Perylene-d12	76%	Conc: 382	50-150	02/20/19 04:13	M-02



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Reported:  
03/27/2019 10:37

## Sample Results

(Continued)

Sample: SGR-077

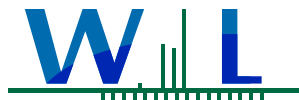
Sampled: 01/31/19 14:32 by ES/AH

9A31094-02 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
<b>Anions by IC, EPA Method 300.0</b>							
Method: EPA 300.0	Batch ID: W9B0004	Instr: LC12	Prepared: 02/01/19 08:05	Analyst: jan			
Chloride, Total	0.38	0.10	0.50	mg/l	1	02/01/19 22:00	J
Sulfate as SO4	0.63	0.10	0.50	mg/l	1	02/01/19 22:00	
<b>Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods</b>							
Method: EPA 160.4	Batch ID: W9B0045	Instr: OVEN11	Prepared: 02/01/19 14:44	Analyst: sar			
Volatile Suspended Solids	16	3.1	5.0	mg/l	1	02/04/19 10:30	
Method: EPA 180.1	Batch ID: W9B0016	Instr: TURB01	Prepared: 02/01/19 10:06	Analyst: SBN			
Turbidity	35	0.024	0.10	NTU	1	02/01/19 16:41	
Method: EPA 335.4	Batch ID: W9B0579	Instr: AA01	Prepared: 02/11/19 12:39	Analyst: MAT			
Cyanide, Total	ND	2.7	5.0	ug/l	1	02/12/19 12:47	
Method: EPA 350.1	Batch ID: W9B0197	Instr: AA06	Prepared: 02/05/19 10:22	Analyst: mcs			
Ammonia as N	0.23	0.048	0.10	mg/l	1	02/05/19 16:58	
Method: EPA 351.2	Batch ID: W9B0534	Instr: AA06	Prepared: 02/09/19 15:20	Analyst: mcs			
TKN	0.20	0.050	0.10	mg/l	1	02/20/19 18:46	
Method: EPA 353.2	Batch ID: W9B0010	Instr: AA01	Prepared: 02/01/19 09:13	Analyst: MAT			
NO2+NO3 as N	89	83	200	ug/l	1	02/15/19 18:49	J
Method: EPA 365.1	Batch ID: W9B0125	Instr: AA01	Prepared: 02/04/19 10:39	Analyst: mat			
Phosphorus as P, Total	0.11	0.0014	0.010	mg/l	1	02/07/19 11:35	
Method: EPA 365.3	Batch ID: W9B0224	Instr: UVVIS04	Prepared: 02/05/19 13:53	Analyst: anb			
Phosphorus, Dissolved	0.030	0.00083	0.010	mg/l	1	02/15/19 12:24	
Method: EPA 410.4	Batch ID: W9B0754	Instr: UVVIS04	Prepared: 02/13/19 12:08	Analyst: ymt			
Chemical Oxygen Demand	31	0.73	5.0	mg/l	1	02/20/19 11:06	
Method: EPA 420.4	Batch ID: W9B1110	Instr: AA03	Prepared: 02/20/19 10:12	Analyst: mcs			
Phenolics	ND	0.0042	0.010	mg/l	1	02/21/19 12:32	
Method: SM 2320B	Batch ID: W9B0178	Instr: PH01	Prepared: 02/04/19 20:14	Analyst: anb			
Alkalinity as CaCO3	11	0.56	2.0	mg/l	1	02/05/19 12:12	
Method: SM 2510B	Batch ID: W9B0485	Instr: PH01	Prepared: 02/08/19 12:13	Analyst: sbn			
Specific Conductance (EC)	26	0.23	2.0	umhos/cm	1	02/08/19 14:05	
Method: SM 2540C M	Batch ID: W9B0159	Instr: OVEN01	Prepared: 02/04/19 16:38	Analyst: blg			
Total Dissolved Solids	ND	4.0	10	mg/l	1	02/05/19 15:24	
Method: SM 2540D	Batch ID: W9B0046	Instr: OVEN11	Prepared: 02/01/19 14:46	Analyst: sar			
Total Suspended Solids	75		5	mg/l	1	02/04/19 10:30	
Method: SM 4500O-G	Batch ID: W9B0013	Instr: PH13	Prepared: 02/01/19 09:57	Analyst: sar			
Dissolved Oxygen	10.1	0.500	1.00	mg/l	1	02/01/19 10:11	*
Method: SM 5210B	Batch ID: W9B0014	Instr: PH13	Prepared: 02/01/19 09:59	Analyst: SAR			
Biochemical Oxygen Demand	2.2	2.0	2.0	mg/l	1	02/06/19 16:10	

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FINAL REPORT

Reported:

03/27/2019 10:37

## Sample Results

(Continued)

Sample: SGR-077

Sampled: 01/31/19 14:32 by ES/AH

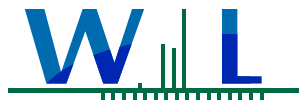
9A31094-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
<b>Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)</b>							
Method: SM 5540C	Batch ID: W9B0076	Instr: UVVIS04	Prepared: 02/01/19 17:33	Analyst: mcs			
MBAS	0.11	0.019	0.050	mg/l	1	02/01/19 21:05	
<b>Hexavalent Chromium by IC</b>							
Method: EPA 218.6	Batch ID: W9B0358	Instr: LC13	Prepared: 02/06/19 11:00	Analyst: pjs			
Chromium 6+	0.095	0.0048	0.020	ug/l	1	02/06/19 19:10	U-01
Method: EPA 218.6	Batch ID: W9B0643	Instr: LC13	Prepared: 02/12/19 09:11	Analyst: pjs			
Chromium 6+, Dissolved	0.36	0.0048	0.020	ug/l	1	02/12/19 15:01	
<b>Hydrocarbons by GC/FID</b>							
Method: EPA 8015B	Batch ID: W9B0282	Instr: GC04	Prepared: 02/06/19 08:36	Analyst: ars			
Diesel Range Organics	0.35	0.12	0.50	mg/l	5	02/15/19 02:15	M-04, J
Oil Range Organics	ND	1.6	2.5	mg/l	5	02/15/19 02:15	M-04
<i>Surrogate(s)</i>							
n-Tetracosane	110%	Conc: 0.276	64-155			02/15/19 02:15	M-04
<b>Metals by EPA 200 Series Methods</b>							
Method: EPA 200.7	Batch ID: [CALC]	Instr: [CALC]	Prepared: 02/01/19 16:15	Analyst: mtt			
Calcium Hardness as CaCO3	10.6		0.250	mg/l	1	02/25/19 14:54	
Method: EPA 200.7	Batch ID: W9B0060	Instr: ICP03	Prepared: 02/01/19 16:15	Analyst: mtt			
Calcium, Total	4.24	0.0160	0.100	mg/l	1	02/25/19 14:54	
Phosphorus, Dissolved	0.025	0.012	0.020	mg/l	1	02/25/19 14:52	
Phosphorus, Total	0.10	0.012	0.020	mg/l	1	02/25/19 14:54	
Method: EPA 200.8	Batch ID: W9B0063	Instr: ICPMS02	Prepared: 02/01/19 16:24	Analyst: jea			
Aluminum, Dissolved	67	1.3	5.0	ug/l	1	03/09/19 14:17	
Aluminum, Total	2500	1.3	5.0	ug/l	1	03/09/19 14:24	
Antimony, Dissolved	0.53	0.045	0.50	ug/l	1	03/09/19 14:17	
Antimony, Total	1.4	0.045	0.50	ug/l	1	03/09/19 14:24	
Arsenic, Dissolved	0.23	0.074	0.40	ug/l	1	03/09/19 14:17	J
Arsenic, Total	1.0	0.074	0.40	ug/l	1	03/09/19 14:24	
Cadmium, Dissolved	ND	0.041	0.10	ug/l	1	03/12/19 00:51	
Cadmium, Total	0.12	0.041	0.10	ug/l	1	03/12/19 00:58	
Chromium, Dissolved	0.27	0.035	0.20	ug/l	1	03/09/19 14:17	
Chromium, Total	3.7	0.035	0.20	ug/l	1	03/09/19 14:24	
Copper, Dissolved	2.2	0.13	0.50	ug/l	1	03/09/19 14:17	
Copper, Total	12	0.13	0.50	ug/l	1	03/09/19 14:24	
Iron, Dissolved	60	0.91	20	ug/l	1	03/09/19 14:17	
Iron, Total	2500	0.91	20	ug/l	1	03/09/19 14:24	
Lead, Dissolved	0.20	0.031	0.20	ug/l	1	03/09/19 14:17	
Lead, Total	5.9	0.031	0.20	ug/l	1	03/09/19 14:24	

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WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

# Certificate of Analysis

FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Sample Results

(Continued)

Sample: SGR-077

Sampled: 01/31/19 14:32 by ES/AH

9A31094-02 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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### Metals by EPA 200 Series Methods (Continued)

<b>Method:</b> EPA 200.8	<b>Batch ID:</b> W9B0063	<b>Instr:</b> ICPMS02	<b>Prepared:</b> 02/01/19 16:24			<b>Analyst:</b> jea	
<b>Nickel, Dissolved</b>	0.53	0.045	0.80	ug/l	1	03/09/19 14:17	J
<b>Nickel, Total</b>	2.9	0.045	0.80	ug/l	1	03/09/19 14:24	
<b>Zinc, Dissolved</b>	8.9	0.94	5.0	ug/l	1	03/09/19 14:17	
<b>Zinc, Total</b>	89	0.94	5.0	ug/l	1	03/09/19 14:24	

### Microbiological Parameters by Standard Methods

<b>Method:</b> SM 9221F	<b>Batch ID:</b> W9B1435	<b>Instr:</b> _ANALYST	<b>Prepared:</b> 01/31/19 18:45	<b>Analyst:</b> jns	
<b>E. coli</b>	540	1.8	MPN/100ml	1	02/25/19 14:08

### Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 625.1	Batch ID: W9B0006	Instr: GCMS15	Prepared: 02/01/19 08:42	Analyst: EFC			
Acenaphthene	13	2.2	25	ng/l	1	02/20/19 04:40	M-02, J
Acenaphthylene	3.2	2.6	25	ng/l	1	02/20/19 04:40	M-02, J
Anthracene	ND	4.6	25	ng/l	1	02/20/19 04:40	M-02
Benzo (a) anthracene	6.4	4.0	25	ng/l	1	02/20/19 04:40	M-02, J
Benzo (a) pyrene	ND	2.9	25	ng/l	1	02/20/19 04:40	M-02
Benzo (b) fluoranthene	ND	8.0	25	ng/l	1	02/20/19 04:40	M-02
Benzo (g,h,i) perylene	14	4.5	25	ng/l	1	02/20/19 04:40	M-02, J
Benzo (k) fluoranthene	ND	2.6	25	ng/l	1	02/20/19 04:40	M-02
Chrysene	9.8	2.6	25	ng/l	1	02/20/19 04:40	M-02, J
Dibenzo (a,h) anthracene	ND	6.0	25	ng/l	1	02/20/19 04:40	M-02
Fluoranthene	18	6.5	25	ng/l	1	02/20/19 04:40	M-02, J
Fluorene	16	3.8	25	ng/l	1	02/20/19 04:40	M-02, J
Indeno (1,2,3-cd) pyrene	ND	5.0	25	ng/l	1	02/20/19 04:40	M-02
Naphthalene	150	2.6	25	ng/l	1	02/20/19 04:40	M-02
Phenanthrene	48	4.8	25	ng/l	1	02/20/19 04:40	M-02
Pyrene	18	3.4	25	ng/l	1	02/20/19 04:40	M-02, J

#### Surrogate(s)

<b>1,3-Dimethyl-2-nitrobenzene</b>	104%	Conc: 522	50-150		02/20/19 04:40	M-02
<b>Perylene-d12</b>	77%	Conc: 385	50-150		02/20/19 04:40	M-02





WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

Project Number: Irwindale SW Outfall Mon.

Project Manager: Edmond G. Suher

## Certificate of Analysis

FINAL REPORT

Reported:  
03/27/2019 10:37

## Sample Results

(Continued)

Sample: BDW-027A

Sampled: 01/31/19 15:15 by ES/AH

9A31094-03 (Water)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
<b>Anions by IC, EPA Method 300.0</b>							
Method: EPA 300.0	Batch ID: W9B0004	Instr: LC12	Prepared: 02/01/19 08:05	Analyst: jan			
Chloride, Total	2.7	0.10	0.50	mg/l	1	02/01/19 22:00	
Sulfate as SO <sub>4</sub>	2.3	0.10	0.50	mg/l	1	02/01/19 22:00	
<b>Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods</b>							
Method: EPA 160.4	Batch ID: W9B0045	Instr: OVEN11	Prepared: 02/01/19 14:44	Analyst: sar			
Volatile Suspended Solids	13	3.1	5.0	mg/l	1	02/04/19 10:30	
Method: EPA 180.1	Batch ID: W9B0016	Instr: TURB01	Prepared: 02/01/19 10:06	Analyst: SBN			
Turbidity	27	0.024	0.10	NTU	1	02/01/19 16:42	
Method: EPA 335.4	Batch ID: W9B0579	Instr: AA01	Prepared: 02/11/19 12:39	Analyst: MAT			
Cyanide, Total	ND	2.7	5.0	ug/l	1	02/12/19 12:48	
Method: EPA 350.1	Batch ID: W9B0197	Instr: AA06	Prepared: 02/05/19 10:22	Analyst: mcs			
Ammonia as N	0.34	0.048	0.10	mg/l	1	02/05/19 16:58	
Method: EPA 351.2	Batch ID: W9B0534	Instr: AA06	Prepared: 02/09/19 15:20	Analyst: mcs			
TKN	0.52	0.050	0.10	mg/l	1	02/20/19 18:46	
Method: EPA 353.2	Batch ID: W9B0010	Instr: AA01	Prepared: 02/01/19 09:13	Analyst: MAT			
NO <sub>2</sub> +NO <sub>3</sub> as N	290	83	200	ug/l	1	02/15/19 18:50	
Method: EPA 365.1	Batch ID: W9B0125	Instr: AA01	Prepared: 02/04/19 10:39	Analyst: mat			
Phosphorus as P, Total	0.15	0.0014	0.010	mg/l	1	02/07/19 11:29	
Method: EPA 365.3	Batch ID: W9B0224	Instr: UVVIS04	Prepared: 02/05/19 13:53	Analyst: anb			
Phosphorus, Dissolved	0.083	0.00083	0.010	mg/l	1	02/15/19 12:24	
Method: EPA 410.4	Batch ID: W9B0754	Instr: UVVIS04	Prepared: 02/13/19 12:08	Analyst: ymt			
Chemical Oxygen Demand	41	0.73	5.0	mg/l	1	02/20/19 11:06	
Method: EPA 420.4	Batch ID: W9B1110	Instr: AA03	Prepared: 02/20/19 10:12	Analyst: mcs			
Phenolics	ND	0.0042	0.010	mg/l	1	02/21/19 12:32	
Method: SM 2320B	Batch ID: W9B0178	Instr: PH01	Prepared: 02/04/19 20:14	Analyst: anb			
Alkalinity as CaCO <sub>3</sub>	12	0.56	2.0	mg/l	1	02/05/19 12:12	
Method: SM 2510B	Batch ID: W9B0485	Instr: PH01	Prepared: 02/08/19 12:13	Analyst: sbn			
Specific Conductance (EC)	40	0.23	2.0	umhos/cm	1	02/08/19 14:05	
Method: SM 2540C M	Batch ID: W9B0159	Instr: OVEN01	Prepared: 02/04/19 16:38	Analyst: blg			
Total Dissolved Solids	23	4.0	10	mg/l	1	02/05/19 15:24	
Method: SM 2540D	Batch ID: W9B0046	Instr: OVEN11	Prepared: 02/01/19 14:46	Analyst: sar			
Total Suspended Solids	51		5	mg/l	1	02/04/19 10:30	
Method: SM 4500O-G	Batch ID: W9B0013	Instr: PH13	Prepared: 02/01/19 09:57	Analyst: sar			
Dissolved Oxygen	9.15	0.500	1.00	mg/l	1	02/01/19 10:11	*
Method: SM 5210B	Batch ID: W9B0014	Instr: PH13	Prepared: 02/01/19 09:59	Analyst: SAR			
Biochemical Oxygen Demand	5.3	2.0	2.0	mg/l	1	02/06/19 16:13	

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WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

Project Number: Irwindale SW Outfall Mon.

Project Manager: Edmond G. Suher

# Certificate of Analysis

FINAL REPORT

Reported:

03/27/2019 10:37

## Sample Results

(Continued)

Sample: BDW-027A

Sampled: 01/31/19 15:15 by ES/AH

9A31094-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
<b>Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)</b>							
Method: SM 5540C	Batch ID: W9B0076	Instr: UVVIS04	Prepared: 02/01/19 17:33	Analyst: mcs			
MBAS	0.16	0.019	0.050	mg/l	1	02/01/19 21:05	
<b>Hexavalent Chromium by IC</b>							
Method: EPA 218.6	Batch ID: W9B0358	Instr: LC13	Prepared: 02/06/19 11:00	Analyst: pjs			
Chromium 6+	0.54	0.0048	0.020	ug/l	1	02/06/19 19:22	
Method: EPA 218.6	Batch ID: W9B0643	Instr: LC13	Prepared: 02/12/19 09:11	Analyst: pjs			
Chromium 6+, Dissolved	0.61	0.0048	0.020	ug/l	1	02/12/19 15:13	
<b>Hydrocarbons by GC/FID</b>							
Method: EPA 8015B	Batch ID: W9B0282	Instr: GC04	Prepared: 02/06/19 08:36	Analyst: ars			
Diesel Range Organics	0.35	0.12	0.50	mg/l	5	02/15/19 02:51	J, M-04
Oil Range Organics	ND	1.6	2.5	mg/l	5	02/15/19 02:51	M-04
<i>Surrogate(s)</i>							
n-Tetracosane	107%	Conc: 0.268	64-155			02/15/19 02:51	M-04
<b>Metals by EPA 200 Series Methods</b>							
Method: EPA 200.7	Batch ID: [CALC]	Instr: [CALC]	Prepared: 02/01/19 16:15	Analyst: mtt			
Calcium Hardness as CaCO3	10.9		0.250	mg/l	1	02/25/19 15:00	
Method: EPA 200.7	Batch ID: W9B0060	Instr: ICP03	Prepared: 02/01/19 16:15	Analyst: mtt			
Calcium, Total	4.38	0.0160	0.100	mg/l	1	02/25/19 15:00	
Phosphorus, Dissolved	0.059	0.012	0.020	mg/l	1	02/25/19 14:57	
Phosphorus, Total	0.13	0.012	0.020	mg/l	1	02/25/19 15:00	
Method: EPA 200.8	Batch ID: W9B0063	Instr: ICPMS02	Prepared: 02/01/19 16:24	Analyst: jea			
Aluminum, Dissolved	47	1.3	5.0	ug/l	1	03/09/19 14:31	
Aluminum, Total	1300	1.3	5.0	ug/l	1	03/09/19 14:39	
Antimony, Dissolved	0.63	0.045	0.50	ug/l	1	03/09/19 14:31	
Antimony, Total	1.3	0.045	0.50	ug/l	1	03/09/19 14:39	
Arsenic, Dissolved	0.53	0.074	0.40	ug/l	1	03/09/19 14:31	
Arsenic, Total	1.1	0.074	0.40	ug/l	1	03/09/19 14:39	
Cadmium, Dissolved	0.070	0.041	0.10	ug/l	1	03/12/19 01:05	J
Cadmium, Total	0.19	0.041	0.10	ug/l	1	03/12/19 01:13	
Chromium, Dissolved	0.78	0.035	0.20	ug/l	1	03/09/19 14:31	
Chromium, Total	2.9	0.035	0.20	ug/l	1	03/09/19 14:39	
Copper, Dissolved	6.6	0.13	0.50	ug/l	1	03/09/19 14:31	
Copper, Total	16	0.13	0.50	ug/l	1	03/09/19 14:39	
Iron, Dissolved	65	0.91	20	ug/l	1	03/09/19 14:31	
Iron, Total	1500	0.91	20	ug/l	1	03/09/19 14:39	
Lead, Dissolved	0.38	0.031	0.20	ug/l	1	03/09/19 14:31	
Lead, Total	6.9	0.031	0.20	ug/l	1	03/09/19 14:39	

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WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

# Certificate of Analysis

FINAL REPORT

Project Number: Irwindale SW Outfall Mon.

Reported:

03/27/2019 10:37

Project Manager: Edmond G. Suher

## Sample Results

(Continued)

Sample: BDW-027A

Sampled: 01/31/19 15:15 by ES/AH

9A31094-03 (Water)

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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### Metals by EPA 200 Series Methods (Continued)

Method: EPA 200.8	Batch ID: W9B0063	Instr: ICPMS02	Prepared: 02/01/19 16:24	Analyst: jea	
Nickel, Dissolved	2.8	0.045	0.80 ug/l	1	03/09/19 14:31
Nickel, Total	5.8	0.045	0.80 ug/l	1	03/09/19 14:39
Zinc, Dissolved	71	0.94	5.0 ug/l	1	03/09/19 14:31
Zinc, Total	160	0.94	5.0 ug/l	1	03/09/19 14:39

### Microbiological Parameters by Standard Methods

Method: SM 9221F	Batch ID: W9B1435	Instr: _ANALYST	Prepared: 01/31/19 18:45	Analyst: jns	
E. coli	16000	1.8	MPN/100ml	1	02/25/19 14:08

### Semivolatile Organics - Low Level by Tandem GC/MS/MS

Method: EPA 625.1	Batch ID: W9B0006	Instr: GCMS15	Prepared: 02/01/19 08:42	Analyst: EFC			
Acenaphthene	ND	2.2	25	ng/l	1	02/20/19 05:08	M-02
Acenaphthylene	ND	2.6	25	ng/l	1	02/20/19 05:08	M-02
Anthracene	ND	4.6	25	ng/l	1	02/20/19 05:08	M-02
Benzo (a) anthracene	ND	4.0	25	ng/l	1	02/20/19 05:08	M-02
Benzo (a) pyrene	ND	2.9	25	ng/l	1	02/20/19 05:08	M-02
Benzo (b) fluoranthene	9.2	8.0	25	ng/l	1	02/20/19 05:08	J, M-02
Benzo (g,h,i) perylene	14	4.5	25	ng/l	1	02/20/19 05:08	J, M-02
Benzo (k) fluoranthene	ND	2.6	25	ng/l	1	02/20/19 05:08	M-02
Chrysene	9.8	2.6	25	ng/l	1	02/20/19 05:08	J, M-02
Dibenzo (a,h) anthracene	ND	6.0	25	ng/l	1	02/20/19 05:08	M-02
Fluoranthene	12	6.5	25	ng/l	1	02/20/19 05:08	J, M-02
Fluorene	ND	3.8	25	ng/l	1	02/20/19 05:08	M-02
Indeno (1,2,3-cd) pyrene	7.8	5.0	25	ng/l	1	02/20/19 05:08	M-02, J
Naphthalene	3.8	2.6	25	ng/l	1	02/20/19 05:08	M-02, J
Phenanthrene	15	4.8	25	ng/l	1	02/20/19 05:08	M-02, J
Pyrene	20	3.4	25	ng/l	1	02/20/19 05:08	M-02, J

#### Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	95%	Conc: 476	50-150			02/20/19 05:08	M-02
Perylene-d12	101%	Conc: 503	50-150			02/20/19 05:08	M-02



WECK LABORATORIES, INC.

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2740 W. Magnolia Blvd., Ste.102  
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# Certificate of Analysis

FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Sample Results Alpha Analytical Laboratories, Inc.

Sample: SAWPW-074A  
9A31094-01 (Water) Sampled: 01/31/19 13:49 by ES/AH

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>EPA 1631E</b>						
<b>Method:</b> BAL Hg 1631	<b>Batch ID:</b> AC93658	<b>Prepared:</b> 03/11/19 16:00				<b>Analyst:</b> AJC
<b>Mercury</b> .....	<b>0.0413</b>	0.00500	ug/L	10	03/12/19	<b>P-W</b>
<b>Method:</b> BAL Hg 1631 Dissolved	<b>Batch ID:</b> AC94001	<b>Prepared:</b> 03/18/19 17:00				<b>Analyst:</b> AJC
<b>Mercury, dissolved</b> .....	<b>0.00429</b>	0.000500	ug/L	1	03/19/19	<b>P-W</b>



WECK LABORATORIES, INC.

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# Certificate of Analysis

FINAL REPORT

**Reported:**  
03/27/2019 10:37

## Sample Results Alpha Analytical Laboratories, Inc.

(Continued)

Sample: SGR-077  
9A31094-02 (Water) Sampled: 01/31/19 14:32 by ES/AH

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>EPA 1631E</b>						
<b>Method:</b> BAL Hg 1631	<b>Batch ID:</b> AC93658	<b>Prepared:</b> 03/11/19 16:00				<b>Analyst:</b> AJC
<b>Mercury</b> .....	<b>0.00929</b>	0.000500	ug/L	1	03/12/19	<b>P-W</b>
<b>Method:</b> BAL Hg 1631 Dissolved	<b>Batch ID:</b> AC94001	<b>Prepared:</b> 03/18/19 17:00				<b>Analyst:</b> AJC
<b>Mercury, dissolved</b> .....	<b>0.00244</b>	0.000500	ug/L	1	03/19/19	<b>P-W</b>



WECK LABORATORIES, INC.

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# Certificate of Analysis

FINAL REPORT

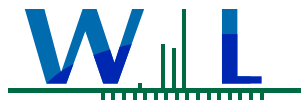
**Reported:**  
03/27/2019 10:37

## Sample Results Alpha Analytical Laboratories, Inc.

(Continued)

Sample: BDW-027A  
9A31094-03 (Water) Sampled: 01/31/19 15:15 by ES/AH

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>EPA 1631E</b>						
<b>Method:</b> BAL Hg 1631	<b>Batch ID:</b> AC93769	<b>Prepared:</b> 03/13/19 16:00				<b>Analyst:</b> AJC
<b>Mercury</b> .....	<b>0.163</b>	0.00500	ug/L	10	03/14/19	<b>P-W</b>
<b>Method:</b> BAL Hg 1631 Dissolved	<b>Batch ID:</b> AC94001	<b>Prepared:</b> 03/18/19 17:00				<b>Analyst:</b> AJC
<b>Mercury, dissolved</b> .....	<b>0.0195</b>	0.000500	ug/L	1	03/19/19	<b>P-W</b>



WECK LABORATORIES, INC.

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**Project Number:** Irwindale SW Outfall Mon.

**Project Manager:** Edmond G. Suher

# Certificate of Analysis

FINAL REPORT

**Reported:**  
03/27/2019 10:37

## Sample Results Alpha Analytical Laboratories, Inc.

(Continued)

Sample: Trip Blank  
9A31094-04 (Water) Sampled: 01/31/19 0:00 by ES/AH

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
<b>EPA 1631E</b>						
<b>Method:</b> BAL Hg 1631	<b>Batch ID:</b> AC93658	<b>Prepared:</b> 03/11/19 16:00				<b>Analyst:</b> AJC
<b>Mercury</b> .....	<b>0.000728</b>	0.000500	ug/L	1	03/12/19	<b>P-W</b>
<b>Method:</b> BAL Hg 1631 Dissolved	<b>Batch ID:</b> AC94001	<b>Prepared:</b> 03/18/19 17:00				<b>Analyst:</b> AJC
<b>Mercury, dissolved</b> .....	<b>0.00147</b>	0.000500	ug/L	1	03/19/19	<b>P-W</b>



WECK LABORATORIES, INC.

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**Project Number:** Irwindale SW Outfall Mon.

**Project Manager:** Edmond G. Suher

# Certificate of Analysis

FINAL REPORT

**Reported:**  
03/27/2019 10:37

## Sample Results

McC Campbell Analytical, Inc. ELAP #1644

(Continued)

Sample: SAWPW-074A  
9A31094-01 (Water) Sampled: 01/31/19 13:49 by ES/AH

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
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### SM5310B

**Method:** SM5310B **Batch ID:** 173531 **Prepared:** 02/23/19 00:00 **Analyst:** TD  
**TOC** ..... **5.3** 0.3 mg/L 1 02/24/19





WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

**Project Number:** Irwindale SW Outfall Mon.

**Project Manager:** Edmond G. Suher

# Certificate of Analysis

FINAL REPORT

**Reported:**  
03/27/2019 10:37

## Sample Results

McC Campbell Analytical, Inc. ELAP #1644

(Continued)

Sample: SGR-077  
9A31094-02 (Water) Sampled: 01/31/19 14:32 by ES/AH

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
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### SM5310B

**Method:** SM5310B **Batch ID:** 173531 **Prepared:** 02/23/19 00:00 **Analyst:** TD  
**TOC** ..... **1.9** 0.3 mg/L 1 02/24/19



WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

# Certificate of Analysis

FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher



## Sample Results

McCampbell Analytical, Inc. ELAP #1644

(Continued)

Sample: BDW-027A  
9A31094-03 (Water) Sampled: 01/31/19 15:15 by ES/AH

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
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### SM5310B

**Method:** SM5310B

**Batch ID:** 173531

**Prepared:** 02/23/19 00:00

**Analyst:** TD

TOC	4.3	0.3	mg/L	1	02/24/19	
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## Quality Control Results

EPA 1631E

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: AC93658 - BAL Hg 1631</b>										
<b>Blank (AC93658-BLK1)</b>				<b>Prepared: 03/11/19 Analyzed: 03/12/19</b>						
Mercury	ND	0.000500	ug/L							
<b>LCS (AC93658-BS1)</b>				<b>Prepared: 03/11/19 Analyzed: 03/12/19</b>						
Mercury	0.00508	0.000500	ug/L	0.00500		102	77-123			
<b>Matrix Spike (AC93658-MS1)</b>				<b>Source: 19B3345-01 Prepared: 03/11/19 Analyzed: 03/12/19</b>						
Mercury	0.0256	0.000500	ug/L	0.0250	0.00234	93.1	71-125			
<b>Matrix Spike (AC93658-MS2)</b>				<b>Source: 19B3354-01 Prepared: 03/11/19 Analyzed: 03/12/19</b>						
Mercury	0.0258	0.000500	ug/L	0.0250	0.00202	94.9	71-125			
<b>Matrix Spike Dup (AC93658-MSD1)</b>				<b>Source: 19B3345-01 Prepared: 03/11/19 Analyzed: 03/12/19</b>						
Mercury	0.0258	0.000500	ug/L	0.0250	0.00234	93.7	71-125	0.662	24	
<b>Matrix Spike Dup (AC93658-MSD2)</b>				<b>Source: 19B3354-01 Prepared: 03/11/19 Analyzed: 03/12/19</b>						
Mercury	0.0255	0.000500	ug/L	0.0250	0.00202	93.8	71-125	1.09	24	
<b>Reference (AC93658-SRM1)</b>				<b>Prepared: 03/11/19 Analyzed: 03/12/19</b>						
Mercury	0.0474	0.000500	ug/L	0.0500		94.9	68-125			
<b>Batch: AC93769 - BAL Hg 1631</b>										
<b>Blank (AC93769-BLK1)</b>				<b>Prepared: 03/13/19 Analyzed: 03/14/19</b>						
Mercury	ND	0.000500	ug/L							
<b>LCS (AC93769-BS1)</b>				<b>Prepared: 03/13/19 Analyzed: 03/14/19</b>						
Mercury	0.00526	0.000500	ug/L	0.00500		105	77-123			
<b>Matrix Spike (AC93769-MS1)</b>				<b>Source: 19C0107-05 Prepared: 03/13/19 Analyzed: 03/14/19</b>						
Mercury	0.0292	0.000500	ug/L	0.0250	0.00640	91.2	71-125			
<b>Matrix Spike (AC93769-MS2)</b>				<b>Source: 19C0108-02 Prepared: 03/13/19 Analyzed: 03/14/19</b>						
Mercury	0.0278	0.000500	ug/L	0.0250	0.00178	104	71-125			
<b>Matrix Spike Dup (AC93769-MSD1)</b>				<b>Source: 19C0107-05 Prepared: 03/13/19 Analyzed: 03/14/19</b>						
Mercury	0.0297	0.000500	ug/L	0.0250	0.00640	93.1	71-125	1.63	24	
<b>Matrix Spike Dup (AC93769-MSD2)</b>				<b>Source: 19C0108-02 Prepared: 03/13/19 Analyzed: 03/14/19</b>						
Mercury	0.0275	0.000500	ug/L	0.0250	0.00178	103	71-125	0.940	24	
<b>Reference (AC93769-SRM1)</b>				<b>Prepared: 03/13/19 Analyzed: 03/14/19</b>						
Mercury	0.0472	0.000500	ug/L	0.0500		94.4	68-125			
<b>Batch: AC94001 - BAL Hg 1631 Dissolved</b>										
<b>Blank (AC94001-BLK1)</b>				<b>Prepared: 03/18/19 Analyzed: 03/19/19</b>						
Mercury, dissolved	ND	0.000500	ug/L							
<b>LCS (AC94001-BS1)</b>				<b>Prepared: 03/18/19 Analyzed: 03/19/19</b>						
Mercury, dissolved	0.00495	0.000500	ug/L	0.00500		99.0	77-123			
<b>Matrix Spike (AC94001-MS1)</b>				<b>Source: 9A31094-01 Prepared: 03/18/19 Analyzed: 03/19/19</b>						
Mercury, dissolved	0.0328	0.000500	ug/L	0.0250	0.00429	114	71-125			
<b>Matrix Spike (AC94001-MS2)</b>				<b>Source: 19C0104-01 Prepared: 03/18/19 Analyzed: 03/19/19</b>						
Mercury, dissolved	0.0310	0.000500	ug/L	0.0250	0.00185	117	71-125			

9A31094

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## Quality Control Results

(Continued)

EPA 1631E (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: AC94001 - BAL Hg 1631 Dissolved (Continued)</b>										
<b>Matrix Spike Dup (AC94001-MSD1)</b>		<b>Source: 9A31094-01</b>		<b>Prepared: 03/18/19 Analyzed: 03/19/19</b>						
Mercury, dissolved	0.0326	0.000500	ug/L	0.0250	0.00429	113	71-125	0.703	24	
<b>Matrix Spike Dup (AC94001-MSD2)</b>		<b>Source: 19C0104-01</b>		<b>Prepared: 03/18/19 Analyzed: 03/19/19</b>						
Mercury, dissolved	0.0303	0.000500	ug/L	0.0250	0.00185	114	71-125	2.48	24	
<b>Reference (AC94001-SRM1)</b>		<b>Prepared: 03/18/19 Analyzed: 03/19/19</b>								
Mercury, dissolved	0.0520	0.000500	ug/L	0.0500		104	68-125			

## Quality Control Results

(Continued)

SM5310B

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: 173531 - SM5310B</b>										
<b>LCS (LCS-173531)</b>		<b>Prepared &amp; Analyzed: 02/23/19</b>								
TOC	46	0.3	mg/L	50		92	80-120			
<b>LCSD (LCSD-173531)</b>		<b>Prepared &amp; Analyzed: 02/23/19</b>								
TOC	46	0.3	mg/L	50		93	80-120	0.843	20	
<b>Blank (MB-173531)</b>		<b>Prepared &amp; Analyzed: 02/23/19</b>								
TOC	ND	0.3	mg/L							



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## Quality Control Results

(Continued)

Anions by IC, EPA Method 300.0

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0004 - EPA 300.0</b>											
<b>Blank (W9B0004-BLK1)</b>					<b>Prepared &amp; Analyzed: 02/01/19</b>						
Chloride, Total	ND	0.10	0.50	mg/l							
Sulfate as SO4	ND	0.10	0.50	mg/l							
<b>LCS (W9B0004-BS1)</b>					<b>Prepared &amp; Analyzed: 02/01/19</b>						
Chloride, Total	20.2	0.10	0.50	mg/l	20.0		101	90-110			
Sulfate as SO4	20.8	0.10	0.50	mg/l	20.0		104	90-110			
<b>Matrix Spike (W9B0004-MS1)</b>					<b>Source: 9A31010-01 Prepared &amp; Analyzed: 02/01/19</b>						
Chloride, Total	432	1.0	5.0	mg/l	200	227	103	76-118			
Sulfate as SO4	318	1.0	5.0	mg/l	200	101	109	78-111			
<b>Matrix Spike (W9B0004-MS2)</b>					<b>Source: 9A31066-04 Prepared &amp; Analyzed: 02/01/19</b>						
Chloride, Total	314	1.0	5.0	mg/l	200	98.8	108	76-118			
Sulfate as SO4	405	1.0	5.0	mg/l	200	185	110	78-111			
<b>Matrix Spike Dup (W9B0004-MSD1)</b>					<b>Source: 9A31010-01 Prepared &amp; Analyzed: 02/01/19</b>						
Chloride, Total	435	1.0	5.0	mg/l	200	227	104	76-118	0.6	20	
Sulfate as SO4	319	1.0	5.0	mg/l	200	101	109	78-111	0.3	20	
<b>Matrix Spike Dup (W9B0004-MSD2)</b>					<b>Source: 9A31066-04 Prepared &amp; Analyzed: 02/01/19</b>						
Chloride, Total	315	1.0	5.0	mg/l	200	98.8	108	76-118	0.4	20	
Sulfate as SO4	406	1.0	5.0	mg/l	200	185	110	78-111	0.2	20	



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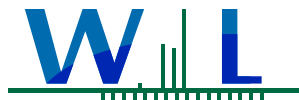
(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: W9B0010 - EPA 353.2</b>											
<b>Blank (W9B0010-BLK1)</b>					<b>Prepared: 02/01/19 Analyzed: 02/15/19</b>						
NO2+NO3 as N	ND	83	200	ug/l							
<b>LCS (W9B0010-BS1)</b>					<b>Prepared: 02/01/19 Analyzed: 02/15/19</b>						
NO2+NO3 as N	1020	83	200	ug/l	1000		102	90-110			
<b>Matrix Spike (W9B0010-MS1)</b>					<b>Source: 9A31077-01 Prepared: 02/01/19 Analyzed: 02/15/19</b>						
NO2+NO3 as N	2250	83	200	ug/l	2000	162	104	90-110			
<b>Matrix Spike (W9B0010-MS2)</b>					<b>Source: 9A31083-01 Prepared: 02/01/19 Analyzed: 02/15/19</b>						
NO2+NO3 as N	2570	83	200	ug/l	2000	534	102	90-110			
<b>Matrix Spike Dup (W9B0010-MSD1)</b>					<b>Source: 9A31077-01 Prepared: 02/01/19 Analyzed: 02/15/19</b>						
NO2+NO3 as N	2240	83	200	ug/l	2000	162	104	90-110	0.4	20	
<b>Matrix Spike Dup (W9B0010-MSD2)</b>					<b>Source: 9A31083-01 Prepared: 02/01/19 Analyzed: 02/15/19</b>						
NO2+NO3 as N	2550	83	200	ug/l	2000	534	101	90-110	0.8	20	
<b>Batch: W9B0014 - SM 5210B</b>											
<b>Blank (W9B0014-BLK1)</b>					<b>Prepared: 02/01/19 Analyzed: 02/06/19</b>						
Biochemical Oxygen Demand	ND	2.0	2.0	mg/l							
<b>Blank (W9B0014-BLK2)</b>					<b>Prepared: 02/01/19 Analyzed: 02/06/19</b>						
Biochemical Oxygen Demand	ND	2.0	2.0	mg/l							
<b>LCS (W9B0014-BS1)</b>					<b>Prepared: 02/01/19 Analyzed: 02/06/19</b>						
Biochemical Oxygen Demand	210	2.0	2.0	mg/l	198		106	85-115			
<b>Duplicate (W9B0014-DUP1)</b>					<b>Source: 9A31098-02 Prepared: 02/01/19 Analyzed: 02/06/19</b>						
Biochemical Oxygen Demand	ND	2.0	2.0	mg/l		ND				20	
<b>Duplicate (W9B0014-DUP2)</b>					<b>Source: 9A31101-02 Prepared: 02/01/19 Analyzed: 02/06/19</b>						
Biochemical Oxygen Demand	ND	2.0	2.0	mg/l		ND				20	
<b>Batch: W9B0016 - EPA 180.1</b>											
<b>Blank (W9B0016-BLK1)</b>					<b>Prepared &amp; Analyzed: 02/01/19</b>						
Turbidity	ND	0.024	0.10	NTU							
<b>LCS (W9B0016-BS1)</b>					<b>Prepared &amp; Analyzed: 02/01/19</b>						
Turbidity	10.0	0.024	0.10	NTU	10.0		100	90-110			
<b>Duplicate (W9B0016-DUP1)</b>					<b>Source: 9A31093-02 Prepared &amp; Analyzed: 02/01/19</b>						
Turbidity	113	0.12	0.50	NTU		113			0	10	
<b>Batch: W9B0045 - EPA 160.4</b>											
<b>Blank (W9B0045-BLK1)</b>					<b>Prepared: 02/01/19 Analyzed: 02/04/19</b>						
Volatile Suspended Solids	ND	3.1	5.0	mg/l							
<b>LCS (W9B0045-BS1)</b>					<b>Prepared: 02/01/19 Analyzed: 02/04/19</b>						
Volatile Suspended Solids	41	3.1	5.0	mg/l	39.0		105	90-110			
<b>Duplicate (W9B0045-DUP1)</b>					<b>Source: 9A31094-02 Prepared: 02/01/19 Analyzed: 02/04/19</b>						
Volatile Suspended Solids	14	3.1	5.0	mg/l		16			13	15	
<b>Duplicate (W9B0045-DUP2)</b>					<b>Source: 9A31094-03 Prepared: 02/01/19 Analyzed: 02/04/19</b>						

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## Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0045 - EPA 160.4 (Continued)</b>											
<b>Duplicate (W9B0045-DUP2)</b>	<b>Source: 9A31094-03</b>		<b>Prepared: 02/01/19 Analyzed: 02/04/19</b>								
Volatile Suspended Solids	12	3.1	5.0	mg/l		13			8	15	
<b>Batch: W9B0046 - SM 2540D</b>											
<b>Blank (W9B0046-BLK1)</b>	<b>Prepared: 02/01/19 Analyzed: 02/04/19</b>										
Total Suspended Solids	ND		5	mg/l							
<b>LCS (W9B0046-BS1)</b>	<b>Prepared: 02/01/19 Analyzed: 02/04/19</b>										
Total Suspended Solids	60.0		5	mg/l	54.9		109	90-110			
<b>Duplicate (W9B0046-DUP1)</b>	<b>Source: 9A31094-02</b>		<b>Prepared: 02/01/19 Analyzed: 02/04/19</b>								
Total Suspended Solids	73.0		5	mg/l		75.0			3	20	
<b>Duplicate (W9B0046-DUP2)</b>	<b>Source: 9A31094-03</b>		<b>Prepared: 02/01/19 Analyzed: 02/04/19</b>								
Total Suspended Solids	51.0		5	mg/l		51.0			0	20	
<b>Batch: W9B0076 - SM 5540C</b>											
<b>Blank (W9B0076-BLK1)</b>	<b>Prepared &amp; Analyzed: 02/01/19</b>										
MBAS	ND	0.019	0.050	mg/l							
<b>LCS (W9B0076-BS1)</b>	<b>Prepared &amp; Analyzed: 02/01/19</b>										
MBAS	0.197	0.019	0.050	mg/l	0.200		98	82-115			
<b>Matrix Spike (W9B0076-MS1)</b>	<b>Source: 9A31073-04</b>		<b>Prepared &amp; Analyzed: 02/01/19</b>								
MBAS	0.275	0.019	0.050	mg/l	0.200	0.0859	95	74-123			
<b>Matrix Spike Dup (W9B0076-MSD1)</b>	<b>Source: 9A31073-04</b>		<b>Prepared &amp; Analyzed: 02/01/19</b>								
MBAS	0.285	0.019	0.050	mg/l	0.200	0.0859	99	74-123	4	20	
<b>Batch: W9B0125 - EPA 365.1</b>											
<b>Blank (W9B0125-BLK1)</b>	<b>Prepared: 02/04/19 Analyzed: 02/07/19</b>										
Phosphorus as P, Total	ND	0.0014	0.010	mg/l							
<b>LCS (W9B0125-BS1)</b>	<b>Prepared: 02/04/19 Analyzed: 02/07/19</b>										
Phosphorus as P, Total	0.0503	0.0014	0.010	mg/l	0.0500		101	90-110			
<b>Matrix Spike (W9B0125-MS1)</b>	<b>Source: 9A31094-02</b>		<b>Prepared: 02/04/19 Analyzed: 02/07/19</b>								
Phosphorus as P, Total	0.156	0.0014	0.010	mg/l	0.0500	0.110	92	90-110			
<b>Matrix Spike (W9B0125-MS2)</b>	<b>Source: 9A31094-03</b>		<b>Prepared: 02/04/19 Analyzed: 02/07/19</b>								
Phosphorus as P, Total	0.200	0.0014	0.010	mg/l	0.0500	0.153	94	90-110			
<b>Matrix Spike Dup (W9B0125-MSD1)</b>	<b>Source: 9A31094-02</b>		<b>Prepared: 02/04/19 Analyzed: 02/07/19</b>								
Phosphorus as P, Total	0.155	0.0014	0.010	mg/l	0.0500	0.110	90	90-110	0.6	20	
<b>Matrix Spike Dup (W9B0125-MSD2)</b>	<b>Source: 9A31094-03</b>		<b>Prepared: 02/04/19 Analyzed: 02/07/19</b>								
Phosphorus as P, Total	0.199	0.0014	0.010	mg/l	0.0500	0.153	92	90-110	0.5	20	
<b>Batch: W9B0159 - SM 2540C M</b>											
<b>Blank (W9B0159-BLK1)</b>	<b>Prepared: 02/04/19 Analyzed: 02/05/19</b>										
Total Dissolved Solids	ND	4.0	10	mg/l							
<b>LCS (W9B0159-BS1)</b>	<b>Prepared: 02/04/19 Analyzed: 02/05/19</b>										
Total Dissolved Solids	809	4.0	10	mg/l	824		98	96-102			

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## Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: W9B0159 - SM 2540C M (Continued)</b>											
<b>Duplicate (W9B0159-DUP1)</b>	<b>Source: 9B04080-01</b>				<b>Prepared: 02/04/19</b>		<b>Analyzed: 02/05/19</b>				
Total Dissolved Solids	1320	4.0	10	mg/l		1330			0.5	10	
<b>Duplicate (W9B0159-DUP2)</b>	<b>Source: 9B01063-01</b>				<b>Prepared: 02/04/19</b>		<b>Analyzed: 02/05/19</b>				
Total Dissolved Solids	2130	4.0	10	mg/l		2140			0.3	10	
<b>Batch: W9B0178 - SM 2320B</b>											
<b>Blank (W9B0178-BLK1)</b>					<b>Prepared: 02/04/19</b>		<b>Analyzed: 02/05/19</b>				
Alkalinity as CaCO3	ND	0.56	2.0	mg/l							
<b>LCS (W9B0178-BS1)</b>					<b>Prepared: 02/04/19</b>		<b>Analyzed: 02/05/19</b>				
Alkalinity as CaCO3	261	0.56	2.0	mg/l	250		104	94-108			
<b>Duplicate (W9B0178-DUP1)</b>	<b>Source: 9A22088-02</b>				<b>Prepared: 02/04/19</b>		<b>Analyzed: 02/05/19</b>				
Alkalinity as CaCO3	366	0.56	2.0	mg/l		365			0.3	15	
<b>Batch: W9B0197 - EPA 350.1</b>											
<b>Blank (W9B0197-BLK1)</b>					<b>Prepared &amp; Analyzed: 02/05/19</b>						
Ammonia as N	ND	0.048	0.10	mg/l							
<b>Blank (W9B0197-BLK2)</b>					<b>Prepared &amp; Analyzed: 02/05/19</b>						
Ammonia as N	ND	0.048	0.10	mg/l							
<b>LCS (W9B0197-BS1)</b>					<b>Prepared &amp; Analyzed: 02/05/19</b>						
Ammonia as N	0.253	0.048	0.10	mg/l	0.250		101	90-110			
<b>LCS (W9B0197-BS2)</b>					<b>Prepared &amp; Analyzed: 02/05/19</b>						
Ammonia as N	0.254	0.048	0.10	mg/l	0.250		101	90-110			
<b>Matrix Spike (W9B0197-MS1)</b>	<b>Source: 9A31094-02</b>				<b>Prepared &amp; Analyzed: 02/05/19</b>						
Ammonia as N	0.455	0.048	0.10	mg/l	0.250	0.225	92	90-110			
<b>Matrix Spike (W9B0197-MS2)</b>	<b>Source: 9A31094-03</b>				<b>Prepared &amp; Analyzed: 02/05/19</b>						
Ammonia as N	0.599	0.048	0.10	mg/l	0.250	0.344	102	90-110			
<b>Matrix Spike Dup (W9B0197-MSD1)</b>	<b>Source: 9A31094-02</b>				<b>Prepared &amp; Analyzed: 02/05/19</b>						
Ammonia as N	0.455	0.048	0.10	mg/l	0.250	0.225	92	90-110	0.02	15	
<b>Matrix Spike Dup (W9B0197-MSD2)</b>	<b>Source: 9A31094-03</b>				<b>Prepared &amp; Analyzed: 02/05/19</b>						
Ammonia as N	0.598	0.048	0.10	mg/l	0.250	0.344	102	90-110	0.06	15	
<b>Batch: W9B0224 - EPA 365.3</b>											
<b>Blank (W9B0224-BLK1)</b>					<b>Prepared: 02/05/19 Analyzed: 02/15/19</b>						
Phosphorus, Dissolved	ND	0.00083	0.010	mg/l							
<b>LCS (W9B0224-BS1)</b>					<b>Prepared: 02/05/19 Analyzed: 02/15/19</b>						
Phosphorus, Dissolved	0.204	0.00083	0.010	mg/l	0.200		102	90-110			
<b>Matrix Spike (W9B0224-MS1)</b>	<b>Source: 9A31094-02</b>				<b>Prepared: 02/05/19 Analyzed: 02/15/19</b>						
Phosphorus, Dissolved	0.228	0.00083	0.010	mg/l	0.200	0.0300	99	90-110			
<b>Matrix Spike Dup (W9B0224-MSD1)</b>	<b>Source: 9A31094-02</b>				<b>Prepared: 02/05/19 Analyzed: 02/15/19</b>						
Phosphorus, Dissolved	0.236	0.00083	0.010	mg/l	0.200	0.0300	103	90-110	3	20	
<b>Batch: W9B0485 - SM 2510B</b>											

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# Certificate of Analysis

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Project Number: Irwindale SW Outfall Mon.

Reported:

03/27/2019 10:37

Project Manager: Edmond G. Suher

## Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0485 - SM 2510B (Continued)</b>											
<b>Blank (W9B0485-BLK1)</b>						<b>Prepared &amp; Analyzed: 02/08/19</b>					
Specific Conductance (EC)	ND	0.23	2.0	umhos/cm							
<b>LCS (W9B0485-BS1)</b>						<b>Prepared &amp; Analyzed: 02/08/19</b>					
Specific Conductance (EC)	304	0.23	2.0	umhos/cm	309		98	95-105			
<b>Duplicate (W9B0485-DUP1)</b>						<b>Source: 9A31058-01</b>					
Specific Conductance (EC)	110	0.23	2.0	umhos/cm		109			0.9	5	
<b>Batch: W9B0534 - EPA 351.2</b>											
<b>Blank (W9B0534-BLK1)</b>						<b>Prepared: 02/09/19 Analyzed: 02/20/19</b>					
TKN	ND	0.050	0.10	mg/l							
<b>Blank (W9B0534-BLK2)</b>						<b>Prepared: 02/09/19 Analyzed: 02/20/19</b>					
TKN	ND	0.050	0.10	mg/l							
<b>LCS (W9B0534-BS1)</b>						<b>Prepared: 02/09/19 Analyzed: 02/20/19</b>					
TKN	0.948	0.050	0.10	mg/l	1.00		95	90-110			
<b>LCS (W9B0534-BS2)</b>						<b>Prepared: 02/09/19 Analyzed: 02/20/19</b>					
TKN	0.939	0.050	0.10	mg/l	1.00		94	90-110			
<b>Matrix Spike (W9B0534-MS1)</b>						<b>Source: 9B01052-01</b>					
TKN	1.17	0.050	0.10	mg/l	1.00	0.145	103	90-110			
<b>Matrix Spike (W9B0534-MS2)</b>						<b>Source: 9B01052-02</b>					
TKN	1.17	0.050	0.10	mg/l	1.00	0.126	104	90-110			
<b>Matrix Spike Dup (W9B0534-MSD1)</b>						<b>Source: 9B01052-01</b>					
TKN	1.19	0.050	0.10	mg/l	1.00	0.145	104	90-110	1	10	
<b>Matrix Spike Dup (W9B0534-MSD2)</b>						<b>Source: 9B01052-02</b>					
TKN	1.17	0.050	0.10	mg/l	1.00	0.126	105	90-110	0.2	10	
<b>Batch: W9B0579 - EPA 335.4</b>											
<b>Blank (W9B0579-BLK1)</b>						<b>Prepared: 02/11/19 Analyzed: 02/12/19</b>					
Cyanide, Total	ND	2.7	5.0	ug/l							
<b>LCS (W9B0579-BS1)</b>						<b>Prepared: 02/11/19 Analyzed: 02/12/19</b>					
Cyanide, Total	104	2.7	5.0	ug/l	100		104	90-110			
<b>Matrix Spike (W9B0579-MS1)</b>						<b>Source: 9B01063-01</b>					
Cyanide, Total	174	2.7	5.0	ug/l	200	ND	87	90-110			MS-01
<b>Matrix Spike (W9B0579-MS2)</b>						<b>Source: 9B01063-01</b>					
Cyanide, Total	825	14	25	ug/l	1000	ND	82	90-110			MS-03
<b>Matrix Spike Dup (W9B0579-MSD1)</b>						<b>Source: 9B01063-01</b>					
Cyanide, Total	175	2.7	5.0	ug/l	200	ND	88	90-110	0.6	20	MS-01
<b>Matrix Spike Dup (W9B0579-MSD2)</b>						<b>Source: 9B01063-01</b>					
Cyanide, Total	735	14	25	ug/l	1000	ND	74	90-110	12	20	MS-03
<b>Batch: W9B0754 - EPA 410.4</b>											
<b>Blank (W9B0754-BLK1)</b>						<b>Prepared: 02/13/19 Analyzed: 02/20/19</b>					

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FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0754 - EPA 410.4 (Continued)</b>											
<b>Blank (W9B0754-BLK1)</b>						<b>Prepared: 02/13/19 Analyzed: 02/20/19</b>					
Chemical Oxygen Demand	ND	0.73	5.0	mg/l							
<b>LCS (W9B0754-BS1)</b>						<b>Prepared: 02/13/19 Analyzed: 02/20/19</b>					
Chemical Oxygen Demand	1010	0.73	5.0	mg/l	1000		101	90-110			
<b>Duplicate (W9B0754-DUP1)</b>						<b>Source: 9A31113-01 Prepared: 02/13/19 Analyzed: 02/20/19</b>					
Chemical Oxygen Demand	711	0.73	5.0	mg/l		703			1	15	
<b>Matrix Spike (W9B0754-MS1)</b>						<b>Source: 9A31073-04 Prepared: 02/13/19 Analyzed: 02/20/19</b>					
Chemical Oxygen Demand	209	2.9	20	mg/l	200	9.57	100	90-110			
<b>Matrix Spike (W9B0754-MS2)</b>						<b>Source: 9A31075-11 Prepared: 02/13/19 Analyzed: 02/20/19</b>					
Chemical Oxygen Demand	2350	2.9	20	mg/l	2000	373	99	90-110			
<b>Matrix Spike Dup (W9B0754-MSD1)</b>						<b>Source: 9A31073-04 Prepared: 02/13/19 Analyzed: 02/20/19</b>					
Chemical Oxygen Demand	206	2.9	20	mg/l	200	9.57	98	90-110	2	15	
<b>Matrix Spike Dup (W9B0754-MSD2)</b>						<b>Source: 9A31075-11 Prepared: 02/13/19 Analyzed: 02/20/19</b>					
Chemical Oxygen Demand	2390	2.9	20	mg/l	2000	373	101	90-110	2	15	
<b>Batch: W9B1110 - EPA 420.4</b>											
<b>Blank (W9B1110-BLK1)</b>						<b>Prepared: 02/20/19 Analyzed: 02/21/19</b>					
Phenolics	ND	0.0042	0.010	mg/l							
<b>LCS (W9B1110-BS1)</b>						<b>Prepared: 02/20/19 Analyzed: 02/21/19</b>					
Phenolics	0.0929	0.0042	0.010	mg/l	0.100		93	90-110			
<b>Matrix Spike (W9B1110-MS1)</b>						<b>Source: 9B12068-01 Prepared: 02/20/19 Analyzed: 02/21/19</b>					
Phenolics	0.243	0.0042	0.010	mg/l	0.250	ND	97	90-110			
<b>Matrix Spike Dup (W9B1110-MSD1)</b>						<b>Source: 9B12068-01 Prepared: 02/20/19 Analyzed: 02/21/19</b>					
Phenolics	0.244	0.0042	0.010	mg/l	0.250	ND	98	90-110	0.5	20	



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## Quality Control Results

(Continued)

Hexavalent Chromium by IC

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0358 - EPA 218.6</b>											
<b>Blank (W9B0358-BLK1)</b>					<b>Prepared &amp; Analyzed: 02/06/19</b>						
Chromium 6+ .....	ND	0.0048	0.020	ug/l							
<b>LCS (W9B0358-BS1)</b>					<b>Prepared &amp; Analyzed: 02/06/19</b>						
Chromium 6+ .....	4.87	0.0048	0.020	ug/l	5.00		97	90-110			
<b>Matrix Spike (W9B0358-MS1)</b>					<b>Prepared &amp; Analyzed: 02/06/19</b>						
Chromium 6+ .....	4.97	0.0048	0.020	ug/l	5.00	0.0586	98	88-112			
<b>Matrix Spike (W9B0358-MS2)</b>					<b>Prepared &amp; Analyzed: 02/06/19</b>						
Chromium 6+ .....	7.86	0.0048	0.020	ug/l	5.00	3.02	97	88-112			
<b>Matrix Spike Dup (W9B0358-MSD1)</b>					<b>Prepared &amp; Analyzed: 02/06/19</b>						
Chromium 6+ .....	5.07	0.0048	0.020	ug/l	5.00	0.0586	100	88-112	2	10	
<b>Matrix Spike Dup (W9B0358-MSD2)</b>					<b>Prepared &amp; Analyzed: 02/06/19</b>						
Chromium 6+ .....	7.79	0.0048	0.020	ug/l	5.00	3.02	96	88-112	0.8	10	
<b>Batch: W9B0643 - EPA 218.6</b>											
<b>Blank (W9B0643-BLK1)</b>					<b>Prepared &amp; Analyzed: 02/12/19</b>						
Chromium 6+, Dissolved .....	ND	0.0048	0.020	ug/l							
<b>LCS (W9B0643-BS1)</b>					<b>Prepared &amp; Analyzed: 02/12/19</b>						
Chromium 6+, Dissolved .....	4.74	0.0048	0.020	ug/l	5.00		95	90-110			
<b>Matrix Spike (W9B0643-MS1)</b>					<b>Prepared &amp; Analyzed: 02/12/19</b>						
Chromium 6+, Dissolved .....	5.00	0.0048	0.020	ug/l	5.00	0.0691	99	88-112			
<b>Matrix Spike (W9B0643-MS2)</b>					<b>Prepared &amp; Analyzed: 02/12/19</b>						
Chromium 6+, Dissolved .....	5.72	0.0048	0.020	ug/l	5.00	0.794	98	88-112			
<b>Matrix Spike Dup (W9B0643-MSD1)</b>					<b>Prepared &amp; Analyzed: 02/12/19</b>						
Chromium 6+, Dissolved .....	5.02	0.0048	0.020	ug/l	5.00	0.0691	99	88-112	0.4	10	
<b>Matrix Spike Dup (W9B0643-MSD2)</b>					<b>Prepared &amp; Analyzed: 02/12/19</b>						
Chromium 6+, Dissolved .....	5.72	0.0048	0.020	ug/l	5.00	0.794	98	88-112	0.009	10	



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## Quality Control Results

(Continued)

Hydrocarbons by GC/FID

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0282 - EPA 8015B</b>											
<b>Blank (W9B0282-BLK1)</b>											
						Prepared: 02/06/19 Analyzed: 02/14/19					
Diesel Range Organics	0.0758	0.024	0.10	mg/l							J
Oil Range Organics	ND	0.33	0.50	mg/l							
Surrogate(s)											
n-Tetracosane	0.257			mg/l	0.250		103	64-155			
<b>LCS (W9B0282-BS1)</b>											
						Prepared: 02/06/19 Analyzed: 02/14/19					
Diesel Range Organics	0.415	0.024	0.10	mg/l	0.500		83	56-136			
Surrogate(s)											
n-Tetracosane	0.261			mg/l	0.250		104	64-155			
<b>LCS Dup (W9B0282-BSD1)</b>											
						Prepared: 02/06/19 Analyzed: 02/15/19					
Diesel Range Organics	0.404	0.024	0.10	mg/l	0.500		81	56-136	3	25	
Surrogate(s)											
n-Tetracosane	0.260			mg/l	0.250		104	64-155			



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## Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0060 - EPA 200.7</b>											
<b>Blank (W9B0060-BLK1)</b>						<b>Prepared: 02/01/19 Analyzed: 02/25/19</b>					
Calcium, Total	ND	0.0160	0.100	mg/l							
Phosphorus, Dissolved	ND	0.012	0.020	mg/l							
Phosphorus, Total	ND	0.012	0.020	mg/l							
<b>LCS (W9B0060-BS1)</b>						<b>Prepared: 02/01/19 Analyzed: 02/25/19</b>					
Calcium, Total	47.1	0.0160	0.100	mg/l	50.0		94	85-115			
Phosphorus, Dissolved	1.02	0.012	0.020	mg/l	1.00		102	85-115			
Phosphorus, Total	1.02	0.012	0.020	mg/l	1.00		102	85-115			
<b>Matrix Spike (W9B0060-MS1)</b>						<b>Source: 9A30064-01 Prepared: 02/01/19 Analyzed: 02/25/19</b>					
Calcium, Total	93.6	0.0160	0.100	mg/l	50.0	49.6	88	70-130			
Phosphorus, Total	1.62	0.012	0.020	mg/l	1.00	0.593	103	70-130			
<b>Matrix Spike (W9B0060-MS2)</b>						<b>Source: 9A31092-02 Prepared: 02/01/19 Analyzed: 02/25/19</b>					
Calcium, Total	57.2	0.0160	0.100	mg/l	50.0	10.6	93	70-130			
Phosphorus, Total	1.45	0.012	0.020	mg/l	1.00	0.414	103	70-130			
<b>Matrix Spike Dup (W9B0060-MSD1)</b>						<b>Source: 9A30064-01 Prepared: 02/01/19 Analyzed: 02/25/19</b>					
Calcium, Total	92.6	0.0160	0.100	mg/l	50.0	49.6	86	70-130	1	30	
Phosphorus, Total	1.60	0.012	0.020	mg/l	1.00	0.593	101	70-130	1	30	
<b>Matrix Spike Dup (W9B0060-MSD2)</b>						<b>Source: 9A31092-02 Prepared: 02/01/19 Analyzed: 02/25/19</b>					
Calcium, Total	58.4	0.0160	0.100	mg/l	50.0	10.6	96	70-130	2	30	
Phosphorus, Total	1.48	0.012	0.020	mg/l	1.00	0.414	106	70-130	2	30	
<b>Batch: W9B0063 - EPA 200.8</b>											
<b>Blank (W9B0063-BLK1)</b>						<b>Prepared: 02/01/19 Analyzed: 03/09/19</b>					
Aluminum, Dissolved	ND	1.3	5.0	ug/l							
Aluminum, Total	1.38	1.3	5.0	ug/l							J
Antimony, Dissolved	ND	0.045	0.50	ug/l							
Antimony, Total	ND	0.045	0.50	ug/l							
Arsenic, Dissolved	ND	0.074	0.40	ug/l							
Arsenic, Total	ND	0.074	0.40	ug/l							
Cadmium, Dissolved	ND	0.041	0.10	ug/l							
Cadmium, Total	ND	0.041	0.10	ug/l							
Chromium, Dissolved	ND	0.035	0.20	ug/l							
Chromium, Total	ND	0.035	0.20	ug/l							
Copper, Dissolved	ND	0.13	0.50	ug/l							
Copper, Total	ND	0.13	0.50	ug/l							
Iron, Dissolved	1.23	0.91	20	ug/l							J
Iron, Total	1.72	0.91	20	ug/l							J
Lead, Dissolved	ND	0.031	0.20	ug/l							
Lead, Total	ND	0.031	0.20	ug/l							
Nickel, Dissolved	ND	0.045	0.80	ug/l							



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## Quality Control Results

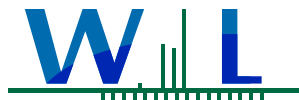
(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0063 - EPA 200.8 (Continued)</b>											
<b>Blank (W9B0063-BLK1)</b>						<b>Prepared: 02/01/19 Analyzed: 03/09/19</b>					
Nickel, Total	0.160	0.045	0.80	ug/l							J
Zinc, Dissolved	ND	0.94	5.0	ug/l							
Zinc, Total	ND	0.94	5.0	ug/l							
<b>Blank (W9B0063-BLK2)</b>						<b>Prepared: 02/01/19 Analyzed: 03/11/19</b>					
Cadmium, Dissolved	ND	0.041	0.10	ug/l							
Cadmium, Total	ND	0.041	0.10	ug/l							
<b>LCS (W9B0063-BS1)</b>						<b>Prepared: 02/01/19 Analyzed: 03/09/19</b>					
Aluminum, Dissolved	53.7	1.3	5.0	ug/l	49.9		108	85-115			
Aluminum, Total	53.7	1.3	5.0	ug/l	49.9		108	85-115			
Antimony, Dissolved	49.5	0.045	0.50	ug/l	49.9		99	85-115			
Antimony, Total	49.5	0.045	0.50	ug/l	49.9		99	85-115			
Arsenic, Dissolved	51.5	0.074	0.40	ug/l	49.9		103	85-115			
Arsenic, Total	51.5	0.074	0.40	ug/l	49.9		103	85-115			
Cadmium, Dissolved	50.3	0.041	0.10	ug/l	49.9		101	85-115			
Cadmium, Total	50.3	0.041	0.10	ug/l	49.9		101	85-115			
Chromium, Dissolved	50.3	0.035	0.20	ug/l	49.9		101	85-115			
Chromium, Total	50.3	0.035	0.20	ug/l	49.9		101	85-115			
Copper, Dissolved	51.5	0.13	0.50	ug/l	49.9		103	85-115			
Copper, Total	51.5	0.13	0.50	ug/l	49.9		103	85-115			
Iron, Dissolved	1020	0.91	20	ug/l	1050		97	85-115			
Iron, Total	1020	0.91	20	ug/l	1050		97	85-115			
Lead, Dissolved	50.8	0.031	0.20	ug/l	49.9		102	85-115			
Lead, Total	50.8	0.031	0.20	ug/l	49.9		102	85-115			
Nickel, Dissolved	51.7	0.045	0.80	ug/l	49.9		104	85-115			
Nickel, Total	51.7	0.045	0.80	ug/l	49.9		104	85-115			
Zinc, Dissolved	57.8	0.94	5.0	ug/l	57.0		101	85-115			
Zinc, Total	57.8	0.94	5.0	ug/l	57.0		101	85-115			
<b>LCS (W9B0063-BS2)</b>						<b>Prepared: 02/01/19 Analyzed: 03/11/19</b>					
Cadmium, Dissolved	51.0	0.041	0.10	ug/l	49.9		102	85-115			
Cadmium, Total	51.0	0.041	0.10	ug/l	49.9		102	85-115			
<b>Matrix Spike (W9B0063-MS1)</b>						<b>Source: 9A31094-03 Prepared: 02/01/19 Analyzed: 03/09/19</b>					
Aluminum, Dissolved	1300	1.3	5.0	ug/l	49.9	47.1	NR	70-130			
Aluminum, Total	1300	1.3	5.0	ug/l	49.9	1320	NR	70-130			MS-02
Antimony, Dissolved	49.1	0.045	0.50	ug/l	49.9	0.630	97	70-130			
Antimony, Total	49.1	0.045	0.50	ug/l	49.9	1.30	96	70-130			
Arsenic, Dissolved	51.1	0.074	0.40	ug/l	49.9	0.530	101	70-130			
Arsenic, Total	51.1	0.074	0.40	ug/l	49.9	1.08	100	70-130			
Cadmium, Dissolved	49.0	0.041	0.10	ug/l	49.9	0.0700	98	70-130			
Cadmium, Total	49.0	0.041	0.10	ug/l	49.9	0.190	98	70-130			

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WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

# Certificate of Analysis

FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
<b>Batch: W9B0063 - EPA 200.8 (Continued)</b>											
<b>Matrix Spike (W9B0063-MS1)</b>	<b>Source: 9A31094-03</b>				<b>Prepared: 02/01/19 Analyzed: 03/09/19</b>						
Chromium, Dissolved	52.3	0.035	0.20	ug/l	49.9	0.780	103	70-130			
Chromium, Total	52.3	0.035	0.20	ug/l	49.9	2.94	99	70-130			
Copper, Dissolved	66.2	0.13	0.50	ug/l	49.9	6.58	119	70-130			
Copper, Total	66.2	0.13	0.50	ug/l	49.9	15.7	101	70-130			
Iron, Dissolved	2500	0.91	20	ug/l	1050	64.7	232	70-130			
Iron, Total	2500	0.91	20	ug/l	1050	1480	97	70-130			
Lead, Dissolved	58.0	0.031	0.20	ug/l	49.9	0.380	115	70-130			
Lead, Total	58.0	0.031	0.20	ug/l	49.9	6.90	102	70-130			
Nickel, Dissolved	56.6	0.045	0.80	ug/l	49.9	2.84	108	70-130			
Nickel, Total	56.6	0.045	0.80	ug/l	49.9	5.75	102	70-130			
Zinc, Dissolved	211	0.94	5.0	ug/l	57.0	70.7	247	70-130			
Zinc, Total	211	0.94	5.0	ug/l	57.0	158	95	70-130			
<b>Matrix Spike (W9B0063-MS2)</b>	<b>Source: 9A31092-03</b>				<b>Prepared: 02/01/19 Analyzed: 03/09/19</b>						
Aluminum, Dissolved	348	1.3	5.0	ug/l	49.9	20.8	656	70-130			
Aluminum, Total	348	1.3	5.0	ug/l	49.9	302	93	70-130			
Antimony, Dissolved	50.5	0.045	0.50	ug/l	49.9	0.790	99	70-130			
Antimony, Total	50.5	0.045	0.50	ug/l	49.9	1.41	98	70-130			
Arsenic, Dissolved	50.2	0.074	0.40	ug/l	49.9	0.340	100	70-130			
Arsenic, Total	50.2	0.074	0.40	ug/l	49.9	0.490	100	70-130			
Cadmium, Dissolved	48.9	0.041	0.10	ug/l	49.9	ND	98	70-130			
Cadmium, Total	48.9	0.041	0.10	ug/l	49.9	ND	98	70-130			
Chromium, Dissolved	50.6	0.035	0.20	ug/l	49.9	0.310	101	70-130			
Chromium, Total	50.6	0.035	0.20	ug/l	49.9	0.910	99	70-130			
Copper, Dissolved	61.1	0.13	0.50	ug/l	49.9	6.70	109	70-130			
Copper, Total	61.1	0.13	0.50	ug/l	49.9	10.9	101	70-130			
Iron, Dissolved	1580	0.91	20	ug/l	1050	20.8	149	70-130			
Iron, Total	1580	0.91	20	ug/l	1050	364	116	70-130			
Lead, Dissolved	54.8	0.031	0.20	ug/l	49.9	0.270	109	70-130			
Lead, Total	54.8	0.031	0.20	ug/l	49.9	3.66	103	70-130			
Nickel, Dissolved	51.9	0.045	0.80	ug/l	49.9	0.990	102	70-130			
Nickel, Total	51.9	0.045	0.80	ug/l	49.9	1.54	101	70-130			
Zinc, Dissolved	110	0.94	5.0	ug/l	57.0	28.5	144	70-130			
Zinc, Total	110	0.94	5.0	ug/l	57.0	55.6	96	70-130			
<b>Matrix Spike (W9B0063-MS3)</b>	<b>Source: 9A31094-03</b>				<b>Prepared: 02/01/19 Analyzed: 03/12/19</b>						
Cadmium, Dissolved	51.3	0.041	0.10	ug/l	49.9	0.0700	103	70-130			
Cadmium, Total	51.3	0.041	0.10	ug/l	49.9	0.190	102	70-130			
<b>Matrix Spike Dup (W9B0063-MSD1)</b>	<b>Source: 9A31094-03</b>				<b>Prepared: 02/01/19 Analyzed: 03/09/19</b>						
Aluminum, Dissolved	1220	1.3	5.0	ug/l	49.9	47.1	NR	70-130	6	30	
Aluminum, Total	1220	1.3	5.0	ug/l	49.9	1320	NR	70-130	6	30	MS-02

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# Certificate of Analysis

FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Quality Control Results

(Continued)

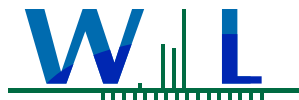
Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: W9B0063 - EPA 200.8 (Continued)</b>											
<b>Matrix Spike Dup (W9B0063-MSD1)</b>			<b>Source: 9A31094-03</b>		<b>Prepared: 02/01/19 Analyzed: 03/09/19</b>						
Antimony, Dissolved	47.1	0.045	0.50	ug/l	49.9	0.630	93	70-130	4	30	
Antimony, Total	47.1	0.045	0.50	ug/l	49.9	1.30	92	70-130	4	30	
Arsenic, Dissolved	50.0	0.074	0.40	ug/l	49.9	0.530	99	70-130	2	30	
Arsenic, Total	50.0	0.074	0.40	ug/l	49.9	1.08	98	70-130	2	30	
Cadmium, Dissolved	48.8	0.041	0.10	ug/l	49.9	0.0700	98	70-130	0.5	30	
Cadmium, Total	48.8	0.041	0.10	ug/l	49.9	0.190	97	70-130	0.5	30	
Chromium, Dissolved	51.2	0.035	0.20	ug/l	49.9	0.780	101	70-130	2	30	
Chromium, Total	51.2	0.035	0.20	ug/l	49.9	2.94	97	70-130	2	30	
Copper, Dissolved	63.6	0.13	0.50	ug/l	49.9	6.58	114	70-130	4	30	
Copper, Total	63.6	0.13	0.50	ug/l	49.9	15.7	96	70-130	4	30	
Iron, Dissolved	2400	0.91	20	ug/l	1050	64.7	223	70-130	4	30	
Iron, Total	2400	0.91	20	ug/l	1050	1480	88	70-130	4	30	
Lead, Dissolved	56.6	0.031	0.20	ug/l	49.9	0.380	113	70-130	2	30	
Lead, Total	56.6	0.031	0.20	ug/l	49.9	6.90	100	70-130	2	30	
Nickel, Dissolved	54.5	0.045	0.80	ug/l	49.9	2.84	103	70-130	4	30	
Nickel, Total	54.5	0.045	0.80	ug/l	49.9	5.75	98	70-130	4	30	
Zinc, Dissolved	209	0.94	5.0	ug/l	57.0	70.7	242	70-130	1	30	
Zinc, Total	209	0.94	5.0	ug/l	57.0	158	90	70-130	1	30	
<b>Matrix Spike Dup (W9B0063-MSD2)</b>			<b>Source: 9A31092-03</b>		<b>Prepared: 02/01/19 Analyzed: 03/09/19</b>						
Aluminum, Dissolved	342	1.3	5.0	ug/l	49.9	20.8	643	70-130	2	30	
Aluminum, Total	342	1.3	5.0	ug/l	49.9	302	80	70-130	2	30	
Antimony, Dissolved	49.9	0.045	0.50	ug/l	49.9	0.790	98	70-130	1	30	
Antimony, Total	49.9	0.045	0.50	ug/l	49.9	1.41	97	70-130	1	30	
Arsenic, Dissolved	50.2	0.074	0.40	ug/l	49.9	0.340	100	70-130	0.2	30	
Arsenic, Total	50.2	0.074	0.40	ug/l	49.9	0.490	99	70-130	0.2	30	
Cadmium, Dissolved	48.6	0.041	0.10	ug/l	49.9	ND	97	70-130	0.5	30	
Cadmium, Total	48.6	0.041	0.10	ug/l	49.9	ND	97	70-130	0.5	30	
Chromium, Dissolved	50.4	0.035	0.20	ug/l	49.9	0.310	100	70-130	0.4	30	
Chromium, Total	50.4	0.035	0.20	ug/l	49.9	0.910	99	70-130	0.4	30	
Copper, Dissolved	60.3	0.13	0.50	ug/l	49.9	6.70	107	70-130	1	30	
Copper, Total	60.3	0.13	0.50	ug/l	49.9	10.9	99	70-130	1	30	
Iron, Dissolved	1380	0.91	20	ug/l	1050	20.8	130	70-130	14	30	
Iron, Total	1380	0.91	20	ug/l	1050	364	97	70-130	14	30	
Lead, Dissolved	55.0	0.031	0.20	ug/l	49.9	0.270	110	70-130	0.2	30	
Lead, Total	55.0	0.031	0.20	ug/l	49.9	3.66	103	70-130	0.2	30	
Nickel, Dissolved	51.0	0.045	0.80	ug/l	49.9	0.990	100	70-130	2	30	
Nickel, Total	51.0	0.045	0.80	ug/l	49.9	1.54	99	70-130	2	30	
Zinc, Dissolved	110	0.94	5.0	ug/l	57.0	28.5	143	70-130	0.5	30	
Zinc, Total	110	0.94	5.0	ug/l	57.0	55.6	95	70-130	0.5	30	

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FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: W9B0063 - EPA 200.8 (Continued)</b>											
<b>Matrix Spike Dup (W9B0063-MSD3)</b>			<b>Source: 9A31094-03</b>			<b>Prepared: 02/01/19 Analyzed: 03/12/19</b>					
Cadmium, Dissolved	50.2	0.041	0.10	ug/l	49.9	0.0700	100	70-130	2	30	
Cadmium, Total	50.2	0.041	0.10	ug/l	49.9	0.190	100	70-130	2	30	

## Quality Control Results

(Continued)

Microbiological Parameters by Standard Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: W9B1435 - SM 9221F</b>											
<b>Blank (W9B1435-BLK3)</b>			<b>Prepared: 01/31/19 Analyzed: 02/25/19</b>								
E. coli	ND		1.8	MPN/100ml							
<b>Blank (W9B1435-BLK4)</b>			<b>Prepared: 01/31/19 Analyzed: 02/25/19</b>								
E. coli	ND		1.8	MPN/100ml							
<b>Blank (W9B1435-BLK9)</b>			<b>Prepared: 02/19/19 Analyzed: 02/22/19</b>								
E. coli	ND		1.8	MPN/100ml							



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## Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
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**Batch: W9B0006 - EPA 625.1**

**Blank (W9B0006-BLK1)**

**Prepared: 02/01/19 Analyzed: 02/19/19**

1-Methylnaphthalene	ND	0.56	5.0	ng/l							
1-Methylphenanthrene	ND	0.98	5.0	ng/l							
2,6-Dimethylnaphthalene	ND	0.65	5.0	ng/l							
2-Methylnaphthalene	ND	0.82	5.0	ng/l							
Acenaphthene	ND	0.43	5.0	ng/l							
Acenaphthylene	ND	0.52	5.0	ng/l							
Anthracene	ND	0.91	5.0	ng/l							
Benzo (a) anthracene	ND	0.79	5.0	ng/l							
Benzo (a) pyrene	ND	0.58	5.0	ng/l							
Benzo (b) fluoranthene	ND	1.6	5.0	ng/l							
Benzo (e) pyrene	ND	0.95	5.0	ng/l							
Benzo (g,h,i) perylene	ND	0.90	5.0	ng/l							
Benzo (k) fluoranthene	ND	0.52	5.0	ng/l							
Biphenyl	ND	0.49	5.0	ng/l							
Chrysene	ND	0.52	5.0	ng/l							
Dibenzo (a,h) anthracene	ND	1.2	5.0	ng/l							
Fluoranthene	ND	1.3	5.0	ng/l							
Fluorene	0.926	0.75	5.0	ng/l							J
Indeno (1,2,3-cd) pyrene	ND	0.99	5.0	ng/l							
Naphthalene	1.21	0.53	5.0	ng/l							J
Perylene	ND	3.0	5.0	ng/l							
Phenanthrene	4.21	0.96	5.0	ng/l							J
Pyrene	ND	0.68	5.0	ng/l							

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	96.8			ng/l	100		97	50-150			
Perylene-d12	69.4			ng/l	100		69	50-150			

**LCS (W9B0006-BS1)**

**Prepared: 02/01/19 Analyzed: 02/19/19**

Acenaphthene	36.2	0.43	5.0	ng/l	50.0		72	50-150			
Acenaphthylene	36.3	0.52	5.0	ng/l	50.0		73	50-150			
Anthracene	34.3	0.91	5.0	ng/l	50.0		69	50-150			
Benzo (a) anthracene	33.8	0.79	5.0	ng/l	50.0		68	50-150			
Benzo (a) pyrene	28.0	0.58	5.0	ng/l	50.0		56	50-150			
Benzo (b) fluoranthene	32.6	1.6	5.0	ng/l	50.0		65	50-150			
Benzo (g,h,i) perylene	21.9	0.90	5.0	ng/l	50.0		44	50-150			BS-03
Benzo (k) fluoranthene	31.9	0.52	5.0	ng/l	50.0		64	50-150			
Chrysene	34.5	0.52	5.0	ng/l	50.0		69	50-150			
Dibenzo (a,h) anthracene	22.4	1.2	5.0	ng/l	50.0		45	50-150			BS-03
Fluoranthene	35.2	1.3	5.0	ng/l	50.0		70	50-150			
Fluorene	36.9	0.75	5.0	ng/l	50.0		74	50-150			



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FINAL REPORT

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**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Quality Control Results

(Continued)

Semivolatiles Organics - Low Level by Tandem GC/MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: W9B0006 - EPA 625.1 (Continued)</b>											
<b>LCS (W9B0006-BS1)</b>						<b>Prepared: 02/01/19 Analyzed: 02/19/19</b>					
Indeno (1,2,3-cd) pyrene	25.0	0.99	5.0	ng/l	50.0		50	50-150			
Naphthalene	41.1	0.53	5.0	ng/l	50.0		82	50-150			
Phenanthrene	37.3	0.96	5.0	ng/l	50.0		75	50-150			
Pyrene	38.7	0.68	5.0	ng/l	50.0		77	50-150			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	91.8			ng/l	100		92	50-150			
Perylene-d12	61.5			ng/l	100		61	50-150			
<b>Matrix Spike (W9B0006-MS1)</b>						<b>Source: 9A29083-01 Prepared: 02/01/19 Analyzed: 02/19/19</b>					
Acenaphthene	32.6	0.43	5.0	ng/l	50.0	4.67	56	50-150			
Acenaphthylene	34.2	0.52	5.0	ng/l	50.0	1.37	66	50-150			
Anthracene	34.5	0.91	5.0	ng/l	50.0	ND	69	50-150			
Benzo (a) anthracene	38.0	0.79	5.0	ng/l	50.0	ND	76	50-150			
Benzo (a) pyrene	26.6	0.58	5.0	ng/l	50.0	ND	53	50-150			
Benzo (b) fluoranthene	23.8	1.6	5.0	ng/l	50.0	ND	48	50-150			MS-05
Benzo (g,h,i) perylene	26.1	0.90	5.0	ng/l	50.0	ND	52	50-150			
Benzo (k) fluoranthene	25.4	0.52	5.0	ng/l	50.0	ND	51	50-150			
Chrysene	29.9	0.52	5.0	ng/l	50.0	ND	60	50-150			
Dibenzo (a,h) anthracene	28.7	1.2	5.0	ng/l	50.0	ND	57	50-150			
Fluoranthene	39.3	1.3	5.0	ng/l	50.0	ND	79	50-150			
Fluorene	34.7	0.75	5.0	ng/l	50.0	4.39	61	50-150			
Indeno (1,2,3-cd) pyrene	24.3	0.99	5.0	ng/l	50.0	ND	49	50-150			MS-05
Naphthalene	41.6	0.53	5.0	ng/l	50.0	13.9	55	50-150			
Phenanthrene	36.7	0.96	5.0	ng/l	50.0	6.80	60	50-150			
Pyrene	37.3	0.68	5.0	ng/l	50.0	1.13	72	50-150			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	77.9			ng/l	100		78	50-150			
Perylene-d12	48.7			ng/l	100		49	50-150			S-GC
<b>Matrix Spike Dup (W9B0006-MSD1)</b>						<b>Source: 9A29083-01 Prepared: 02/01/19 Analyzed: 02/20/19</b>					
Acenaphthene	37.7	0.43	5.0	ng/l	50.0	4.67	66	50-150	14	30	
Acenaphthylene	39.4	0.52	5.0	ng/l	50.0	1.37	76	50-150	14	30	
Anthracene	37.7	0.91	5.0	ng/l	50.0	ND	75	50-150	9	30	
Benzo (a) anthracene	36.9	0.79	5.0	ng/l	50.0	ND	74	50-150	3	30	
Benzo (a) pyrene	30.1	0.58	5.0	ng/l	50.0	ND	60	50-150	12	30	
Benzo (b) fluoranthene	26.5	1.6	5.0	ng/l	50.0	ND	53	50-150	11	30	
Benzo (g,h,i) perylene	28.6	0.90	5.0	ng/l	50.0	ND	57	50-150	9	30	
Benzo (k) fluoranthene	23.2	0.52	5.0	ng/l	50.0	ND	46	50-150	9	30	MS-05
Chrysene	29.7	0.52	5.0	ng/l	50.0	ND	59	50-150	0.7	30	
Dibenzo (a,h) anthracene	35.0	1.2	5.0	ng/l	50.0	ND	70	50-150	20	30	
Fluoranthene	40.7	1.3	5.0	ng/l	50.0	ND	81	50-150	4	30	



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**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher

## Quality Control Results

(Continued)

Semivolatile Organics - Low Level by Tandem GC/MS/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
<b>Batch: W9B0006 - EPA 625.1 (Continued)</b>											
<b>Matrix Spike Dup (W9B0006-MSD1)</b>			<b>Source: 9A29083-01</b>			<b>Prepared: 02/01/19 Analyzed: 02/20/19</b>					
Fluorene	38.9	0.75	5.0	ng/l	50.0	4.39	69	50-150	11	30	
Indeno (1,2,3-cd) pyrene	30.8	0.99	5.0	ng/l	50.0	ND	62	50-150	24	30	
Naphthalene	45.8	0.53	5.0	ng/l	50.0	13.9	64	50-150	9	30	
Phenanthrene	39.9	0.96	5.0	ng/l	50.0	6.80	66	50-150	9	30	
Pyrene	43.9	0.68	5.0	ng/l	50.0	1.13	86	50-150	16	30	
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	79.3			ng/l	100		79	50-150			
Perylene-d12	70.5			ng/l	100		71	50-150			



WECK LABORATORIES, INC.

AEI-CASC Consulting  
2740 W. Magnolia Blvd., Ste.102  
Burbank, CA 91505

# Certificate of Analysis

FINAL REPORT

**Project Number:** Irwindale SW Outfall Mon.

**Reported:**

03/27/2019 10:37

**Project Manager:** Edmond G. Suher



## Notes and Definitions

Item	Definition
*	The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past holding time.
BS-03	The recovery of this analyte in the BS/LCS was outside the control limits. The sample result was accepted based on another acceptable BS/LCS and/or MS and MSD that meet BS criteria.
J	Estimated conc. detected <MRL and >MDL.
M-02	Due to the nature of matrix interferences, sample was diluted prior to preparation. The MDL and MRL were raised due to the dilution.
M-04	Due to the nature of matrix interferences, sample extract was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation. The MDL and MRL were raised due to this dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
MS-03	Multiple analyses indicate the percent recovery is out of acceptance limits due to a possible matrix effect.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
P-W	Samples preserved by Weck Laboratories upon receipt.
S-GC	Surrogate recovery outside of control limits due to a possible matrix effect. The data was accepted based on valid recovery of the remaining surrogate.
U-01	The sample was received without the proper preservation.
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ) and Detection Limit for Reporting (DLR)
MDA	Minimum Detectable Activity
NR	Not Reportable
TIC	Tentatively Identified Compound (TIC) using mass spectrometry. The reported concentration is relative concentration based on the nearest internal standard. If the library search produces no matches at, or above 85%, the compound is reported as unknown.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California State Water Resources Control Board (SWRCB)

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS 002.

## STANDARD CHAIN OF CUSTODY RECORD

14859 East Clark Avenue : Industry : CA 91745

Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ [www.wecklabs.com](http://www.wecklabs.com)

WECK WKO#

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*Irwindale Project*

WECK LABORATORIES, INC.

Analytical Laboratory Service - Since 1964

# Analytical Service Quotation

**Contact:** Ed Suher  
**Client Name:** ~~AEI~~ CASC Consulting  
**Address:** ~~2740 W. Magnolia Blvd., Ste. 102~~  
~~Burbank, CA 91505~~  
**Phone:** ~~(818) 841-9804~~  
**Fax:** ~~(818) 841-8813~~

**Printed:** 10/18/2017  
**Effective:** 10/17/17  
**Expires:** 06/30/18

**Project:** MS4 - Storm Water Monitoring 2017-2018

Code	Method	Qty	TAT * (workdays)	Unit Price	Extended Price
<b>Water</b>					
200.7 Hardness	_Varies	1	15	\$15.00	\$15.00
Alkalinity, total - SM 2320B	SM 2320B	1	15	\$5.00	\$5.00
Aluminum - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Aluminum, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Ammonia-N - EPA 350.1	EPA 350.1	1	15	\$15.00	\$15.00
Antimony - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Antimony, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Arsenic - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Arsenic, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Biochemical Oxygen Demand - SM5210B	SM 5210B	1	15	\$40.00	\$40.00
Cadmium - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Cadmium, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Chemical Oxygen Demand - EPA 410.4	EPA 410.4	1	15	\$20.00	\$20.00
Chloride - EPA 300.0	EPA 300.0	1	15	\$15.00	\$15.00
Chromium - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Chromium, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Chromium, Hexavalent - EPA 218.6	EPA 218.6	1	15	\$35.00	\$35.00
Chromium, Hexavalent, dissolved - EPA 218.6	EPA 218.6	1	15	\$50.00	\$50.00
Copper - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Copper, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Cyanide, Total - ASTM D 7511	ASTM D7511	1	15	\$40.00	\$40.00
Dissolved Oxygen - SM 4500O-G	SM 4500O-G	1	15	\$15.00	\$15.00
E.Coli Coliform by Enumeration SM9221 F	SM 9221F	1	15	\$20.00	\$20.00
<del>Enterococcus - Enterolert</del>	<del>Enterolert</del>	<del>1</del>	<del>15</del>	<del>\$35.00</del>	<del>\$35.00</del>
<del>EPA 515.3 - Chlorinated Acid Herbicides</del>	<del>EPA 515.3</del>	<del>1</del>	<del>15</del>	<del>\$100.00</del>	<del>\$100.00</del>
EPA 8015B - Diesel & Oil Range Organics (DRO/ORO)	EPA 8015D	1	15	\$45.00	\$45.00
<del>Fecal Coliform by Enumeration SM9221E 3 dilutions</del>	<del>SM 9221E</del>	<del>1</del>	<del>15</del>	<del>\$25.00</del>	<del>\$25.00</del>
Iron - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Iron, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Lead - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Lead, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
MBAS - SM 5540 C	SM 5540C	1	15	\$30.00	\$30.00
Mercury, Diss, low-level - EPA 1631E	EPA 1631E	1	15	\$100.00	\$100.00
Mercury, total, low-level - EPA 1631E	EPA 1631E	1	15	\$100.00	\$100.00
Nickel - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Nickel, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Nitrite+Nitrate-N - EPA 300.0	EPA 300.0	1	15	\$15.00	\$15.00
PAHs low level in water by GC/MS/MS	GC/MS/MS	1	15	\$215.00	\$215.00
Phenolics in water - EPA 420.4	EPA 420.4	1	15	\$45.00	\$45.00
Phosphorus Dissolved - EPA 365.3	EPA 365.3	1	15	\$40.00	\$40.00



Irwindale Cont'd.

WECK LABORATORIES, INC.

Analytical Laboratory Service - Since 1964

Code	Method	Qty	TAT * (workdays)	Unit Price	Extended Price
Phosphorus, Total as P - EPA 365.1	EPA 365.1	1	15	\$30.00	\$30.00
Specific Conductance (EC) - SM 2510B	SM 2510B	1	15	\$25.00	\$25.00
Sulfate - EPA 300.0	EPA 300.0	1	15	\$15.00	\$15.00
<del>Total Coliforms by Enumeration - SM 9221B-3 dil.</del>	<del>SM 9221B</del>	<del>1</del>	<del>15</del>	<del>\$45.00</del>	<del>\$45.00</del>
Total Dissolved Solids - SM 2540C	SM 2540C	1	15	\$15.00	\$15.00
Total Kjeldahl Nitrogen by EPA 351.2	EPA 351.2	1	15	\$35.00	\$35.00
Total Organic Carbon - SM 5310C	SM 5310C	1	15	\$35.00	\$35.00
Total Suspended Solids - SM 2540D	SM 2540D	1	15	\$15.00	\$15.00
Turbidity - EPA 180.1	EPA 180.1	1	15	\$10.00	\$10.00
Volatile Suspended Solids - 160.4	EPA 160.4	1	15	\$15.00	\$15.00
Zinc - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
Zinc, dissolved - EPA 200.8	EPA 200.8	1	15	\$10.00	\$10.00
<b>Additional Items</b> (if requested or applicable, will be charged at listed rates)					
Afterhours - Holiday 10p before-8a after /hr/empl		1		\$400.00	\$400.00
Afterhours - Rain Event - Standby flat fee		1		\$300.00	\$300.00
Afterhours - Weekday 10p-8a /hour/employee		1		\$300.00	\$300.00
Afterhours - Weekday 6p-10p /hour/employee		1		\$200.00	\$200.00
Afterhours - Weekend 10p Fri-8a Mon /hr/empl		1		\$300.00	\$300.00
Extra per micro dilution		1		\$10.00	\$10.00
Filtration Fee		1		\$15.00	\$15.00

**Bid Total: \$2,985.00**

**200.7 Hardness consists of:**

Calcium - EPA 200.7

*Marilyn Romero*

**Marilyn Romero**

**Client Services Manager**

\* Subject to Capacity

Payment terms are NET 30 days from invoice date. New accounts require payment prior to the release of test results until a credit application has been approved. Weck Laboratories accepts credit card payments (VISA/Master Card, American Express). Credit application/credit card approval form and Weck Laboratories' terms & conditions can be found at [www.wecklabs.com](http://www.wecklabs.com) under Resources. Paperless reports (PDF) are included while mailed paper reports are available at additional cost

Method Reporting Limits (MRL) and Method Detection Limits (MDL) are based upon specified sample volume or weight. When matrix interferences are apparent, sample amounts may be reduced during the preparation step and/or may be diluted prior to analysis. This is done to reduce analytical interference and instrumental contamination and will result in elevated MRL/ MDL on the test report.